Journal of Food Law & Policy

Volume 16 | Number 2 Article 1

2020

Journal of Food Law & Policy - Fall 2020

Journal Editors

Journal of
FOOD & LAW
POLICY

Volume Sixteen Number Two

Fall 2020

Articles

A PUBLICATION OF THE UNIVERSITY OF ARKANSAS SCHOOL OF LAW

Journal of
FOOD & LAW
POLICY

Volume Sixteen Number Two

Fall 2020

CONTENTS

ARTICLES

Journal of Food Law & Policy
University of Arkansas School of Law
1045 West Maple Street
Fayetteville, AR 72701
Phone: 479-575-2754
Fax: 479-575-3540

foodlaw@uark.edu

The *Journal of Food Law & Policy* is published twice annually by the University of Arkansas School of Law in Fayetteville, Arkansas.

Subscription Information: The *Journal of Food Law & Policy* is available to subscribers for $34.00 per year. Subscribers may mail a check and contact information to the *Journal* offices. Changes of address should be sent by mail to the address above or to foodlaw@uark.edu. The *Journal* assumes each subscriber desires to renew its subscription unless the subscribers sends notification, in writing, before the subscription expires. Back issues may also be purchased from the *Journal*.

Citation Format: Please cite this issue of the *Journal of Food Law & Policy* as 16 J. FOOD L. & POL'Y _ (2020).

Postmaster: Please send address changes to the *Journal of Food Law & Policy*, University of Arkansas School of Law, 1045 West Maple Street, Fayetteville, AR 72701.

Journal of Food Law & Policy
2020-2021 Editorial Board

UNIVERSITY OF ARKANSAS SCHOOL OF LAW FACULTY AND PROFESSIONAL STAFF

ADMINISTRATION

MARGARET E. SOVA MCCABE , B.A., J.D.
Dean and Professor of Law

WILLIAM E. FOSTER, B.S., J.D., LL.M.,
Associate Dean for Academic Affairs and Arkansas Bar Foundation Associate Professor of Law

JAMES K. MILLER, B.S., B.A., J.D.,
Senior Associate Dean for Students

SUSANNAH W. POLLVOGT, B.A., J.D.,
Associate Dean for Student Success

LAURENT SACHAROFF, B.A., J.D., LL.M.,
Associate Dean for Research and Faculty Development and Professor of Law

LYNN STEWART, B.S., B.S., C.P.A., M.B.A.,
Director of Budget, Facilities, and Human Resources

TERRI CHADICK, B.A.,
Director of Career Services

TORY GADDY, B.A.,
Director of Development and External Relations

DARINDA SHARP, B.A., M.S., M.A.,
Director of Communications

EDISON R. WILLIAMS, SR.,, B.A., M.B.A.,
Diversity, Equity and Inclusion Coordinator

FACULTY

LONNIE R. BEARD, B.A., J.D., LL.M.,
Professor of Law

HOWARD W. BRILL, A.B., J.D., LL.M.,
Vincent Foster University Professor of Legal Ethics & Professional Responsibility

CARL J. CIRCO, B.A., J.D.,
Ben J. Altheimer Professor of Legal Advocacy

STEPHEN CLOWNEY, B.A., J.D.,
Professor of Law

ANGELA DOSS, B.A., J.D.,
Director of Externships

UCHE EWELUKWA, DIP. L., LL.B., B.L., LL.M., LL.M.,
E.J. Ball Professor of Law

SHARON E. FOSTER, B.A., J.D., LL.M., PH.D.,
Robert A. Leflar Professor of Law

CAROL R. GOFORTH, B.A., J.D.,
University Professor and Clayton N. Little University Professor of Law

SARA R. GOSMAN, B.S., J.D., LL.M.,
Associate Professor of Law

AMANDA HURST, B.A., J.D.,
Assistant Professor of Law

DONALD P. JUDGES, B.A., J.D., PH.D.,
Professor of Law

CHRISTOPHER R. KELLEY, B.A., J.D., LL.M.,
Associate Professor of Law

ANN M. KILLENBECK, B.A., M.A., M.ED., J.D., PH.D.,
Professor of Law

MARK R. KILLENBECK, A.B., J.D., PH.D.,
Wylie H. Davis Distinguished Professor of Law

ANDREW L. LAWSON, B.A., J.D.,
Visiting Assistant Professor of Law

STACY L. LEEDS, B.A., M.B.A., J.D., LL.M.,
Dean Emeritus and Professor of Law

JILL WIEBER LENS, B.A., J.D.,
Associate Professor of Law

MARY ELIZABETH MATTHEWS, B.S., J.D.,
Sidney Parker Davis, Jr. Professor of Business & Commercial Law

TIFFANY MURPHY, B.A., J.D.,
Associate Professor of Law

CYNTHIA E. NANCE, B.S., M.A., J.D.,
Dean Emeritus and Nathan G. Gordon Professor of Law

ALEX NUNN, B.A., J.D.,
Assistant Professor of Law

CLAY SAPP, B.A., J.D.,
Visiting Assistant Professor of Law

SUSAN A. SCHNEIDER, B.A., J.D., LL.M.,
Director of the LL.M. Program in Agricultural & Food Law; William H. Enfield Professor of Law

ANNIE B. SMITH, B.A., J.D.,
Associate Professor of Law

TIMOTHY R. TARVIN, B.A., J.D.,
Professor of Law

RANDALL J. THOMPSON, B.A., J.D., M.L.S.,
Director of Young Law Library and Information Technology Services; Associate Professor of Law

DANIELLE WEATHERBY, B.A., J.D.,
Associate Professor of Law

JORDAN BLAIR WOODS, A.B., J.D., M.PHIL., PH.D.,
Assistant Professor of Law

ROBERT & VIVIAN YOUNG LAW LIBRARY

RANDALL J. THOMPSON, B.A., J.D., M.L.S.,
Director of Young Law Library and Information Technology Services; Associate Professor of Law

DANIEL BELL, B.A., J.D., M.L.I.S,
Faculty Services and Outreach Librarian

CATHERINE P. CHICK, B.A., M.L.S.,
Reference Librarian

DOMINICK J. GRILLO, B.A., J.D., M.S.L.S.,
Electronic Services Librarian

STEVEN R. PROBST, B.A., J.D., M.S.L.I.S.,
Head of Public Services

MONIKA SZAKASITS, B.A., J.D., M.S.L.I.S.,
Associate Director

COLLEEN WILLIAMS, B.A., J.D., M.L.I.S.,
Reference Librarian

The University of Arkansas School of Law is a member of the Association of American Law Schools and is accredited by the American Bar Association.

(American Bar Association Council of the Section of Legal Education and Admissions to the Bar, American Bar Association, 321 N. Clark Street, 21st Floor, Chicago, IL 60654, 312.988.6738, legaled@americanbar.org)

Private Farms, Public Power: Governing the Lives of Dairy Cattle

Jessica Eisen*

Abstract

It is widely assumed that laws governing dairy production include substantial protection of animals' interests—that in some way the state is regulating the treatment of farmed animals and protecting them against the worst excesses of their owners' self-interest. In fact, across jurisdictions in Canada and the United States, the standards governing farmed animal protection are not established by elected lawmakers or appointed regulators, but are instead primarily defined by private, interested parties, including producers themselves. As scholars of animal law have noted, this has contributed to weak and ineffectual legal protection of the interests of farmed animals. The present study will focus on a distinct, though related, difficulty arising from the *de facto* or *de jure* delegation of standard-setting authority to animal industries. Not only does this delegation result in less stringent standards, but it also works to erode crucial public law values, such as transparency, accountability and impartiality.

This limitation of public law values poses a deep structural threat to animal interests, especially in light of animals' particular dependence on public law for their protection. Animals are excluded from private law protections, and from direct access to conventional means of legal and political participation, leaving them without legal avenues to press their interests as individuals. Effective animal protection therefore requires that the human beings who advocate for animal interests have meaningful access to standard-setting processes. Such meaningful access is facilitated where public law values assure transparent, accountable and impartial decision-making. For this reason, the assignment of standard-setting authority to private producers, and the attendant diminution of public law values, is of special concern in the animal protection context. This

* Jessica Eisen is an Assistant Professor at the University of Alberta Faculty of Law. The author extends her sincerest thanks to her co-editors on this volume, Erum Sattar and Xiaoqian Hu, for their energy and enthusiasm throughout this project, and for their thoughtful comments on earlier drafts of this article. Thanks are owed also to the University of Alberta's Kule Institute for Advanced Studies and to the University of Arizona for supporting an extremely helpful workshop in connection with this volume. The author is grateful to all the participants in that workshop and, in particular, the discussants Albertina Antognini and Andrew Woods for sharing their reactions to an earlier draft.

article will chart the operation of private power in setting standards for the protection of dairy cattle and identify the damage this privatized authority does to public law values. The article will tentatively suggest in conclusion that high levels of privatization in standard-setting may reflect a public desire to be comforted by the idea of regulation, tempered by an underlying ambivalence respecting the practical consequences of meaningful legal oversight.

I. Introduction

At the heart of the Canadian and US dairy industries are cows: millions of living, feeling creatures, whose lives are shaped, from birth to death, by our collective decision to use their bodies in food production. It is widely assumed that laws governing dairy production include substantial protection of these animals' interests—that in some way the state is regulating the treatment of farmed animals and protecting them against the worst excesses of their owners' self-interest.[1] In fact, across jurisdictions in Canada and the United States, the standards governing farmed animal protection are not elaborated by elected lawmakers or appointed regulators, but are instead primarily defined by private, interested parties, including producers themselves.

As scholars of animal law have noted, this has contributed to weak and ineffectual legal protection of the interests of farmed animals.[2] The present study will focus on a distinct, though related, difficulty arising from the *de facto* or *de jure* delegation of standard-setting authority to animal industries. Not only does this delegation result in less stringent standards, but it also works to erode crucial public law values, such as transparency, accountability and impartiality. This limitation of public law values poses a deep structural threat to animal interests, especially in light of animals' particular dependence on public law for their protection. Animals are excluded from private law protections, and from direct access to conventional means of legal and political participation, leaving them without legal avenues to press their interests as individuals. Effective animal protection therefore requires that the human beings who advocate for animal interests have meaningful access to standard-setting processes. Such meaningful access is facilitated where public

---

[1] David J. Wolfson & Mariann Sullivan, *Foxes in the Henhouse: Animals, Agribusiness, and the Law: A Modern American Fable*, *in* ANIMAL RIGHTS: CURRENT DEBATES AND NEW DIRECTIONS, 205, 206, 226 (Cass R. Sunstein & Martha C. Nussbaum eds., 2004) (describing a widespread "presumption that the law currently provides some basic legal protection for animals, even if there is skepticism about its effectiveness or enforcement").

[2] *See id.*

law values assure transparent, accountable and impartial decision-making. For this reason, the assignment of standard-setting authority to private producers, and the attendant diminution of public law values, is of special concern in the animal protection context.

This article will offer a descriptive account of farmed animal protection regimes across Canada and the United States, with a particular focus on dairy cattle. The article will further advance a normative critique of privatized standard-setting in this sphere given animals' particular vulnerabilities. Part II will describe the regulatory context under consideration: the lives and well-being of dairy cattle in Canada and the United States. Part III will confront the complexity of the supposed public/private distinction in law, drawing on scholarship in feminist legal theory and comparative administrative law. Despite the instability of these categories, however, this Part will argue that the identification of public and private authority—and the related operation (or not) of public law values—remains salient in the animal protection context. In particular, animals' exclusion from private law protections and from formal access to legal and political institutions make public law and public law values (including transparency, impartiality and accountability) critical to effective animal protection.

With this framework in place, Part IV will offer a description of regulatory approaches to dairy cattle protection in the United States and Canada, with an emphasis on the role of private actors in legal standard-setting in these jurisdictions. This Part will reveal that, although a variety of regulatory mechanisms exist across jurisdictions, private standard-setting is commonly employed, supplanting crucial public law functions and values. The Conclusion will reflect on why, despite the significance of public law values to animal protection, private power over legal standard-setting persists. Tentatively, this Conclusion will suggest that the present legal landscape may reflect a public desire to be comforted by the *idea* of regulation, tempered by an underlying ambivalence respecting the practical consequences of meaningful legal oversight.

II. Milk and the Lives of Dairy Cattle

The lives of cows in the Canadian and U.S. dairy industries are controlled by human beings, from their broadest contours to their most minute details.[3] The choices of cows themselves—respecting whether and how to care for their young, when and with whom to

[3] Jessica Eisen, *Milked: Nature, Necessity, and American Law*, 34 BERKELEY J. GENDER L. & JUST. 71, 106–109 (2019).

have sex, and how to live in community with their herds—are highly constrained.[4] Their bodies are surgically altered, physically restrained, and continually manipulated to facilitate the production and extraction of their nursing materials.[5] The human actors whose decisions so thoroughly shape these animals' lives range from the farmers who own these cows as a matter of private law to participants in the dense networks of public administration that govern the production and sale of dairy products.

The calves of dairy cows are generally separated from their mothers immediately after birth.[6] Male calves are usually auctioned to be slaughtered for veal.[7] Female calves spend their early days isolated in individual hutches, then spend a period in group housing, before they are old enough for their first insemination.[8] Many cows are subject to painful physical modifications designed to support their use in dairying. These include the "disbudding" or removal of horns to reduce the risk of injury arising from their confinement in close proximity;[9] the cutting of "supernumerary" or inconveniently

---

[4] *Id*. Animals, of course, retain their agency in the face of human constraints, resisting coercion and refusing instructions. *See* Jason C. Hribal, *Animals, Agency, and Class: Writing the History of Animals from Below*, 14 HUM. ECOLOGY REV. 101, 103 (2007) (observing that "[f]aking ignorance, rejection of commands . . . foot-dragging . . . breaking equipment" and other tactics constitute forms of resistance employed by animals against human beings); Catharine A. MacKinnon, *Of Mice and Men: A Feminist Fragment on Animal Rights*, *in* ANIMAL RIGHTS: CURRENT DEBATES AND NEW DIRECTIONS 263, 270 (Cass R. Sunstein & Martha C. Nussbaum eds., 2004) ("Do animals dissent from human hegemony? I think they often do. They vote with their feet by running away. They bite back, scream in alarm, withhold affection, approach warily, fly and swim off."); *cf.* JOCELYNE PORCHER, THE ETHICS OF ANIMAL LABOUR: A COLLABORATIVE UTOPIA 116 (2017) (explaining that cattle apply their "affective and cognitive capacities to work" in order to "collaborate" in certain milking processes).

[5] *Eisen*, *supra* note 3, at 106–109.

[6] Kathrin Wagner, Daniel Seitner, Kerstin Barth, Rupert Palme, Andreas Futschik & Susanne Waiblinger, *Effects of Mother versus Artificial Rearing During the First 12 Weeks of Life on Challenge Responses of Dairy Cows*, 164 APPLIED ANIMAL BEHAV. SCI. 1, 2 (2015).

[7] Kathryn Gillespie, *Sexualized Violence and the Gendered Commodification of the Animal Body in Pacific Northwest US Dairy Production*, 21 GENDER, PLACE & CULTURE 1321, 1327 (2014).

[8] Eisen, *supra* note 3, at 107.

[9] *See* Erin Mintline, Mairi Stewart, Andrea Rogers, Neil Cox, Gwyneth Verkerk, Joseph Stookey, James Webster & Cassandra Tucker, *Play Behavior as an Indicator of Animal Welfare: Disbudding in Dairy Calves*, 144 APPLIED ANIMAL BEHAV. SCI. 22, 23 (2013).

placed teats;[10] and the "docking" or amputation of their tails to improve cleanliness and access to their udders.[11]

To stimulate milk production, dairy cows are repeatedly impregnated, almost always through artificial insemination.[12] When their calves are born, they are taken away immediately to be raised for dairy or veal according to their sex.[13] While lactating, many cows are held in "tie-stall" housing systems, in which they are closely chained at the neck in individual stalls just large enough to allow them to lie down or stand up.[14] A feeding trough runs in front of the cows, and a waste trough runs behind them.[15] Such tie-stall housing is often supported by the use of "electric trainers" that hover over the cows and administer a shock if they move their bodies into positions that might allow them to defecate outside the designated trough.[16] When no longer considered productive, dairy cows are slaughtered, often after being transported many hours by truck without access to water or rest on their journey.[17] Dairy cows are generally slaughtered between 4-6 years of age, well below their life expectancy (if not slaughtered) of 15-20 years.[18]

Cows are intelligent, social animals, and there is strong evidence that many of these practices cause serious physical and emotional harm. It is widely agreed, for example, that separation of these mammals from their young is a source of "distress" or "stress"

---

[10] ROGER W. BLOWEY & A. DAVID WEAVER, COLOR ATLAS OF DISEASES AND DISORDERS OF CATTLE 203 (3rd ed. 2011) (explaining that supernumerary teats "are unsightly, may interfere with milking, and can develop mastitis" and so are "normally removed with curved scissors early in life").

[11] *See Literature Review on the Welfare Implications of Tail Docking of Cattle*, AM. VETERINARY MED. ASS'N (Aug. 2014), https://www.avma.org/resources-tools/literature-reviews/welfare-implications-tail-docking-cattle; *Tail Docking of Dairy Cattle: Position Statement,* CAN. VETERINARY MED. ASS'N (Oct. 12, 2016), https://www.canadianveterinarians.net/documents/tail-docking-of-dairy-cattle; W. K. Fulwider, T. Grandin, B. E. Rollin, T. E. Engle, N. L. Dalsted & W. D. Lamm, *Survey of Dairy Management Practices on One Hundred Thirteen North Central and Northeastern United States Dairies,* 91 J. DAIRY SCI. 1686, 1688 (2008).

[12] Eisen, *supra* note 3, at 107.

[13] *See supra* notes 6–7 and accompanying text.

[14] Eisen, *supra* note 3*,* at 108.

[15] *Id.*

[16] *Id.* at 109.

[17] *See* Wolfson & Sullivan, *supra* note 1, at 208; *Curb the Cruelty: Canada's Farm Animal Transport System in Need of Repair*, WORLD SOCIETY FOR THE PROTECTION OF ANIMALS 4 (2010), https://www.animalalliance.ca/wp-content/uploads/2016/04/report-WSPA-Curb-the-Cruelty-Report.pdf.

[18] Eisen, *supra* note 3, at 109.

(to use the parlance of dairy science) for both cow and calf.[19] Indeed, a significant body of literature has emerged to address how the precise timing and manner of separation might improve productivity and animal well-being, since cow-calf separation often causes weight loss and injury as the pair attempt to reunite.[20] There is also extensive evidence demonstrating that tail docking is painful for cows, and that the practice provokes behaviors associated with discomfort or severe pain.[21] (The amputation or "docking" of cows tails is most commonly achieved by placing a tight band or rubber ring near the base of the cow's tail, with the tail ultimately atrophying from lack of blood flow, then falling off.[22]) The practice of routine tail docking is officially opposed by both the Canadian Veterinary Medical Association[23] and the American Veterinary Medical Association.[24]

There are sharp differences in opinion as to the morality of confining, impregnating and milking animals, and as to the acceptability of many of the specific animal use practices within the dairy sector.[25] Questions about the justice or fairness of laws protecting animals in agricultural contexts often, perhaps inevitably, lead to underlying questions about the importance or necessity of

---

[19] *See, e.g.*, Frances C. Flower & Daniel M. Weary, *The Effects of Early Separation on the Dairy Cow and Calf*, 12 ANIMAL WELFARE 339, 340 (2003) [hereinafter Flower & Weary, *Early Separation*]; Frances C. Flower & Daniel M. Weary, *Effects of Early Separation on the Dairy Cow and Calf: 2. Separation at 1 Day and 2 Weeks after Birth*, 70 APPLIED ANIMAL BEHAV. SCI. 275, 276 (2001) [hereinafter Flower & Weary, *Separation at 1 Day and 2 Weeks*]; E.O. Price, J. E. Harris, R. E. Borgward, M. L. Sween & J. M. Connor, *Fenceline Contact of Beef Calves with Their Dams at Weaning Reduces the Negative Effects of Separation on Behavior and Growth Rate*, 81 J. ANIMAL SCI. 116, 121 (2003); Wagner et al*., supra* note 6, at 2.

[20] *See, e.g.*, Flower & Weary, *Early Separation*, *supra* note 19, *passim*; Flower & Weary, *Separation at 1 Day and 2 Weeks*, *supra* note 19, at 282–83; Price, *supra* note 19, at 121; Wagner et al., *supra* note 6, at 2.

[21] *See* M.A. Sutherland & C.B. Tucker, *The Long and Short of It: A Review of Tail Docking in Farm Animals*, 135 APPLIED ANIMAL BEHAV. SCI. 179, 187–89 (2011); S.D. Eicher, H.W. Cheng, A.D. Sorrells & M.M. Shutz, *Short Communication: Behavioral and Physiological Indicators of Sensitivity or Chronic Pain Following Tail Docking*, 89 J. DAIRY SCI. 3047, 3047 (2006); S.D. Eicher & J.W. Dailey, *Indicators of Acute Pain and Fly Avoidance Behaviors in Holstein Calves Following Tail-docking*, 85 J. DAIRY SCI. 2850, 2850 (2002).

[22] *See* AM. VETERINARY MED. ASS'N, *supra*, note 11*;* CAN. VETERINARY MED. ASS'N, *supra* note 11.

[23] CAN. VETERINARY MED. ASS'N, *supra* note 11.

[24] AM. VETERINARY MED. ASS'N, *supra*, note 11.

[25] *See* Jessica Eisen, Xiaoqian Hu & Erum Sattar, *Dairy Tales: Global Portraits of Milk and Law*, 16 J. FOOD L. & POL'Y 1, 9 (2020).

animal products in human diets and food systems.[26] The analysis that follows will not endeavor to answer underlying questions as to whether or how the farming of mammals for their nursing materials might be humanely or ethically conducted. Instead, the aim is to explain how different regulatory regimes have answered questions respecting animal care as a matter of law—and how these regimes have decided *who decides*. In particular, this study will demonstrate that significant decisions respecting the permissible treatment of animals are often left to the private choices of individual producers. As the following Part will argue, high levels of regulatory privatization, and the resulting marginalization of public law values, represent serious obstacles to effective farmed animal protection.

III. Animals and Public Law

Private dairy producers currently enjoy significant authority to set standards for farmed animal care.[27] This Part will argue that such privatization of regulatory authority is of special concern in the sphere of farmed animal protection. Because farmed animals lack both private law rights and direct access to formal legal and political remedies, their meaningful protection requires that the humans who advocate for animal interests have adequate access to standard-setting processes. This access is best supported where decision-making is shaped by public law values such as accountability, transparency and impartiality.

A. Defining Public and Private Law

It bears mention at the outset that distinctions between public and private are rarely clean and never unproblematic—as scholars of both administrative law and feminist legal theory have long warned. In schematic terms, public law describes the legal relationship between state and citizen, while private law denotes legal relations between individuals. According to this schematic, the public sphere is defined by shared commitments and values, while the private

---

[26] *See* Katie Sykes, *Rethinking the Application of Canadian Criminal Law to Factory Farming*, *in* CANADIAN PERSPECTIVES ON ANIMALS AND THE LAW 33, 55–56 (Peter Sankoff, Vaughan Black & Katie Sykes eds., 2015) (observing that "opening up the question of what is 'unnecessary' in the context of food production could be a discomfiting prospect, since it unavoidably leads to questions about whether the use of animals for food is necessary at all"); Elaine L. Hughes & Christine Meyer, *Animal Welfare Law in Canada and Europe*, 6 ANIMAL L. 23, 56 (2000) ("A clear definition of necessity would require a social consensus on the legitimacy and importance of various human uses of animals; however, this is lacking.").

[27] *See infra* Part IV.

sphere is characterized by pursuit of self-interest.[28] Within both administrative law and feminist scholarships, the terms public and private are deeply contested, subject to multiple (sometimes conflicting) definitions, and, in practice, impossibly intertwined.

Within administrative law scholarship, the conventional public/private division is increasingly understood to be complicated or collapsed by the privatization of public authority, especially respecting standard-setting.[29] The fraying edges of the public and private spheres identified in administrative law scholarship echo a related destabilization of these categories identified by feminist legal theorists.[30] In particular, feminist theory has exposed supposedly "private" spheres, including "the home" and "sexuality," as being, in fact, fundamentally constituted by collective commitments and public power.[31]

For both feminist theorists and administrative law scholars, the complex interplay between the supposedly public and private aspects of law are matters of normative concern. Feminist theorists have emphasized that the rhetorical delineation of certain "private" spheres has allowed governments to ignore, shirk or deny "responsibility" for certain harms or inequalities.[32] In a similar vein, administrative lawyers have identified the operation of private power

---

[28] *See* Paul Starr, *The Meaning of Privatization*, 6 YALE L. & POL'Y REV. 6, 8–10 (1988).

[29] Susan Rose-Ackerman, Peter L. Linseth, and Blake Emerson, COMPARATIVE ADMINISTRATIVE LAW 2 (Susan Rose-Ackerman, Peter L. Linseth & Blake Emerson eds., 2d ed. 2017) (noting that, although "[t]he distinction between public and private is . . . essential to administrative law," the assumption that "one can compartmentalize regulatory activities and actors into either a public or a private sphere" fails to capture "the increasingly blurred boundary between state and society" in practice).

[30] *See* Derek McKee, *The Public/Private Distinction in* Roncarelli v. Duplessis, 55 MCGILL L.J. 461, 472 (2010) (linking the public/private distinction within administrative law to the state/market divide of classical liberalism, and to related distinctions between market/family and civilization/state).

[31] *See*, *e.g.*, Carol Pateman, *Feminist Critiques of the Public/Private Divide*, *in* PUBLIC AND PRIVATE IN SOCIAL LIFE 281, 281–307 (S.I. Benn & G.F. Gaus eds., 1983); Susan B. Boyd, *Can Law Challenge the Public/Private Divide? Women, Work and Family*, 15 WINDSOR Y.B. OF ACCESS TO JUST. 161, 171–74 (1996).

[32] Nicola Lacey, *Theory into Practice? Pornography and the Public/Private Dichotomy*, 20 J.L. & SOCIETY 93, 97 (1993) (asserting that the public/private distinction "allows government to clean its hands of any responsibility for the state of the 'private' world"); *see also* Frances Olsen, *The Family and the Market: A Study of Ideology and Legal Reform*, 96 HARV. L. REV. 1497, 1502 (1983) (describing the casting of relations of "domination" as "private matters that do not implicate the political state").

in public administration as a possible threat to public law values such as transparency, democracy, accountability and fairness.[33]

These analyses point to a common set of underlying concerns. First, the conceptual delineation of private spaces within legal regimes—even, or perhaps especially, when cloaked in the language of freedom or liberty—may in fact operate to authorize oppressive and even violent relationships in practice.[34] Second, there are harms and power dynamics for which governed societies rightly accept shared responsibility, and our institutions should be organized accordingly.[35] In other words, it is not simply that it is difficult or impossible to sort the public from the private, but rather that efforts to cast these spheres as independent often work to conceal and distort our collective obligations to one another.

The concern that public/private legal distinctions can be deployed to obscure and confuse law's role in shaping practices and relationships is apparent in the field of farmed animal protection. Elsewhere, I have suggested that the farm is analogous to the private sphere of the family within feminist theory—a space in which a particular, contestable conception of the public good is pursued using legal forms and social discourses that often reject overt public regulation in favor of such values as privacy, personal duty, and even love.[36] The present analysis details farmed animal protection regimes in Canada and the United States to reveal the mechanics of

---

[33] *See, e.g.*, Jean-Bernard Auby, *Contracting Out and "Public Values": A Theoretical and Comparative Approach*, *in* COMPARATIVE ADMINISTRATIVE LAW 552, 552 (Susan Rose-Ackerman, Peter L. Linseth & Blake Emerson eds., 2d ed. 2017) (describing the question of how to maintain private contractors' adherence to "public values" as a "characteristically post-modern administrative law question").

[34] *See generally* JENNIFER NEDELSKY, LAW'S RELATIONS: A RELATIONAL THEORY OF SELF, AUTONOMY AND LAW (2011) (offering an extended argument in favor of legal analyses that focus on the relationships produced by legal rules).

[35] *C.f.* Lacey, *supra* note 32, at 97.

[36] *See Eisen*, *supra* note 3, at 98-101 (2019) (discussing "the farm" as analogous to the "private sphere" of feminist theory); Jessica Eisen, *Milk and Meaning: Puzzles in Posthumanist Method*, *in* MAKING MILK: THE PAST, PRESENT AND FUTURE OF OUR PRIMARY FOOD 237, 240 (Mathilde Cohen & Yoriko Otomo eds., 2017) (observing that regulation of the farm, like "the family" within feminist critique, "trusts private actors (farmers; husbands) to wield their power appropriately because they are well-intentioned, bound by duty, and even because they love those in their charge"); *see also* Dinesh Wadiwel, *Whipping to Win: Measured Violence, Delegated Sovereignty and the Privatised Domination of Non-Human Life*, *in* LAW AND THE QUESTION OF THE ANIMAL: A CRITICAL JURISPRUDENCE 116, 116–32 (Yoriko Otomo & Edward Mussawir eds., 2013) (describing the "privatised domination of non-human life"); Mathilde Cohen, *Of Milk and the Constitution*, 40 HARV. J.L. & GENDER 115, 152 n.238 (2017) (analogizing the private sphere of the farm to the private sphere of the family).

the public/private law interplay working to keep the treatment of farmed animals effectively unregulated by public authorities.

B. Animals and Public Law Values

Despite the identified artificiality of distinctions between public and private in legal ordering, the analysis that follows will rely on these terms to some extent. This is because, although problematic, these categories remain operative, with their operation having significant consequences for farmed animal protection. There are two critical aspects of animal protection regimes that demand continued attention to distinctions between public and private law in this context. The first is the reality that so-called private law (laws understood to govern relations between individuals) have consistently refused to recognize animals as the kinds of individuals whose relations are of legal consequence. The second is that values such as transparency, accountability and impartiality are legally cognizable only with respect to public law authority. Because these public law values are crucial to effective animal protection, the juridical positioning of animal protection as a matter of public law improves prospects for animal protection.

Animals do not hold private legal rights, even to their own lives and bodies. Instead, private law has quite durably retained a basic classification of animals as things: mere objects of the property rights of others.[37] In terms of private law alone, animals are objects, not subjects. They are things to be owned, traded, and extinguished at the will of those who hold rights to their bodies. In the famous formulation of property as relations amongst people (rather than relations between people and objects),[38] relations with animals are

---

[37] *See* GARY FRANCIONE, ANIMALS, PROPERTY AND THE LAW 65–115 (1995); Wendy Adams, *Human Subjects and Animal Objects: Animals as "Other" in Law*, *in* 3 J. ANIMAL L. & ETHICS 29, 29–30 (2009). In recent years, a number of civil law jurisdictions have formally affirmed in their civil codes that animals are not "things"; however, each of these jurisdictions has also specified that provisions pertaining to "things" also apply to animals, making the change in status merely nominal. *See* Sabine Brels, *The Evolution of the Legal Status of Animals: From Things to Sentient Beings*, THE CONSCIOUS LAWYER (Jan. 2016), https://www.theconsciouslawyer.co.uk/the-evolution-of-the-legal-status-of-animals-from-things-to-sentient-beings/.

[38] *See* CAROL M. ROSE, PROPERTY AND PERSUASION: ESSAYS ON THE HISTORY, THEORY AND RHETORIC OF OWNERSHIP 3–4 (1994); Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 YALE L.J. 16, 22–23 (1913).

invisible, with no real meaning in the world of legal value and exchange.[39]

Public law, on the other hand, has long recognized some minimal legal significance in animals' own lives and experiences, most notably through prohibitions against cruelty and the regulation of certain animal-use industries. Admittedly, the longest-standing forms of public law protection of animal interests—criminal prohibitions of cruelty and bestiality—have not focused on animal well-being as much as they have attended to human property interests or community morals.[40] In both Canada and the United States, however, there is evidence of a shift in emphasis in public and judicial understandings of these laws: a growing sense that their purpose is, at least in part, to protect animals for their own sakes.[41] The treatment of animals has become the subject of regulatory concern, with human use of animal property addressed as a site of ongoing risk and oversight.[42] These regulatory interventions now commonly reference the interests of animals as being legally relevant.[43]

In addition to providing the sole available forum for pressing animals' interests, public law is tied to values of particular significance for effective animal protection—namely transparency,

---

[39] Some have claimed that being "owned" may be beneficial to animals. *See, e.g.*, Richard A. Epstein, *Animals as Objects, or Subjects, of Rights*, *in* ANIMAL RIGHTS: CURRENT DEBATES AND NEW DIRECTIONS 143, 148–149 (Cass R. Sunstein & Martha C. Nussbaum eds., 2004) (arguing that "[b]ecause they use and value animals, owners will spend resources for their protection," such that "[o]ver broad areas of human endeavour, the ownership of animals has worked to their advantage"). Of course, any indirect benefit that animals may experience to the extent that they hold value to their human owners does not amount to private law recognition of animals' interests. Moreover, in the case of farmed animals, especially in industrial-scale agricultural operations, relations of economic exploitation diminish the likelihood of alignment between animal and owner interests. *See* Ani B. Satz, *Animals as Vulnerable Subjects: Beyond Interest-Convergence, Hierarchy, and Property*, 16 ANIMAL L. 65, 79–80 (2009).

[40] *See* Margit Livingston, *Desecrating the Ark: Animal Abuse and the Law's Role in Prevention*, 87 IOWA L. REV. 1, 21–29 (2001) (noting that, in the United States, 19th century anti-cruelty laws were generally interpreted by courts "under the rubric of property" or as emphasizing that "cruelty was degrading to the human perpetrator, the human witnesses, and society as a whole").

[41] *See, e.g.*, Regina v. D.L.W., [2016] 1 S.C.R. 402, para. 140; *see also* Jessica Eisen, *Animals in the Constitutional State*, 15 ICON: INT'L J. CONST. L. 909, 911–923 (2018) (offering a broader cross-jurisdictional account of legal attention to animal interests).

[42] *See, e.g.*, The Animal Welfare Act, 7 U.S.C. § 2131.

[43] *See, e.g.*, *id*. at § 2131(1).

impartiality and accountability.[44] Because animals lack access to human language, they are especially vulnerable to having their interests overlooked in legal and political processes as they are currently structured.[45] The traditional democratic mechanisms through which state power is held to account—elections and litigation—are not directly available to animals to contest inadequate or unfair conduct.[46] Elsewhere, I have argued that animals therefore experience "radical vulnerability" within contemporary legal systems: they are both subject to ongoing state-sanctioned harm, and practically excluded from both law-making and rights-enforcement.[47]

Because animals are not legally empowered to press the private dimensions of their own individual interests,[48] the public character of animal protection demands heightened acknowledgment and institutional fortification. Effective protection of animal interests depends on animal advocates having meaningful access to processes that assure the sufficiency and implementation of standards. In public law terms, this requires that standard-setting

---

[44] *See* Michael Taggart, *The Province of Administrative Law Determined?*, *in* THE PROVINCE OF ADMINISTRATIVE LAW 1, 3–4 (Michael Taggart ed., 1997) (summarizing that "[t]he list of public law values includes openness, fairness, participation, impartiality, accountability, honesty and rationality").

[45] Eisen, *supra* note 41, at 941–42. Some scholars have argued that this structural exclusion of animals from political and legal decision-making can and should be reformed. *See, e.g.*, SUE DONALDSON & WILL KYMLICKA, ZOOPOLIS: A POLITICAL THEORY OF ANIMAL RIGHTS 255 (2011) (calling for recognition of "animals not just as individual subjects entitled to respect of their basic rights, but as members of communities—both ours and theirs—woven together in relations of interdependency, mutuality and responsibility"); Will Kymlicka & Sue Donaldson, *Animals and the Frontiers of Citizenship*, 34 OXFORD J. LEGAL STUD. 201, 207 (2014); Alasdair Cochrane, SHOULD ANIMALS HAVE POLITICAL RIGHTS? 90–91 (2020); Robert Garner, *Animals, Politics and Democracy*, *in* THE POLITICAL TURN IN ANIMAL ETHICS 103, 115 (Robert Garner & Siobhan O'Sullivan eds., 2016).

[46] *See* Eisen, *supra* note 41, at 925–29.

[47] *Id.* at 941-946. For other scholarly treatments of animal "vulnerability," *see, e.g.*, Maneesha Deckha, *Vulnerability, Equality, and Animals*, 27 CANADIAN J. WOMEN & L. 47 (2015); Satz, *supra* note 39.

[48] Scholars have debated whether legal standing for animals should be either acknowledged or expanded as a means of allowing animals, through their representatives, to enforce legal interests or rights. *See, e.g.*, Cass R. Sunstein, *Standing for Animals (with Notes on Animal Rights)*, 47 U.C.L.A. L. REV. 1333 (2000); Kelsey Kobil, *When it Comes to Standing, Two Legs are Better than Four*, 120 PENN. ST. L. REV. 621 (2016). Even if such standing were recognized, however, the legal rights and interests in question would (absent dramatic transformation of animals' legal status) remain public law protections. Moreover, the effective advancement and enforcement of legal standards by animals' representatives would continue to require transparent, impartial and accountable institutions.

authority be entrusted to institutions that value impartiality, accountability, and transparency.[49]

The first of these principles, impartiality, represents a core public law value relevant to animal protection law. Impartiality requires that decision-makers not decide matters in their own self-interest, a principle rooted in the idea that "a judge should neither judge her own cause nor have any interest in the outcome of a case before her (*nemo judex in sua causa debet esse*)."[50] Impartiality has been a particularly fraught moral and legal concept, particularly insofar as it might seem to imply the possibility of a "view from nowhere," concealing the standpoint of privileged speakers in the process.[51] In the case of animal protection, we might think it impossible to find a truly impartial or disinterested human decision-maker, given the widespread human consumption of animal products.[52] But a narrower conception of impartiality—foreclosing decision-making by those with a direct financial stake in the outcome—is also at stake in dairy governance. To the extent that dairy producers have economic incentives to intensify dairy operations in ways that prioritize efficiency over animal well-being, the value of impartiality weighs against granting them the authority to set standards of animal care.[53]

---

[49] *See* Jessica Eisen, *Beyond Rights and Welfare: Democracy, Dialogue, and the Animal Welfare Act*, 51 U. MICH. J. L. REFORM 469, 481–485 (2018). *See generally* Eisen, *supra* note 41.

[50] Laverne A. Jacobs, *Tribunal Independence and Impartiality: Rethinking the Theory after* Bell *and* Ocean Port Hotel*—A Call for Empirical Analysis*, *in* DIALOGUE BETWEEN COURTS AND TRIBUNALS—ESSAYS IN ADMINISTRATIVE LAW AND JUSTICE (2001–2007) 43, 47–48 (Laverne A. Jacobs & Justice Anne L. Mactavish eds., 2008). Jacobs further notes the connection between impartiality and "the notion that decision-making requires a decision-maker to hear and listen to both sides of the case before making a decision (*audi alteram partem*)." *Id.* Some have distinguished "impartiality" from "independence," with "impartiality" representing a "state of mind" and "independence" invoking the institutional forms that assure impartiality. *R. v. Valente*, [1985] 2 S.C.R. 673 at para. 15; *see also Gillies v. Secretary of State for Work and Pensions* [2006] 1 All E.R. 731 at para. 38 (Baroness Hale). In this article, I take "impartiality" to embrace both the personal and institutional dimensions.

[51] *See* Kathryn Murphy and Anita Traninger, *Introduction: Instances of Impartiality*, *in* THE EMERGENCE OF IMPARTIALITY 1, 5–6, 20 (Kathryn Murphy & Anita Traninger eds., 2013).

[52] *See* Matthew Liebman, *Who the Judge Ate for Breakfast: On the Limits of Creativity in Animal Law and the Redeeming Power of Powerlessness*, 18 ANIMAL L. 133 (2011).

[53] *See* Eisen, *supra* note 41, at 950 ("Human efforts to determine the legal and regulatory strategies that best advance the interests of animals are plagued by

The second of these values, accountability, connotes "legal oversight of public power."[54] While accountability might embrace a broad array of values and institutions, I mean here to invoke a relatively narrow meaning: that public actors might be called upon to justify their decisions, that their justifications may be subject to review, and that there may be consequences for failed justification.[55] The principle that exercises of public power must be held to account is essential to democracy and the rule of law.[56] It is also critical to animal protection. To the extent that animal protection depends upon the oversight of human advocates for animal interests, those human advocates must have access to legal mechanisms by which to challenge decisions respecting standards of animal use and care.

Transparency is a third public law value that is critical for both animal protection and democratic governance more broadly.[57] Transparency refers to the ability of "external stakeholders to monitor the internal workings of an organization."[58] While transparency may have costs and "trade-offs" in terms of efficiency and other values, it is generally accepted that "at very low levels of transparency, more transparency is likely to be beneficial" for good governance.[59] With respect to animal protection, transparency

---

conflicts of interest, and these conflicts are exacerbated when enforcement agencies lack independence from the industries they regulate.").

[54] CRAIG FORCESE, ADAM DODEK, PHILIP BRYDEN, RICHARD HAIGH, MARY LISTON & CONSTANCE MACINTOSH, PUBLIC LAW: CASES, COMMENTARY, AND ANALYSIS 12 (4th ed., 2020). Such "legal oversight" (for example, by judges and administrative tribunals) is distinguishable from "political oversight" (achieved, for example, through periodic elections). *Id.* at 10–14. *See generally* THE OXFORD HANDBOOK OF PUBLIC ACCOUNTABILITY (Mark Bovens, Robert E. Goodin & Thomas Schillemans eds., 2014) (offering an introduction to scholarship on accountability as a legal and political value).

[55] Mark Bovens, *Analysing and Assessing Accountability: A Conceptual Framework*, 13 EURO. L.J. 447 (2007) (setting out the definition of accountability on which I rely here).

[56] Forcese et al., *supra* note 54, at 10. *See also* Mark E. Warren, *Accountability and Democracy*, *in* THE OXFORD HANDBOOK OF PUBLIC ACCOUNTABILITY 39 (Mark Bovens, Robert E. Goodin & Thomas Schillemans eds., 2014).

[57] *See* Anoeska Buijze, *The Six Faces of Transparency*, 9 UTRECHT L. REV. 3, 5 (2013).

[58] Scott Douglas & Albert Meijer, *Transparency and Public Value—Analyzing the Transparency Practices and Value Creation of Public Utilities*, 39 INT'L J. PUB. ADMIN. 940, 940 (2016).

[59] David Heald, *Transparency as an Instrumental Value*, *in* TRANSPARENCY: THE KEY TO BETTER GOVERNANCE? 59, 59 (Christopher Hood & David Heald eds., 2006); *see also* Paul Daly, *Administrative Law: A Values-based Approach*, *in* PUBLIC LAW ADJUDICATION IN COMMON LAW SYSTEMS: PROCESS AND SUBSTANCE 23 (John Bell, Mark Elliott, Jason N.E. Varuhas & Philip Murray eds., 2016) (identifying transparency as "an important legal value").

(respecting both the conditions of animals' lives and the processes by which those conditions are regulated) is necessary to minimize the risk of political erasure arising from animals' exclusion from traditional modes of legal engagement.[60] Because animals cannot advocate for themselves under current legal arrangements, human advocates for animal interests must have some minimal access to information in order to hold decision-makers accountable and assure adequate substantive protection.[61]

Commitments to impartiality, transparency, and accountability thus take on a special significance in the animal protection context. These values, however, are generally only cognizable as legal commitments where public authority is recognized as operative.[62] Yet, despite the practical significance of public law values to effective animal protection, regulatory regimes in Canada and the United States often depend on privatized standard-setting, concealing public responsibility and minimizing or erasing the application of public law values.

IV. The Public and the Private In Dairy Governance

Across Canada and the United States, a variety of regulatory regimes govern the protection of farmed animals. This Part offers a survey of these governance approaches, organized according to a rough spectrum of legal forms, ranging from the most public (i.e., primary legislation) to the most private (i.e., unencumbered individual producer choice). As this survey will demonstrate, however, this neat organizational structure belies the messy interplay between public and private authority that in fact characterizes this

---

[60] *See* Eisen, *supra* note 41, at 951; Eisen, *supra* note 49.

[61] *See* Albert Meijer, *Transparency*, *in* OXFORD HANDBOOK OF PUBLIC ACCOUNTABILITY 507 (Mark Bovens, Robert E. Goodin & Thomas Schillemans eds., 2014) (examining the relationship between transparency and accountability).

[62] It is, of course, possible for private parties to bind themselves to such principles through private contractual obligations. The U.S. National Dairy FARM program and the Dairy Farmers of Canada ProAction Initiative are examples of this form of commitment respecting dairy cattle welfare. *See* Katelyn E. Mills, Katherine E. Koralesky, Daniel M. Weary & Marina A. G. von Keyserlingk, *Dairy Farmer Advising in Relation to the Development of Standard Operating Procedures*, 103 J. DAIRY SCI. 11524, 11524 (2020). Such mechanisms have become matters of increasing interest in the fields of international and comparative administrative law. *See*, *e.g.*, Laura A. Dickinson, *Public Law Values in a Privatized World*, 31 YALE L.J. 383 (2006). This article has focused on standard-setting with a connection, however tenuous, to generalized legal requirements. The role of voluntary or contractual standard-setting by commodity producer associations represents a distinct but equally fascinating case study into agricultural industry self-regulation.

field of law. On closer examination, it becomes apparent that even the most ostensibly public forms of governance are structured to give substantial standard-setting power to animal use industries. This privatization of governing authority comes at the expense of public law values that are required for effective animal protection.

Various legal forms are employed to confer standard-setting authority on dairy producers. In some jurisdictions, this is achieved through judicial or statutory deference to the aggregate choices of individual producers, expressed as affirmative permission to engage in "customary farming practices."[63] In other jurisdictions, private bodies comprised largely of producers and their representatives are directly or indirectly empowered to set standards for permissible conduct. The following subsections will detail these various regulatory forms. The final subsection of this Part will summarize the substantial role that private parties play across these animal protection regimes, and the threat that this privatized governance poses to public law values such as transparency, impartiality and accountability.

A. Primary Legislation

One governance tool employed to protect farmed animals is primary legislation. Farmed animal protection laws are passed either through ordinary legislative processes (i.e., by elected representatives) or through direct popular referenda in states where such lawmaking processes exist.[64] Respecting primary legislation, the connection to public law values and processes is, in principle, relatively clear: legislators are broadly accountable to the electorate (not just to any single interest group), and their laws and legislative processes are relatively transparent by constitutional design.[65] Yet, as we will see, legislative provisions protecting farmed animals often grant significant *de facto* or *de jure* authority to private actors to determine the substance of the standards imposed.

---

[63] Wolfson & Sullivan *supra* note 1, at 212.

[64] *See* ANIMAL WELFARE INSTITUTE, LEGAL PROTECTIONS FOR ANIMALS ON FARMS (2018) at 8–11.

[65] Of course, in practice, these values are often not well safeguarded. As public choice theorists, in particular, have elaborated, legislative processes are often not public, transparent or impartial at all. *See* Daniel A. Farber, *Public Choice Theory and Legal Institutions*, *in* THE OXFORD HANDBOOK OF LAW AND ECONOMICS, VOL. 1: METHODOLOGY AND CONCEPTS (Francesco Parisi ed., 2017). Nonetheless, the basic institutions of democratic governance are present, and legislation is among the most undeniably public forms of standard-setting.

Legislation restricting specific animal use practices on farms are exceedingly rare in Canada and the United States.[66] Respecting dairy cattle, these are limited to legislative prohibitions on routine tail docking in California[67] and Rhode Island.[68] In all other US states, and in Canada, the use of primary legislation to protect animals on farms is limited to broadly framed provisions, for example prohibiting "cruelty" or the causing of "distress" (collectively referred to here as "anti-cruelty statutes").[69] In Canada, these include both federal criminal prohibitions on cruelty toward animals[70] and provincial quasi-criminal cruelty prohibitions.[71] In the United States,

---

[66] *See* ANIMAL WELFARE INSTITUTE, *supra* note 64, at 3, 8–11. Note that the present analysis is restricted to the legal treatment of animals *on farms*. More detailed legislative and regulatory constraints apply with respect to transport and slaughter in both jurisdictions. In Canada, see Health of Animals Act, S.C. 1990, c 21 and Health of Animals Regulations, C.R.C., c 296 (regarding transport); Safe Food for Canadians Act, S.C. 2012, c 24 and Safe Food for Canadians Regulation, S.O.R./2018-108 (regarding slaughter). In the United States, see Twenty-Eight Hour Law, 49 U.S.C. § 80502 (1994) (regarding transport); Humane Methods of Slaughter Act, 7 U.S.C. § 1901 (1958) and Humane Slaughter of Livestock Regulations, 9 C.F.R. 313 (1987) (regarding slaughter). For commentary on these regimes, see Vaughan Black, *Traffic Tickets on the Last Ride*, *in* CANADIAN PERSPECTIVES ON ANIMALS AND THE LAW 57, 57–68, 73–79 (Peter Sankoff, Vaughan Black & Katie Sykes eds., 2015); Sophie Gaillard & Peter Sankoff, *Bringing Animal Abusers to Justice Independently: Private Prosecutions and the Enforcement of Canadian Animal Protection Legislation, in* CANADIAN PERSPECTIVES ON ANIMALS AND THE LAW 307, 313–14 (Peter Sankoff, Vaughan Black & Katie Sykes eds., 2015) (arguing that private prosecutions might also be brought under these statutes); Wolfson & Sullivan *supra* note 1, at 207–209.

[67] CAL. PENAL CODE § 597n (West 2010).

[68] 4 R.I. GEN. LAWS ANN. § 4-1-6.1 (West 2012). In addition, there are some legislated protections respecting the tethering and confinement of calves, though this more commonly impacts the related veal industry. *See generally* ANIMAL WELFARE INSTITUTE, *supra* note 64, at 9, 11.

[69] *See* ANIMAL WELFARE INSTITUTE, *supra* note 64, at 2; LESLI BISGOULD, ANIMALS AND THE LAW 57–123 (2011). As discussed above, both jurisdictions include further regulatory oversight once animals have left the farm, during transport and slaughter. *See supra* note 66.

[70] In Canada, criminal law is the exclusive jurisdiction of the federal government. Constitution Act, 1867, 30 & 31 Vict., c 3, § 91(27). The Criminal Code of Canada sets out a number of offences respecting the treatment of animals, including a general prohibition against causing unnecessary pain, suffering or injury to an animal. Criminal Code of Canada, R.S.C. 1985, c C-46, § 445.1(a).

[71] Provincial governments in Canada are authorized to make law in respect of property and civil rights. Constitution Act, 1867, 30 & 31 Vict., c 3, § 92(14). Provincial authority to govern the treatment of animals is generally grounded in this power, as animals are legally classified as property. For a survey and discussion of Canadian provincial anti-cruelty laws, see BISGOULD, *supra* note 69, at 97-123.

these take the form of state-level criminal anti-cruelty laws.[72] These general anti-cruelty statutes are often structured to exempt common agricultural practices from their purview—an exemption that has given industry actors a central role in defining the substance of the governing legal standards.

In Canada, the classic case establishing the exemption of common agricultural practices from criminal cruelty prohibitions is *Pacific Meat*.[73] In that case, the British Columbia County Court was called upon to construe a federal Criminal Code provision making it a criminal offence to "wilfully cause[] or, being the owner, wilfully permit[] to be caused unnecessary pain, suffering or injury to an animal or bird."[74] At issue in that case was whether a method of slaughtering pigs—in which conscious pigs were hoisted by the leg, slammed into a wall and then stuck with a knife—caused pain, suffering or injury that was "unnecessary" and so prohibited by the criminal law.[75] The court held that, while this conduct might constitute criminal cruelty outside the slaughterhouse context, in the present case there was no "unnecessary" suffering given the "necessity of slaughtering hogs to provide food for mankind."[76] Although the Crown adduced evidence of less-painful slaughter methods, the court was not prepared to accept that this made the method at issue "unnecessary."[77] In particular, the court was persuaded by the fact that all other slaughter houses in Canada, and several U.S. slaughterhouses employed this same method.[78]

---

[72] *See* Wolfson & Sullivan, *supra* note 1, at 208–09. In the United States, criminal law is generally determined at the state level, rather than by the federal government.

[73] Regina v. Pacific Meat Co., [1957] B.C.J. No. 98, para. 14 (B.C. Cty. Ct.).

[74] Criminal Code of Canada, 1953-54, c 51, § 387(1)(a). That provision has since been replaced by the identically phrased Criminal Code of Canada, R.S.C. 1985, c C-46, § 445.1(a).

[75] *See Pacific Meat*, [1957] B.C.J. at para. 1–4.

[76] *Id.* at para. 14.

[77] *Id*.

[78] *Id* at para. 10. The court, on the evidence, was not prepared to find that these alternative methods were, in fact, less painful. *Id.* Nonetheless, the case has come to stand for the proposition that courts ought to defer to common industry practice in defining the scope of the criminal prohibition at issue. *See* Sykes, *supra* note 26, at 33, 38 (explaining that "an interpretation of the animal cruelty offence has . . . become entrenched whereby almost anything done to animals as part of the business of producing animal food is exempt from the *Code*'s application," though disputing the doctrinal basis for this interpretation); *see* BISGOULD, *supra* note 69, at 71 (explaining that prevailing interpretations of the Criminal Code include a "*de facto* exemption" for farmed animals).

Since *Pacific Meat*, the Criminal Code has not generally been applied in prosecutions of agricultural operations.[79] Instead, prosecutions for cruelty tend to proceed under provincial quasi-criminal anti-cruelty statutes.[80] Even with respect to proceedings brought under these provincial statutes, however, the *Pacific Meat* protection of common industry practice (sometimes referred to as the "implicit farming exemption"[81]) has continued to operate. In many cases, such exemptions are reflected in the text of provincial anti-cruelty statutes.[82] For example, the Ontario Society for the Prevention of Cruelty to Animals Act establishes that "[n]o person shall cause an animal to be in distress," but then goes on to specify that this prohibition does not apply to "an activity carried out in accordance with reasonable and generally accepted practices of agricultural animal care, management or husbandry."[83] Similar exemptions for common agricultural practices exist in Alberta,[84]

---

[79] *See* Maneesha Deckha, *Initiating a Non-Anthropocentric Jurisprudence: The Rule of Law and Animal Vulnerability under a Property Paradigm*, 50 ALBERTA L. REV. 783, 806 n. 152 (2013); Sykes, *supra* note 26, at 34–35, 40–41 n.36, 49 (explaining that the Criminal Code provision is "almost invariably" applied in cases where "pet dogs and cats" are victims of "acts of pointless sadism or spite," with the exceptional application of the provision to farmed animals occurring only in respect of farms that have "stopped functioning as a farm" due to financial ruin); BISGOULD, *supra* note 69, at 74 (reporting that the "criminal law has not generally been invoked in the context of the actual practices by which animals are used," including in agriculture, and that "much deference is given to those in industry to know best how to handle their animal property"); Gaillard & Sankoff, *supra* note 66, at 318 (discussing the reluctance of prosecutors to bring criminal charges against agricultural operations).

[80] Gaillard & Sankoff, *supra* note 66, at 318–319 (explaining that "public prosecutors have shown an unwillingness" to lay charges under federal criminal anti-cruelty laws, preferring to proceed under provincial quasi-criminal offences "even in cases of extreme mistreatment"); Peter Sankoff, *Canada's Experiment with Industry Self-Regulation in Agriculture: Radical Innovation or Means of Insulation*, 5 CANADIAN J. COMPARATIVE & CONTEMPORARY L. 1, 10 n.19 (2019) (observing that, following an undercover investigation of a dairy in Chilliwack, British Columbia, "[n]othwithstanding what seemed like a clear case of criminal level abuse, the workers were only charged and convicted of provincial offences").

[81] Sykes, *supra* note 26, at 33.

[82] *See* Hughes and Meyer, *supra* note 26, at 63.

[83] Ontario Society for the Prevention of Cruelty to Animals Act, R.S.O. 1990, c O.36, §§ 11.2(1), 11.2(6)(c). In theory, the term "reasonable" could be interpreted to carry a meaning independent of "generally accepted," but in practice courts have construed these terms together as providing a blanket exemption for common agricultural practices. *See* Sankoff, *supra* note 80, at 13–14.

[84] Animal Protection Act, R.S.A. 2000, c A-41, §§ 2(1)(1.1), 2(1)(2) (providing that "[n]o person shall cause an animal to be in distress," then specifying that "[t]his section does not apply if the distress results from an activity carried on in accordance with. . . reasonable and generally accepted practices of animal care, management, husbandry . . . or slaughter").

British Columbia,[85] Nova Scotia,[86] and Quebec.[87] Consequently, the aggregate choices of individual producers become part of the law—defining through common use which practices are immune from prosecution regardless of how harmful they may be to animals.

In the United States, a similar picture emerges: general anti-cruelty statutes have been drafted or construed to exempt common agricultural practices. As a result, the collective private choices of individual producers effectively become legal standards. In their critique of farmed animal protection in the United States, David Wolfson and Mariann Sullivan describe this dynamic as it arose in the case of *Commonwealth v. Barnes*:[88]

> In Pennsylvania, individuals accused of starving horses argued that the practice of denying nutrition to horses who were no longer wanted and were to be sold for meat was a "normal agricultural operation" . . . . Such horses, the defendants argued, are commonly denied veterinary care and sufficient nutrition, and are placed in so-called killer pens . . . . While the court did convict the defendants of cruelty, it decided to do so only because the defendants failed to offer sufficient testimony as to the pervasiveness of the practice, and no testimony [that they were in fact raising the horses for meat].
>
> The case highlights the ramifications of the exclusion of customary farming practices from criminal anticruelty statutes . . . . The defendants'

[85] Prevention of Cruelty to Animals Act, R.S.B.C. 1996, c 372, § 24.02(c) (providing that "[a] person must not be convicted of an offence under this Act in relation to an animal in distress if . . . the distress results from an activity that is carried out in accordance with reasonable and generally accepted practices of animal management . . . ."). Note that British Columbia has additionally incorporated the NFACC Codes into its legislative scheme. *See* Animal Care Codes of Practice Regulation, B.C. Reg. 34/2019, § 4; *see also infra* note 142 and accompanying text.

[86] Animal Protection Act, S.N.S. 2008, c 33, §§ 21(1), 21(4) (establishing that "[n]o person shall cause an animal to be in distress," then specifying that this prohibition does not apply "if the distress, pain suffering or injury results from an activity carried on . . . in accordance with reasonable and generally accepted practices of animal management, husbandry or slaughter").

[87] Animal Welfare and Safety Act, C.Q.L.R., c B-3.1, §§ 6, 7 (establishing that "[a] person may not, by an act or omission, cause an animal to be in distress," then stating that this prohibition does not apply in respect of "agricultural activities . . . carried on in accordance with generally recognized rules").

[88] 629 A.2d 123 (Pa. Super. Ct. 1993).

> problem was not that they starved horses, but that they could not prove that enough people were doing the same thing.[89]

Since the time of Wolfson and Sullivan's writing, the practice of codifying explicit customary agricultural practice exemptions has only expanded in the United States.[90] As a result, primary legislation, despite its formal anchoring in public law, places significant authority to set legal standards in the hands of private actors.

B. Regulation and Delegated Legislation

Regulations, or "delegated legislation," represent another public law tool governing the lives of farmed animals. Regulations arise where primary legislation has expressly delegated to an agency or public body the authority to set precise regulatory standards. The formal role of public law standards and values remains relatively clear in cases of regulation or delegated legislation. Under such arrangements, public bodies are bound by enabling legislation, which is in turn passed through democratic means. Although the shape and content of public engagement respecting rule-making and standard-setting differs significantly between Canada and the United States, both jurisdictions include some basic procedural requirements that are followed in the creation of regulations, and some minimal opportunities for judicial and appellate review through which citizens might hold public actors accountable to their statutory grants of authority.[91]

As is the case with primary legislation in both Canada and the United States, regulatory prohibitions respecting specific farmed animal use practices are extremely rare. In Canada, provincial farmed animal protection regulations are either highly general in form or explicitly import standards set by non-governmental entities

---

[89] Wolfson & Sullivan, *supra* note 1, at 214–215.

[90] *See* JUSTIN MARCEAU, BEYOND CAGES: ANIMAL LAW AND CRIMINAL PUNISHMENT 98–110 (2019) (surveying common agricultural practice exemptions in the United States and explaining that, "[i]f a practice becomes generally accepted or customary, no matter how cruel, it cannot, as a matter of law, serve as the basis for an animal cruelty prosecution in forty states").

[91] For a discussion of regulatory oversight in Canada, see Linda Reid, *Oversight of Regulations by Parliamentarians*, 33 CANADIAN PARLIAMENTARY REV. 7, 7–10 (2010); Lorne Neudorf, *Rule by Regulation: Revitalizing Parliament's Supervisory Role in the Making of Subordinate Legislation*, 39 CANADIAN PARLIAMENTARY REV. 29, 29–31 (2016). For a discussion of 'rulemaking' in U.S. administrative law, including a discussion of differences from select parliamentary systems, see PETER CANE, CONTROLLING ADMINISTRATIVE POWER: AN HISTORICAL COMPARISON ch. 8 (2016).

(as discussed in the following subsection). In the United States, however, a small minority of states have delegated law-making authority to a public body which has in turn established detailed regulations respecting specific agricultural practices.[92] These rare instances of detailed regulatory protection of animal interests arguably represent the strongest importation of enforceable public law values into farmed animal protection regimes in Canada and the United States.

New Jersey's experience with detailed regulation of farmed animal protection provides a useful example. In 1996, the New Jersey Legislature amended its anti-cruelty statute to delegate standard-setting authority to the New Jersey Department of Agriculture (NJDA) and the state Board of Agriculture.[93] In particular, the amended statute prohibited "cruelty" toward animals while also enabling the NJDA and Board of Agriculture to establish "safe harbor" provisions that would insulate certain practices from legal action under the statute and its regulations.[94] In that context, the NJDA attempted to create, *inter alia*, a broad "safe harbor" exemption for common agricultural practices and a narrower "safe harbor" for tail docking.[95] Because the NJDA was bound by a substantive statutory mandate, to which it was accountable as a matter of public law, the regulatory process and resulting standards reflected public law values.

Consider the impact of public law values on the common agricultural practices "safe harbor."[96] First, a relatively transparent

---

[92] *See* ANIMAL WELFARE INSTITUTE, *supra* note 64, at 3, 5, 6, 14 (discussing delegated authority to set binding standards for the protection of farmed animals in New Jersey, Alaska, Arizona and Ohio).

[93] N.J. STAT. ANN. § 4:22-16.1(a) (1996) ("The State Board of Agriculture and the Department of Agriculture, in consultation with the New Jersey Agricultural Experiment Station and within six months of the date of enactment of this act, shall develop and adopt, pursuant to the 'Administrative Procedure Act,' P.L.1968, c.410 (C. 52:14B-1 et seq.): (1) standards for the humane raising, keeping, care, treatment, marketing, and sale of domestic livestock; and (2) rules and regulations governing the enforcement of those standards.").

[94] N.J. Soc'y for Prevention of Cruelty to Animals v. N.J. Dep't of Agric., 955 A.2d 886, 900 (N.J. 2008); *see* N.J. STAT. ANN. § 4:22-16.1(b) (1996) ("[T]here shall exist a presumption that the raising, keeping, care, treatment, marketing, and sale of domestic livestock in accordance with the standards developed and adopted therefor pursuant to subsection a. of this section shall not constitute a violation of any provision of this title involving alleged cruelty to, or inhumane care or treatment of, domestic livestock.").

[95] *See* N.J. Soc'y for Prevention of Cruelty to Animals v. N.J. Dep't of Agric., 955 A.2d 886, 903–909 (N.J. 2008).

[96] *Id.*

and accountable process was followed in the development and adoption of regulatory standards. Second, the standards themselves were subject to judicial review, creating a further layer of accountability and transparency, and introducing the courts as relatively impartial adjudicators. Third, the courts' ultimate decision respecting the safe harbor constrained the role of private producers, in part out of concern that producers' economic incentives made them ill-suited to impartial standard-setting respecting animal care.

First, the process by which regulatory standards were adopted was relatively transparent and accountable, resulting in a final regulation that was somewhat more protective of animal interests. The regulations as originally proposed had defined exempted "routine husbandry practices" broadly, as "techniques commonly employed and accepted as necessary or beneficial to raise, keep, care, treat, market, and transport livestock."[97] This would have had the effect of conferring substantive standard-setting authority on producers, essentially re-inscribing the common agricultural practice exemption found in the anti-cruelty provisions discussed in the previous subsection. In accordance with the New Jersey Administrative Procedures Act, however, this initial proposal was subject to a public comment period, in which over 6,500 written comments were received and various witnesses appeared at a public hearing.[98] Following extensive criticism of the proposed definition of "routine husbandry practices" as both vague and inclusive of inhumane practices,[99] the definition of "routine husbandry practices" was redefined in the promulgated regulation as "techniques commonly taught by veterinary schools, land grant colleges, and agricultural extension agents."[100] This public process therefore resulted in a regulatory definition of prohibited conduct that was a degree removed from a direct conferral of authority on the collective choices of individual producers. The process itself, moreover, was relatively transparent and accountable to the public.

Second, the standards adopted by the regulators were subject to judicial review, further demonstrating and bolstering the presence of public law values in the New Jersey scheme. The conferral of authority on "veterinary schools, land grant colleges, and agricultural extension agents" to define acceptable "routine husbandry practices," although narrower than the initially proposed definition,

---

[97] 35 N.J. Reg. 1877 (May 5, 2003).
[98] 36 N.J. Reg. 2586(a) (June 7, 2004).
[99] *Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 905.
[100] *Id.* at 904.

was nonetheless challenged in judicial review proceedings.[101] The petitioners, including several animal advocacy groups, argued that the safe harbor provisions for routine husbandry practices impermissibly delegated authority to private parties (in particular, veterinary schools, land grant colleges and agricultural extension agents), despite the legislative mandate that the NJDA and Board of Agriculture were to determine the content of the "humane" practices that would be authorized by the regulations.[102] In arguing that the regulations impermissibly delegated standard-setting authority to these private parties, the petitioners noted that there was no evidence that the NJDA scrutinized these entities, individually or as a whole, for example through independent assessment of their texts, curricula, course offerings or personnel.[103] The NJDA, it was argued, thus had no evidentiary basis for assuming that the practices taught by these entities were "humane," as required by the enabling legislation, and in accordance with the NJDA's own regulatory definition of "humane" as "marked by compassion, sympathy, and consideration for the welfare of animals."[104]

The New Jersey Supreme Court agreed.[105] The court described the regulations as "plac[ing] into the hands of this wide-ranging and ill-defined group of presumed experts the power to determine what is humane."[106] The agency's failure to conduct any substantive inquiry into the practices endorsed by these entities left the NJDA "without any basis in the record" for their apparent

---

[101] *Id.* at 903–904. The legal challenge took the form of an "appeal" to the Appellate Division. *Id.* at 888. Appeals to the Appellate division may be made as of right "to review final decisions or actions of any state administrative agency or officer, and to review the validity of any rule promulgated by such agency or officer" with specified exceptions, none of which applied in this case. *See* N.J. CT. R. 2:2-3(a)(2). An earlier appeal, launched prior to the promulgation of the amended regulations, had been dismissed without prejudice to allow the parties to pursue the matter after the regulations had been promulgated. *See Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 917 n.6.

[102] *Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 904.

[103] *Id.* at 904–05. The NJDA countered that it had in fact reviewed some such curricular materials, though the New Jersey Supreme Court concluded that this review did not take place until after the regulations had been promulgated and litigation was underway. *Id*. at 905–06.

[104] N.J. ADMIN. CODE § 2:8-1.2(a) (2004); *see Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 904.

[105] *Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 904–07. The petitioners were initially unsuccessful before the New Jersey Appellate Division. N.J. Soc'y for Prevention of Cruelty to Animals v. N.J. Dep't of Agric., No. A-6319-03T1, 2007 WL 486764, at *20 (N.J. Super. Ct. App. Div. Feb. 16, 2007).

[106] *Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 905.

presumption that the practices endorsed by these entities were in fact humane.[107]

The New Jersey Supreme Court emphasized two distinct but interrelated flaws in the routine practices safe harbor exemptions: first, that they failed to follow the legislature's directive that the agency authorize only "humane" practices; and, second, that they amounted to an impermissible delegation of statutory authority.[108] The court observed that many other jurisdictions have adopted welfare laws that exempt routine agricultural practices,[109] and that the New Jersey legislature explicitly chose a different "specific goal," namely to exempt "humane," rather than merely "routine" practices.[110] In the court's view, "[t]o suggest, as the Department's 'routine husbandry practices' definition implies, that the Legislature meant 'routine' when it said 'humane' would 'abuse the interpretive process and . . . frustrate the announced will of the people.'"[111] In other words, the public law value of accountability was engaged and, because of the regulatory structure in place, enforceable through judicial review.

Third, the public law value of impartiality was relevant to the New Jersey Supreme Court's assessment. The court was particularly troubled by the fact that the "impermissible subdelegation" in this instance transferred power to "some entities that might also be described as private interests."[112] Dr. Bernard E. Rollin, an expert in animal welfare, had filed an amicus brief with the court explaining that the private entities in question in fact endorsed practices on the basis of their economic productivity, rather than on the basis of compassion or concern for animal well-being.[113] The New Jersey Supreme Court concluded that "there is no evidence that [the NJDA] considered the intersection between the interests of those who attended these institutions or are taught by them and those

---

[107] *Id.*
[108] *Id.* at 906–07.
[109] *Id.*; *see, e.g.*, 18 PA. CONS. STAT. ANN. § 5511(c)(3) (repealed 2015); COLO. REV. STAT. § 18-9-201.5(1). For an overview of customary agricultural practice exemptions in the United States, see Wolfson & Sullivan, *supra* note 1, at 212–16.
[110] *Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 906.
[111] *Id.* (quoting Serv. Armament Co. v. Hyland, 362 A.2d 13, 17 (N.J. 1976)).
[112] *Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 906. The New Jersey Supreme Court relied on the established principle that agencies may not subdelegate their statutory powers unless the legislature intends that they may do so. *Id.* The court also relied on caselaw demonstrating particular skepticism of unauthorized subdelegations to interested parties. *Id*.
[113] *Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 896–97, 904.

who are concerned with the welfare of animals."[114] The court remarked that it would have been possible for the NJDA to incorporate external standards through more deliberate reference to specific institutions that the agency determined to be reliable arbiters of "humane" treatment.[115] As it stood though, the agency "accepted, without analysis, the practices that are taught in every veterinary school, land grant college, and agricultural extension agent not only in this state, but in the rest of the country and, it would appear, wherever they might be found around the globe . . . [although] nothing in the record suggests that all of them will meet the standard set by our Legislature."[116]

In light of this broad, unauthorized, and unaccountable delegation of authority, the court struck down the safe harbor exemptions for routine husbandry practices as representing "arbitrary and capricious" agency action.[117] Following this ruling, the agency passed a revised regulation, prescribing an open list of specific "science-based" sources and standards, which "may be found to be humane."[118] By specifically identifying particular "science-based" sources, the agency narrowed its reliance on private parties as arbiters of "humane" conduct, and assigned this role to actors defined by their supposed impartiality.[119] Moreover, these actors' assessments of "humane" practices no longer gave rise to definite "safe harbors," but were instead merely persuasive (i.e. "may

---

[114] *Id.* at 906.
[115] *Id.* at 906–07.
[116] *Id.* at 907.
[117] *Id.*
[118] N.J. ADMIN. CODE § 2:8-1.1(b) (2012) (establishing a presumption that "the raising, keeping, care, treatment, marketing and sale of domestic livestock" does not constitute "cruelty" or "inhumane care" where it includes practices that "may be found to be humane, based upon techniques for necessary livestock management and producers included in the following science-based sources or other sources, which may be shown to incorporate similar science-based standards," including the Handbook of Livestock Management, (Battaglia, 4th ed., 2007), and particular publications of the Federation of Animal Science Societies, the American Veterinary Medical Association, the American Association of Equine Practitioners, the Rutgers School of Environmental and Biological Sciences, and the New Jersey Agricultural Experiment Station.
[119] The presumed independence and impartiality of "science-based" sources is contested. *See generally* SHEILA JASANOFF, SCIENCE AT THE BAR: LAW, SCIENCE, AND TECHNOLOGY IN AMERICA (1995) (arguing that scientific and legal knowledge are interconnected and co-constituting). Nonetheless, this appeal to "science" undeniably represents an embrace of impartiality as a public law value, particularly in comparison to the prior scheme's delegation of authority to parties with more direct financial self-interest in lax regulatory standards. *See supra* notes 112–113 and accompanying text.

be found to be humane"); the ultimate decision as to whether a practice qualified as "humane" was now more clearly in the hands of public authorities.

In addition to challenging the NJDA's routine agricultural practice exemption, the petitioners also challenged a number of more particular safe harbor exemptions, including the "tail docking" of dairy cows.[120] The petitioners argued that the practice of tail docking was not "humane" as required by the governing statute, and so its inclusion within a safe harbor was beyond the scope of the regulator's authority.[121] The NJDA defended its decision on the basis that it had responded appropriately to concerns about animal pain raised in public comment and that there was some (albeit conflicting) evidence to support the view that tail docking might improve milk quality and udder health and reduce the spread of disease.[122] The NJDA further noted that it does in fact "discourage[]" tail docking, and intends to monitor the practice with the possibility of banning it in the future if it later concludes the practice to be "inhumane."[123] The NJDA was thus required in the course of judicial review proceedings to account for both its decision-making process and its ultimate choice as a regulator. Such transparency and accountability exceed that required of producers empowered to set standards through the common agricultural practice exemptions to anti-cruelty legislation, as discussed in the previous subsection.

Ultimately, the New Jersey Supreme Court rejected the NJDA's arguments. The reviewing court recognized the "considerable expertise that the [NJDA] brought to bear in reaching its decision to include tail docking within its list of permitted practices," and the very high standard of review that applies to agency decisions of this kind.[124] Nonetheless, the court concluded that the decision to list routine tail docking as a permissible (i.e. "humane") practice was "both arbitrary and capricious," and so outside the scope of the regulator's authority.[125] The court was swayed not only by the evidence of the pain and suffering caused by the practice, but also by the fact that both the American Veterinary Medical Association and the Canadian Veterinary Medical Association have "specifically disparaged" the practice "as having

---

[120] *Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 908.
[121] *Id.*
[122] *Id.*
[123] *Id.* at 908–09.
[124] *Id.*
[125] *Id.*

no benefit and as leading to distress."[126] The ambiguity of the evidence of any benefit associated with routine tail docking, and the fact that the practice was "discourage[d]" by the NJDA, supported the court's finding that shielding tail docking from penalty was contrary to the statutory mandate.[127] The statutory directive that the agency must define "humane" practices required that decisions respecting tail docking not be left to the "individual conscience of each dairy farmer."[128] Further to this judicial ruling, the governing regulation was modified to provide that tail docking of cattle be permitted only in individual cases (i.e. not as a routine matter), and "only upon determination by a veterinarian for individual animals."[129] Again, we see that the regulator was required to be transparent about its reasons for setting particular standards, and was accountable to an impartial judiciary. This public law oversight, moreover, substantively elevated the governing standards for the care of dairy cattle.

New Jersey's experience of regulation and review is highly unusual in the context of farmed animal protection in Canada and the United States, representing a relatively remarkable level of protection for public law values. It is not my intention to suggest that dairy cows in New Jersey have good lives, or that the legal regime governing producers in that state is acceptable. It is important to emphasize that dairy industries across Canadian and U.S. jurisdictions are characterized by extensive social and physical control of animals.[130] The NJDA and reviewing court were each engaged in welfare balancing wherein considerable attention was given to whether impugned practices were in fact useful to dairy production.[131] Tail docking was ultimately impermissible as a routine practice because there was no persuasive evidence that it benefited dairying.[132] Harmful practices that are perceived as necessary to industrial dairying—most notably calf separation—are not disrupted or even threatened by the New Jersey scheme.[133] While public law values are necessary for effective farmed animal

---

[126] *Id.*
[127] *Id.*
[128] *Id.*
[129] N.J. ADMIN. CODE § 2:8-2.6(f) (2012); *see* ANIMAL WELFARE INSTITUTE, *supra* note 64, at 3.
[130] *See supra* Part II.
[131] *See supra* notes 126-127 and accompanying text.
[132] *See supra* notes 126-127 and accompanying text.
[133] For a discussion of calf separation, see *supra* notes 19–20 and accompanying text.

protection, they are certainly not sufficient, especially absent substantial democratic commitment to animal interests.[134]

Nonetheless, the presence of public law values—impartiality, transparency and accountability—are remarkable in this scheme relative to other forms of farmed animal protection across Canada and the United States. Concerned citizens in New Jersey believed that a regulatory body was failing to adhere to its statutory mandate in defining "humane" practices. These citizens were able to file suit, bring evidence, and convince a reviewing court that it was "arbitrary and capricious" to conclude that routine tail docking was "humane," and that it was similarly "arbitrary and capricious" to assume that the practices endorsed by "veterinary schools, land grant colleges, and agricultural extension agents" ought to be trusted as necessarily "humane."[135] The litigation and ensuing judicial reasons engaged with themes of bias, transparency, adequacy of reasons, and substantive conformity with legal requirements. In short, the governing regime was legible as an operation of public power, and, as such, public law values were understood by all involved to be both relevant and operative.

C. Private or Quasi-Private Standards

Canada's National Farm Animal Care Council (NFACC) represents a step further along the rough public-to-private spectrum of farmed animal protection tools: formal but private (or quasi-private) standard-setting bodies. Such bodies may be recognized through statute, regulation or judicial assessment as setting persuasive or authoritative standards for animal care. But these bodies themselves are not legally bound to public law values. As the NFACC case study demonstrates, such entities may choose to adopt processes that have elements of transparency, accountability or impartiality, but these choices are not subject to public law enforcement.

NFACC is wholly funded by government, but not created or constrained by statute or regulations.[136] NFACC is comprised of

---

[134] *See infra* Part V. *See also* Eisen, *supra* note 49 (arguing that democratic engagement is necessary to enforcing and strengthening animal protection standards).

[135] *See Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 903–07.

[136] *See* Sankoff, *supra* note 80, at 17 ("From the start, the endeavour has been funded by Agriculture Canada, a federal agency, though the government has no voting seat at the table, and no official role in the direction of the coalition. It funds the project and has observer status – nothing more. Other provincial

commodity producers (including Dairy Farmers of Canada, Dairy Processors Association of Canada, and Dairy Farmers of Ontario), animal protection groups, the Canadian Veterinary Medical Association, and other interested parties, including restaurants and retailers, and manufacturers of animal feed.[137] The primary function of NFACC is the development of "Codes of Practice" (Codes) setting out guidelines for the care of farmed animals.[138]

Although NFACC Codes use some language suggestive of legal compulsion (i.e. "standards" and "requirements"),[139] the Codes have no independent legal force.[140] Their juridical role varies from province to province depending on the extent, if any, of legislative incorporation. In some provinces, where no legislative or regulatory reference is made to the Codes, they may be relied upon by courts as evidence of the "reasonable and generally accepted" practices that are routinely exempted from the ordinary operation of anti-cruelty statutes.[141] In other provinces, the Codes are referentially incorporated to provide "safe harbors," such that compliance with the Codes constitutes an absolute defense to a cruelty prosecution.[142] The Codes are not generally incorporated as establishing mandatory regulatory standards, although such incorporation is certainly possible.[143]

---

agriculture ministries have also been involved, though government agencies are not permitted to vote on NFACC matters.").

[137] *Id.* at 16–17.

[138] *See id.* at 18.

[139] *Id.* at 18, 32–33, 48–49; *see also Implementing Codes of Practice*, NFACC.CA (2013), http://www.nfacc.ca/resources/assessment/animal_care_assessment_framework.pdf.

[140] Sankoff, *supra* note 80, at 18–19.

[141] *See* Sankoff, *supra* note 84, at 35, 37 n.122 (discussing *R. v. Dondale*, 2017 SKPC 58 as a case in which "failing to follow the code of practice, in conjunction with other evidence, established that the animals were in distress for the purposes of the Act"); *id.* at 35 n.118 (discussing *R. v. Kowalik*, 2010 SKPC 58 and *R. v. Tomalin*, 2011 NBPC 29 as cases that demonstrate that courts are strongly influenced by NFACC Codes). *But see id.* at 35 n.118 (discussing *R. v. Van Dongen*, 2004 BCPC 479 and *R. v. Hurley*, 2017 ONCJ 263 as emphasizing NFACC compliance is neither mandatory nor determinative of compliance with the law).

[142] *See* Sankoff, *supra* note 80, at 19; *see, e.g.*, Animal Care Codes of Practice Regulation, B.C. Reg. 34/2019, § 4 (establishing that "the requirements and recommendations contained in a [listed] code of practice [including the 2009 NFACC Code of Practice for the Care and Handling of Dairy Cattle] are recognized as reasonable and generally accepted" for the purposes of the statutory customary agricultural practices exemption).

[143] *See* Sankoff, *supra* note 80, at 20. For examples of mandatory incorporation of Codes, see Animal Protection Standards Regulations, Nfld. Reg. 36/12, §§ 2(2) &

The NFACC "Code development process" sets out a number of procedural and substantive requirements for Codes.[144] These include, for example, that Codes "should meet or exceed [World Organisation for Animal Health] standards," should be based on "the best available science and other acceptable knowledge sources," and, wherever possible, should include reasons for standards imposed.[145] The Code process is initiated by commodity groups themselves, for example the Dairy Farmers of Canada.[146] An expert scientific report is first prepared, setting out major animal welfare concerns in a given industry.[147] A draft Code is then developed by a Code Committee with a specified composition, and made available for a 60-day public consultation period.[148] If that process is "appropriately followed," the NFACC Executive "will support the Code," and a final Code will be issued.[149] There is, however, no mechanism by which to hold the NFACC process accountable to these requirements, through judicial review or otherwise.[150]

NFACC's treatment of calf separation and tail docking demonstrate the limits of this regulatory model. First, the Code's approach to tail docking illustrates the weakness of Code "requirements." Second, the Code's approach to calf separation demonstrates the strength of producer interests in defining Codes that

---

5 (establishing that a "code or standard adopted in these regulations may be considered a requirement" where the code contains mandatory language, and "adopt[ing]" aspects of the NFACC *Code of Practice for the Care and Handling of Dairy Cattle*); Animal Welfare Regulations, P.E.I. Reg. EC194/17, § 26, sched. B (requiring out that "[e]very owner of a commercial animal shall comply with the codes of practice listed in Schedule B," including the *Code of Practice for the Care and Handling of Dairy Cattle*). NFACC specifies that Code requirements "may be enforceable under federal and provincial legislation" and that producers "may be compelled by industry associations to undertake corrective measures or risk a loss of market options." *Codes of Practice for the Care and Handling of Farm Animals*, NFACC.CA (2020), https://www.nfacc.ca/code-development-process. Such possible incorporation into legislative or voluntary standards are, however, not intrinsic to the Codes themselves. *See* Sankoff, *supra* note 84, at 23.

[144] *Development Process for Codes of Practice for the Care and Handling of Farm Animals*, NFACC.CA (2020), https://www.nfacc.ca/code-development-process [hereinafter *Development Process for Codes*]; *see also* Sankoff, *supra* note 80, at 22–23.

[145] *Development Process for Codes*, *supra* note 144.

[146] *Id*.

[147] *Id*.

[148] *Id*.

[149] *Id*.

[150] *See* Sankoff, *supra* note 80 at 4–5 (observing that NFACC is "a major player on the Canadian law-making scene" despite "an organizational framework that lacks many of the traditional checks and balances of a legislative body, and the fact that what the group produces is not actually law, in the strict sense of the word").

prioritize industry imperatives over animal well-being—and the absence of protection for public law values in spite of this predictable outcome.

The Dairy Code of Practice (2009) takes preambular note of the lack of evidence supporting tail docking as a hygiene measure, and the research demonstrating that "[d]ocked heifers show signs of chronic pain," among other possible complications.[151] The Code sets out as a "requirement" that "[d]airy cattle must not be tail docked unless medically necessary,"[152] and sets out a number of alternative "recommended best practices," including "switch trimming" (i.e. trimming the hair on cows' tails) and maintenance of a clean housing environment.[153] As noted above, however, the language of "requirement" should not be taken to define a mandatory legal standard in the absence of formal incorporation into a provincial regulation.[154] The Code's use of the word "requirement" carries no independent legal force.[155]

The Dairy Code of Practice further acknowledges calf separation as a source of "stress," but does not provide for any "requirements" in relation to this practice.[156] The Code's preambular statement on "Calves" explains:

> Generally, dairy calves are separated from their mothers shortly after birth. There are benefits to both calf and dam by allowing the pair to bond. Allowing the calf to spend a longer period of time with the dam may result in lowered morbidity and mortality in the calf; however, separation stress to both the cow and calf will be higher the longer they are together. Cow health is generally improved by allowing the calf to suckle (related to oxytocin effects on the post partum uterus). Whether the calf is removed immediately or allowed to suckle the cow, it is important to ensure that the calf receives adequate colostrum.[157]

---

[151] *Code of Practice for the Handling of Dairy Cattle*, NFACC.CA § 4.6 (2009), https://www.nfacc.ca/codes-of-practice/dairy-cattle/code#Section4 [hereinafter *Dairy Code of Practice*].
[152] *Id.*
[153] *Id.*
[154] *See supra* notes 139–143 and accompanying text.
[155] *See supra* notes 139–143 and accompanying text.
[156] *Dairy Code of Practice*, *supra* note 151, at § 3.8.
[157] *Id.* (citations omitted).

The "recommended" practices that follow include monitoring the calf for signs of illness during its early days, and the recommendation that farmers "reduce separation distress by either removing the calf shortly after birth or by using a two-step weaning process."[158]

The notional (but not generally legal) force that "required" practices may have do not apply to such recommended practices.[159] In fact two-step weaning processes remain rare, with most dairy calves separated immediately from their mothers despite the associated "stress."[160] The sole social "requirement" set out for calves is that they "have visual contact with other calves."[161] It is further recommended that their "motivation to suck" be satisfied with an artificial teat.[162] The acknowledged scientific consensus on the stress of separation, and the lack of associated "requirements" (even in the diminished form represented by the Code), reflects the interests of producers and production imperatives in the Code process.

However, unlike under the New Jersey regime, the NFACC delegation of authority to producers is not legible as a public law concern amenable to judicial oversight. NFACC, although funded entirely by government, and created for the purpose of setting standards contemplated to have legal effect, thus represents a step away from the public law values evident in the New Jersey scheme. Because NFACC does not operate pursuant to statutory authority, it cannot be made accountable as the NJDA was in respect of its decision to allow routine tail docking. Arguments that NFACC is biased, lacks transparency, or makes unreasonable decisions are not cognizable as justiciable questions of public law. Formally, NFACC is merely a private body, making private choices, unaccountable to the mechanisms that constrain public power. This is true despite the fact that NFACC is created to, and does in fact, generate Canada's only detailed articulation of standards for legally permissible treatment of farmed animals.[163]

There is no legal basis on which to demand adherence to public law values—such as transparency, accountability and impartiality—in NFACC standard-setting. These values do,

---

[158] *Id.*
[159] *See supra* notes 139–143 and accompanying text.
[160] Emillie M. Bassi, Ellen Goddard & John R. Parkins, *"That's the Way We've Always Done It": A Social Practice Analysis of Farm Animal Welfare in Alberta*, 32 J. AGRIC. & ENVTL. ETHICS 335, 346–47 (2019).
[161] *Dairy Code of Practice*, *supra* note 151, at § 1.1.1.
[162] *See id.* at § 2.2.1.
[163] Sankoff, *supra* note 80, at 4–5.

however, arguably remain operative in an attenuated form. Because NFACC is designed to have many of the trappings of a conventional administrative body, NFACC offers some assurances of transparency, structured decision-making, and reason-giving—albeit assurances that are not subject to judicial or administrative supervision. NFACC, for example, promises to follow a specific process for developing its Codes,[164] binds itself to consider some kinds of evidence,[165] includes requirements for the composition of Code Committees,[166] commits to the regular review of Codes,[167] and publishes draft Codes for comment before ultimately making its final Codes transparently available to the public.[168] The fact that judicial review is unavailable, however, limits the confidence that might reasonably be placed in these voluntary processes and commitments.

D. Private Choices of Individual Actors

In the absence of express legal requirements to the contrary (which, as we have seen, are rare), individual producers may decide to dock the tails of cattle on their farms, or separate calves from their mothers, or otherwise engage in common agricultural practices despite their harm to dairy animals.[169] At first blush, these may appear to be purely private choices. In legal terms, we might think of these as producers' private decisions as to how to dispose of their own property. But, as we have seen, even these purest of private actions carry a law-making function in the context of animal protection as it is structured in most jurisdictions. This is because, as discussed above, almost every jurisdiction has incorporated "customary agricultural practices" as the governing legal standard for defining exemptions to criminal and quasi-criminal anti-cruelty laws—including in jurisdictions where those laws are the only ones governing the treatment of animals on farms.[170] In most jurisdictions, therefore, dairy producers' private, profit-seeking decisions carry a double valence for the lives of farmed animals. These private producer choices not only shape the experiences of the animals they own themselves, but they also contribute to setting the

---

[164] *Development Process for Codes*, *supra* note 144.
[165] *Id.*
[166] *Id.*
[167] *Id.*; *see also* Sankoff, *supra* note 80, at 28 (arguing that this establishment of periodic review enhances public deliberation on the legal treatment of farmed animals).
[168] *Development Process for Codes*, *supra* note 144.
[169] *See supra* Part II for a review of harmful dairy industry practices.
[170] *See* Wolfson & Sullivan, *supra* note 1, at 212–216; *supra* notes 64–90 and accompanying text.

legal standards that govern the treatment of farmed animals more generally.

Because this form of standard-setting power is so diffuse and indirect, the force of public law values is negligible. There is no expectation that individual dairy producers will be transparent with respect to how they treat their herds, let alone how they arrive at decisions respecting animal care. In fact, across jurisdictions, the proliferation of "ag gag" laws affirmatively protect producers' ability to shield their operations from public scrutiny.[171] There is further no expectation that they will be impartial when making choices respecting animal care. Producers are not bound, even notionally, to any public obligation to weigh competing values in setting standards for animal care. They are, instead, legally authorized and expected to maximize their own interests in dairy productivity, with their resulting choices elevated to the level of *de facto* legal standards. Finally, with no public obligations to impartiality or transparency, there are no substantive commitments to which they might be made accountable, and no mechanism for public law accountability.

E. Dairy Cow Protection and Public Law Values

The foregoing survey elaborates the various forms of legal oversight engaged by Canadian and U.S. jurisdictions to protect the interests of dairy cows. Although organized around the formality of lawmaking authority involved (beginning with legislation and ending in practice or custom), this survey has demonstrated that, in reality, there are significant interactions and overlaps between these forms of governance. These regulatory environments represent, in Jody Freeman's terms, case studies of "regulatory regimes," in which the classical administrative law distinction between "public" and "private" seems to blur, with private actors directly or indirectly engaged in public or quasi-public functions.[172] In particular, we have seen that, across jurisdictions, the aggregate choices of individual agricultural producers have a significant impact on the substance of legal standards respecting the treatment of farmed animals.

Scholars and animal advocates have long argued that this state of affairs gives farmers effectively unrestricted control over the

---

[171] *See* Jodi Lazare, *Ag-Gag Laws, Animal Rights Activism, and the Constitution: What is Protected Speech?* 58 ALBERTA L. REV. 83 (2020); Justin F. Marceau, *Ag Gag Past, Present, and Future*, 38 SEATTLE U. L. REV. 1317 (2015).
[172] *See* Jody Freeman, *Private Parties, Public Functions and the New Administrative Law*, 52 ADMIN. L. REV. 813, 816–19 (2000).

lives of the animals in their care.[173] Such criticisms often emphasize that, given producers' incentives to prioritize economic efficiency over animal well-being, this amounts to putting the proverbial "foxes" in charge of the "henhouse."[174]

I suggest here that this fox-in-charge-of-the-henhouse problem is one instance of a broader set of concerns respecting farmed animal protection: that public law values are inadequately guarded in this context. Deficits of public law values such as impartiality, transparency and accountability are particularly problematic where animals are an affected constituency. Animal experience lacks even the most basic recognition as a matter of private law.[175] And public law, which has so far been the sole forum for legal recognition of animal interests, is only capable of providing robust protection where animals' particular vulnerabilities are taken into account.[176] Animals—who do not vote or hold office or instruct counsel—are likely to have their interests protected only where interested human voters, litigators and activists have the information and legal tools necessary to assure that protection. In other words, effective animal protection is possible only in settings where decision-making is relatively impartial, transparent and accountable.[177]

Yet despite the importance of public law values to effective animal protection, legal regulation of farmed animal use has not generally nourished these values. Exceptionally, in New Jersey, a generalized regulatory reliance on the judgments of "veterinary schools, land grant colleges, and agricultural extension agents" was justiciable, and ultimately found to be an impermissible delegation of authority to define standards of animal care, in part because of these parties' interest in the economic exploitation of animals.[178] But this lack of impartiality was only visible as a legal "problem" because of the structure of the particular statutory regime, the United States' more developed judicial constraints on rulemaking processes,[179] and because of the legislature's choice to bring animal protection out of

---

[173] *See* BISGOULD, *supra* note 69, at 173–74; Wolfson & Sullivan, *supra* note 1, at 226.
[174] Wolfson & Sullivan, *supra* note 1, at 212-219.
[175] *See supra* Part III.
[176] *See supra* Part III.
[177] *See supra* Part III.
[178] *See Soc'y for Prevention of Cruelty to Animals*, 955 A.2d at 903–07; *supra* Part IV.B.
[179] *See* sources cited *supra* note 91.

the sphere of broad criminal or quasi-criminal prohibition,[180] and into the realm of more detailed public regulation.[181]

More commonly, standard-setting respecting the treatment and use of farmed animals is left in the hands of entities like NFACC,[182] or even the aggregate choices of individual producers, who are not bound to public law values.[183] Although the NFACC process is entirely publicly funded, governments play no substantive role in establishing Code standards.[184] The Code development process includes many of the trappings of a regulatory process (procedural requirements, public comment periods, substantive parameters, etc.), but these ostensible requirements are not subject to oversight or enforcement through judicial review proceedings.[185] The resulting process is unlike a statutory delegation of legislative authority, for example to professional associations: there is no delegating statute constraining the exercise of rulemaking or standard-setting, and no judicial oversight, despite the fact that the NFACC process does, and is contemplated to, generate standards with legal force.[186]

---

[180] *See supra* Part IV.A. For a broader critique of criminal and carceral approaches to animal protection, see generally MARCEAU, *supra* note 90.
[181] *See supra* Part IV.B.
[182] *See supra* Part IV.C.
[183] *See supra* Part IV.D.
[184] *See supra* Part IV.C.
[185] *See supra* Part IV.C. Such unenforceable methods of implementing public law values in privatized regulatory regimes have been scrutinized in administrative law scholarship. *See, e.g.*, MICHAEL TAGGART, THE PROVINCE OF ADMINISTRATIVE LAW 2 (1997); Steven Bernstein, *When is Non-State Global Governance Really Governance?*, 1 UTAH L. REV. 91, 91, 93 (2010) (arguing that many forms of non-state government do not function as "meaningful governance"); Francesca Bignami, *From Expert Administration to Accountability Network: A New Paradigm for Comparative Administrative Law*, 59 AM. J. COMP. L. 859, 860–61 (2011); Cary Coglianese & Evan Mendelson, *Meta-Regulation and Self-Regulation*, *in* THE OXFORD HANDBOOK OF REGULATION 146, 146–68 (Robert Baldwin, Martin Cave & Martin Lodge eds., 2010); Freeman, *supra* note 177, at 816–19; Lesley K. McAllister, *Harnessing Private Regulation*, 3 MICH. J. ENVTL. & ADMIN. L. 291, 298–326 (2014); Gillian E. Metzger, *Privatization as Delegation*, 103 COLUM. L. REV. 1367, 1374 (2003) (assessing whether and how private delegations might remain constitutionally accountable in the absence of judicial oversight); Jodi L. Short & Michael W. Toffel, *Making Self-Regulation More than Merely Symbolic: The Critical Role of the Legal Environment*, 55 ADMIN. SCI. QUARTERLY 361, 361 (2010) (describing conditions under which self-regulation is more or less effective, and concluding that self-regulation cannot fully replace direct legal enforcement mechanisms).
[186] Sankoff, *supra* note 80, at 4–5, 24 n.82 (referring to NFACC as a "body performing a government function of setting standards").

Even more starkly, the prevalence of common agricultural practice exemptions to cruelty provisions across Canada and the United States effectively endows producers themselves with the authority to set standards of animal care.[187] It may be the case that these farmers are effectively defining the substance of farmed animal protection law, but they are not subject in this function to any structured public oversight whatsoever. Unlike primary legislation, these choices are not made by elected representatives. Unlike regulation, they are not legally bound to follow any substantive or procedural requirements. Unlike private or quasi-private standard-setting, there is not even a voluntary or implied commitment to embrace any public purposes whatsoever—or to articulate and defend decisions made.[188]

In sum, standard-setting in the sphere of farmed animal protection is often left in the hands of actors who are legally welcome and expected to act in their own self-interest, rather than in the interests of animals, or in accordance with any other public-regarding interests; who are not required to explain or even publicly reveal their choices in any systematic way; and who are not generally accountable to any statute or public body. Under this common model of standard-setting in the farmed animal protection context, the operation of public law values—including transparency, accountability, and impartiality—dwindles and effectively disappears.

V. Conclusion

Dairy cows are radically vulnerable beings.[189] They are subject to routinized, large-scale and deeply intimate harms in every area of their lives.[190] Their sex, birth, and nursing are, in particular, meticulously controlled as the engines of vast economic and political machines constructed and directed by human beings.[191] Like other farmed animals, they are particularly vulnerable to the private authority that their legal owners exercise over their lives and bodies, and to public law institutions, which they have no direct power to shape.

---

[187] *See supra* Part IV.A. and Part IV.D.
[188] The sole minimal exception would appear to be that some farmers may choose, on an individual basis, to bring their practices into the judicial and public-law spotlight by testifying as to their own practices in order to assist in the defence of another farmer charged with cruelty for a similar practice.
[189] Eisen, *supra* note 41, at 941–42; *see supra* note 47 and accompanying text.
[190] *See supra* Part II.
[191] *See supra* Part II.

Meaningful legal protection of animal interests requires recognition of public law values. Impartiality, transparency, and accountability facilitate public engagement on the part of democratic and litigation constituencies beyond those who have a direct financial interest in the unencumbered exploitation of animals. Yet, as we have seen, significant regulatory and standard-setting authority across Canada and the United States has been effectively ceded to producers, with exemptions for common agricultural practices serving as only the most extreme (and most common) example. These privatized modes of standard-setting leave vanishingly little role for the public law values necessary to effective farmed animal protection.

The choice across jurisdictions to establish some veneer of constraint on industry, while at the same time allowing industry to substantially determine governing standards, raises questions. Why are farmed animals regulated in this way, despite the apparent importance of transparency, impartiality and accountability to effective protection? One possibility is that governments and democratic majorities feel a moral imperative to protect animals, but this imperative is significantly tempered by an ambivalence as to the consequences of more interventionist regulation. The price and availability of agricultural products, including perhaps especially dairy,[192] is weighted heavily in the policy balance. If, however, we wish to take seriously the experiences of the animals whose lives are so thoroughly determined by their positions as farmed animals, the public law dimensions of our commitments must be more consciously and more consistently defended.

[192] *See* Mathilde Cohen, *Of Milk and the Constitution*, 40 HARV. J. L. & GENDER 115, 119–21 (2017).

The U.S. Dairy Industry in the 20th & 21st Century

George B. Frisvold*

Abstract

At the beginning of the 20th Century, the U.S. dairy industry was comprised of millions of small-scale operations producing for their own or for very local consumption. By the end of the 20th Century, the industry was dominated by large-scale producers marketing products via large cooperatives. Improvements in transportation, advances in animal breeding and feeding technologies, and scale economies have allowed the industry to be more competitive on global markets, where there is now active international trade in dairy products. Major government programs to support dairy farm income date back to Depression-era problems facing the industry. Federal programs to support dairy income led to recurring problems of overproduction. Programs initially instituted to protect dairy producers from oligopsony power of purchasers now have more questionable effects given industry concentration. Increased market concentration has led to ongoing antitrust scrutiny of the industry, while geographic concentration of production has raised concerns over water and air pollution. At the outset of the 21st Century, increased productivity has made the dairy industry less reliant on government programs and more reliant on global markets. Yet the industry faces many challenges: greater scrutiny over greenhouse gas emissions, secular declines in milk prices and U.S. per capita milk consumption, reduced viability of small-scale operations, and the rise of plant-based milk substitutes. Still, dairies and dairy products remain an important part of U.S. agriculture and U.S. household food consumption.

I. Introduction

The U.S. dairy industry at the beginning of the 20th Century was characterized by diffuse production and geographically concentrated consumption.[1] By the end of the century, it was characterized by concentrated production, with nationally and

* Professor, Department of Agricultural & Resource Economics, University of Arizona.

[1] *See* M. R. Weimer & D. P. Blayney, *Landmarks in the U.S. Dairy Industry*, 694 AGRIC. INFORMATION BULL. 1, 3–4 (1994). The United States Department of Agriculture provides statistical data through the National Agricultural Statistics Service that may be access publicly online. *See generally Quick Stats*, NAT'L AGRIC. STAT. SERV., https://quickstats.nass.usda.gov/ (last visited February 9, 2020).

globally diffused marketing for consumption.[2] Numerous technological advances enabled this transformation.[3] The federal and state governments have also actively intervened in U.S. dairy markets.[4] Many laws and programs enacted in response to income and market problems facing dairy producers at the beginning of the century and during the Great Depression remain in effect today.[5] Several critics have questioned the need for and value of such programs in light of modern market realities.[6] For example, government programs to raise dairy prices have led to waves of overproduction, which led to the slaughter of dairy herds.[7] As the industry became increasingly comprised of larger-scale producers and marketing cooperatives, it has faced ongoing antitrust scrutiny from the U.S. Department of Justice.[8] The rise of farm-level and geographical concentration has also presented problems of air and water pollution.[9]

At the outset of the 21st Century, increased productivity has made the dairy industry less reliant on government programs and more reliant on global markets.[10] Yet, the industry faces many challenges: greater scrutiny over greenhouse gas emissions, secular declines in milk prices and U.S. per capita milk consumption, reduced viability of small-scale operations, and the rise in plant-based milk substitutes.[11] Still, dairies and dairy products remain an

---

[2] *See* Weimer & Blayney, *supra* note 1, at 5.
[3] *See* id.
[4] *Id.* at 17–18.
[5] ERIC M. ERBA & ANDREW M. NOVAKOVIC, THE EVOLUTION OF MILK PRICING AND GOVERNMENT INTERVENTION IN DAIRY MARKETS 14 (Cornell Program on Dairy Mkts. and Policy, EB 95-05, 1995).
[6] Robert T. Masson & Philip M. Eisenstat, *The Pricing Policies and Goals of Federal Milk Order Regulations: Time for Reevaluation*, 23 S.D. L. REV. 662, 663 (1978).
[7] *See* ERBA & NOVAKOVIC, *supra* note 5, at 13.
[8] *See* Masson & Eisenstat, *supra* note 6, at 674.
[9] JAMES M. MACDONALD ET AL., PROFITS, COSTS, AND THE CHANGING STRUCTURE OF DAIRY FARMING 31 (U. S. Dep't of Agric., Econ. Research Report No. 47, 2007).
[10] *See* DANIEL A. SUMNER, DAIRY POLICY PROGRESS: COMPLETING THE MOVE TO MARKETS 9 (2018).
[11] NIGEL KEY & STACY SNEERINGER, CARBON PRICES AND THE ADOPTION OF METHANE DIGESTERS ON DAIRY AND HOG FARMS 3–4, 8 (U.S. Dep't of Agric., Econ. Research Serv., Econ. Brief No. 16, 2011). Hyunok Lee & Daniel A. Sumner, *Dependence on Policy Revenue Poses Risks for Investments in Dairy Digesters*, 72 CAL. AGRIC. 226, 227 (2018). HAYDEN STEWART ET AL., WHY ARE AMERICANS CONSUMING LESS FLUID MILK? A LOOK AT GENERATIONAL DIFFERENCES IN INTAKE FREQUENCY, at i (U.S. Dep't of Agric., Econ. Research Serv., Rep. No. 149, 2013). HAYDEN STEWART AND JERRY CESSNA, LIVESTOCK, DAIRY AND POULTRY OUTLOOK: SPECIAL ARTICLE ON DIFFERENT TRAJECTORIES: A LOOK AT SALES OF COW'S MILK AND PLANT-BASED MILK ANALOGS 2 (U.S. Dep't of Agric., Econ. Research Serv., LDP-M-279 SA, 2017). JAMES M. MACDONALD ET AL., PROFITS, COSTS, AND THE CHANGING STRUCTURE OF DAIRY FARMING 31 (U. S. Dep't of Agric., Econ. Research Report No. 47, 2007).

important part of U.S. agriculture and U.S. household food consumption.[12]

II. The U.S. Dairy Industry at the Beginning of the 20th Century

At the beginning of the 20th Century, households produced milk primarily for home consumption, while markets for milk were not yet well developed.[13] While most farms had cows, production was small-scale and diffuse.[14] By 1920, five million US farms had dairy cows (compared to 54 thousand today).[15] In 1930, 70% of US farms had dairy cows, yet sale of dairy products accounted for a relatively small share of farm household income.[16] Among all farms with cows, dairy sales accounted for more than 40% of total farm sales on only 14%.[17]

The scope for marketing dairy products increased with improvements in technology and infrastructure.[18] Refrigerated tanker cars allowed rail shipments of milk across longer distances, allowing transportation of milk from rural areas to fast-growing urban ones.[19] The introduction of trucks and improved roads gave producers greater flexibility and control in milk shipping.[20] Production of evaporated milk, processed cheese, and butter, which were less perishable than fluid milk, all became more widespread.[21] There was more scope for storing and marketing these processed products over greater distances.[22] But, after World War I, European demand for those U.S. dairy products that could be preserved and shipped more easily dropped, leading to falling dairy prices.[23]

---

[12] M. SWEITZER ET AL., FOOD-AT-HOME EXPENDITURES: COMPARING COMMERCIAL HOUSEHOLD SCANNER DATA FROM IRI AND GOVERNMENT SURVEY DATA 16 (U.S. Dep't of Agric., Econ. Res. Serv., TB-1946, 2017). NAT'L AGRIC. STATISTICS SERV., U.S. DEP'T OF AGRICULTURE, ACH17-4, 2017 CENSUS OF AGRICULTURE HIGHLIGHTS: DAIRY CATTLE AND MILK PRODUCTION 1 (2019), https://www.nass.usda.gov/Publications/Highlights/2019/2017Census_DairyCattle_and_Milk_Production.pdf.

[13] ERBA & NOVAKOVIC, *supra* note 5, at 1.

[14] *See* Weimer & Blayney, *supra* note 1, at 4.

[15] For historical numbers, see *id.* at 3. For current numbers, see *Quick Stats*, *supra* note 1.

[16] Weimer & Blayney, *supra* note 1, at 4.

[17] *Id.*

[18] *See* ERBA & NOVAKOVIC, *supra* note 5, at 1–2.

[19] *Id.* at 1.

[20] *Id.*

[21] *See* Weimer & Blayney, *supra* note 1, at 7–8.

[22] ERBA & NOVAKOVIC, *supra* note 5, at 1 and 4.

[23] *Id.* at 4.

Moreover, many barriers remained to permit orderly marketing of milk.[24] First, farm households lacked many basic resources: only 58% had cars, 25% had telephones, and 33% had electricity.[25] Few farms then had refrigeration.[26] Fluid milk is produced daily on dairies.[27] Yet, it is highly perishable even with refrigeration (which most farms still lacked).[28] Without phones, it was difficult for farmers to find and negotiate with buyers.[29] Prices were based on weight and butterfat content, but farmers could not know if their milk that was shipped more distantly was being weighed and tested fairly by milk purchasers.[30] On the other side, handlers were not assured the milk they contracted for in advance was not soured or tainted.[31]

Fluid milk was bulky and difficult to transport over long distances.[32] It is also highly perishable, greatly limiting the space and time over which it may be transported and consumed.[33] In urban centers, there were a relatively small number of large milk buyers (called handlers) purchasing milk from a large number of small, unorganized producers.[34] This market structure gave handlers oligopsony power to push down milk purchase prices below competitive levels.[35]

To countervail this oligopsony power, dairy producers began to organize collectively in cooperatives to bargain over the prices of dairy products they received.[36] Handlers countered this collective action in court, arguing that such explicit cooperation by sellers violated the Sherman Antitrust Act of 1890.[37] The Clayton Act of 1914[38] explicitly exempted non-stock agricultural associations from antitrust laws, but did not address some of the vague wording of the Sherman Act that left the status of cooperative marketing

---

[24] Masson & Eisenstat, *supra* note 6, at 668–69.
[25] MARYANNA S. SMITH & DENNIS M. ROTH, CHRONOLOGICAL LANDMARKS IN AMERICAN AGRICULTURE 63 (U.S. Dep't of Agric., Agric. Info. Bulletin No. 425, 1990).
[26] Weimer & Blayney, *supra* note 1, at 3.
[27] SUMNER, *supra* note 10, at 5.
[28] *Id.*; *see* Masson & Eisenstat, *supra* note 6, at 670.
[29] *See* Masson & Eisenstat, *supra* note 6, at 670.
[30] *Id.*
[31] *Id.*
[32] *Id.*
[33] *Id.*; *see* SUMNER, *supra* note 10, at 5.
[34] ERBA & NOVAKOVIC, *supra* note 5, at 2.
[35] *See* Masson & Eisenstat, *supra* note 6, at 670.
[36] ERBA & NOVAKOVIC, *supra* note 5, at 2.
[37] *See* Sherman Antitrust Act of 1890, 15 U.S.C. §§ 1–38 (2019); *see* ERBA & NOVAKOVIC, *supra* note 5, at 2.
[38] Clayton Act of 1914, 15 U.S.C. §§ 12–27, 29 U.S.C. § 52 (2019).

associations ambiguous.[39] To partially address this ambiguity, Congress annually passed "riders" on appropriations for the Department of Justice, prohibiting it from prosecuting cooperating farmers.[40] Dairy producers began organizing large-scale "milk strikes" withholding milk to cities.[41]

To address these ongoing issues, the 1922 Capper-Volstead Act [42] allowed farmers limited exemptions from antitrust controls of the Clayton and Sherman Antitrust Act, allowing them to organize to collectively set product prices.[43] Passage of Capper-Volstead was controversial at the time, with concerns that the antitrust exemption would give dairy cooperative marketing associations too much power to raise prices, at the expense of consumers.[44] Senator Atlee Pomerene of Ohio argued, "There is nothing in this bill to prevent a combination of men who are dealing in food products – and I refer to the dairymen – from getting the most exorbitant prices, and doing so at the expense of the babes of the country."[45] Capper-Volstead prohibited "undue price enhancement" by cooperatives, but did not specify what constituted "undue."[46] Further, authority to monitor and temper agricultural cooperative pricing behavior was given to the U.S. Department of Agriculture (USDA) rather than the Department of Justice.[47] USDA was perceived at the time to be more sympathetic to farm interests (and less likely to restrict their behavior).[48]

In the 1930s, while court decisions restricted cooperatives from interstate marketing of dairy products, courts tended to uphold cooperative intrastate marketing.[49] California, a major dairy state, adopted an intrastate marketing organization in the early 1930s, which is still in effect today.[50] Despite Capper-Volstead, cooperative marketing associations were largely unsuccessful in raising dairy product prices, for two reasons.[51] First, because milk is highly perishable, its value falls dramatically over a short time.[52] The threat by dairies of withholding milk supplies was less credible than for

---

[39] James L. Guth, *Farmer Monopolies, Cooperatives, and the Intent of Congress: Origins of the Capper-Volstead Act*, 56 AGRIC. HIST. 67, 68 (1982).
[40] *Id.*
[41] *Id.*
[42] Capper-Volstead Act, 7 U.S.C. §§ 291–92 (2020).
[43] *Id.*; *see* Guth, *supra* note 36, at 82.
[44] Guth, *supra* note 36, at 75.
[45] *Id.* at 78.
[46] 7 U.S.C. § 292.
[47] Guth, *supra* note 36, at 82.
[48] *See id.*
[49] ERBA & NOVAKOVIC, *supra* note 5, at 7.
[50] *Id.*
[51] *See* ERBA & NOVAKOVIC, *supra* note 5, at 5.
[52] *See id.* at 3.

more easily storable agricultural commodities.[53] Second, because the associations were voluntary, producers were not compelled to join them, and those not in associations often sold into the urban markets (acting as "strikebreakers").[54]

In the wake of the Great Depression, the Agricultural Adjustment Act of 1933 (AAA) was passed, giving the Secretary of Agriculture authority to impose production controls to reduce commodity surpluses and raise prices.[55] The AAA provided for the establishment of marketing orders.[56] Unlike cooperative associations, marketing orders had aspects of mandatory compulsion.[57] Growers within a designated region could vote on whether to form a marketing order, with the referenda requiring a super-majority to assent.[58] Once approved by the Secretary of Agriculture, however, the rules of the order applied to all producers in the region.[59] Thus, producers were no longer able to free ride and undercut arrangements negotiated by the order.

In 1935, however, the U.S. Supreme Court ruled that the National Industrial Recover Act was an unconstitutional delegation of power.[60] The AAA was amended in 1935 to address the Court's ruling, but in 1936 the Supreme Court ruled that the 1935 AAA violated the Tenth Amendment of the U.S. Constitution.[61] To address the Court's ruling, Congress passed the Agricultural Marketing and Agreement Act of 1937 (AMAA), which among other things specified the Secretary's powers over establishment and enforcement of marketing orders more clearly.[62] The AMAA also brought all handlers (buyer processors) in an approved marketing order area under the authority of the order.[63] Minimum prices for different types of dairy products were set for all handlers in an order.[64]

---

[53] *See* ERBA & NOVAKOVIC, *supra* note 5, at 2. Swantz, Alexander. "How we came to have federal milk marketing orders: What they are and what they do." *Journal of Dairy Science* 45, no. 11 (1962): 1397-1402, at 1398.
[54] *Id.* at 5.
[55] *See* Paul L. Murphy, *The New Deal Agricultural Program and the Constitution*, 29 AGRIC. HIST. 160, 160–69 (1955).
[56] *Id.* at 161.
[57] *See id.* at 160–62.
[58] *See id.*
[59] *See id.*
[60] Schechter Poultry Co. v. U.S., 295 U.S. 495, 550–51 (1935); Murphy, *supra* note 51, at 160.
[61] United States v. Butler, 297 U.S. 1, 77–78 (1936); Murphy, *supra* note 51, at 160–61.
[62] Agricultural Marketing Agreement Act of 1937, Pub. L. No. 75-137, 50 Stat. 246 (codified as amended in scattered sections of 7 U.S.C.); Murphy, *supra* note 51, at 163.
[63] Agricultural Marketing Agreement Act of 1937, Pub. L. No. 75-137, 50 Stat. 246; *see* Murphy, *supra* note 51, at 163–64.
[64] *See* Murphy, *supra* note 51, at 163.

When some processors refused to pay assessments under and order, the United States filed a complaint against them in October 27, 1938.[65] The processors countered that the marketing order and the AMAA of 1937 was unconstitutional, infringing on their Fifth Amendment rights to due process, their property rights under the Fourth Amendment, and on rights reserved only for states under the Tenth Amendment.[66] The District Court concurred, and the United States appealed to the U.S. Supreme Court.[67] The Court upheld both the AMAA and the Milk Order in a 5 to 4 decision, citing both Congress' authority to regulate economic activity through the Interstate Commerce Clause and under its power to authorize regulatory powers it deemed necessary, even if this granted powers to the Executive Branch (i.e., the Secretary of Agriculture).[68]

The AMAA and subsequent legislation in the 1940s solidified key aspects of U.S. dairy policy.[69] These included:

- Establishment of Federal Milk Marketing Orders (FMMO) across different regions and states;[70] the FMMOs allowed dairy producers to coordinate to increase their sales revenue;[71]
- Government price supports for dairy products carried out by direct government purchases of dairy products;[72]
- Dairy product import controls;[73]
- Disposal of "surplus" dairy products by channeling them to foreign relief, the School Lunch Program, and other outlets.[74]

The Steagall Amendment of 1941 established a support price for dairy products promoted my government purchases of butter (which could be stored).[75] Under the Agricultural Act of 1949, government purchases of dairy products to support farm income was

---

[65] United States v. Rock Royal Cooperative, Inc., 307 U.S. 533, 540 (1939); *see* 9 NEIL E. HARL & CHARLES F. CURTISS, AGRICULTURAL LAW § 70.01[3] (2007).
[66] *Rock Royal Cooperative, Inc.*, 307 U.S. at 541, 568; *see* HARL & CURTISS, *supra* note 61, at § 70.01[3].
[67] HARL & CURTISS, *supra* note 61, at § 70.01[3]; *see Rock Royal Cooperative, Inc.*, 307 U.S. at 539–41.
[68] *Rock Royal Cooperative, Inc.*, 307 U.S. at 568–71, 577–78; *see* HARL & CURTISS, *supra* note 61, at § 70.01[3].
[69] *See generally* SUMNER, *supra* note 10.
[70] *Id.* at 8, 10.
[71] *Id.*
[72] *Id.* at 8–9.
[73] *Id.*
[74] *Id.*
[75] ERBA & NOVAKOVIC, *supra* note 5, at 8.

formalized as a central policy.[76] Section 22 of the original, 1933 AMAA included provisions for import controls.[77] These were first applied with implementation of the Trade Agreements Extension Act of 1951.[78] Imported products were typically limited to 3% or less of U.S. milk production.[79] Import restrictions were another means to maintain the government support price.[80]

These policies sought to address a host of problems facing dairy farming in particular, and U.S. agriculture in general, in the 1930s. First, there were certain aspects of agriculture that led to what was called "the farm problem."[81] Both the demand and supply of dairy products was inelastic – both consumption and production changed relatively little in response to changes in market prices.[82] Related to this feature, small changes in consumer demand or production could cause large fluctuations in milk prices.[83] Next, demand for dairy products was growing slowly, while technological innovations were causing supply to increase faster.[84] As production outstripped demand, this placed downward pressure on prices.[85] A related problem was what Cochrane called the "agricultural treadmill."[86] Farmers adopting cost-reducing technologies or improved practices could sell at lower prices than non-adopters.[87] This downward price pressure induced other operators to adopt cost-cutting technologies and practices in order to survive in the market.[88] This, in turn, increased supply further, starting another cycle of price reductions.[89]

---

[76] *Id.*
[77] *Id.* at 9.
[78] *Id.*
[79] *Id.*
[80] *See id.*
[81] John M. Crespi & Richard J. Sexton, *Concurrence, Coopératives de Producteurs et Marketing Orders aux États-Unis [Competition, U.S. Farmer Cooperatives, and Marketing Orders]*, 277–78 ÉCONOMIE RURALE 135, 135 (2003) (Fr.), *English translation available in* RESEARCHGATE, https://www.researchgate.net/publication/289527129_Crespi-Sexton-EconRurale-ENGLISH; Bruce L. Gardner, *Changing Economic Perspectives on the Farm Problem*, 30 J. ECON. LITERATURE 62, 62 (1992).
[82] Gardner, *supra* note 77, at 63.
[83] *Id.*
[84] *Id.*
[85] *Id.*
[86] WILLARD W. COCHRANE, FARM PRICES: MYTH AND REALITY 96–97 (1958).
[87] *See id.* at 95.
[88] *Id.* at 96.
[89] *Id.* at 95.

Marketing orders and dairy cooperatives were also supposed to address the oligopsony power of milk handlers.[90] Collective action by dairy producers was intended to provide countervailing power to such buyer market power.[91] Economic theory suggests that buyers who exercise oligopsony power restrict purchases and lower prices for the inputs they purchase.[92] In the case of milk, this would lead to lower prices dairies received for milk and lower volumes of milk purchased.[93] This latter would also reduce the supply of milk available to final consumers.[94] Theory also suggests that if sellers coordinate action in this type of market, they can increase both the price they receive and sales.[95] This raises both overall economic welfare and benefits final milk consumers because greater production lowers consumer prices.[96] While the 1937 Act established programs to raise dairy farm income, policies to raise farm prices were to, "be in the public interest."[97]

Finally, the marketing orders were intended to use coordination to overcome a host of communication, transportation, and technological impediments to marketing milk.[98] An explicit goal of legislation was to promote "orderly marketing" of products.[99]

Further, dairy legislation was drafted in the context of rural poverty and nutrition concerns during the Great Depression.[100] For example, there was concern that if a large share of dairy operations went out of production, it would take years to rebuild production capacity.[101] This would lead to price spikes later, once consumer demand recovered.[102] But, such price spikes would harm consumers. Further, rural poverty (as illustrated by popular literature such as Steinbeck's *The Grapes of Wrath* and by Dorothea Lange's iconic photographs of the rural poor for the Farm Security Administration) was a major macroeconomic problem.[103] Then, a large share of the

---

[90] David L. Baumer et al., *Curdling the Competition: An Economic and Legal Analysis of the Antitrust Exemption for Agriculture*, 31 VILL. L. REV. 183, 185 (1986).
[91] *Id.* at 185 & n.8.
[92] *Id.* at 197 & n.46.
[93] *See id.*
[94] *Id.* at 198.
[95] *Id.* at 196; *see* Roger D. Blair et al., *A Pedagogical Treatment of Bilateral Monopoly*, 55 S. ECON. J. 831, 831–41 (1989).
[96] Baumer et al., *supra* note 86, at 198.
[97] Masson & Eisenstat, *supra* note 6, at 662–63.
[98] *See id.* at 670.
[99] *Id.* at 662.
[100] *See id.* at 678.
[101] *Id.*
[102] *Id.*
[103] *See generally* SUSAN LEVINE, SCHOOL LUNCH POLITICS: THE SURPRISING HISTORY OF AMERICA'S FAVORITE WELFARE PROGRAM 40, 46 (2008).

U.S. population still resided on farms.[104] A motivation of providing milk for the School Lunch Program and dairy products as foreign aid, aside from supporting farm income, was to improve nutrition of low-income, vulnerable populations.[105]

III. The Dairy Industry in the Latter Half of the 20th Century

Throughout the latter half of the 20th Century, the dairy industry and federal dairy policy faced several challenges. While the USDA intervened significantly to increase dairy prices, these myriad market interventions often had unintended negative consequences, which led to a cascade of new interventions (with their own contradictions).[106] Protected from antitrust limits by the Capper-Volstead Act, and encouraged by economies of scale, dairies and marketing cooperatives grew larger and larger.[107] Various tactics by large cooperatives to increase their market power led to greater Justice Department scrutiny and initiatives to limit what was characterized as their anti-competitive behavior.[108] This has raised various legal questions about the appropriate limits of cooperative and marketing order behavior under Capper-Volstead.[109] Finally, programs to "dispose of" surplus milk via foreign aid and federal nutrition programs sought to simultaneously (a) raise farm income and (b) improve nutrition of the economically vulnerable.[110] Some commentators began to question whether the farm income support goal of these programs was promoted at the expense of nutrition and anti-poverty goals.[111]

A. Difficulties Maintaining Federal Price Supports

---

[104] *See* U.S. DEP'T OF COMMERCE, BUREAU OF THE CENSUS, ANALYZING THE SMALL CITY AND RURAL MARKET AREA 3 (1933).
[105] LEVINE, *supra* note 99, at 46.
[106] *Id.* at 46; E. Dale Odom, *Associated Milk Producers, Incorporated: Testing the Limits of Capper-Volstead*, 59 AGRIC. HIST. 40, 46 nn. 10–11 (1985).
[107] *See* Odom, *supra* note 102, at 47–48.
[108] *Id.* at 50.
[109] *Id.* at 52–53.
[110] LEVINE, *supra* note 99, at 46.
[111] J. Amy Dillard, *Sloppy Joe, Slop, Sloppy Joe: How USDA Commodities Dumping Ruined the National School Lunch Program*, 87 OR. L. REV. 221, 223 (2008); Michael T. Belongia, *The Dairy Price Support Program: A Study of Misdirected Economic Incentives*, 66 FED. RES. BANK ST. LOUIS REV. 5, 14 (1984); *see* Michael Correll, *Getting Fat on Government Cheese: The Connection Between Social Welfare Participation, Gender, and Obesity in America*, 18 DUKE J. GENDER L. & POL'Y 45, 46 (2010).

The Agriculture Act of 1949 established the Milk Price Support Program (MPSP).[112] Under the MPSP, USDA would purchase less perishable dairy products, such as cheddar cheese, nonfat dry milk, and butter at a pre-determined, government set price.[113] USDA would commit to purchasing as much of these products as the dairy industry could supply at these support prices.[114] The law also required the Secretary of Agriculture to set a minimum price support for fluid milk as well as these manufactured dairy products.[115] Because fluid milk is an input into manufactured dairy products, government purchases of manufactured products bid up the price of milk.[116] The MPSP did not, however, place any limits on the quantity of milk that dairies could produce.[117]

The intention of the program was to take dairy products off the market in times when prices were low and then make them available when prices recovered.[118] The government sent nonfat dry milk abroad as food aid through Food for Peace programs.[119] Some cheddar cheese and butter was distributed to the School Lunch Program, by other federal nutrition programs, by Veterans Administration hospitals, and by federal prisons.[120] The rest was stored in warehouses or underground caverns. [121]

The post-World War II period saw a series of technological innovations that reduced the costs of dairy production.[122] In the 1950s, producers began adopting antibiotics and sulfa drugs to combat mastitis and other diseases.[123] This increased milk production per cow.[124] The use of mathematical linear programming techniques allowed researchers to develop least-cost feed rations.[125] Use of mainframe computers in the 1960s made it easier for feed companies

---

[112] Katherine Lacy et al., *Government Cheese: A Case Study of Price Supports*, 2 APPLIED ECON. TEACHING RESOURCES 14, 17 (2020).
[113] *Id.*
[114] *See id.*
[115] *Id.*
[116] *See* CONG. BUDGET OFFICE, CBO-42-823, CONSEQUENCES OF DAIRY PRICE SUPPORT POLICY 15 (1979).
[117] Lacy et al., *supra* note 108, at 17; *see* Jeffrey LaFrance & Harry de Gorter, *Regulation in a Dynamic Market: The U.S. Dairy Industry*, 67 AM. J. AGRIC. ECON. 821, 821–32 (1985).
[118] *See* CONG. BUDGET OFFICE, *supra* note 112, at 22–24.
[119] *See* Seth King, *Dairy Support Prices to Increase on April 1*, N.Y. TIMES, Mar. 12, 1978, at 19.
[120] *See* Lacy et al., *supra* note 108, at 20.
[121] *See id.*
[122] Weimer & Blayney, *supra* note 1, at 10-11
[123] Weimer & Blayney, *supra* note 1, at 4.
[124] Weimer & Blayney, *supra* note 1, at 4.
[125] *See* I. Katzman, *Solving Feed Problems Through Linear Programming*, 28 J. FARM ECON. 420, 420 (1956).

and Cooperative Extension to quickly develop and disseminate information about these least-cost rations.[126] By the late 1970s, artificial insemination was wide used for dairy cow breeding.[127] These innovations all acted to push down costs and increase supplies of dairy products.[128] These growing supplies made it more difficult for the government to support prices above market levels.[129]

Government price supports were trimmed in the Nixon and Ford administrations under the tenure of Secretary of Agriculture, Earl Butz.[130] In attempts to control inflation in the early 1970s, the Nixon Administration relaxed certain dairy product import quotas.[131] Increased imports and expansion of domestic production led to subsequent price collapses.[132] In response, farmers lobbied Congress and pushed 1976 presidential candidates for more government support.[133] Newly-elected President Carter signed the Food and Agricultural Act of 1977, which increased the milk support price by 11% in 1978 and another 14% in 1979.[134]

With guaranteed higher prices, dairy production expanded, inducing the USDA to stockpile even more products to support prices.[135] Each year, though, dairies had an economic incentive to over-produce, which only increased government acquisitions further to support prices.[136] Dairies produced 10% more milk per year than the private market demanded at support prices.[137] From 1977 to 1981 alone, the USDA bought up and stored more than 560 million pounds of cheddar cheese alone.[138] Government dairy program spending rose above $2 billion per year.[139] By 1981, government stocks of dairy products were growing by 20 million pounds per week.[140] The Reagan Administration attempted to reign in dairy program spending

---

[126] *See generally id.*
[127] Weimer & Blayney, *supra* note 1, at 5.
[128] Weimer & Blayney, *supra* note 1, at 4-5, 10.
[129] Katherine Lacy et al., *Government Cheese: A Case Study of Price Supports*, 2 APPLIED ECON. TEACHING RESOURCES 14, 17 (2020). de Goiter, H., Nielson, D. J., & Rausser, G. C. (1995). The determination of technology and commodity policy in the US dairy industry. In GATT Negotiations and the Political Economy of Policy Reform (pp. 253-274). Springer, Berlin, Heidelberg.
[130] *See* ERBA & NOVAKOVIC, *supra* note 5, at 11–12.
[131] *Id.* at 12.
[132] *See id.*
[133] *See id.* at 19.
[134] *See id.* at 12.
[135] Lacy et al., *supra* note 108, at 18.
[136] *See id.* at 17–22.
[137] *See id.* at 21.
[138] *See id.* at 14.
[139] ERBA & NOVAKOVIC, *supra* note 5, at 13; Lacy et al., *supra* note 108, at 20.
[140] Associated Press, *A Big Dairy Surplus Grows, So Do U.S. Wishes to Shed It*, N.Y. TIMES, Oct. 4, 1981, at 74; Lacy et al., *supra* note 108, at 20.

and accumulation of dairy product stocks, without much success initially.[141] The 1981 Agriculture and Food Act, slowed the rate of support price increases. [142] The Administration authorized the release of what became known as "government cheese" – stockpiled cheese distributed to low-income people via food banks, food pantries, and other non-profit organizations.[143] Yet, because dairies could sell to the government at high prices, supply continued to expand as producers adopted output-expanding technologies and practices.[144] Stocks continued to accumulate.[145]

The 1983 Dairy Production Stabilization Act established the Milk Diversion Program (MDP) to control the supply of milk.[146] The federal government offered dairy farmers $10-per-hundredweight to reduce their sales below their historical production.[147] More than 2 billion pounds of these reductions, however, were only "air" as many producers had already reduced their production prior to signing contracts.[148] Thus, a significant portion of program funds went to producers who were planning to reduce their production anyway. There was further slippage as dairy producers who did not sign up for the MDP increased *their* production.[149] Total U.S. milk production increased to record levels, again triggering even more government dairy purchases.[150]

The Dairy Production Stabilization Act did, however, set in place reductions in the support price.[151] The USDA also instituted the Dairy Termination Program (DTP) to control supplies.[152] Under the DTP, the federal government bought out entire dairy herds, with farmers committing to forego dairying for five years.[153] The government slaughtered or exported animals from purchased herds.[154] Operating from April, 1986 to September 1987, the program cost more than $1.8 billion, [155] with more than 1.4 million animal

---

[141] *See* Lacy et al., *supra* note 108, at 20–21.
[142] *Id.* at 21; *see* ERBA & NOVAKOVIC, *supra* note 5, at 13.
[143] Lacy et al., *supra* note 108, at 21.
[144] *See* Associated Press, *Surplus Cheese Goes to Poor as President Signs Farm Bill*, N.Y. TIMES, Dec. 23, 1981, at 12.
[145] *See* Lacy et al., *supra* note 108, at 21.
[146] ERBA & NOVAKOVIC, *supra* note 5, at 13.
[147] *Id.*
[148] *Id.* at 14.
[149] *Id.*
[150] *Id.*
[151] *Id.*
[152] ERBA & NOVAKOVIC, *supra* note 5, at 15.
[153] *Id.*
[154] HARRY KAISER & ANDREW NOVAKOVIC, RESULTS OF THE DAIRY TERMINATION PROGRAM AND IMPLICATIONS FOR NEW YORK MILK PRODUCTION 1 (Cornell Univ. Dep't of Agric. Econ. Ser. No. A.E. Ext. 86-20, 1986).
[155] *Id.*

slaughtered.[156] Originally authorized under the Food Security Act of 1985,[157] the Dairy Export Incentive Program provided subsidies to exporters shipping dairy products abroad.[158] The Dairy Production Stabilization Act[159] also created the National Dairy Board (NDB), which from 1984 to 1987 spent more than $100 million in television and radio advertising to promote dairy products.[160] There is some evidence that the advertising and promotional programs succeeded in increasing the demand for milk.[161] Through this combination of reduced price supports, export subsidies, increased demand via advertising, and animal slaughter, dairy over-supply problems began to ebb.[162] USDA stocks of dairy products began to fall steadily starting in 1984.[163]

Since the late 1980s, structural and technological change in the U.S. industry has dramatically reduced the cost of U.S. production.[164] This had the effect of making U.S. products more competitive on global markets.[165] The early 1980s were characterized by U.S. export subsidies and tight import restrictions keeping competing products out of U.S. markets.[166] As U.S. production became more competitive, world prices rather than government support prices served as a price floor for U.S. dairy commodities.[167] By the 1990s, government support prices were rarely in effect.[168] The 2014 Farm Bill (Agricultural Act of 2014) eliminated price supports and export subsidies altogether.[169] The U.S. still has what Sumner has called a "mind-boggling array of TRQ regulations."[170] TRQs (tariff rate quotas) essentially act as import quotas, and the United States still maintains many of these for dairy products.[171] Yet, Sumner has assessed these have relatively little

---

156 John M. Marsh, *The Effects of the Dairy Termination Program on Live Cattle and Wholesale Beef Prices*, 70 AM. J. AGRIC. ECON. 919, 919 (1998).
157 15 U.S.C. § 713a-14 (1985) (repealed 2014).
158 *Id.*
159 7 U.S.C. §§ 4501–14.
160 *Id.*; Lacy et al., *supra* note 108, at 9.
161 Ronald W. Ward & Bruce L. Dixon, *Effectiveness of Fluid Milk Advertising since the Dairy and Tobacco Adjustment Act of 1983*, 71 AM. J. AGRIC. ECON. 730, 738–39 (1989).
162 *See* Lacy et al., *supra* note 108, at 9.
163 *Id.* at 6 fig.5, 9.
164 J. CESSNA ET AL., GROWTH OF U.S. DAIRY EXPORTS: REPORT FROM THE ECONOMIC RESEARCH SERVICE 10 (U.S. Dep't of Agric., Econ. Res. Serv. Ser. No. LDPM-270-01, 2016); *see* SUMNER, *supra* note 10, at 1, 7–9.
165 SUMNER, *supra* note 10, at 9.
166 *Id.* at 8.
167 *See id.* at 9–10.
168 *Id.* at 9.
169 *Id.* at 16.
170 *Id.* at 10.
171 *Id.*

effect, favoring a few companies, but with little effects on larger markets.[172]

Two major remaining components of U.S. dairy policy are the Federal Milk Marketing Orders (FMMOs) and a relatively new Margin Protection Program (MPP), which, on the surface, operates as a revenue insurance program.[173] Producers can take out (highly subsidized) insurance policies that protect them when the price of animal feed rises relative to milk prices.[174] Like US crop insurance programs, payments can be more than actuarially fair.[175] In other words, indemnity payments can regularly exceed payment premiums (i.e., some can regularly make money from their insurance).[176] Similar to crop insurance, when MPP constitutes essentially a disguised federal income payment. In cases where signing up does not provide producers such assured returns, producers have either not signed up at all or have signed up at the minimum level of coverage, which requires zero premiums.[177]

B. Nutrition Programs

The distribution of government-purchased dairy products as domestic or international food aid dates back to the AAA of 1935.[178] Surplus dairy products were distributed under the School Lunch Programs, first established in 1935.[179] The Agricultural Act of 1954 established the Special School Milk Program to use USDA funds to increase fluid milk consumption in schools.[180] The program was extended in 1956 to include "nonprofit summer camps, orphanages, and other child-care institutions."[181] The national Food Stamp Program was approved and made part of permanent agricultural legislation in 1964.[182] Implementation of USDA nutrition programs have not been without

---

[172] *Id.* at 5, 10.
[173] *Id.* at 3.
[174] *Id.*
[175] *See id.* at 18–19.
[176] *See id.*
[177] *Id.* at 17–18.
[178] Agricultural Adjustment Act Amendment of 1935, ch. 641, 48 Stat. 750 (1935); *see* Daniel A. Sumner & Joseph V. Balagtas, *United States' Agricultural Systems: An Overview of U.S. Dairy Policy*, *in* ENCYCLOPEDIA OF DAIRY SCIENCES 20, 20–25 (H. Roginski et al. eds., 2002).
[179] HERMAN M. SOUTHWORTH & MAXWELL I. KLAYMAN, THE SCHOOL LUNCH PROGRAM AND AGRICULTURAL SURPLUS DISPOSAL 1–2 (U.S. Dep't of Agric., Misc. Pub. No. 467, 1941).
[180] Weimer & Blayney, *supra* note 1, at 15.
[181] SMITH & ROTH, *supra* note 22, at 75.
[182] MILTON C. HALLBERG, POLICY FOR AMERICAN AGRICULTURE: CHOICES AND CONSEQUENCES 316 (1992).

controversy.[183] Programs have been tasked with achieving multiple goals, disposing of government purchased surpluses, increasing demand for competing commodities (and pleasing competing commodity groups), and improving nutrition of low income or other target populations.[184] Controversies have arisen when farm income support and nutrition objectives have not coincided.[185] Some critics have argued that the farm income support objectives have taken precedent over nutrition goals.[186]

C. Challenges to Capper-Volstead Exemptions

Federal Milk Marketing Orders (FMMOs) increase dairy producer incomes through price discrimination.[187] FMMOs divide the country into geographic regions.[188] There have been as many as 42, but that has been reduced to 11.[189] Milk and dairy product processors in each region are required to pay farmers at least a minimum price for four classes of milk defined by the Federal government.[190] Class I is the milk used for fluid beverage products.[191] The price of fluid milk is relatively inelastic – the quantity that consumers demand changes little relative to changes in the price of milk.[192] Conversely, if the quantity available of milk falls, the price increases more proportionally than the quantity reduction.[193] So, limiting supplies increases sales revenues. Demand for fluid milk is inelastic because it is highly perishable and expensive to transport, so fluid milk in a particular area faces little competition from outlying areas.[194] Demand for manufactured milk products (e.g. cheese, butter) can be stored longer and transported less expensively.[195] These products face more regional and even global

---

[183] Dillard, *supra* note 107, at 244–45; see LEVINE, *supra* note 99, at 68, 108–09, 130.
[184] *See generally* SUMNER, *supra* note 10.
[185] Correll, *supra* note 107, at 62–65; Dillard, *supra* note 107, at 244–45; see LEVINE, *supra* note 99, at 68, 108–09, 130.
[186] Correll, *supra* note 107, at 62–65; Dillard, *supra* note 107, at 244–45; Belongia, *supra* note 107, at 9.
[187] SUMNER, *supra* note 10, at 12.
[188] *Id.* at 11.
[189] Hayley H. Chouinard et al., *Milk Marketing Order Winners and Losers*, 32 APPLIED ECON. PERSP. & POL'Y 59, 59–60 (2010). US Department of Agriculture (USDA) Office of Budget & Program Analysis. 2020 USDA Budget Explanatory Notes. Agricultural Marketing Service. At 21-9. https://www.usda.gov/sites/default/files/documents/21ams2020notes.pdf (accessed 12/8/2020)
[190] SUMNER, *supra* note 10, at 12.
[191] *Id.* at 13.
[192] *Id.*
[193] *Id.* at 21.
[194] *Id.* at 21–22.
[195] Richard A. Ippolito & Robert T. Masson, *The Social Cost of Government Regulation of Milk*, 21 J. L. & ECON. 33, 56 (1978); Masson & Eisenstat, *supra* note 6, at 670.

price competition.[196] Because of this, demand for these products is more price elastic.[197] Changes in the amount supplied have a relatively small impact on the price producers receive.[198]

Marketing orders increase producer income by setting a high price for fluid milk and reducing its supply below competitive levels.[199] At the same time production is shunted toward manufactured products.[200] As output of manufactured products increases, their prices fall only a little bit.[201] When the supply of fluid milk is reduced, though, its price rises a lot.[202] Dairy producers receive a blend price that is a weighted average of fluid milk and manufactured dairy product prices.[203] Compared to a competitive market outcome, more milk is produced overall, but less actually is sold as fluid milk, while more is sold in the form of manufactured products.[204] How individual consumers are affected overall by the price changes depends on their relative expenditures on fluid milk versus processed dairy products.[205] Consumers, on the whole, are made worse off, though, as consumer losses from higher fresh milk prices outweigh gains from lowered prices of manufactured products.[206]

The economic welfare effects of marketing orders depend on one's reference point. Gardner (1984) characterized competing views of U.S. dairy policy.[207] One was of "market failure" story, where dairy policy is designed to counter anti-competitive behavior of milk processors.[208] The Capper Volstead Act was passed at a time when technological and institutional constraints presented severe problems for dairy producers.[209] In the 1920s on-farm refrigeration was limited

---

[196] SUMNER, *supra* note 10, at 9; *see* ERBA & NOVAKOVIC, *supra* note 5, at 9; *see* Ippolito & Masson, *supra* note 187, at 35–36.
[197] Masson & Eisenstat, *supra* note 6, at 666.
[198] *Id.* at 667.
[199] Robert T. Masson & Philip M. Eisenstat, *Welfare Impacts of Milk Orders and the Antitrust Immunities for Cooperatives*, 62 AM. J. AGRIC. ECON. 270, 271 (1980) [hereinafter *Welfare Impacts*].
[200] *Id.*
[201] *See* Masson & Eisenstat, *supra* note 6, at 666 n.17, 667.
[202] *See id.*
[203] Ippolito & Masson, *supra* note 187, at 35.
[204] *Id.* at 51.
[205] *See* Masson & Eisenstat, *supra* note 6, at 688.
[206] John E. Kwoka, Jr., *Pricing under Federal Milk Market Regulation*, 15 ECON. INQUIRY 367, 380 (1977).
[207] Bruce L. Gardner, *Price Discrimination or Price Stabilization: Debating with Models of U.S. Dairy Policy*, 66 AM. J. AGRIC. ECON. 763, 763 (1984) [hereinafter *Price Discrimination*].
[208] *Id.*; Gardner, *supra* note 77, at 92.
[209] Baumer et al., *supra* note 86, at 204; *see* Masson & Eisenstat, *supra* note 6, at 669.

as was transportation infrastructure.[210] Dairies were captive to a small number of buyers in the nearest urban centers to their farms.[211] Dairies marketed their wares individually and so had little bargaining power.[212] In contrast, handlers had great scope to exert monopsony power.[213] Capper Volstead allowed dairies to organize to set prices, but the intent was to countervail monopsony power.[214] The Agricultural Marketing Act of 1937 and subsequent legislation supported formation of milk marketing orders and marketing cooperatives.[215] At the time, dairy production was small-scale and marketing largely uncoordinated.[216]

A competing perspective was one of "capture" where dairy producers were able to influence USDA policy to their benefit at consumer and taxpayer expense.[217] As dairy marketing became more consolidated, sentiment, particularly by the Federal Trade Commission and the Department of Justice began to shift toward the capture perspective.[218] In the post-World War II era, technological and institutional change fundamentally altered how dairy products were marketed.[219] First, improvements in roads, refrigeration, and shipping technology meant that dairies could sell their product to more distant markets, lessening the need to only sell to the most local processors.[220] Also, dairy marketing cooperatives began to consolidate, increasing their geographic scope and market power.[221] The large cooperative, American Milk Producers Incorporated (AMPI) formed in 1969 out of several mergers of smaller cooperatives in 1967.[222] Over the next three years AMPI merged with 54 more cooperatives[223] until it stretched from Texas to the Canadian Border.[224] By the mid-1970s, AMPI produced about one eighth of all milk sold in the United States and had become the largest cheese producer in the world.[225] Around this time, two other large cooperatives were formed via merger: Mid-America Dairymen (Mid-Am) and Dairyman, Inc. (DI).[226] In many markets, AMPI, Mid-

---

[210] Masson & Eisenstat, *supra* note 6, at 670.
[211] ERBA & NOVAKOVIC, *supra* note 5, at 1.
[212] *Id.* at 2.
[213] Ippolito & Masson, *supra* note 187, at 34.
[214] Baumer et al., *supra* note 86, at 193.
[215] *Id.* at 206; *see* Ippolito & Masson, *supra* note 187, at 37.
[216] Masson & Eisenstat, *supra* note 6, at 669–70.
[217] *Price Discrimination*, *supra* note 199, at 763.
[218] *See* Baumer et al., *supra* note 86, at 204; *see* Kwoka, *supra* note 198, at 380.
[219] ERBA & NOVAKOVIC, *supra* note 5, at 9; Lacy et al., *supra* note 108, at 9.
[220] *See* ERBA & NOVAKOVIC, *supra* note 5, at 9.
[221] Baumer et al., *supra* note 86, at 220.
[222] *Welfare Impacts*, *supra* note 191, at 275..
[223] *Id.*
[224] Baumer et al., *supra* note 86, at 220.
[225] Odom, *supra* note 102, at 44.
[226] Baumer et al., *supra* note 86, at 220.

Am or DI controlled 90% or more of all raw milk sales.[227] By 1982, these three cooperatives, along with Land O'Lakes were all Fortune 500 companies.[228]

Justice Department economists began to argue that actions of the larger cooperatives went beyond just countervailing the market power of milk purchasers.[229] They argued that the largest cooperatives were exercising supervailing power.[230] While countervailing power would lead to greater milk sales (and lower prices) to consumers, the exercise of supervailing power was meant to increase cooperative profits at the expense of consumers, raising prices above competitive levels.[231] Economists at the Federal Trade Commission and Justice Department conducted econometric market studies estimating the effects of cooperative behavior on prices and consumer welfare.[232] Kwoka estimated that marketing orders raised milk prices 7-15% above competitive levels and created a deadweight loss to the economy of $55 to $180 million per year.[233] Ippolito and Masson estimated that U.S. milk marketing orders, by increasing fluid milk prices, transferred $210 million from consumers to producers.[234] Masson and Eisenstat estimated that U.S. dairy cooperatives succeeded in raising retail fluid milk prices by $0.07 -$0.10 per gallon, costing consumers of $71 million per year from 1967-1975.[235]

In addition to such studies, the Department of Justice (DOJ) also began to take a more aggressive stance to reign in what was perceived as excessive anticompetitive behavior.[236] The DOJ sued the three large cooperatives, AMPI, Mid-Am and DI in 1972.[237] DOJ alleged the cooperatives engaged in "predatory pricing, price squeezes, and foreclosure of nonmembers from customers through contracts and mergers with nonfarmer milk processors."[238] DOJ signed a consent decree with AMPI in 1975 and one with Mid-Am in 1977.[239] In the AMPI consent decree, AMPI did not admit to any wrongdoing, but agreed to desist from specific "predatory and

---

[227] *Id.*
[228] *Id.* at 184 & n.1.
[229] Masson & Eisenstat, *supra* note 6, at 662, 670.
[230] Baumer et al., *supra* note 86, at 185.
[231] *Id.* at 198–201.
[232] Ippolito & Masson, *supra* note 187, *passim*; Kwoka, *supra* note 198, *passim*.
[233] Kwoka, *supra* note 198, at 380.
[234] Ippolito & Masson, *supra* note 187, at 37.
[235] *See* Masson & Eisenstat, *supra* note 6, at 668 n.22.
[236] Ananth N. Madhavan et al., *Cooperation for Monopolization? An Empirical Analysis of Cartelization*, 76 REV. ECON. & STAT.161, 161–75 (1994).
[237] *Id.* at 163.
[238] *Id.*
[239] *Id.*

exclusionary" practices.[240] AMPI also lost that part of the major private case charging conspiracy to monopolize.[241] In 1976, the suit against DI went to trial in 1976 and was eventually resolved in 1985, partially in the DOJ's favor.[242] Studies found that after the consent decrees, cooperatives were less able to exercise market power to push fluid milk prices significantly above minimum government support prices.[243] In other cases, courts have ruled that cooperatives attempting to further monopoly power by acquiring investor-owned firms, engaging in predatory practices, or forming joint ventures with non-cooperative businesses are not protected by Capper Volstead exemptions and are subject to prosecution under the Sherman Antitrust Act.[244]

IV. The U.S. Dairy Landscape Today

Dairy production is important to US farm and food systems. In 2018, the United States produced more than 200 billion pounds of milk, 13 billion pounds of cheese, 840 million gallons of ice cream, and 50 million gallons of frozen yogurt.[245] Dairy farming, product processing, and wholesaling employed more than 290,000 workers, who received more than $15 billion in wages in 2018.[246] According to the most recent, 2017 *Census of Agriculture*, farms sold nearly $37 billion of milk, accounting for about 9% of total U.S. farm sales.[247] U.S. households spend roughly $8 per week on dairy products on average, with spending ranging from $4 per week for low income households to nearly $12 per week for high income ones.[248] Households with lower incomes, children, or both tend to have a higher share of dairy spending in the form of fresh milk.[249]

---

[240] *Id.* at 164 n.17.
[241] *Id.*
[242] *Id.* at 163.
[243] *Id.* at 164 n.18, 174.
[244] Maryland & Virginia Milk Producers Ass'n v. U.S., 362 U.S. 458, 471–72 (1960); U.S. v. Borden Co., 308 U.S. 188, 203–07 (1939); U.S. v. Maryland Co-op. Milk Producers, Inc., 145 F. Supp. 151, 154–55 (D.D.C. 1956).
[245] *Quick Stats*, *supra* note 1.
[246] *Quarterly Census of Employment Wages*, U.S. BUREAU OF LAB. STAT., https://www.bls.gov/cew/ (last visited Feb. 9, 2020).
[247] NAT'L AGRIC. STATISTICS SERV., U.S. DEP'T OF AGRICULTURE, ACH17-4, 2017 CENSUS OF AGRICULTURE HIGHLIGHTS: DAIRY CATTLE AND MILK PRODUCTION 1 (2019), https://www.nass.usda.gov/Publications/Highlights/2019/2017Census_DairyCattle_and_Milk_Production.pdf.
[248] M. SWEITZER ET AL., FOOD-AT-HOME EXPENDITURES: COMPARING COMMERCIAL HOUSEHOLD SCANNER DATA FROM IRI AND GOVERNMENT SURVEY DATA 16 (U.S. Dep't of Agric., Econ. Res. Serv., TB-1946, 2017).
[249] *Id.* at 32, 34; Chouinard et al., *supra* note 181, at 74.

Milk production is characterized by concentration regionally and across operations.[250] Five states – California, Wisconsin, Idaho, New York, and Texas – account for more than half of all U.S. milk production.[251] The top eight states (adding Michigan, Pennsylvania, and Minnesota) account for two-thirds.[252] In 2017, there were more than 9.5 million milk cows on more than 54,000 U.S. farm operations.[253] About 15,000 operations had no milk sales.[254] These were comprised almost entirely of operations with herds of 19 or fewer cows.[255] Of farms that did have sales, those with herds of fewer than 100 cows accounted for nearly two-thirds of operations, but only 11% of sales.[256] In contrast, just 5% of farms had dairy herds of 1,000 or more cows, but these farms accounted for more than half of all milk sales.[257] About 84% of milk sold in the United States is marketed by dairy farmer-owned cooperatives.[258] The four largest of these – Dairy Farmers of America, Land O'Lakes, Dairy Farmers Incorporated, and Darigold Inc. – market about 40% of all U.S. milk.[259]

From 1980 to 2018, the total U.S. dairy herd size has declined about 12%, but milk produced per cow has more than doubled.[260] The average number of milk cows per farm with cows rose from about 50 in the 1987 *Census of Agriculture* to about 175 in the 2017 *Census*.[261] Another measure of dairy scale is the midpoint herd size – the size for which half of all milk cows are in herds of that size or larger.[262] This midpoint has risen from 80 cows in 1987 to 900 cows in 2012, and to more than 1,000 cows by 2017.[263]

The United States has become a major exporter of some dairy products, especially dry milk powder, while still being a significant importer of others, particularly cheese.[264] From 2004 to 2014, U.S. dairy product exports more than quadrupled.[265] Overall,

---

[250] NAT'L AGRIC. STATISTICS SERV., *supra* note 239, at 1–2.
[251] *Id.*
[252] *Id.*
[253] U.S. DEP'T OF AGRIC., NAT'L AGRIC. STATISTICS SERV., AC-17-A-51, 2017 CENSUS OF AGRICULTURE 7 tbl.1 (2019) [hereinafter 2017 CENSUS].
[254] *Id.* at 23 tbl.17.
[255] *Id.*
[256] *Id.*
[257] *Id.*
[258] SUMNER, *supra* note 10, at 5.
[259] *Id.*
[260] *Id.* at 6; *Quick Stats*, *supra* note 1.
[261] 2017 CENSUS, *supra* note 245, at 7 tbl.1.
[262] ROBERTO MOSHEIM ET AL., CHANGING STRUCTURE, FINANCIAL RISKS, AND GOVERNMENT POLICY FOR THE U.S. DAIRY INDUSTRY 7 (U.S. Dep't of Agric., Econ. Research Serv., Rep. No. 205, 2016).
[263] *Id.* at 7–8; *Quick Stats*, *supra* note 1.
[264] CESSNA ET AL., *supra* note 156, at 22.
[265] *Id*. at 1.

the United State is the third largest global exporter of dairy products, following New Zealand and the European Union (EU).[266]

What can we glean from this dizzying array of dairy facts and figures? First, the U.S. dairy industry remains a central part of U.S. agriculture, while dairy products remain an important part of consumer diets. It is a technologically dynamic sector, demonstrating impressive and sustained productivity growth. A driving factor behind this growth are scale economies that have allowed producers to lower average costs by increasing operation size.[267] Today, the U.S. dairy industry is dominated by large-scale operations, with marketing dominated by large-scale marketing cooperatives.[268] Productivity growth has made U.S. dairy production more competitive in international markets.[269] This has shifted the U.S. policy stance away from protectionism to a more outward looking export orientation.[270] The United States has abandoned dairy product export subsidies and moved away from import controls and tariffs (although this has been incomplete).[271] The industry has moved toward less government intervention in general (although substantial involvement remains).[272]

A. Technological and Structural Change

Larger dairy farms have been able to take better advantage of a range of technologies and practices (Table 1).[273] Larger operations make greater use of artificial insemination as well as services of veterinarians and nutritionists.[274] They are also far more likely to use computers to deliver feed to cattle and for milking.[275] As operations have grown, dairies have relied less on producing their own feed and raising their own heifers (as replacements) and more on purchasing them from other operations.[276] While smaller operations produce more of their own feed, larger operations are more specialized, purchasing it from others.[277] Larger farms are also more likely to enter into forward pricing contracts for inputs (primarily feed).[278] This reduces their risks against unexpected

[266] *Id.* at 2.
[267] *Id.* at 10.
[268] *See id.*
[269] *Id.* at 2, 10.
[270] *Id.*
[271] *Id.* at 1.
[272] *Id.* at 2.
[273] MOSHEIM ET AL., *supra* note 254, at 16.
[274] *Id.*
[275] *Id.*
[276] *Id.*
[277] *Id.* at 7.
[278] *Id.* at 16.

increases in feed prices.[279] Larger farms can also use their size to increase their bargaining power, negotiating input prices, rather than accepting them as given.[280]

Table 1. Comparison of dairy practice adoption for three different herd sizes

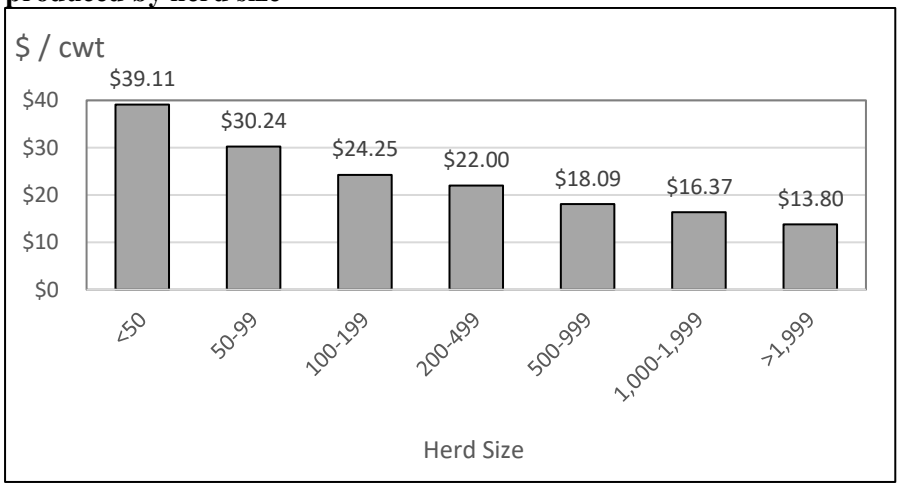
	Herd Size (number of cows)		
Practices	**<50**	**200-499**	**>1,999**
	Percent of Farms Adopting Practice		
Artificial insemination	75	80	99
Routine veterinary service	43	89	96
Nutritionist service	59	87	95
All feed purchased	2	5	21
Most feed purchased	36	54	95
Heifers off-farm	1	10	31
Forward contract inputs	7	49	69
Negotiate for inputs	17	63	93
Computers for feed delivery	1	16	69
Computers for milking	1	24	33

Source: MacDonald et al., 2016[281]

Thus, larger farms have split off several functions that smaller operations still engage in. This has allowed them to greatly reduce their average production costs (Figure 1).[282] One can see dramatic reductions in production costs as the scale of operation increases.[283] The dramatic shift in the average scale of dairy operations is not surprising in light of these cost advantages.

[279] *Id.*
[280] *Id.*
[281] *Id.*
[282] *Id.* at 18.
[283] *Id.*

Figure 1. Average cost per cwt (hundredweight) of milk produced by herd size



Source: MacDonald et al., 2016[284]

A. Dairy Antitrust Issues in the 21st Century

Economists have continued to find evidence of dairy policies redistributing income from consumers to producers.[285] One study examined effects on different types of households.[286] It found that marketing orders reduced wellbeing for families with young children, but benefited couples without children.[287] This was because they reduced prices of processed products (such as cheese or yogurt), but raised prices of fluid milk.[288] It also estimated that the program was more costly to lower income than high income households.[289] Another study found that in markets regulated by Federal Milk Marketing Orders, cooperatives are able to exert market power to raise the price of milk 9% above marginal cost, transferring more than $70 million per year from final consumers.[290]

Dairy cooperative and marketing order activity has continued to receive antitrust scrutiny.[291] In 2010, the DOJ and several states filed a civil antitrust suit against Dean Foods alleging that its purchase of processing plants owned by the Wisconsin cooperative, Foremost

[284] *Id.*
[285] *See* Chouinard et al., *supra* note 181, at 59.
[286] *Id.*
[287] *Id.*
[288] *Id.* at 74.
[289] *Id.* at 74–75.
[290] Metin Cakir & Joseph V. Balagtas, *Estimating Market Power of U.S. Dairy Cooperatives in the Fluid Milk Market*, 94 AM J. AGRIC. ECON. 647, 657 (2012).
[291] DENNIS A. SHIELDS, CONG. RESEARCH SERV., R41224, CONSOLIDATION AND CONCENTRATION IN THE U.S. DAIRY INDUSTRY 18–20 (2002).

Farms, violated Section 7 of the Clayton Act.[292] DOJ asserted the acquisition would eliminate price competition from Foremost Farms, raising milk prices paid by schools, grocery chains, restaurants, and other retail outlets.[293] Various cooperatives have been the defendants in class action suits, often settling out of court.[294]

B. Emerging Environmental and Consumer Challenges

As the U.S. population has shifted westward, so has dairy production, with significant growth in California, Idaho, New Mexico, and Arizona.[295] Western operations also tend to be larger on average.[296] Although U.S. milk production continues to grow, that production has been concentrated in fewer counties over time.[297] In 1969, 71 counties had one-quarter of all dairy cows, while half of all cows were in 247 counties.[298] By 2017, a quarter of U.S. dairy cows were in just 16 counties (with all but one in the West), while half of all cows were in just 50 counties.[299]

This concentration and westward movements present certain environmental challenges.[300] First, this concentrates manure wastes on a smaller land area.[301] As noted above, larger operations have moved away from feed and forage crop production, which means

---

[292] *Id.* at 18–19.
[293] *Id.* at 18.
[294] *Id.* at 19–20; John C. Monica, Jr., *Agricultural Antitrust Liability: What about the Reasonable Farmer*, 22 DRAKE J. AGRIC. L. 1, 2; Jessica Fu, *Milk Co-Ops Slaughtered 500,000 Cows via a "Retirement" Program. Now They'll Pay $220 Million in a Price-Fixing Lawsuit*, THE COUNTER (Dec. 5, 2019, 4:23 PM), https://thecounter.org/dairy-cooperatives-herd-retirement-cow-slaughter-antitrust-price-fixing-retailer-lawsuit-settlement/; Carol Dumas, *National Milk Settles CWT Lawsuit for $220 Million*, CAPITAL PRESS (Dec. 10, 2019), https://www.capitalpress.com/ag_sectors/dairy/national-milk-settles-cwt-lawsuit-for-220-million/article_566e01f4-1b6b-11ea-98a1-0b954157be31.html; Melinda Burton, *Not Everything is Settled in the* Allen v. Dairy Farmers of America *Antitrust Class Action – The Fight Over Allocating Fees to Class Counsel*, FARUKI (Jan. 25, 2019), https://www.ficlaw.com/blog/class-actions/archives/not-everything-is-settled-in-the-allen-v-dairy-farmers-of-america-antitrust-class-action-the-fight-over-allocating-fees-to-class-counsel; *see* Yuliya V. Bolotova, *Agricultural Supply Control: Lessons from the U.S. Dairy and Potato Industries*, CHOICES, 4th Quarter 2015, at 1, 1.
[295] MACDONALD ET AL., *supra* note 9, at 1.
[296] *Id.*
[297] *Id.* at 23.
[298] *Id.*
[299] *See* NAT'L AGRIC. STATISTICS SERV., *supra* note 239; *see 2017 Census Ag Atlas Maps: Milk Cows – Inventory*, NAT'L AGRIC. STATISTICS SERV., https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Ag_Atlas_Maps/17-M209g.php (last modified Feb. 1, 2019).
[300] *See* MACDONALD ET AL., *supra* note 9, at 23.
[301] *Id.* at 23–24.

there are fewer crop acres where manure might be applied as fertilizer.[302]

This excess manure can lead to various types of water and air pollution.[303] Nitrogen and phosphorus from manure can end up in surface and groundwater.[304] One study of public wells in California found that one in ten of those sampled exceeded the maximum concentration level (MCL) of nitrate permissible under the Safe Drinking Water Act.[305] Fertilizers on cropland of which dairy manure was a significant part, were the dominant factor accounting for the contamination.[306] An EPA study of Washington found one in five sampled wells exceeding the nitrate MCL, with dairy manure again being a significant contributor.[307] This same study also found a group of dairies in the Yakima Valley were the primary source for pharmaceutical contamination in the majority of dairy source water samples.[308] Dairy production can also contribute to air pollution in the form of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and oxides of nitrogen (NO and NO_2), ammonia (NH_3), hydrogen sulfide (H_2S), and volatile organic compounds (VOCs) as well as particulate matter.[309] Many of these are criteria pollutants regulated under the U.S. Clean Air Act.[310] In addition, Section 304 of the Emergency Planning and Community Right-to-Know Act (EPCRA) requires farms to report NH_3 and H_2S emissions if 45.3 kg or more of either are emitted in any given 24-hour period.[311]

In the mid-1970s, EPA established effluent limits for large feedlots (including dairies) under its Clean Water Act authority.[312] In April 2003, EPA established regulatory requirements for concentrated animal feeding operations (CAFOs).[313] After a legal challenge to the 2003 rule, EPA was remanded to revise some

---

[302] *Id.* at 3.
[303] *Id.* at 23–24; M. A. G. von Keyserlingk et al., *Invited Interview: Sustainability of the US Dairy Industry*, 96 J. DAIRY SCI. 5405, 5415 (2013).
[304] MACDONALD ET AL., *supra* note 9, at 24.
[305] THOMAS HARTER ET AL., ADDRESSING NITRATE IN CALIFORNIA'S DRINKING WATER WITH A FOCUS ON TULARE LAKE BASIN AND SALINAS VALLEY GROUNDWATER 11, 35 (2012).
[306] *Id.* at 11.
[307] U.S. ENVTL. PROT. AGENCY, EPA-910-R-13-004, RELATION BETWEEN NITRATE IN WATER WELLS AND POTENTIAL SOURCES IN THE LOWER YAKIMA VALLEY, WASHINGTON, at ES-6 (2012), https://www.epa.gov/sites/production/files/2017-12/documents/lower-yakima-valley-groundwater-report-2013.pdf.
[308] *Id.* at 23–24.
[309] *See* Keyserlingk et al., *supra* note 295, at 5415.
[310] *Id.*
[311] *Id.*
[312] MACDONALD ET AL., *supra* note 9, at 26.
[313] *Id.*

portions of the regulations.[314] The original 2003 regulations required all CAFOS to apply for National Pollutant Discharge Elimination System (NPDES) permits.[315] This designated all CAFOs as point sources of pollution.[316] The revised rule only required CAFOs discharging (or proposing to discharge animal wastes) into U.S. water to obtain NPDES permits.[317]

One potential technology for dealing with dairy wastes are anaerobic digesters, which use the methane in manure to produce electricity.[318] Methane has 28-36 the global warming potential of carbon dioxide.[319] Adoption of digesters, however, is less than nine percent on very large operations and nearly nonexistent for smaller operations.[320] Digesters can reduce dairy electricity costs and potentially be a source of revenue through the sale of excess electricity.[321] Another source of revenue is the sale of carbon offsets, but markets for such offsets has been slow to develop, with low prices.[322]

In California, the dairy industry is a major source of methane emissions.[323] Under Senate Bill 1383, signed into law in 2016, livestock operations will be required to reduce methane emissions starting in 2024, with a requirement to reduce emissions by 40% by 2030.[324] Using anaerobic digesters to produce electricity in California can be problematic, though, because the process can generate other air pollutants.[325] Many dairies are already located in air pollution nonattainment areas regulated by the EPA.[326] An alternative is to use the process to produce pipeline-injectable renewable natural gas that could potentially be used as transportation fuel.[327] To be economically viable, even large dairies would have to operate cooperatively to achieve the needed scale economies. The

---

[314] *Id.*
[315] *Id.*
[316] *Id.*
[317] *Id.*
[318] *Id.* at 29.
[319] Nicolas Sanchez & David C. Mays, *Effects of Methane Leakage on the Greenhouse Gas Footprint of Electricity Generation*, 133 CLIMATE CHANGE 169, 172, 176 (2015).
[320] NIGEL KEY & STACY SNEERINGER, CARBON PRICES AND THE ADOPTION OF METHANE DIGESTERS ON DAIRY AND HOG FARMS 3–4, 8 (U.S. Dep't of Agric., Econ. Research Serv., Econ. Brief No. 16, 2011).
[321] *Id.* at 1.
[322] *Id.*
[323] Hyunok Lee & Daniel A. Sumner, *Dependence on Policy Revenue Poses Risks for Investments in Dairy Digesters*, 72 CAL. AGRIC. 226, 227 (2018).
[324] *Id.* at 226.
[325] *Id.* at 229.
[326] *Id.*
[327] *Id.*

California Low Carbon Fuel Standard (LCFS) Program has a tradable credit system that allows to producers of eligible low-carbon transportation fuels to sell emission reduction credits.[328] In December 2015, the California Air Resources Board announced it would allow LCFS credits for vehicle fuel produced from biogas that counts toward avoided dairy methane emissions.[329] Lee and Sumner warn however that the viability of dairy production of biogas for vehicles depends on a raft of assumptions about future regulations and incentives facing transportation, air pollution, and energy production.[330]

Another resource concern deals with water scarcity. Much dairy production has expanded in the arid Western United States.[331] With limited water supplies and continued population growth, water scarcity has grown acute.[332] Prolonged drought and the potential lower precipitation under climate change exacerbates this scarcity problem.[333] A future challenge for dairies will be the water requirements for feed and forage crops needed to support their herds.[334] Such crops like alfalfa and corn silage tend to be relatively water intensive.[335] In the future, dairies may have to rely on feed and forage from more distant markets.

The dairy industry also faces challenges on the consumer side.[336] US per capita milk consumption has been declining with each successive generation consuming less fluid milk than the generation before.[337] Increases in cheese and yogurt consumption partially offsets this downward trend.[338] Another challenge to the dairy industry is the rise of plant-based milks (e.g. soy milk, cashew milk,

---

328 *Id.* at 230.
329 *Id.*
330 *Id.*
331 George B. Frisvold et al., *Agriculture and Ranching, in* ASSESSMENT OF CLIMATE CHANGE IN THE SOUTHWEST UNITED STATES: A REPORT PREPARED FOR THE NATIONAL CLIMATE ASSESSMENT REGIONAL TECHNICAL INPUT REPORT SERIES 218, 220–21 (Gregg Garfin et al. eds., 2013).
332 Jonathan Overpeck et al., *Summary for Decisionmakers*, *in* ASSESSMENT OF CLIMATE CHANGE IN THE SOUTHWEST UNITED STATES: A REPORT PREPARED FOR THE NATIONAL CLIMATE ASSESSMENT REGIONAL TECHNICAL INPUT REPORT SERIES 1, 15 (Gregg Garfin et al. eds., 2013).
333 Margaret Wilder et al., *Climate Change and U.S.-Mexico Border Communities*, *in* ASSESSMENT OF CLIMATE CHANGE IN THE SOUTHWEST UNITED STATES: A REPORT PREPARED FOR THE NATIONAL CLIMATE ASSESSMENT REGIONAL TECHNICAL INPUT REPORT SERIES 340, 341 (Gregg Garfin et al. eds., 2013).
334 Frisvold et al., *supra* note 323, at 222.
335 *Id.* at 224.
336 HAYDEN STEWART ET AL., WHY ARE AMERICANS CONSUMING LESS FLUID MILK? A LOOK AT GENERATIONAL DIFFERENCES IN INTAKE FREQUENCY, at i (U.S. Dep't of Agric., Econ. Research Serv., Rep. No. 149, 2013).
337 *Id.*
338 *Id.* at 1.

almond milk, rice milk, oat milk, etc.).[339] These plant-base products now represent nearly 7% of the combined animal and plant milk sales.[340] The dairy industry has attempted legal action to prevent these products from using the term "milk" but, in a set of cases, it has been turned back (Ang v. WhiteWave Foods Co.; Gitson v. Trader Joe's Co.; Painter v. Blue Diamond Growers).[341] In 2017, Senator Tammy Baldwin (D-Wisconsin) introduced the Dairy Pride Act, which would prohibit plant-based products from using terms such as "milk," "yogurt" or "cheese" on their labels.[342] The bill, however is "languishing in committee."[343] Interestingly, it has no co-sponsors from major nut producing states such as California, New Mexico or Georgia.[344] The first two are also major dairy states.[345] Neither does the bill have any Senate cosponsors from major soybean producing states.[346]

V. Conclusions

The U.S. dairy industry has transformed itself from one isolated from world markets and highly dependent on government programs to an industry more globally and market oriented.[347] Impressive productivity growth and industry concentration has made this possible.[348] Yet, such concentration (including geographical concentration) has certain negative environmental implications.[349] A future challenge facing the industry will be compliance with environmental laws while navigating changes in global dairy markets. Increased consolidation of dairy cooperatives has also brought increasing challenges to the Capper Volstead exemptions for agricultural cooperatives to antitrust action.[350] The rise of plant-

---

[339] HAYDEN STEWART AND JERRY CESSNA, LIVESTOCK, DAIRY AND POULTRY OUTLOOK: SPECIAL ARTICLE ON DIFFERENT TRAJECTORIES: A LOOK AT SALES OF COW'S MILK AND PLANT-BASED MILK ANALOGS 2 (U.S. Dep't of Agric., Econ. Research Serv., LDP-M-279 SA, 2017).
[340] *Id.* at 3.
[341] Iselin Gambert, *Got Mylk: The Disruptive Possibilities of Plant Milk*, 84 BROOK L. REV. 801, 812–17 (2019).
[342] *Id.* at 803.
[343] Elaine Watson, *NMPF Hails Victory over Plant-Based "Milks" in Spending Bill, PBFA Says Claims Have "Zero Legal Significance"*, FOOD NAVIGATOR (Mar. 23, 2018, 15:23 GMT), https://www.foodnavigator-usa.com/Article/2018/03/23/NMPF-hails-victory-over-plant-based-milks-in-spending-bill-PBFA-says-claims-have-zero-legal-significance.
[344] *Cosponsors: S.130 – 115th Congress (2017-2018)*, CONGRESS.GOV, https://www.congress.gov/bill/115th-congress/senate-bill/130/cosponsors?searchResultViewType=expanded (last visited Oct. 25, 2020).
[345] *Id.*
[346] *Id.*
[347] *See supra* notes 1–2 and accompanying text.
[348] *See supra* notes 9–10 and accompanying text.
[349] *See* Frisvold et al., *supra* note 323.
[350] *See supra* notes 199–208 and accompanying text.

based milk substitutes and declining per capita U.S. milk consumption threaten domestic demand.[351] Yet, income growth (and increased demand for dairy products in developing countries) represents a market opportunity.[352]

---

[351] *See supra* notes 328–333 and accompanying text.
[352] SUMNER, *supra* note 10, at 9–10.

Towards Industrial Dairy Farming in Pakistan: The End of Small Farms and the Transformation of Cattle-Rearing Practices

Erum Sattar*

Abstract

Milk in Pakistan is infused with the self-understanding of a nation. British colonial administrators laid the modern-day foundations of the country's structure through land grants to small farmers. In an agricultural country where nearly forty percent of the population remains food insecure, rearing animals is a way of life in the rural areas where milk remains an important source of animal protein. Selling the daily surplus that families don't consume is a significant source of earnings for cash poor families – and here an unprecedented change is taking place within dairy management and milk procurement systems. The scale of this change is significant as is its ability to connect even the smallest of dairy farmers to the milk buying habits, shaped by sophisticated marketing campaigns, of middle-class buyers in the country's burgeoning cities. The significant changes underway are the result of the actions of large multinational and national companies - including the entry of the commercial arm of the military in the commercialization of the milk value chain - paying cash to small farmers. These operations, which may at first seem symbiotic, in connecting rural sellers to urban buyers, are in fact placing significant pressures on farmers to increase the size of their holdings as well as to improve their breeding stock by moving towards improved (meaning imported) higher yielding

* Lecturer (Program Lead, Core Class Instructor and Water Diplomacy Track Leader), Sustainable Water Management program, Friedman School of Nutrition Science and Policy and Institute of the Environment, Tufts University; Adjunct Professor, Elizabeth Haub School of Law, Pace University; S.J.D., Harvard Law School (2017); LL.M., Harvard Law School (2010); LL.M., Queen Mary, University of London, (2008); LL.B., University of London (2007); Member of the Bar of England and Wales and The Honourable Society of Lincoln's Inn (2010). This article grows out of research on the Indus river basin over the past several years for the Harvard Water Federalism Project under the Harvard Water Security Initiative. A draft of this paper was presented at a Harvard Law School workshop, 'Animal Agriculture, From the Middle East to Asia', Sponsored by the Harvard South Asia Institute, Harvard Law School Animal Law & Policy Program, and Harvard Law School Islamic Legal Studies Program: Law and Social Change as well as at the workshop in support of this special volume at the University of Arizona James E. Rogers College of Law. I thank the participants of both workshops for their suggestions and take responsibility for any omissions and errors.

cattle varieties. While national and provincial governments with the support of international development partners promote the dairy sector as contributing to rural, economic and national development, I argue that a strategy driven by efficiency will ultimately lead to the demise of those very same small livestock and agricultural farmers it aims to uplift. This is because the logic of commercializing the milk value chain through the operations of large Milk Procurement and Marketing Companies (MPMC's) and the pressures to increase milk yields and herd sizes requires consolidation and financing – options that are mostly available to richer and larger farmers. Is modernized milk collection already moving beyond its reliance on collecting milk from dispersed small farms? The unfolding pressures carry with them the effects of increasing demand for all inputs, including consolidated land, water and feed operations which in turn have significant implications for small farmers, animals and the environment. With small farmers reliant on the income from the sale of milk that ties them to a system that may come to no longer need them, can we foretell the demise of small farms? I suggest that these insights are particularly relevant for the study of rural, economic, social, national and international development.

"You are assisting the poor of Pakistan and this helps us fight the root cause of extremism and terrorism."

- President General Parvez Musharraf on the opening of Nestle's milk factory[1]

I. Background

Let me recount an anecdote from a field visit[2] to a model Nestle[3] farm in Punjab province of Pakistan.[4] A hardworking, educated young farmer who spoke good English and wore jeans had

---

[1] Kabirwala, *Nestlé Opens New Milk Factory in Pakistan, Its Largest Milk Reception Plant in the World*, Nestlé (Mar. 16, 2007), https://www.nestle.com/media/pressreleases/allpressreleases/milkfactorypaskistan. At the inauguration outside Lahore, Pakistan of Nestle's largest milk plant in the world when General Parvez Musharraf was President of the country, "Nestlé opens new milk factory in Pakistan, its largest milk reception plant in the world." *Id.*

[2] *See* Communique, *Friends of Democratic Pakistan Summit Meeting Concluding Statement by the Co-Chairs*, U.S. DEP'T OF STATE (Sept. 24, 2009), https://2009-2017.state.gov/p/sca/ci/pk/friends/131015.htm. This portion of the research was conducted along with the Friends of Democratic Pakistan (FODP), a consortium of Pakistan's largest donors formed after the resumption of democratic rule in 2008 to help achieve development priorities, and the Harvard Water Security Initiative's Water Federalism Project. *Id. See generally* Jonathan Shaw, *The Water Tamer*, HARVARD MAGAZINE (Jan. – Feb. 2012), https://harvardmagazine.com/2012/01/the-water-tamer.

[3] Nestle is one of the two largest dairy companies in Pakistan. *See Nestle Pakistan Sells Pasteurized Milk in $23 Billion Market*, EDAIRYNEWS (Feb. 27, 2015), https://edairynews.com/en/nestle-pakistan-sells-pasteurized-milk-in-23-billion-market-42185/ [hereinafter *Pasteurized*]. It took over operations of the older local MilkPak Pakistan Ltd. *Id.* The other main local conglomerate, Engro Pakistan (now FrieslandCampina Engro) (Engro), emerged after the majority share buyout by the Dutch conglomerate of the local Engro Foods Ltd. Jim Cornall, *FrieslandCampina Completes Engro Foods Deal*, DAIRY REPORTER (Jan. 5, 2017, 10:23 GMT), https://www.dairyreporter.com/Article/2017/01/05/FrieslandCampina-completes-Engro-Foods-deal. For details of the corporate takeover, see generally *Our Brands*, FRIESLAND CAMPINA, https://www.frieslandcampina.com/about-frieslandcampina/our-brands/ (last visited Oct. 27, 2020).

[4] A "province" is the equivalent administrative unit to a "state" in the U.S. *Resource Library: Encyclopedia Entry*, NATIONAL GEOGRAPHIC, https://www.nationalgeographic.org/encyclopedia/province/ (last visited Oct. 27, 2020).

returned to Pakistan after a degree in computer science from the United States. His parents had money to invest so he bought land with access to a road network and partnered with Nestle to become a bulk milk supplier. He saw commercial milk operations as a profitable business venture and initially targeted a herd size of 50-100 buffaloes and cows.[5] He had plans to grow and improve his herd with imported varieties and artificial insemination. Nestle was very proud of his farm and showcased him to visitors as a model farmer,[6] certainly more affluent and educated than the average dairy farmer[7]. To demonstrate his commitment to Nestle's recommended infrastructure and cattle rearing practices, he'd installed large ceiling fans which periodically dispersed cooling mist in the well-ventilated cattle sheds. He had two biogas pits to produce electricity from dung, which gave him uninterrupted electricity,[8] to power the farm's tube well[9] and the 6 split air conditioners in the farm office. Because he had access to investment capital, he could take advantage of Nestle's assurance that the company would buy all the milk volume he could produce through increased herd size and yields. The question for us is whether this model farmer is representative of the bulk of livestock and small farmers in the country who would find anything close to such expenditure beyond their reach. Also, what does presenting such a commercially minded farmer as a 'model farmer' reveal about the operations of large private-sector national, and international dairy marketers more broadly, as well as the implications of the dairy value chains they are creating.

Two large foreign milk and dairy conglomerates, the Swiss Nestle and the Dutch FrieslandCampina, are Pakistan's largest

---

[5] Milk from both buffaloes and cows makes up the bulk of commercial milk sales in Pakistan. UMM E. ZIA ET AL., DAIRY REPORTS: DAIRY DEVELOPMENT IN PAKISTAN 2 (2011), *available at* http://www.fao.org/3/a-al750e.pdf.

[6] NESTLÉ, CSV REPORT OF NESTLÉ PAKISTAN LIMITED: TOGETHER WE CARE 24–29 (2014), *available at* https://www.nestle.pk/sites/g/files/pydnoa361/files/asset-library/documents/financial_reports/nestle_ar_2014_csv.pdf [hereinafter CVS NESTLÉ]. Nestle is funding a project of the NGO, the Dairy and Rural Development Foundation (DRDF) to upgrade 100 farms on a 50% cost-sharing basis to model farms. *Id.* at 28.

[7] *See* Samrina Akhtar et al., *Management Profile and Contribution of Livestock in Poverty Alleviation and Nutritional Improvement in Peri-Urban Areas of Faisalabad*, 45 PAK. J. AGRI. SCI. 381, 381–82 (2008). A study conducted in sub-urban areas of Faisalabad, Pakistan's third largest city, found that just over 58% of dairy farmers were illiterate. *Id.*

[8] Shahzeb Jillani, *Power Cuts Hit Pakistan's Economy*, BBC NEWS (July 15, 2011), https://www.bbc.com/news/av/world-asia-pacific-14164825. Reliable regular electricity is far from the norm with power blackouts colloquially known as 'loadshedding' prevalent in both urban and rural areas. *Id.*

[9] A well with a submersible pump to access groundwater.

formal sector providers of milk.[10] Together the two companies control approximately 90% of Pakistan's formal dairy value chain.[11] Providing a rationale for the work that the foreign dairy conglomerates are doing. Nestle, for instance, claims that by "developing progressive dairy farmers (medium scale) into commercial dairy farmers (large scale)" it is "contributing to achieving Sustainable Development Goals (SDGs) 1 and 2 (No poverty and Zero Hunger) which aim at poverty reduction, ending hunger, achieving food security, and promoting more sustainable agriculture."[12] Let us take a closer look at the development of Pakistan's dairy sector to assess the extent to which this particular form of market development, and the global language of economic and social development that is used to justify it, is warranted in the country's case.

II. Introduction

What we saw that day was certainly not the norm for the majority of Pakistan's dairy farmers and animals, whether local buffaloes or cows (local, imported, or improved through AI), where about 84% of rural households have between 1-4 dairy animals.[13] The bulk of milk consumed in the country is from indigenous breeds of riverine buffaloes, approximately double that of cow's milk: 58% to 35%.[14] Even though Pakistan is the world's fourth largest producer of milk after China, India, and the U.S.,[15] with a stock of approximately 48 million heads of buffaloes and cows.[16] Only 7% of farms report having what may be considered a large farm, 50 head of

---

[10] Kazim Alam, *Of Loose Milk and Tight Margins*, DAWN (Mar. 17, 2020), https://www.dawn.com/news/1541158.
[11] *Id.*
[12] *Nestlé Empowering Farmers with Best Farm Practices*, NESTLÉ PAKISTAN (Apr. 23, 2018), https://www.nestle.pk/media/newsandfeatures/nestle-supporting-farmers-to-become-leaders-in-agriculture [hereinafter *Farm Practices*].
[13] Abdus Sattar, *Milk Production in Pakistan*, PIDE BLOG (Mar. 1, 2020), https://pide.org.pk/blog/milk-production-in-pakistan/#:~:text=Average%20household%20holdings%20are%202,2006%2D07%5D%20in%20Pakistan.
[14] Omer Farooq, *Agriculture*, *in* PAKISTAN ECONOMIC SURVEY 2008–09 17, 33 (Pak.), *available at* http://www.finance.gov.pk/survey/chapters/02-Agriculture09.pdf.
[15] Abdul Rehman et al., *Livestock Production and Population Census in Pakistan: Determining Their Relationship with Agricultural GDP Using Econometric Analysis*, 4 INFO. IN PROCESSING AGRIC. 168, 168 (2017).
[16] GOV'T OF PAK., AGRIC. CENSUS ORG., AGRICULTURE CENSUS 2010: ALL PAKISTAN TABLES (IN ACRES) tbl. 11.4 (2010), [hereinafter AGRICULTURE CENSUS 2010], *available at* http://www.pbs.gov.pk/sites/default/files/aco/publications/agricultural_census2010/Tables%20%28Pakistan%20-%20In%20Acres%29.pdf.

cattle.[17] Further, given that milk yields are low, 5-6 times less than what are achieved in the developed world,[18] cattle holdings are relatively dispersed and dairy is embedded in the fabric of daily rural life. In fact, 80% of the milk in the country is produced by either rural commercial or rural subsistence producers, 70% of that is produced by subsistence farmers.[19] At the same time, given this particular form of dairy abundance, imports continue to rise as domestic demand outstrips supply.[20] Pakistan is the largest importer of formula milk in the world.[21] When looked at more closely, what imports reveal is that there is a shift from fresh milk towards manufactured dairy products (both liquid and powdered). The large commercial dairy marketers, in addition to their sale of packaged milk brands, are also at the forefront of promoting the sale of manufactured dairy products.[22] One explanation is that having these products in their portfolios allows them to target customers at lower price points which they've recognized as being potentially highly profitable since milk's price (both fresh and packaged) continues to make it unaffordable for a large segment of the population.[23] As per Nestle's research, this group earns between $2-8 a day.[24] We must of course recognize that it is precisely the practice of selling manufactured dairy products that undercuts the price of fresh, raw, and loose milk. This is because milk now has to compete against a product that can be manufactured at a lower cost, and to state the obvious is not milk but a substitute. It is this segment, fresh raw milk after all, that the companies see as their real competitor.[25]

---

[17] Umm E. Zia, *Pakistan: A Dairy Sector at a Crossroads*, *in* SMALLHOLDER DAIRY DEVELOPMENT: LESSONS LEARNED IN ASIA 76, 76 (Nancy Morgan ed., 2009), *available at* http://www.fao.org/3/a-i0588e.pdf [hereinafter *Crossroads*].

[18] Sattar, *supra* note 13.

[19] *Crossroads*, *supra* note 17, at 76, 80.

[20] *See generally* Muhammad Naeem Tahir et al., *Current Standing and Future challenges of Dairying in Pakistan: A Status Update*, *in* MILK PRODUCTION, PROCESSING AND MARKETING (Khalid Javed ed., 2019), *available at* https://www.intechopen.com/books/milk-production-processing-and-marketing/current-standing-and-future-challenges-of-dairying-in-pakistan-a-status-update.

[21] *Dairy Industry in Pakistan*, PAKISSAN.COM (Sept. 17, 2017, 5:12 pm), https://www.pakissan.com/2017/09/17/dairy-industry-in-pakistan/.

[22] *See* Marylou Andrew, *Milk in the Time of Opportunity*, AURORA (Jan. 29, 2018, 10:36 AM), https://aurora.dawn.com/news/1141745. These products may be manufactured using whey, lactic acid, powdered milk or vegetable protein. *Id.*

[23] *Id.*

[24] *Id.*

[25] Farooq Tirmizi, *Despite Stellar Earnings, Nestle Pakistan Aspires for Better Results*, THE EXPRESS TRIBUNE (Feb. 8, 2012), https://tribune.com.pk/story/333671/despite-stellar-earnings-nestle-pakistan-aspires-for-better-results. In an interview the former CEO of Nestle Pakistan revealed for instance that, "Take the example of yoghurt. We are 80% of the

Since the country's independence in 1947, the share of agriculture in the GDP has been on a downward trajectory, nevertheless, it remains significant at nearly 20%.[26] Livestock, perhaps surprisingly, is the bulk of the agricultural sector at 60% representing 11% of total GDP.[27] Let's note how remarkable this is for a primarily agricultural country, such that the total value of livestock products is more than the combined value of all major crops including the largest primary commodities of cotton, wheat, rice, and sugarcane.[28] Most farm families obtain 20-25 % of their income from their holdings of 2-3 buffaloes and cows along with 5-6 sheep and goats.[29] These families sell about a third of the milk they produce.[30] Meanwhile, on the consumption side, nearly a third of household income spent on food is on milk and dairy products.[31] About 69% of the irrigated area is in Punjab province which means that it has the most significant share of the country's economy as well as its agricultural base.[32] The milk production too comes from the two largest agricultural provinces, Punjab and Sindh, that together produce 96% of milk.[33] Of this about 73% of milk production comes from Punjab, Sindh contributes about 23%, while the other provinces and areas produce the remainder.[34]

---

market when it comes to packaged yoghurt. But that packaged segment is only 2% of the total market, . . . [s]o it doesn't really matter what our market share is. We need to grow the whole packaged segment." *Id.*

[26] Gov't of Pak., Fin. Div., *Agriculture*, *in* PAKISTAN ECONOMIC SURVEY 2019-20 17, 17 (2020), [hereinafter ECONOMIC SURVEY 2019-20], *available at* http://finance.gov.pk/survey/chapter_20/02_Agriculture.pdf.

[27] Gov't of Pak., Fin. Div., *Agriculture*, *in* Pakistan Economic Survey 2018-19 11, 14 (2019), [hereinafter ECONOMIC SURVEY 2018-19], *available at* http://www.finance.gov.pk/survey/chapters_19/2-Agriculture.pdf.

[28] *See* Muhammad Tariq et al., *Milk Marketing and Value Chain Constraints*, 45 PAK. J. AGRIC. SCI. 195, 195 (2008).

[29] Muhammad Ashfaq et al., *Factors Affecting the Economic Losses Due to Livestock Diseases: A Case Study of District Faisalabad*, 52 PAK. J. AGRIC. SCI. 503, 503 (2015).

[30] *See generally* Tariq et al., *supra* note 28, at 199.

[31] PETER WYNN ET AL., REPORT ON DAIRY MISSION TO PAKISTAN 5 (2006).

[32] *See A Snapshot of India and Pakistan Agriculture*, KLEFFMANN GROUP, https://www.kleffmann.com/en/kleffmann-group/news--press/press-releases/a-snapshot-of-the-pakistan-and-indian-agriculture/#:~:text=Punjab%20covers%20about%2069%25%20of,to%20the%20national%20food%20production%20%5Bhereinafter%20SNAPSHOT%5D, (last visited Oct. 28, 2020).

[33] Sattar, *supra* note 13.

[34] Arshad H. Hashami et al., *Gender Role in Livestock Management and Their Implication for Poverty Reduction in Rural Toba Tek Singh, Punjab-Pakistan*, 44 PAK. J. AGRIC. SCI. 674, 674 (2007).

In the seventh decade of Pakistan's founding, a vast percentage of the population, about 47%, remains dependent on some form of an agricultural income.[35] With an estimated population of approximately 220 million,[36] this amounts to nearly 104 million people. Of this, an estimated 7.5 million families are involved in the livestock sector and depend on the milk they produce both to meet their own nutritional needs and the income they are able to generate from the sale of any surplus.[37] The sector employs between 30-35 million people directly.[38] Approximately 62% of the rural population relies on an agricultural income.[39] The bulk of livestock holdings remain small and dispersed, as farms of less than 5 acres make up 64% of the total farms in the country.[40] Perhaps, more than the sheer size of the livestock sector in the economy, for those dependent on an income from farming, the production and sale of milk is the most significant source of regular income throughout the year.[41] This is because there are two annual cropping seasons, spring and winter.[42]

---

[35] Rehman et al., *supra* note 15, at 169.

[36] *See Pakistan Population 2020 (Live)*, WORLD POPULATION REV., https://worldpopulationreview.com/countries/pakistan-population (last visited Nov. 3, 2020). The census remains deeply politicized in Pakistan and the previous completed census was in 1998. Even though the census is to be repeated every ten years, there was a nearly two-decade gap to the 2017 census. To date, the results of this remain provisional. Muhammad A. Wazir & Anne Goujon, *Assessing the 2017 Census of Pakistan Using Demographic Analysis" A Sub-National Perspective* 2 (Vienna Inst. of Demography, Working Paper No. 06/2019), https://www.econstor.eu/bitstream/10419/207062/1/1667013416.pdf.

[37] CTR. FOR APPLIED POLICY RESEARCH IN LIVESTOCK, UNIV. OF VETERINARY & ANIMAL SCIS., POLICY PAPER: IMPORT OF MILK & WHEY POWDERS IN PAKISTAN 1 (2017), *available at* http://www.uvas.edu.pk/doc/MBA/policy/Import-Milk.pdf [hereinafter POLICY PAPER].

[38] M. Sarwar, *Dairy Industry in Pakistan: A Scenario*, 4 INT'L J. AGRIC. & BIOLOGY 420, 420 (2002); *Pakistan Livestock Census 2006*, PAK. BUREAU OF STAT., http://www.pbs.gov.pk/content/pakistan-livestock-census-2006 (last visited Nov. 3, 2020) [hereinafter *Livestock Census 2006*].

[39] Rehman et al., *supra* note 15, at 169.

[40] AGRIC. CENSUS ORG., GOV'T OF PAK., AGRICULTURAL CENSUS 2010: PAKISTAN REPORT, at XLVII (2010), *available at* http://www.pbs.gov.pk/sites/default/files/aco/publications/agricultural_census2010/WRITE-UP%20AGRI.%20CENSUS%202010.pdf [hereinafter AGRICULTURAL CENSUS].

[41] Farmers are paid for their milk weekly and there is a shift to mobile payments so that some of the downsides of cash payments such as safety concerns can be minimized. *See* Staff Report, *Milk Payments Mechanism: Easypaisa, Nestle Collaborate to Facilitate Dairy Farmers*, DAILY TIMES (Apr. 11, 2016), https://dailytimes.com.pk/91261/milk-payments-mechanism-easypaisa-nestle-collaborate-to-facilitate-dairy-farmers/.

[42] *See* ECONOMIC SURVEY 2019-20, *supra* note 26, at 17–18. In the spring Kharif cropping season sowing takes place between Apr-Jun with harvesting taking place between Oct-Dec and in the winter Rabi cropping season, sowing takes place between Oct-Dec with harvesting occurring between Apr-May. *See id.*

Farmers and tenant farmers get paid for their crops when they harvest and bring them to market.[43] Thus, the farming calendar makes the regular weekly income farmers can get from the sale of milk necessary for them to be able to meet their household expenses. Landless livestock farmers are even more dependent on their earnings from the sale of milk.[44] In a cash-strapped, debt-burdened rural economy we should not underestimate the impacts of even small amounts of money to effect significant structural transformation.

An analysis of the transformation in the dairy sector that is underway in Pakistan shows that while looked at individually, as on the farm above, each of the expansionary decisions to undertake dairy farming at greater scale is one of efficiency. Leading to higher productivity with increased milk yields from both improved, often imported, breeds and practices.[45] Plus, as the model farmer and company representatives inform a visitor, producing cattle that is better cared for. However, the heart of the structural transformation in the dairy sector that is underway, in which large companies move in to connect livestock and small farmers with urban consumers by being a source of regular income. This is the very process through which the logic of the market may triumph at the cost of those same livestock, small farmers, and landless agricultural workers. Given the pressures on small farmers to consolidate, I suggest that greater infusions of regular payments, which at first glance is exactly what may seem to be what a resource-poor rural economy needs, is the very mechanism by which small farmers are made to feel the need to consolidate. Allowing them to feel the pressures through the transmission of price signals to overcome the small sizes of their landholdings and herds. In essence, to no longer remain small.

In brief summary, there is a massive, structural transformation taking place in dairy production. Along with a growing nexus of rural areas with urban areas and the overall role of the private sector in this structural shift towards a market-based economy. The structural change towards a market-led approach means that Pakistan is well on its way to a capitalist dairy sector. One

---

[43] *See generally id.*
[44] *See generally* Akhtar et al., *supra* note 7, at 384–85.
[45] *See generally Livestock Census 2006*, *supra* note 38, at tbls.15–16. On average, buffalo milk has twice the fat content of cow milk which has an edge as far as consumer taste is concerned. *See Milk Composition*, FOOD & AGRIC. ORG. UNITED NATIONS, http://www.fao.org/dairy-production-products/products/milk-composition/en/#:~:text=The%20fat%20content%20of%20milk,milk%20is%20about%202%3A1 (last visited Nov. 3, 2020).

with severe, and troublesome, long-term implications for the survival of small-scale dairy and agricultural farmers. The negative effects on livestock health and welfare as the process of ever greater efficiency pressures fall on the most vulnerable, both human and animal. Pakistan is nowhere close to the kind of consolidation of the livestock industry we see in some other countries in this issue. Nevertheless, I suggest that with current trends, and the direction of change, the first hints of such a large structural shift are visible. Surely, once the goal becomes greater yield without a significant regulatory or ethical check developing concurrently, how long can the trend by bucked? The under-appreciated tragedy from a country perspective is that policy-makers are not even asking these relevant questions of the structural changes underway.

To show this transformation in the dairy sector, the article is divided into four sections that taken together describe the forces of change that are underway: (i) the self-understanding of the nation as one based on its rural strength and the British colonial origins of the idea of 'a nation of farmers'; (ii) the structure of the rural economy that supports milk production at a vast and small scale including the critical work of women in daily dairy management; (iii) how international development finance is enabling the role of market forces in shaping the lives of small farmers together with multinational and national companies to increase yields; and (iv) unconsidered implications for policy going forward.

III. Imperial rule Creates a Nation of Farmers

To comprehend the self-understanding of a nation one must get a sense of the history through time and place. Modern-day Pakistan boasts the world's largest contiguous irrigation network, an area covering 45 million acres.[46] The origins of farming in the Indus Basin are to be found in the Bronze-era Indus Valley Civilization centered around Mohenjo-Daro.[47] In the modern era, present-day Pakistan's agricultural endowment is the result of Britain's creation of a vast, agricultural landholding and loyal rural class situated primarily in that part of Punjab province in India. The Jewel in the Crown of the British Empire, that upon Partition in 1947, came to Pakistan's share. This irrigation network remains the basis of Pakistan's economy and continues to employ nearly half its labor

[46] *See Indus Basin Irrigation System of Pakistan*, *TRIPLE BOTTOM-LINE*, http://www.tbl.com.pk/indus-basin-irrigation-system-of-pakistan/ (last visited Nov. 3, 2020).
[47] *See generally* MUHAMMAD H. PANHWAR, SIX THOUSAND YEARS OF IRRIGATION IN SINDH 67 (2011).

force.[48] To this day, agriculture accounts for nearly 70% of the country's export earnings.[49] For instance, national development goals envisage it becoming a milk and meat exporter.[50] Despite the sheer scale of the endowment of a rural agrarian base, 36.9% of the population remains food insecure.[51] To date, the country's dismal and regressive social and economic outcomes are grounded in this basic structure of an economy created to serve the ends of a departed Empire.

A. British Rule of India and the Rural Cooperative Moment

For our purposes, it is important to take account of the long history, going back to the colonial era of rural cooperatives in India when imperial rulers attempted to create them.[52] Under British rule of India, the development of irrigation canals brought water to the previously unirrigated plains of the Indus river.[53] This enabled the settlement of new lands, with new farmers moving west from the densely populated regions of eastern Punjab.[54] At the same time as the canal irrigation project, building the canal colonies was also a colonial-settler project. This helped increase food production in the face of recurring and devastating famines that undermined the credibility of imperial rule. [55] At the height of their development, massive population transfers occurred.[56] According to census figures, nearly 1.5 million settlers moved from Punjab's eastern parts

---

[48] *Agriculture Statistics: Introduction*, PAK. BUREAU OF STAT., http://www.pbs.gov.pk/content/agriculture-statistics (last visited Nov. 4, 2020).
[49] Daniel Workman, *Pakistan's Top 10 Exports*, WORLD'S TOP EXPORTS (Aug. 9, 2020), http://www.worldstopexports.com/pakistans-top-10-exports/.
[50] *Chairman Message*, PLDDB, https://www.plddb.pk/syed-yawar-ali/ (last visited Nov. 4, 2020) (PLDDB stands for the Punjab Livestock and Dairy Development Board); *see* ECONOMIC SURVEY 2019-20, *supra* note 26, at 14.
[51] MINISTRY OF NAT'L HEALTH SERVS., GOV'T OF PAK., NATIONAL NUTRITION SURVEY 2018: KEY FINDINGS REPORT 38 (2018), *available at* https://www.unicef.org/pakistan/sites/unicef.org.pakistan/files/2019-07/Final%20Key%20Findings%20Report%202019%20%281%29.pdf.
[52] *See generally* Mihir Shah et al., *Rural Credit in 20th Century India: Overview of History and Perspectives*, 42 ECON. & POL. WKLY. 1351, 1353 (2007).
[53] *See generally* SAIYID ALI NAQVI, INDUS WATERS AND SOCIAL CHANGE: THE EVOLUTION AND TRANSITION OF AGRARIAN SOCIETY IN PAKISTAN (2013).
[54] For an excellent history of the development of the canal colonies of the Punjab, see IMRAN ALI, THE PUNJAB UNDER IMPERIALISM, 1885–1947 (Princeton Univ. Press 2014) (1988).
[55] In a masterful new study of the East India Company, William Dalrymple has a chapter, "Racked by Famine" that
details the mass hunger and suffering British rule caused in India. *See generally* WILLIAM DALRYMPLE, THE ANARCHY: THE EAST INDIA COMPANY, CORPORATE VIOLENCE, AND THE PILLAGE OF AN EMPIRE 215–58 (2019).
[56] *See* ALI, *supra* note 54, at 8–10.

to the canal colonies of western and southern Punjab in the two decades between 1901-1921.[57] While efforts were made to form and operate "cooperative irrigation societies" after the war in 1920, the experiments failed due to a lack of "harmony among the cultivators."[58] While the efforts had centered on the sharing of irrigation water, the colonial government learned the lesson and did not attempt to organize rural cooperatives for other purposes either.[59] When it comes to the formation of dairy cooperatives, forces similar to the ones disincentivizing cooperatives for water sharing may be in effect.

IV. Shifting Practices

A. Transporting Milk to Cities

While dairy farmers have always sold their milk to peri-urban areas and cities, with the advent of the MPMC's milk procurement is becoming more formalized.[60] This, of course, was a key rationale for their introduction as they would be able to bring high-quality milk to consumers. But, as the IFC has recognized, it is difficult to build businesses that bring nutrition to the base of the pyramid consumers.[61] Before we take a closer look at the differences in practice between the informal and formal mechanisms for milk transport, we must note the immense difference in their market shares. To date, after three decades of the introduction of formal dairy value chains, raw unprocessed milk remains between 95-97% of the market while the remaining 3-5% of milk is Ultra High Treated(ment), or UHT, pasteurized and homogenized milk[62] sold by the MPMC's.[63] In addition to this huge volumetric difference, the substantive differences in their practices are significant as they relate to procurement, handling, storage, transport, and sale.[64] The

---

[57] Indu Agnihotri, *The Canal Colonies of Punjab*, 33 INDIAN ECON. & SOC. HIST. REV. 37, 38 (1996).
[58] *See* ALI, *supra* note 54, at 177.
[59] *See id.*
[60] *See* GENE MOSES, INT'L FIN. CORP., IFC IN THE DAIRY SECTOR: SPOTLIGHT ON NUTRITION 8 (2017).
[61] *Id.* at 13.
[62] The formal liquid milk category is dominated by UHT packaged milk that without refrigeration has a long shelf-life and only requires refrigeration after a carton is opened. As reliable electricity remains a challenge and fresh milk requires refrigeration throughout the supply chain it is not yet the norm across Pakistan's formal dairy sector. *Pasteurized*, *supra* note 3.
[63] ZIA ET AL., *supra* note 5, at 17–18, 21.
[64] *See generally* Natasha Ansari et al., *'Milk for Milk, Water for Water': Analysing Pakistan's Dairy Innovation*, IDS BULLETIN (2018), https://bulletin.ids.ac.uk/index.php/idsbo/article/view/2933/Online%20article.

traditional *doodh walas*[65] (milk sellers) buy milk either directly from farmers at short distances. More commonly, *dodhis* (milk transporting middle men), who transport milk to peri-urban areas and cities in large metal vats, or more recently plastic containers, without any quality checks or refrigerated transport.[66] Usually, low-quality unhygienic ice may be added to the milk vats to cool and protect it from high temperatures during transport as well as to add to the volume of milk, thereby improving margins.[67] This leads to dilution, as well as problems of contamination given the quality of water used to make ice.[68] Despite these concerns, traditional *dodhis* perform a fundamental, low-cost, and efficient service in transporting milk from where it is primarily produced to where it is primarily consumed.

The MPMC's meanwhile have built a more formalized milk collection chain that embeds farmers and private-sector *dodhis* into a network of milk collection and chilling centers that allows them to check quality, while cooling the milk during transport.[69] Nestle, for instance, collects milk from 190,000 dairy farmers, has 3,500 milk collection centers, and 3,300 chilling centers.[70] By 2014, through its emphasis on checking quality from collection through transport, it lowered microbial and Mycotoxin levels, as well as reduced total milk rejections by 20% over the previous year. [71] Engro, too, has 135,000 farmers from whom it collects milk and has developed a network of 1,600 milk collection centers.[72] In partnership with a major telecom and digital phone service provider it has installed a data collection and payments system at its milk centers to gather quality data, volume data, and make automated payments to farmers.[73]

---

[65] *Doodh* is milk in Urdu.
[66] *See* ZIA ET AL., *supra* note 5, at 11–12, 36.
[67] *Id.* at 11.
[68] *Id. See generally* Asif Kamran & Syed Muhammad Ahsan Rizvi, *Reason and Trends for Using Packaged Milk in Pakistan: Study of Urban Pakistani Consumers*, *in* 185 LECTURE NOTES IN ELECTRICAL ENGINEERING 909, 909–10 (J. Xu et al. eds., 2013).
[69] *See* ZIA ET AL., *supra* note 5, at 12, 22.
[70] *See* CSV NESTLÉ, *supra* note 6, at 24.
[71] *Id.* at 26.
[72] Press Release, Engro Corp., Telenor Pakistan Automates Milk Collection Network in Partnership with Engro Corp (Aug. 12, 2016), https://www.engro.com/press-releases/telenor-pakistan-automates-milk-collection-network-in-partnership-with-engro-corp/.
[73] *Id.*

B. Managing Diary Animals for Quality and Yields

One of the major areas of concern for MPMC's is the safe and hygienic procurement of milk.[74] It is particularly illustrative to see some of the changing practices on farms and the ways market dynamics are transforming animal welfare. In some sense, as will be evident by contrast with some of the other articles in this volume, questions that may arise in other jurisdictions about animal welfare are currently largely absent from dairy development discourse in Pakistan. The driving motivation of MPMC training programs, for the most part, is to increase milk yields. Therefore, dairy animals are, in that framing, important to take proper care of due to their instrumental milk-yielding value. Nestle, for instance, works with its farmers to increase the low milk yields of dairy animals from a given base of 5-6 liters to 10-14 liters.[75] While this is a very far cry from what dairy farmers in developed countries, such as the U.S. or Australia produce. For the farmers who sell their milk by volume, these are large gains.[76] The improved practices for better animal welfare and hence greater milk yield that company representatives impart are a combination of a few simple things. For example, sheltering animals in open sheds, rather than closed brick rooms that retain greater heat. Along with such things as ensuring that during the long hot days of summer, with temperatures routinely crossing 100-plus Fahrenheit, livestock even when tied, have ample leeway to easily reach a water container. Representatives of large milk buying companies explain the parallel to farmers by drawing an analogy to human lactating mothers; just as a breast-feeding mother has to have regular drinks of water to make sure that she produces enough milk to feed her child, so too do their dairy animals.[77]

In addition to training farmers who remain on their own farms to care for their animals in ways that increase yields. The MPMC's have also undertaken programs to train additional people, which is expected to professionalize the quality of human enterprise available to larger sized farms. Tapping into the need for trained human cadres that can help grow herd and farm sizes. Engro, for instance, with funding support from the European Union, other European country development banks, and governments has developed its proprietary Dairy Development Program which has trained male workers as farm supervisors and females as livestock

---

[74] *See* Tahir et al., *supra* note 20, at 8.
[75] *See generally id.* at 8–9, 13–14.
[76] *See id.* at 8–9.
[77] Field visit observations (notes on file with author).

extension workers.[78] In 2019, the program had trained 1,263 workers of whom 35% are female.[79] Nestle, however, has chosen to tackle another problem that stands in the way of larger farm sizes. Mainly, the lack of capital and financing that smaller farmers face in growing their farms to larger sizes, thereby improving their economic returns.[80] The *Kisan* (farmer) Club subsidizes farm inputs, such as chillers, cow purchases, and breed improvement, through helping finance bank loans,[81] or through innovative partnerships for digital micro-finance lending.[82]

MPMC's have also put in place testing and quality assurance checks at the points of collection. They perform various qualitative and quantitative tests at the Village Milk Collection centers, as well as at their Regional Milk Collection centers.[83] "These include organoleptic, temperature, clot on boiling, fat%, solids not fat, total solids, and specific gravity. Tests for aflatoxins, antibiotics, and physiochemical characteristics are performed at RMC to ensure product processing quality and safety."[84] "At the second place during processing or intermediate steps, various systems for quality and safety management, e.g., ISO 9000, FSMS 22000, total quality management (TQM), hazard analysis and critical control point (HACCP), and many other ISO certificates are adopted."[85] Further, the companies have also adopted incentive systems, in the form of payment premiums for the volume of milk supplied, the regularity with which a farmer supplies milk to the company, and for other microbial tests.[86]

One key constraint in raising milk yields is the limitations in the commercial availability of fodder, or feed. Agricultural dairy farmers, in particular, face choices of the amount of their plots on which to plant fodder for their dairy animals as against other cash

---

[78] Recorder Report, *European Union Recognises Engro Foods' Dairy Development Programme*, BUSINESS RECORDER (May 28, 2019), https://fp.brecorder.com/2019/05/20190528481122/.
[79] *Id.*
[80] *Farm Practices*, *supra* note 12.
[81] *Id.*
[82] *Nestlé Pakistan and Telenor Microfinance Bank Partner to Launch Digital Lending for Farmers*, NESTLÉ (Aug. 7, 2017), https://www.nestle.pk/media/pressreleases/nestle-pakistan-and-telenor-microfinancebank-partner-to-launch-digital-lending-for-farmers.
[83] Tahir et al., *supra* note 20, at 8.
[84] *Id.*
[85] *Id.*
[86] *See id* at 9–10.

and food crops.[87] For livestock farmers the equation, of course, is different given that they rely on purchasing the necessary feed from agricultural markets. Overall at the national level there is a:

> 15 to 30% deficit in total digestible nutrient requirements for livestock.[88] On average, livestock obtain about 50% of their nutrients from green fodder, 38% from crop residues and the remainder from grazing vacant lands and cropping land post-harvest [in original], and cereal by-products and oil cake/meals.[89] Such estimates highlight the limitations in digestible energy and protein supply at a national level.[90]

Not only is this a major hurdle in raising dairy cattle that produces consistently high yields, but given that these are national averages, more localized research is needed to develop an appreciation of incentives as they operate on the farm level. As the Australian dairy mission pointed out, to sustainably increase yields, there is need for more localized assessments of feed availability for different agro-climatic zones.[91] Without such granular research, it will be difficult to design effective policy that addresses the choices farmers are faced with on a daily basis.

C. Women and the Production of Milk

Women are active workers whose labor and knowledge is vital to the agricultural economy, it employs 67% of the female workforce and they are involved in most tasks from the planting of crops to their harvesting.[92] Small ruminants and animals (goats, buffalo, and, cows) are a part of the household's food basket whose primary care, milking, and feeding duties fall to women along with

---

[87] Muzaffar Iqbal & Munir Ahmad, *An Assessment of Livestock Production Potential in Pakistan: Implications for Livestock Sector Policy*, 38 PAK. DEVELOP REV. 615, 615–16 (1999).
[88] WYNN ET AL., *supra* note 31, at 7.
[89] *Id.*
[90] *Id.*
[91] *Id.*
[92] Ruqayya Khan, *Women in Pakistan Agriculture*, PAKISSAN.COM (Dec. 12, 2018, 9:58 pm), https://www.pakissan.com/2018/12/12/women-in-pakistan-agriculture/; *see* DURRE SAMEE ET AL., FOOD AND AGRIC. ORG. OF THE UNITED NATIONS, WOMEN IN AGRICULTURE IN PAKISTAN 1 (2015), *available at* http://www.fao.org/3/a-i4330e.pdf.Women in Agriculture in Pakistan, *Food and Agriculture Organization* (FAO), Islamabad, Pakistan, 2015, http://www.fao.org/3/a-i4330e.pdf [hereinafter WOMEN IN AGRICULTURE].

responsibilities related to other agricultural tasks.[93] Women's role in household and farm livestock management is particularly extensive. Ranging from the daily watering and milking needs of cattle to making and forming the dung cakes to be used as fuel for household cooking. Essentially, working with livestock is seen as an extension of chores related to the household.[94] Meanwhile, about 60% of their work remains unpaid and to correct this disbalance, extensive mobilization will have to be undertaken.[95]

Because of women's involvement in livestock management, development agencies have funded training programs aimed at them by NGOs and private companies.[96] For example, USAID financed the training of 5,000 women as extension workers under its Dairy Project.[97] These training programs are conducted by more formally educated and trained women. This enables easier access by overcoming cultural and communication barriers with the women farmers being trained.[98] As the rationale for the training emphasizes, when women's work becomes the means through which the family can earn a regular income, their status in both the family as well as the community is enhanced.[99] USAID's internal audit of the project found that its targeted material gains along with enhanced incomes for the female extension workers did not materialize because of social and cultural barriers.[100] Clearly, the structural barriers to such development projects are limited. Meanwhile, the actual work of women in the care of livestock continues.

---

[93] *See* SAMEE ET AL., *supra* note 92, at 38–39, 94.
[94] *See* Ansari et al., *supra* note 64, § 3.1.
[95] Khan, *supra* note 92.
[96] *See Gender Equality and Female Empowerment*, USAID, https://www.usaid.gov/pakistan/cross-cutting-themes-good-governance-and-gender-equity (last updated Sept. 28, 2020).
[97] OFFICE OF INSPECTOR GEN., U.S. AGENCY FOR INT'L DEV., AUDIT REPORT NO. G-391-16-002-P, AUDIT OF USAID/PAKISTAN'S SMALLHOLDER DAIRY PROJECT 3–5 (2015), *available at* https://oig.usaid.gov/sites/default/files/2018-06/g-391-16-002-p.pdf.
USAID's Dairy Project aims to "[t]rain and support 6,000 female livestock extension workers on improved farming practices and establish them as self-employed dairy extension service providers." *Dairy Project*, USAID, https://www.usaid.gov/news-information/fact-sheets/usaid-funded-dairy%C2%A0project (last updated July 12, 2016).
[98] *See Gender Equality and Female Empowerment*, *supra* note 96.
[99] *Id.*
[100] OFFICE OF INSPECTOR GEN., *supra* note 97, at 4–5.

V. Developing Markets: Firms and Finance

While the change that occurs through dairy management practices improves yields and the welfare of animals to the extent that they get easier access to water, shade and feed. It also accelerates the market forces operating on farms to consolidate, increase herd size, improve herd quality through imported crossbreeding, and to change attendant farm practices. With the pressures to increase efficiencies, significant changes have occurred to date in the herd stock, crossbreeds now make up 13% of Pakistan's cattle population.[101] The crossbreeds have higher yields, longer lactation periods, and shorter carving intervals making them ideal for more intensive dairying practices.[102] The MPMC's are particularly keen for their adoption and to move farmers toward intensifying dairying practices.[103] MPMC's are leveraging their strong corporate and financial positions to partner with banks. This allows them to tap into the government's economic development and lending schemes to unlock loans to dairy farmers who want to grow their businesses, but are hampered by the lack of access to formal channels of credit.[104] For instance, Nestle has partnered with JS Bank, a major local bank and financial conglomerate, to provide dairy development loans under the Prime Minister's Youth Business Loan (PMYBL) scheme to farmers in its network at 6% interest with whom it'll work to grow farms along professional lines.[105] JS Bank has extended its provision of financing for dairy farmers to procure machinery and livestock through a partnership with Engro and bring loans to their network of farmers under the PMYBL.[106] Under the terms of the loans, farmers are eligible to borrow for up to 8 years. During that time, the understanding is they will remain part of their respective company's network, while also being able to access the latest information and guidance to be able to grow their businesses along professional lines.[107] Additionally, Nestle has partnered with a major private

---

[101] Tahir et al., *supra* note 20, at 7.
[102] *Id.*
[103] *Id.* at 1.
[104] *See, e.g.*, *JS Bank Partners with Nestle Pakistan under the Prime Minister's Youth Business Loan (PMYBL)*, JS BANK (Dec. 5, 2017), https://jsbl.com/js-bank-partners-nestle-pakistan-prime-ministers-youth-business-loan-pmybl/ [hereinafter *JS Bank Nestle*]; *see, e.g.*, Staff Report, *JS Bank Partners with Engro Foods to Empower Dairy Sector*, PAK. TODAY (Mar. 29, 2018), https://profit.pakistantoday.com.pk/2018/03/29/js-bank-partners-with-engro-foods-to-empower-dairy-sector/; *see, e.g.*, Livestock Financing for Dairy Farmers, BANK AL HABIB, https://www.bankalhabib.com/livestock (last updated 2020).
[105] *JS Bank Nestle*, *supra* note 104.
[106] Staff Report, *supra* note 104.
[107] *Id.*

sector bank, Bank Al Habib, under a State Bank of Pakistan Policy to support the financing of small and medium-size enterprises.[108] Under the scheme, farmers who have been working with Nestle for at least two years are eligible to apply for financing to meet their operational costs. (i.e., purchase animals, purchase livestock or dairy equipment and machinery, or pay distribution and transportation expenses).[109] The State Bank of Pakistan defines small enterprises as having up to 50 employees and a minimum annual sales turnover of PKR of 150 million.[110] At the time of writing, the USD to PKR exchange rate is approximately 1 = 160 which would mean a small commercial dairy farm would have close to USD 938,000 in annual sales.[111] A medium enterprise meanwhile may have up to 250 employees and annual sales of PKR 800 million,[112] which in USD would be an annual turnover of approximately USD 5 million.[113] Given these are huge sums of money and nowhere near what any, but perhaps a handful of the large to very large commercial dairy operators, may be achieving. We can certainly question the policy rationale for having such financing available for the dairy sector. More importantly, for our purposes, the very existence of the policy indicates a certain kind of vision. A vision showcasing the desirability of large, commercially operated dairy farms supported by both international and national development policy-makers plus investors. These large commercially operated dairy firms have the right model for the development of the sector.

Let us recall that the MPMC's started out by paying dairy farmers for milk sales weekly – these were by necessity, relatively small amounts.[114] Over the years, they've amassed a vast trove of working knowledge about the dairy economy and have now turned into conduits for much larger infusions of financing into the dairy economy. In order to transform and build it in the forms most profitable for their corporate objectives of encouraging the transition to larger more professionally managed dairy operations. It helps that these interests are also supported by national goals of economic

---

[108] *Livestock Financing for Dairy Farmers*, *supra* note 104.
[109] *Id.*
[110] *SME Banking*, BANK AL HABIB, https://www.bankalhabib.com/sme-banking (last updated 2020).
[111] *See Pakistani Rupee*, MARKETWATCH, https://www.marketwatch.com/investing/currency/usdpkr (last updated Jan. 27, 2021) (set the time field to "1Y" to see when the conversion rate was 1 USD to 160.55 PKR).
[112] *SME Banking*, *supra* note 110.
[113] *Pakistani Rupee*, *supra* note 111.
[114] *See supra* note 41 and text accompanying notes 35–44.

development supported in turn by the expertise and enabling finance of international development agencies.

A. Dairy Companies and the long path to the Sector's Transformation

In India, the milk value chain was formalized beginning in the 1960's through the world's largest dairy development cooperative, Amul, under its 'white revolution' in which the farmers are the owners.[115] In Pakistan the creation of the dairy value chain is led by the private sector.[116] The members of the Pakistan Dairy Association, an industry association headquartered in Punjab, are drawn from some of the country's largest MPMC's, such as Nestle, Engro, and Fauji Foods.[117] Recognizing the growing viability of milk as an investment vehicle, the country's military has also entered the formal milk market with its acquisition of the Nurpur brand of milk and other dairy products such as butter.[118] While the advertising for its UHT full cream milk follows the norm of an aspirational middle class[119] morning as seen in advertisements for other brands.[120] Their introduction of a low-fat milk for fitness conscious individuals broke from the norm by showing an intense workout featuring a female and male model.[121] Fauji Foods is a division of Fauji Foundation, the welfare organization formed in 1954 for the benefit of retired army personnel serving nearly 9 million beneficiaries.[122] With such big

---

[115] *See generally White Revolution*, AMUL DAIRY, http://www.amuldairy.com/index.php/white-revolution (last updated 2017).
[116] *See* Alam, *supra* note 10.
[117] *List of Executive Committee Members 2019-2020*, PAK. DAIRY ASS'N (May 12, 2020), http://pda.com.pk/ (Navigate to cachedview.com; then enter www.pda.com.pk/list_of_executive_committee_members_pda.htm in the search bar and search the Google Web Cache).
[118] *Our Story*, FAUJI FOODS, https://www.faujifoods.com/our-brands/house-of-nurpur/ (last updated Oct. 5, 2020).
[119] By 2011, approximately half the country's households were estimated to be within the middle class category. *Pasteurized*, *supra* note 3; Jawaid A. Ghani, *The Emerging Middle Class in Pakistan: How it Consumes, Earns, and Saves* 3–4 (Karachi Sch. For Bus. & Leadership, Working Paper Series No. 2014-11, 2014), https://www.researchgate.net/publication/262248885_The_Emerging_Middle_Class_in_Pakistan_How_it_Consumes_Earns_and_Saves.
[120] A mother and two children prepare breakfast with beautiful shots of milk being poured into tea. House of Nurpur, *Nurpur TVC 2018*, YOUTUBE (May 15, 2018), https://www.youtube.com/watch?v=lyPMmlu2Z_w&feature=emb_logo.
[121] Creative Ads, *Nurpur Low Fat Milk! TVC 2017 | Nurpur Milk Ads | Creative Ads*, YouTube (Mar. 29, 2018), https://www.youtube.com/watch?v=V7dH6tFnCr4.
[122] 'Fauj' means 'Army' in Urdu, Pakistan's national language. The Fauji Group was formed in 1954 as a welfare trust for ex-servicemen and their families. It has since grown to a massive listed and traded conglomerate with holdings as diverse

players entering the market for the profit potential, we can expect to see significant changes in the sector in the years ahead. These changes will most affect the livelihood potential, nutritional status of livestock farmers, and small farmers who are agriculturists from the sale of their cattle's milk. Activists and NGO's have warned of the potential harm to rural households for years.[123] As they've identified a main problem of desperately poor livestock farmers and small farmers being forced to sell that very source of nutrition their families need for nutritional safety.[124] This causes their families' income to be insufficient for them to be able to purchase food that provides them with a better source of nutrition.[125] Regardless, the financial and technical support of the international development community and private sector led formalization of the dairy chain in the country continues unabated.

A coffee table book, *Drops of the Divine*, produced by Nestle tells the story of packaged milk in Pakistan including the company's entry into the milk sector.[126] The foundations of the country's first packaged milk brand, MilkPak, were laid in 1974.[127] It formed a lasting partnership with Nestle in 1988 because it saw the need for the foreign company's expertise.[128] The Swiss conglomerate formally took over its operations in 1992.[129] The formalization of the milk value chain in Pakistan through a framework, that at its core supports the development of markets, developed by the private sector is undergirded by the policy and financial support of bilateral donors such as the United States Agency for International Development

---

as selling milk and butter under Fauji Foods Ltd., to fertilizer manufacturing and marketing as well as operating power plants. *See generally The Fauji Group*, FAUJI FOODS, https://www.faujifoods.com/the-fauji-group/ (last updated 2020). While the process of allocating land and resources towards military purposes is an ancient one, the particular form of the Army's present involvement in the rural agricultural domain can be traced to land grants to the military during British colonial rule of the Indian Sub-continent. *See* ALI, *supra* note 54, at 109–57.

[123] Nadeem Iqbal, *Development-Pakistan: 'Milk Economy' Hurts Rural Households*, INTER PRESS SERVICE (Oct. 10, 2003), http://www.ipsnews.net/2003/10/development-pakistan-milk-economy-hurts-rural-households/.

[124] *Id.*

[125] *Id.*

[126] *See generally* NOOR SHEIKH, DROPS OF THE DIVINE: A STORY OF MILK IN PAKISTAN (Raisa Vayani ed., 2017), *available at* https://www.nestle.pk/sites/g/files/pydnoa361/files/asset-library/documents/press_releases/nestle-dairy-book-pdf.pdf.

[127] *Id.* at 40.

[128] *Id.* at 42.

[129] *Id.* at 41.

(USAID).[130] Nestle's Agricultural Services conducts trainings for farmers and has developed farming manuals with IFC's support.[131] In 2017, IFC provided $145 million in financing to the Dutch dairy company FrieslandCampina for its acquisition of a majority stake in Engro Foods. ('Engro')[132] It reiterated that the investment would have significant developmental impact including: "Food Safety improve product quality and safety standards; Farmer Benefits: Increased benefits to small-holder dairy farmers; Job Creation and Inclusive Growth; Improved Competitiveness: Enhanced supply-chain efficiencies in milk collection; [and] Promote FDI to Pakistan."[133] In short, international development agencies base their support of the private-sector led development of the country's dairy sector because of the potential for dual impact in both the rural areas, through an improvement in farmer incomes, and the country's urban areas, for consumers' ability to access high quality milk. Engro's market share for its flagship Olper's brand stands at 45% of the market for packaged milk.[134] Together, with Nestle, the two companies control just over 90% of Pakistan's market for packaged milk.[135] In the creation of this value chain, there are significant gains for the private companies that create the brands on which consumers rely. I suggest, limited gains for livestock farmers and small farmers coupled with significant detriments to their interests.

Accompanying this positive assessment is an evaluation by MPMC's, namely Nestle and Engro, with their dominance of the packaged milk sector. The MPMC's are responsible for the sector's formalization and development of markets that connect farmers to urban markets in the context of the more traditional marketing functions they know well through the development of brands and advertising targeting various segments of the markets they create and

---

[130] USAID's Dairy Project is aimed at supporting 49,000 dairy farmers in Punjab province by providing them with information to upgrade their dairy practices. The project also aims to train 6,000 female extension workers and 2,500 male artificial insemination workers so that they can become self-employed workers in the agricultural value chain in the province. *Dairy Project*, *supra* note 97.

[131] News Desk, *How is Nestle Pakistan Empowering Dairy Farmers?*, GLOBAL VILLAGE SPACE (July 17, 2019), https://www.globalvillagespace.com/how-is-nestle-pakistan-empowering-dairy-farmers/.

[132] Jim Cornall, *IFC Helping FrieslandCampina with $145m Package for Engro Purchase*, DAIRYREPORTER.COM (Feb. 6, 2017, 12:14 GMT), https://www.dairyreporter.com/Article/2017/02/06/IFC-helping-FrieslandCampina-with-145m-package-for-Engro-purchase?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright.

[133] MOSES, *supra* note 60, at 17.

[134] Alam, *supra* note 10.

[135] *Id.*

serve. For the most part, it is these commercial companies that are doing the work of creating the forms of the market and the dairy industry that is taking shape. Given the critical role of companies in creating the overall structures of the dairy industry, and this is in sharp contrast to India, their actions need careful scrutiny of both the actions they choose to undertake and the tasks they leave unattended as functions they believe are the proper domain either of governments or the responsibility of farmers themselves. To give an example of neighboring India, functions such as "animal breeding, animal nutrition, and animal health and hygiene" are all the responsibility of the cooperative.[136] While the companies have developed training programs with donor support that are meant to enhance animal health and hygiene[137] they leave unattended other key areas such as animal breeding as well as animal nutrition – a key contributor to low yields.[138] For instance, in an interview the Engro CEO made clear that as far as the company is concerned the problem of low yields can be addressed if farmers give a proper feed to their cattle: "That is the biggest issue in getting affordable (packaged) milk to people."[139] The problem however may be more complex than what Engro's CEO identified. On a major study mission of Pakistan's dairy sector, Australian experts identified the problem of inadequate feed leading to low dairy yields as a complex problem by situating dairy animals and their roles in rural life beyond the evaluation of a single metric – low yields being linked to inadequate nutrition.[140] Their analysis bears quoting at length:

> Between 1990 and 2005, there has been a trend towards reduced areas of fodder crops, while production per ha has remained static. At the same time, the livestock population has increased, circumstances that suggest nutrient requirements for maintenance have increased, reducing availability for production. This critical constraint of insufficient feed consumed by dairy animals is recognized by scientists, as is the fact that this is aggravated by continuous increases in the milking animal population. Why are these trends occurring? Do farmers not understand basic principles of

---

[136] *White Revolution*, *supra* note 115.
[137] *See* MOSES, *supra* note 60, at 20 ("We are grateful to IFC for the technical expertise. . . . The knowledge we received has
been very useful. We hope that the value additions will prove beneficial for the farmers who will receive the knowledge and insights.").
[138] *See* Alam, *supra* note 10.
[139] *Id.*
[140] *See* WYNN ET AL., *supra* note 31, at 5–8.

> requirements for maintenance and production? Are there other factors at play, such as risk management because of high mortality or opportunities in meat and livestock trading to commercial milk producers? Clearly, large ruminants have traditionally provided milk for household consumption in Pakistan and will continue to do so. However, they also fulfil other roles, such as:
> •providing supplementary income from milk,
> •being an easily liquidated asset, thus providing security against crop failure,
> •providing manure important to maintaining soil fertility,
> •meat production,
> •sale of milking or breeding cows to commercial milk producers,
> •an avenue to convert crop by-products into saleable foods,
> •gainful employment of available family Labour, and
> •in some systems, providing draft power.[141]

To address the issue of nutrition as it leads to milk production, a host of incentives that go beyond those operating on feed markets, and of what Engro has identified perhaps simplistically as sub-optimal behavior on the part of farmers, will need to be addressed. This also raises the question of the role and capacities of various levels of government responsible for the regulation and development of the dairy sector more broadly. Given Pakistan's federal constitutional structure, agriculture and thereby dairy, is a provincial subject[142] with a potentially very significant role for provincial governments and NGO's within the context of the broader financing interface of the federal government with bilateral donors and international development finance institutions.[143] The interplay of the two levels of government has a significant impact on developments on the ground in a given province especially since the

---

[141] *Id.* at 7.

[142] Agriculture is a residuary provincial power in the Constitution of Pakistan. *Understanding Agriculture's Constitutional Arrangement*, BUSINESS RECORDER (Jan. 13, 2020), https://www.brecorder.com/news/561266/.

[143] USAID for instance funds an NGO, the Dairy and Rural Development Foundation for its project in support of the Government of Punjab. *See* Shumaila Jamil, *USAID DRDF Dairy Project Corporate Documentary*, YOUTUBE (Jan. 28, 2017), https://www.youtube.com/watch?v=XyBTecw5v74 (explaining that USAID, for instance, funds an NGO, the Dairy and Rural Development Foundation for its project in support of the Government of Punjab).

federal government is the ultimate guarantor of development loans and the primary arranger of such international development financing.[144] The most significant impacts of the relations between the federal government and any particular provincial government arise in cases in which the provincial government is from a party that is not an ally or is in opposition to the federal government in a given province.[145] This is especially the case because the federal government is often the conduit for channeling development financing for the overall skill development and enhancement of the dairy sector in a particular province.[146] Without such access to financing for provincial development initiatives, farmers and the overall state of the dairy and livestock sector within a province end up suffering.

The particular form of actions that the two largest MPMC's, Nestle and Engro, adopt impacts not just the operations and incentives of the dairy farmers within their networks, but also the actions of other commercial entrants into the dairy sector. Fauji Foods as a significant, new operator in the milk and dairy value chain launched a dairy creamer *Dostea*, a play on the Urdu word for

---

[144] *See Centre-province Ties*, DAWN (Feb. 6, 2019), https://www.dawn.com/news/1462149 (explaining that center-province relations under the present government have been getting progressively more protracted especially in relation to when a particular provincial government is from the opposing party to the party in power at the center); *see* Mishal S. Khan et al., *How do External Donors Influence National Health Policy Processes? Experiences of Domestic Policy Actors in Cambodia and Pakistan*, 33 Health Pol. Planning 215, 215–23 (2018) (explaining that while the influence of donors on actual policy development and outcomes is complex, because donors are perceived as being policy experts who can also unlock financial resources for a country, policy makers at lower tiers of government find it relatively challenging to engage with them for the purposes of policy formulation and implementation). For a mapping of Pakistan's significant donors and the geographic scope of their projects, see generally UNITED NATIONS PAK., PAKISTAN DONOR PROFILE AND MAPPING (2014), *available at* http://climateinfo.pk/frontend/web/attachments/data-type/UN%20(2014)%20Pakistan%20Donor%20Profiles%20and%20Mapping.pdf. The US in particular has been Pakistan's top donor of on-budget, grant-based assistance that is directed via the federal government. *See generally U.S. Assistance to Pakistan*, U.S. EMBASSY & CONSULATES IN PAK., https://pk.usembassy.gov/our-relationship/policy-history/us-assistance-to-pakistan/.

[145] This is the case with the current provincial government in Sindh province being from the PPP – the party of the assassinated former Prime Minister, Benazir Bhutto while Imran Khan the former cricket star turned philanthropist and politician is now the prime minister with his party, PTI in power at the federal level. *See* ZIA ET AL., *supra* note 5, at 14.

[146] *Id.* at 9.

friendship[147]. Now they are working to build their brand through heavy advertising, in ways that are very familiar to consumers of packaged milk.[148] The series of launch advertisements show an unusual and progressive family that breaks gender norms – e.g., the wife is a doctor and the husband is a chef and many such interesting turns in the extended family.[149] In addition to this trio of large companies, dozens of smaller companies have cropped up to mimic this transformation of the dairy value chain supplying their brands, mainly in smaller towns which may not be the primary focus of the bigger firms and not worth extending their distribution network to particularly given the higher price point for their brands.[150]

As can be expected with the presence of these heavy hitters seeking profits from the dairy sector, rural practices are changing rapidly. In this process the country's dairy farmers are being tied to the increasing demand for milk and branded milk products of the growing middle class by the actions of large companies. These include, but are not limited to, extremely sophisticated and well-funded corporate media advertising and branding operations.[151] The MPMC's work with extensive advertising budgets to make packaged milk desirable to the aspirational urban consumer.[152] The level and scale of the television, print, and outdoor media advertising the MPMC's have undertaken is stunningly large. Created with very high-quality production values, through the use of trusted household actors and singers drawn from the country's media industry.[153] Advertising agencies, including the local partner agencies of international firms headquartered in New York City, have taken the lead in developing the marketing campaigns of all the country's major brands.[154] These are elaborate productions telling the tale of a nation. The biggest thematic campaigns are organized around several themes: the safety and health that mothers can give their children by

---

147 *See Our Story*, DOSTEA, https://www.faujifoods.com/our-brands/dostea/ (last updated Oct. 5, 2020).
148 *See id.*
149 Dostea, *Restaurant - #Rishton main bharo #Dostea key rang!*, YOUTUBE (June 2, 2017), https://www.youtube.com/watch?v=JlF3Pqc6dwI&feature=emb_logo; *see* Dostea, *Rishta - #Dostea se banain apnay ghar ko #DosteaGhar*, YOUTUBE (June 2, 2017), https://www.youtube.com/watch?v=w-Q4t3DxE44&feature=emb_logo.
150 *See generally* Ansari et al., *supra* note 64, § 4.
151 *See* Andrew, *supra* note 22; *see* Shoaib Pervaiz & Farooq Tirmizi, *The Next Phase of the Milk Wars*, PAK. TODAY (Jan. 14, 2019), https://profit.pakistantoday.com.pk/2019/01/14/the-next-phase-of-the-milk-wars/.
152 Andrew, *supra* note 22; Pervaiz & Tirmizi, *supra* note 150.
153 *See* Andrew, *supra* note 22; *see* Pervaiz & Tirmizi, *supra* note 150.
154 *See* Pervaiz & Tirmizi, *supra* note 150. *See generally About*, OGILVY, https://www.ogilvy.com/about#ogilvy.

giving them packaged as opposed to unhygienic loose milk; the role of milky tea (chai) in gatherings of family and friends, which plays on and updates the traditional role of young women of marriageable age serving tea to a prospective groom and his family who have come to seek her hand in marriage; enlightened husbands serving their wives tea after she comes home from work; and the biggest annual advertising campaigns of the year capitalize on the idea of piety associated with the Muslim holy month of Ramzan, the month of fasting and feasting in which the morning and evening cups of tea are major desirables.[155] Whereas MPMC's started out by positioning their respective milk brands as providing their customers with the highest quality of milk, guaranteed to be free of the impurities normally associated with loose milk. Loose milk, as we've seen, retains its overwhelming share of the milk market despite years of efforts to the contrary. To get a full sense of their promise about the quality they hoped to convince consumers of, one need only look at their lavish advertising campaigns. These are centered around television commercials with high production values, featuring national celebrities in glamorous settings, custom background scores, and songs.[156] It has become the norm for milk brands to release new, big budget advertising campaigns around the Muslim calendar month of Ramzan (Ramadan in Arabic) that is followed by the festival of Eid as occasions for fasting followed by feasting.[157] The idea is to capitalize on special occasions and build and reinforce customer loyalty around family holidays. Only big brands can do that, whereas the small farmer or loose fresh milk category does not advertise. Additionally, there is no consortium on its behalf, such as

---

[155] *See* Andrew, *supra* note 22; *see* Pervaiz & Tirmizi, *supra* note 150; *see* The Vision Factory, *Olper's – Ramzan IV, Directed by Asim Raza (The Vision Factory)*, YOUTUBE (Aug. 21, 2009), https://www.youtube.com/watch?v=kf3fybQaL8o.

[156] A look at illustrative television commercials (TVCs) from some of the major brands gives us a flavor of broad themes presented by MPMC's. For instance, an ad for Haleeb Milk shows a perfect mother getting her kids ready for the day by giving her two young children glasses of milk while her husband in an early morning scene of domestic bliss hands her a cup of tea. Benetone Films, *Haleeb Milk*, YOUTUBE (Oct. 14, 2016), https://www.youtube.com/watch?v=5pKl1YaXcwc. The ad continues with the mother-in-law making dessert with the help of her grandson by using Haleeb milk. *Id.* The day ends with a party in their garden serving the desserts they've made together as a family at a moment in which the mother-in-law is clearly proud of her daughter-in-law and they are showing receiving the appreciation of their guests. *Id.* A particular form of an aspirational life dominates. *See id.*

[157] *See* The Vision Factory, *supra* note 154. An Olpers ad opens with a craftsman from Brunei, an artist from Pakistan, an engineer from Morocco, a dervish from Turkey, a doctor from Dubai and a scientist from Egypt highlighting their common Muslim bond and invitation of peace towards all in the holy month. *See id.* It closes with scenes of people opening the fast together in a mosque. *Id.*

a dairy council or cooperative, that would engage in promoting fresh, raw milk as a category.

One other aspect to consider is the form of the market that is being created through the operations of the commercial MPMC's in the dairy value chain. Particularly, the procurement of milk from dispersed farmers by tying them to corporate distribution networks. A large exogenous factor may be needed for farmers to move outside of these commercial dairy value chains. This is especially the case due to the newer forms of commercial financing being in-network enables for the farmers. In addition, small farmers are by definition geographically limited and depend on local, traditional milk sellers or MPMC's to buy their milk since they are unable to sell to non-local procurers.[158] Once assured of relative price stability within an established value chain, farmers would consider taking on the potential risk of self-organizing in cooperatives. This is particularly so because the small farmers and landless agricultural workers, we are primarily concerned with, have little financial capacity to undertake any investments which could result in future gains. Clearly, government is not ready to intervene in any such organizational effort, given its demonstrated reliance on donors and corporates to create the dairy value chain.[159] This leaves little room for the introduction of a potentially disruptive, exogenous factor. Small farmers already living on the margins don't have much choice, particularly in the form of market they wish to participate in.

As indicated above, unlike neighboring India with its iconic post-independence Amul dairy cooperative, in Pakistan there is no large-scale discernible movement towards forming dairy farmers' cooperatives with their own milk processing and acquisition facilities.[160]

B. History and Development Affecting the Small Dairy Farmer

---

[158] ZIA ET AL., *supra* note 5, at 19.
[159] *See id.* at 9; *see* CVS NESTLÉ, *supra* note 6, at 28–29.
[160] While there are nascent trends of small-scale dairy cooperatives being developed around smaller urban areas in parts of Punjab province, the bulk of formal market development is being undertaken by the MPMC's; on the emergence of cooperatives. *See* ZIA ET AL., *supra* note 5, at 9; *see Co-operatives Are Empowering Dairy Farmers in Pakistan*, INT'L CO-OPERATIVE ALLIANCE (July 21, 2015), https://www.ica.coop/en/media/news/co-operatives-are-empowering-dairy-farmers-pakistan.

The prevailing understanding of how important agriculture and dairy are in the makeup of the country is one, among many illustrations of how trends, far away in time and place, continue to have a major impact on livestock and small farmers. As per the Government of Pakistan:

> Besides its importance and share in the national economy, the history of livestock raising is embedded in the rural life since inception of our civilization. It is still a sign of prestige for the people associated with agriculture sector. It is an integral part of socio-economic activities of the rural areas and plays a very supportive role in mitigating the effects of poverty by providing essential items of daily use.[161]

In addition, multilateral organizations, such as IFC, are committed to the development of the private sector in developing countries and are a primary driver of the huge structural shift underway.[162] IFC situates the development of dairy as a key theme of its agribusiness agenda.[163] It also conceives the existence of smallholders in the dairy supply chain as a challenge for the development of the sector, and diversified ownership as a barrier to investment.[164] Moreover, in identifying reasons why projects fail, it highlights cooperatives (owned by farmers) as a paradigmatic example.[165] In the popular discourse around the higher quality milk that is now more easily accessible to middle class Pakistani families, these connections are neither made explicit nor acknowledged.[166] For our purposes, however, it is critical to situate the significant changes in Pakistan's dairy sector within the broader international development financing framework that has enabled and continues to support the changes underway.

Given the IFC has a significant commitment to what is the growing field of bottom-of-the-pyramid inclusive businesses, but

---

[161] *Livestock Census 2006*, *supra* note 38, at XVII.
[162] *See About IFC*, INT'L FIN. CORP., https://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/about+ifc_new (last visited Sept. 28, 2020).
[163] *See generally* MOSES, *supra* note 60, at 3.
[164] *Id.* at 8.
[165] *Id.* at 12.
[166] *See FrieslandCampina Enters Fast Growing Pakistani Dairy Market Through Engro Foods*, FRIESLANDCAMPINA (July 3, 2016), https://www.frieslandcampina.com/news/frieslandcampina-enters-pakistani-dairy-market-engro-foods/.

does acknowledge it is difficult to find a solution to the challenge of nutrition for base of the pyramid consumers.[167] Let us pause here for a moment to acknowledge that having dairy cattle, plus access to milk within the household, is a key source of animal protein for landless dairy farmers and smallholders. One view is that precisely when they enter the market to sell any surplus their nutritional safety is impaired due to the low prices farmers receive, preventing them from purchasing foods of higher nutritional value.[168] It is at this point when we must make the underlying presumption of development agencies explicit. Such that it is accepted as true, developing and sustaining robust markets meets the twin goals of either: reaching the poor with services; or somehow raising the conditions of their lives by giving them access to markets. The markets are a means by which they can increase their earnings. An important study by a local grassroots NGO, Punjab Lok Sujag,[169] reached the conclusion that the operations of large MPMC's, such as Nestle, were in fact the result of farmers being forced by market pressures to sell their "surplus" milk and their sales were "poverty driven."[170] Large companies are thus hugely profitable, but their profits result from deep, rural misery and rising nutritional insecurity.[171]

If the goal of "development" becomes the development *of markets,* then theorists, policy makers, and citizens should, or must, ask whether the market-primacy presumption is acceptable, or desirable. If the answer to that question is in the affirmative, then a follow-up question needs to be asked: What particular form should those markets take? It is a comparative question that meets the broader goal of the symposium of which it is a part. The aim of this comparative project is to learn from the ways in which developments in the dairy sectors of other countries have occurred and to draw lessons for the directions which Pakistan's dairy sector may develop. For the sake of argument, if the commitment was to design a milk procurement and marketing supply-chain in Pakistan. Then the particular forms the process takes, particularly because of its distributional effects, has significant consequences.

---

[167] MOSES, *supra* note 60, at 13; *see* BETH JENKINS ET AL., INCLUSIVE BUSINESS SOLUTIONS: EXPANDING OPPORTUNITY AND ACCESS AT THE BASE OF THE PYRAMID 2 (Int'l Fin. Corp., 2010).
[168] Iqbal, *supra* note 123.
[169] Meaning people' awareness/awakening.
[170] *See* PUNJAB LOK SUJAG, THE POLITICAL ECONOMY OF MILK IN PUNJAB: A PEOPLE'S PERSPECTIVE 6–7, 13, 15 (2003).
[171] *Id.* at 11–12.

C. Hormonal Injections – and Claims to Quality and Purity

In addition to what may be relatively benign changes in overall animal welfare (free access to drinking water and shaded stalls to house cattle instead of tying them inside hot brick rooms as advised by company representatives), there is a related and under-studied aspect of the goal to increase milk yields. The concern is with the unregulated use of hormonal injections given to cattle. Milk sellers in Karachi, when faced with a ban on recombinant bovine somatotropin (rBST[172]) pointed to its approval by the FDA, based on which it was given subsequent approval in Pakistan in 1998.[173] This, they claim, is justification for the injection's safety and hence regular use in the country.[174] However, the Drug Regulatory Authority of Pakistan eventually banned three previously authorized hormonal injections (including rBST and rBGH).[175] Health officials, however, admitted that rBST's excessive use started after its approval.[176] At the hearing before the Supreme Court bench, a senior advocate assisting the court submitted that not only was the hormone harmful to human health, but also had detrimental effects on cow and buffalo health.[177] There is also the significant threat of potential harm to human health later in life from consuming milk from animals that receive these injections, including breast and prostate cancer[178]. This shows that there are both negative effects on livestock health and lifespan, as well as on human health.[179] The push for greater yields is pushing the limits of regulation – with the forces for higher yields continuing to push the limits of regulation.

Another hormone is oxytocin. More commonly known as the cuddle hormone, or in Urdu and Hindi as the *'doodh ki dawa'* or

---

[172] *Dairy Farmers Seek Time to Implement SC Ban on Hormonal Injections*, THE CATTLE SITE (Jan. 10, 2018), https://www.thecattlesite.com/news/52527/dairy-farmers-seek-time-to-implement-sc-ban-on-hormonal-injections/ [hereinafter THE CATTLE SITE].

[173] *See generally Bovine Somatotropin (bST)*, U.S. FOOD & DRUG ADMIN. (Apr. 21, 2020), https://www.fda.gov/animal-veterinary/product-safety-information/bovine-somatotropin-bst.

[174] THE CATTLE SITE, *supra* note 170.

[175] *Drap De-lists Three Hormone Injections*, DAWN (Jan. 9, 2018), https://www.dawn.com/news/1381717 [hereinafter *Drap*].

[176] Hasan Mansoor, *Sindh Slaps Ban on Hormonal Injections*, DAWN (Feb. 20, 2018), https://www.dawn.com/news/1390418.

[177] APP, *Import and Sale of Hormone Injections Banned*, DAWN (Jan. 7, 2018), https://www.dawn.com/news/1381337; *see Drap*, *supra* note 173.

[178] *See Dangerous Hormones*, DAWN (Jan. 12, 2018), https://www.dawn.com/news/1382316.

[179] *See id*.

'milk medicine,' is also given to cattle to increase milk yields.[180] Administered into the neck or leg of the animal before milking, up to twice a day on a regular basis because of its impact on milk production. It has the effect of not only making milking easier, but also releasing the milk normally stored in the udders and retained there for use by calves thus depriving calves of the important antibodies found in mother's milk.[181] This effect in itself will increase milk production overall by a few liters.[182] In addition to depriving calves of a valuable food source, because it causes uterine contractions (gynecologists may administer it to women during labor to induce contractions under specific conditions), it causes significant pain to the livestock.[183] This experience of pain undergone at each milking must become the norm for the livestock that have to endure it on a regular basis. It is quite likely that livestock treated this way also become barren in as little as 1-3 years, leading them to be sold for their meat.[184] Not only does the hormone have significant harmful effects on animal welfare, it also has negative effects on human health. These effects come in the form of early onset menstruation, via early puberty, weight gain, and an increase in dark facial hair in girls at a time in their lives in which they are particularly vulnerable to the physical and psychological effects of such changes.[185] While the unregulated use of oxytocin is banned in Pakistan, as in neighboring India, with significant fines as well as prison time for its administration. The unlicensed use as the undercover operation from India, likely remains a problem.[186]

The problem of quality of the milk supply such that concerns are not just limited to loose, fresh milk available at neighborhood

---

[180] Given the similarity of conditions between South Asia's two largest countries, we can safely look to India for the unregulated use of oxycontin in cattle and assume that similar practice may be occurring in Pakistan. A significant undercover operation in cattle markets outside Mumbai, India was undertaken by a Mid-Day team. *See* Vinod Kumar Menon & Ranjeet Jadhav, *Banned Drug Injected into Cattle is Poisoning Your Milk*, MID-DAY.COM (June 11, 2013, 10:01 IST), https://www.mid-day.com/articles/banned-drug-injected-into-cattle-is-poisoning-your-milk/217645.

[181] *Id.*

[182] *Id.*

[183] *Id.*

[184] *Id.*

[185] *Id.*

[186] *Id.*; *see* Fakhir Rizvi, *Use of Lethal Oxytocin to Milk Cattle Continues Unabated*, URDUPOINT (Nov. 11, 2018, 5:00 PM), https://www.urdupoint.com/en/pakistan/use-of-lethal-oxytocin-to-milk-cattle-continu-478219.html.

milk sellers,[187] but also the quality and contents of some MPMC packaged milk brands remains suspect.[188] Approximately 97% of the milk sold in the country is in raw, loose, and fresh form where quality problems are, by the very nature of fresh and unregulated milk being transported without refrigeration and sold through small milk shops, most pressing.[189] The remainder of the 3% of the milk supply in UHT packaged form while safer, nevertheless is not free from quality concerns. A recent study of eight major packaged milk brands marketed by the country's major MPMC's found chemical adulterants in all of them.[190] These included formalin, cane sugar, glucose, alkalinity, and benzoic acid.[191] In some ways adulterated, packaged milk is of greater concern since quality is a significant part of the positioning of the milk brands sold by the MPMC's.[192]

---

[187] While loose milk remains under-regulated and thereby potentially more unhygienic, it is certainly the case that it is in the interests of the MPMCs to highlight its dangers and thereby increase their share of the milk market. Alam, *supra* note 10 ("The dairy industry is in the middle of yet another campaign against loose milk producers. Aesthetically appalling images of actors spitting into loose milk drums draw consumers' attention to unhygienic practices of the commodity's primary producers. Doctors in white lab coats proselytize viewers about the dangers of loose milk. 'Those are facts. It's not something doctors have made up,' [Ali Ahmed Khan, Engro's Managing Director] says about industry-funded research with a whiff of frustration.").

[188] Adeela Awan et al., *A Study on Chemical Composition of Detection of Chemical Adulteration in Tetra Pack Milk Samples Commercially Available in Multan*, 27 PAK. J. PHARM. SCI. 183, 184–85 (2014).

[189] *Id.* at 183; Anam Hakeem, *Beyond UHT Milk*, AURORA (May-June 2012), https://aurora.dawn.com/news/1141893.

[190] Awan et al., *supra* note 185, at 184.

[191] *Id.* at 184–85 ("Alkalinity measures the ability of a solution to neutralize acids to the equivalence point of carbonate or bicarbonate. Rideout *et al.* (2008) has reported that high amounts of carbonates and bicarbonates disrupts hormone signals that regulate development and reproduction. Levels of carbonates and bicarbonates must be kept in milk samples as higher alkalinity values can cause milk alkali syndrome resulting in systemic alkalosis, renal failure, high blood pressure, hypertension, cardiac failure and edema (Troy, 2005). Benzoic acid is a natural component of milk but if its concentration in preserved milk exceeds 2000 mg/kg it can be dangerous for health (Wibbertmann, 2000). Formalin is added to milk as preservative but may cause vomiting, diarrhea, abdominal pain, increased body temperatures, shallow respiration, weak irregular pulse, unconsciousness, blindness and it is also a potent carcinogen (Gwin *et al.*, 2009).").

[192] Olper's Milk, *Olper's Milk #SachKaSafar*, YouTube (Sept. 24, 2016), https://www.youtube.com/watch?v=LK4OICoUFP8. In a long television infomercial format by Engro Foods' Olper's titled #SachKaSafar – the Journey of Truth, a questioning consumer is guided by a well-known television news talk show host on a journey that shows him the company's entire milk collection and packaging chain as he raises questions to company representatives that are typically raised by consumers comparing raw milk vs. packaged milk brands. *Id.* For instance, during a tour of the factory, the main character of the ad while conveying common consumer concerns asks for example why milk fat does not rise to the surface when packaged milk is boiled which it does when raw milk is

Television commercials stake a claim to branded milk being clean and of high quality, as being free of adulteration and undergoing significant quality checks.[193] Engro Foods, the owner of a major brand, Olpers amongst others, undertakes 27-28 physicochemical tests from point of collection to point of packaging.[194] Nevertheless, after ordering an inquiry into reports of unchecked hormone injections being given to cattle the country's Supreme Court took *suo moto* notice under its original jurisdiction powers in the constitution.[195] They issued notices to companies selling UHT milk to explain their quality control policies and practices.[196] To increase yields in cattle raised on a commercial scale, the use of rBST hormonal injections has become common.[197] The court reiterated it was a matter of public health and imperative that milk be free of cancer-causing hormonal injections.[198] The court also warned dairy

---

boiled to which the representative responds that it is because in packaged milk the milk fat is dispersed throughout the milk (it is homogenized) which makes it nutritious and delicious. *Id.* He goes on to say that boiling kills harmful bacteria but also reduces milk's nutrients whereas there are no harmful bacteria in packaged milk, and it retains its nutrients. *Id.* In an interaction with a well-known internet personality and influencer uploaded to his channel titled Doodh Ka Doodh, Paani Ka Paani (a play on an Urdu saying that roughly translated means once put to a test, what is milk will become clear and what is water will become clear), Haleeb Foods gives him and his friends who arrive unannounced a tour of its factory and shows them all the ways in which the company has a rigorous testing regime in place that ensures that its milk is pure and free of adulterants. Junaid Akram, *Doodh Ka Doodh – Paani Ka Paani | Junaid Akram*, YOUTUBE (Apr. 7, 2018), https://www.youtube.com/watch?v=KBK0tPkezHI.

[193] Best Pakistani ADS, *Manao Happy Subha With Olper's AD – Pakistani Milk TVC (2018)*, YOUTUBE (Sept. 27, 2018), https://www.youtube.com/watch?v=qNBwrDDT0i0. The TVC for Olper's Happy Subha (morning) shows a happy cow giving high quality milk that has a high fat content (as a perception of quality: high fat content is linked to a nutritious and delicious product). *Id.* To make its point, in what looks like an Olper's consumer, a middle-class mother, is the one who is going to a cow in its pen in the morning. *Id.* Of course, this depiction is only to make the point and we should not see it as being actually representative of the typical usually much poorer dairy farmer.

[194] *PCSIR Declares Olper's Milk 100pc Pure & Safe for Consumption*, THE NEWS (Jan. 31, 2018), https://www.thenews.com.pk/print/275061-pcsir-declares-olper-s-milk-100pc-pure-safe-for-consumption.

[195] *See* Sikander Ali, *Suo Moto: A Case of Judicial Overreach?*, LEGAL EDUC. AND ACCESS PORTAL (Dec. 12, 2019), https://leappakistan.com/suo-moto-a-case-of-judicial-overreach/.

[196] Supreme Court of Pakistan Civil Petition at 2–6, Bhatti v. Government of Punjab (2016) (No. 2374-L/2016 & C.M.A. No. 2702-L/2016), https://propakistani.pk/wp-content/uploads/2016/12/court-order_2.pdf [hereinafter Civil Petition]; *see* Jamal Khurshid, *CJP Terms Packaged Milk a Fraud with Masses*, THE NEWS (Jan. 4, 2018), https://www.thenews.com.pk/print/268303-cjp-terms-packaged-milk-a-fraud-with-masses.

[197] Faiza Ilyas, *Banned Hormone Still in Use in Dairy Business Despite Health Hazards*, DAWN (Sept. 30, 2015), https://www.dawn.com/news/1209783.

[198] Khurshid, *supra* note 193.

farmers it would send them to "prison if they tried to pressurize the administration by creating artificial milk shortage."[199] For the moment, the competing narratives about safety continue to play themselves out in the court of public opinion.

D. Significantly, a Turn to Imports

Stepping into this vacuum, MPMC have begun to offer highly marketed brands of creamers, particularly powdered tea whiteners.[200] It is critical to explore the dynamics of what may at first look like contrary developments, but in fact the turn to imported dry milk powders and efforts by MPMC's to build successful brands around a new kind of manufactured product are entirely rational. Despite being the world's fourth largest producer of milk, Pakistan remains a milk-deficit country.[201] Milk without refrigeration has a shelf life of about four hours and is highly prone to spoilage plus bacterial growth without refrigeration in high temperatures.[202] In this climate, manufactured non-dairy creamers, particularly powdered, have tapped into a keen consumer need. As expected, there has been pushback too. The country's ex-Chief Justice of the Supreme Court taking notice of the quality of packaged milk reiterated that tea whiteners are not a substitute for milk and their packaging must state that they are a manufactured product, not milk.[203]

Pakistan is said to be having its own version of a "White Revolution."[204] A revolution, that is, in milk production.[205] An ultimate goal of this revolution is to raise the quality of milk available in the country while also becoming a net exporter of milk-based

---

[199] *Id.*
[200] Andrew, *supra* note 22.
[201] Alam, *supra* note 10.
[202] Kamran & Rizvi, *supra* note 68, at 910.
[203] Khurshid, *supra* note 193.
[204] *Milking the White Revolution*, Pak. Today (June 12, 2013), https://www.pakistantoday.com.pk/2013/06/12/milking-the-white-revolution/. As a director of the Pakistan Dairy Association put it, the integrated idea of "[t]his 'White Revolution' has aimed at improving research facilities, training and capacity building of farmers, training veterinarians, improving the cold chain through milk chillers, promoting healthy pasteurized milk, developing model commercial dairy farms, focusing on breed improvement, facilitation of credit financing to dairy farmers, and linking rural based farmers to market mechanisms." *Id.*
[205] *White Revolution*, *supra* note 115. This needs to be contrasted with the "White Revolution," the organization of the milk production and value chain as established in neighboring India beginning in the 1960s through the establishment of the world's largest dairy development cooperative.

products.[206] Despite being the fourth largest producer of milk in the world, there has been a steady increase in the imports of dry and loose milk powders, both skimmed milk and whey powder, at the cost of local fresh milk production.[207] The country remains a net importer of milk.[208] The question is, how a stated policy commitment to increasing local milk production to not only be able to meet local needs but also to capture export markets reconcile with significant dry milk powder imports that are mixed with vegetable oils to make dairy liquids as well as whiteners for tea and coffee to meet local needs. Since 2007 there is a discernible shift in what the MPMC's are doing such that from positioning themselves from selling pure milk procured from Pakistan's dairy farmers, towards selling what are referred to as 'recipe products' – pure milk substitutes that are manufactured from imported milk powders mixed with vegetable oils.[209] There has been a steady rise in the market share of tea enhancers to approximately one-third of the packaged milk category.[210] These shifts in product lines are not only more profitable for the companies but have seen a growth as they tap into a key unmet need in consumption habits – that is of the fact that refrigeration for fresh or UHT milk boxes is limited due to the unavailability or unreliability of a regular supply of electricity.[211] Dry milk coffee or tea creamer by contrast is always handy in diverse settings across the country. Nestle's *Everyday -Dairy Whitener for Tea* made from milk solids, vegetables oils and sugar is the country's iconic brand backed by extensive advertising that aims to help consumers make the perfect cup of tea every time.[212] The MPMC's are being called out due to the gap between their initial stated intentions and their actual practices through the extensive push of manufactured dairy products.[213] These practices are increasing profits for them, but

---

[206] *Milking the White Revolution*, *supra* note 201.
[207] POLICY PAPER, *supra* note 37, at 2.
[208] *Milking the White Revolution*, *supra* note 201.
[209] POLICY PAPER, *supra* note 37, at 2.
[210] Kamran & Rizvi, *supra* note 68, at 911.
[211] *See* Fan Zhang, *What's Keeping Pakistan in the Dark?*, WORLD BANK BLOGS (Dec. 13, 2018), https://blogs.worldbank.org/endpovertyinsouthasia/what-s-keeping-pakistan-dark; *see* FAN ZHANG, IN THE DARK: HOW MUCH DO POWER SECTOR DISTORTIONS COST SOUTH ASIA? 171 (2019).
[212] Uzer Khan, *Nestle Everyday*, YOUTUBE (Sept. 2, 2013), https://www.youtube.com/watch?v=N8eqFzlQEg8. In this ad, for instance, a husband, after returning home from work, makes a cup of tea with Everyday to pacify his wife who seems to be annoyed at him for having left for work without telling her. *Id.* He apologizes to her for not having called her all day either. *Id.* Milk advertising in general works on highlighting themes of blissful domesticity. This one aims to go beyond traditional gender roles by showing the husband as progressive because he is the one making a cup of tea for his wife. *See id.*
[213] *See* Pervaiz & Tirmizi, *supra* note 150.

creating less nutritionally sound products for their customers and harming small farmers in the process.[214]

E. Swiss and Dutch Conglomerates in Pakistan's Dairy Sector

As we've seen, Pakistan's two largest dairy firms are foreign companies committed to the professionalization of the dairy value chain along the lines of their (in the case of the Dutch conglomerate, FrieslandCampina that took over Engro Foods in Pakistan, this as we'll see below is not true of its home base in the Netherlands where it is organized as a cooperative owned by its farmer as owners model) global practices.[215] Nestle for instance as we saw is working with commercial banks to finance and upgrade the infrastructure of existing farms, introduce mechanization, and foreign breeds to produce high-yielding animals.[216]

The particular larger operations that this model of professionalized and internationalized dairying privileges will be at the detriment of both Pakistan's smaller dairy producers as well as the small-scale middlemen who operate at relatively local scale to bring milk from dispersed farms to market.[217] Thus, when considering the role of private sector markets, we must distinguish between smaller dispersed middlemen who have traditionally been the conduits to bring milk to markets and the larger professionalized companies selling packaged milk that are moving ever-closer towards actualizing vertical integration within their business models.

1. Engro's Own Farm – foretelling the way forward?

"[Engro] established its own dairy farm in 2008."[218] As per the company's filing:

> [t]he farm covers an area of 557 acres (220 acres owned, 337 acres leased) which is sufficient to house 10,000 animals. It also includes cropping land

---

214 *See id*.
215 *See Pasteurized*, *supra* note 3; *see* Cornall, *supra* note 3; *see Our Brands*, *supra* note 3.
216 *Empowering Dairy Farms*, NESTLÉ PAK., https://www.nestle.pk/csv/ruraldevelopment/agriculture-services/empowering-dairy-farmers (last visited Nov. 10, 2020).
217 *See Crossroads*, *supra* note 17, at 76–87.
218 Engro Foods Ltd., Offer for Sale of Shares 23 (June 24, 2011) (unpublished corporate filing) (on file with author).

> for growing fodder. As part of the Company strategy, E Foods (Engro) imported cows for its Dairy farm as opposed to using local breeds. E Foods dairy farm remains one of the largest farms housing 2591 animals at Dec 31, 2010 (1,476 adult cows and 1,035 immature cows and 80 male calves and bulls). Currently E Foods dairy farm is producing more than 20,000 LPD (liters per day). At present, the Dairy farm milk is used in various ambient and powder dairy products. This highest quality milk can be compared to the world's best. The optimal use of this milk will come when E Foods will enter into various infant nutrition products and pursue its exports strategy.[219]

This brief corporate filing shines light on the envisaged future of Pakistan's dairy sector from the perspective of the MPMC's who at present have so much do with shaping it. The company informs us that its entire breed at its farm is imported which clearly shows that for the most part, it is much more efficient to import and house high-yielding breeds than to work with the much slower and uncertain efforts to increase yields of local breeds both through breeding programs and cattle management practices. Given the reliance on government efforts for the purposes of improving local breeds and on individual farmers for any improved management practices and facilities they can build, it is no wonder that corporate houses prefer to internalize the entire operation such that factors are under their control. Importantly, the size of the farm ensures that Engro can grow the fodder the cattle will require on its own land further limiting its reliance on uncertain and external fodder markets. Further, given the size of the average family holding of dairy cattle, a farm that can house 10,000 heads of cattle is clearly huge by comparison and can certainly be said to be organized on a commercial scale.[220] Given the amount of high-quality milk supply that that gives the firm, it thereby reduces its need to collect much smaller quantities from a dispersed group of smaller individual farmers. The question for national and international development policy should become, when such efficiency is the main driver for investments, what happens to the interests of livestock farmers and small farmers who ostensibly are the ones that are being economically uplifted through their participation in commercial milk value chains as President General Parvez Musharraf claimed at the

---

[219] *Id.*

[220] *See* ZIA ET AL., *supra* note 5, at 2–3.

opening of Nestle's plant.[221] The stakes of this question become even higher when in contrast to more run-of-the-mill traditionally understood development studies, eliminating poverty is also tied to national and international security paradigms such as fighting extremism and terrorism.[222]

2. The Origins of a Dutch Cooperative

In 2008 the European competition authorities gave permission to two Dutch dairy farmer cooperatives, themselves the amalgamation of several local and regional cooperatives with origins in the 19th century, to form FrieslandCampina, now a major global dairy company whose products are sold in over 100 countries.[223] As they describe the bountiful regions of the Netherlands, their main home (their farmer cooperatives also extend to Germany and Belgium), "Friesland is a region in the north of the Netherlands known for its green meadows, blue skies, many lakes and splendid Frisian dairy herds. Campina is a wooded region of grasslands and meadows in the south of the Netherlands, so named by the Romans more than 2000 years ago."[224] Explaining its origins, the company suggests that dairy farmers in the latter half of the 19th century organized themselves in cooperatives in part to help overcome the challenge of getting their milk supplies quickly to markets and customers given the lack of refrigeration.[225] Another reason for the farmers to join forces within a structure of farmer cooperatives was to gain more power in the market compared to when they used to sell their milk to companies.[226] Given their history, they claim that "the member dairy farmers have built an international dairy company that now spans the world."[227]

We can see their sense of importance of history and the value of farmer cooperatives in the dairy sector of the Netherlands. Given the importance of their sense of history and the value of farmer

---

[221] Press Release, Nestlé Pak., Nestlé Opens New Milk Factor in Pakistan, Its Largest Milk Reception Plant in the World (Mar. 16, 2007), https://www.nestle.com/media/pressreleases/allpressreleases/milkfactorypaskistan.
[222] *Id.*
[223] *See Our Heritage*, FRIESLANDCAMPINA, https://www.frieslandcampina.com.ng/organisation/our-heritage/ (last visited Oct. 9, 2020); *see Our Cooperative: For and By Farmers*, FRIESLANDCAMPINA, https://www.frieslandcampina.com/our-farmers/dutch-heritage/ (last visited Oct. 9, 2020).
[224] *Our Heritage*, *supra* note 219.
[225] *See Our Cooperative: For and By Farmers*, *supra* note 219.
[226] *Id.*
[227] *Id*.

cooperatives in the overall organization of the dairy sector within the Netherlands. It is important to note that since the company's formation as a corporation, and its attendant overseas expansion, it has not adopted a strategy of organizing the dairy sectors of the countries in which it operates into the cooperative structure of its founding, nor continuing present structure in the Netherlands.[228] The reason it is important to note the difference in the organization of the company in its home jurisdiction and in its overseas operations. In the home jurisdiction, it is owned by the members of the cooperative whose interests it operates. In its overseas operations it is organized as a commercial, for-profit company, engaged in the procuring of raw milk from independent farmers and selling it commercially under its own brands (after its takeover of Engro Foods' milk brands). This illustrates how the company does not extend the cooperative model to the countries they expand their operations to. The disjunct between the organization in the 'home' jurisdiction whose value, in its own words, it clearly recognizes and the non-extension of that beneficial model in Pakistan, makes clear in whose primary interests the firm operates. Highlighting this disjunct is not at all to make the claim that somehow it is the responsibility of the conglomerate to extend the cooperative model to its overseas acquisitions or that only a cooperative model can best serve the long-term interests of small farmers. But, noting the difference in the corporate structure is surely important along the lines of what's good for the goose . . . .

VI. Encouraging Consolidation

"The dairy industry makes no secret of its objective to have the consumption of loose milk banned altogether. So what should the hundreds of thousands of ragtag milkmen do to get out of the hair of a handful of corporate Goliaths?"[229] A major thrust of IDFA education and training programs is to motivate farmers to improve their cattle management practices, and to consolidate or increase the size of their cattle holdings and dairy farm operations.[230] USAID's funding for a project with the provincial DRDF does just that through a combination of field trainings, arranging for farmer visits to model farms, and training or advertising videos with consistently framed, standardized messages to reach farmers.[231] Through the development

[228] *See About FrieslandCampina*, FRIESLANDCAMPINA, https://www.frieslandcampina.com/about-frieslandcampina/ (last visited Oct. 9, 2020).
[229] Alam, *supra* note 10.
[230] CVS NESTLÉ, *supra* note 6, at 28–29.
[231] *Id.*

of these forms of media in which experts, or villagers, who have obtained prior training and are thereby held up as having more knowledge impart teachings to farmers who need to be educated in improved dairy practices. They can be motivated by the new forms of learning and internalize goals for the development of themselves and the industry. In addition, a particular thrust of the videos is how, through improved cattle management practices, the farms can become larger.[232] For instance, one farm improvement practice is to keep livestock under a roof in well-ventilated sheds that are open on all four sides. While exploring their farms for installing such a shed, farmers are encouraged to plan for expansion such that to construct with an eye for expanding their cattle holding.[233] The videos and training models recommend a host of other improvements, but all without any discussion of the costs of such expansion. As if the additional capital investments can be made without any consideration of where and how livestock farmers, or small farmers, could access such financing.[234] As we've seen, the MPMC's have enabled themselves, through partnerships with banks, the very mechanisms via which large investment capital can move into the dairy sector, but of course that capital is only accessible by farmers deemed investment worthy. This highlights the fundamental disconnect between what the programs purportedly aim to do (uplift the existing bulk of livestock farmers and small farmers) versus what they essentially do (encourage private capital at scale to move into dairy development).

A. The Price Gap and Some Tentative Conclusions

An example of the gap between the gains by livestock farmers and small farmers, compared to the growth of dairy company revenues is illustrative. Engro estimates that an average small farmer provides it with 1,000 liters of milk annually for which the farmer is paid the equivalent of $480 annually that equals PKR 6,300 or approximately $40 per month.[235] In 2019 meanwhile, the company reported annual revenues of PKR 28.9 billion or just over $180 million USD.[236] The structural, institutional, developmental, and

---

[232] *Id.*
[233] *Id.*
[234] *See id.*
[235] INT'L FIN. CORP., IFC INCLUSIVE BUSINESS COMPANY PROFILE: ENGRO FOODS LTD. 4 (2014), *available at* https://www.ifc.org/wps/wcm/connect/61d3609d-cb53-4b8d-8797-07a62adbfee6/Engro.pdf?MOD=AJPERES&CVID=lv2IlJ8. The United States Dollar (USD) to Pakistan Rupee (PKR) conversion rate being utilized is 1 USD = 160 PKR.
[236] FrieslandCampina Engro posts Rs321m profit for third quarter, PROFIT BY PAKISTAN TODAY, October 16, 2020,

regulatory question to ask is: whether this particular developmental model of the state and market, is in fact operating in the best interests of the farmers, or of consumers and society more broadly.

In essence, there is a significant difference in the average price at which MPMC's buy milk from farmers (Rupees 80 per liter) and the retail price of packaged milk, which is approximately double what the companies pay to farmers.[237] This approximately 100% price markup, the increasing gains to be had from consolidation, and introduction of manufactured non-dairy products may lead the bigger players, either the MPMC's or larger farmers, to move to setup large dairy farms with fully in-house vertical production units. As we've seen this process was initially begun by Nestle.[238] Or, it might enable other private capital to move into intensifying dairy production for which the large companies become the exclusive buyers. Given their larger size, as well as greater ability to procure adequate and nutritious feed, it is clear that larger players will have the ability to move beyond the capacity constraints of small farmers. There are already indications these companies are moving to structure feed markets to meet the higher food needs of livestock presently constrained by the green fodder farmers can, and for the most part have to, grow on their land.[239] Almost certainly, they will also move towards greater mechanization of their large farms with its attendant impacts on animal welfare and the accompanying process of driving smaller farmers out of business because they will be increasingly less able to find ready buyers for their milk supplies. Larger farmers who have the ability to avail of the financing the MPMC's have thus far enabled will likely do well in the formalized dairy value chains that are being created.

Without their own consolidation in the form of cooperatives, as done in India in the early years after Independence in 1947,[240] it is unclear how easy small farmers will find it to survive on even the lowest rungs of commercial dairy production. Perhaps a true White Revolution can only begin through the collective efforts of small

---

https://profit.pakistantoday.com.pk/2020/10/16/frieslandcampina-engro-posts-rs321m-profit-for-third-quarter/ (last visited Jan 28, 2021).

[237] Aamir Shafaat Khan, *Packaged Milk Producers Increase Prices*, DAWN (Feb. 27, 2020), https://www.dawn.com/news/1536951. A price-tracking site was used for this comparison. *See Nestle-MilkPak: Live Price Tracking*, SHOPPINGUM, https://www.shoppingum.com/search_t/nestle-milkpak/ (last visited Nov. 10, 2020).

[238] Pervaiz & Tirmizi, *supra* note 150.

[239] Field visit observations (notes on file with author).

[240] Anbu Seilan, *Dairy Cooperatives and Dairy Development in India*, *in* NON-FARM SECTOR AND RURAL DEVELOPMENT 428, 431 (Palanisamy Sundararaj ed., 2011).

farmers. For as Pakistan's experience shows us, anything else may be less than revolutionary.

Herding History: Law and Collective Subjectivities in the Dairyspheres of Ukraine

Monica E. Eppinger[*]

Abstract

In response to the limitations of socialism and capitalism in meeting basic needs, this article explores the alternative version of modernity offered in post-Soviet Ukraine and its agriculture. Tracing a century of fundamental transformations through the story of milk, it finds a history that troubles universalized framings of indigeneity and colonialism. This article argues that under socialism milk became a product of collectivized effort and a reservoir of household resilience; and then, with post-Soviet disintegration of some forms of collective life and emergence of others, that milk has come to delineate spheres of both collective action and individual striving. This research finds in Ukrainian farming communities a tale of two privatizations, one concentrating wealth and the other, distributing it in more equalizing ways. In the dispersed structure that results, much Ukrainian milk production avoids some of the more environmentally harmful forms for which the contemporary milk economy is famous elsewhere. This study reveals the pragmatic play of gender dynamics within legal disputes and social transformation. Though now enmeshed in global economic networks and policy agendas, milk has remained the ground of specific social networks; this article shows the resilience of intimate relationships between dairy cows and their keepers and the political strength, untapped nationally but salient locally, of dairy maids.

[*] Associate Professor of Law and of Anthropology, Director of the Center for International and Comparative Law, Saint Louis University. I thank Xiaoqian Hu, Jessica Eisen, and Erum Sattar for helpful comments on an earlier draft; Orysia Kulick; Priscilla Eppinger; and Laura Nader for support for the overall project. I also thank Oksana Hasiuk and Will Kernell for research assistance and villagers of Gruzenske village for their warmth. I wish to acknowledge support that research for this paper received from the Saint Louis University Summer Research Award in the Humanities and support for the overall project from the National Science Foundation, Fulbright-Hays program, Yale Law School Olin Fellowship in Law and Social Science, Yale Agrarian Studies and Yale European Studies programs, and University of California Berkeley Post-Soviet Studies.

I. Introduction

In 1992, the milkmaids of Gruzenske village in northern Ukraine[1] demanded a meeting with their collective farm director to discuss the alarming number of cattle gone missing from the village herd. With the Soviet Union recently dissolved[2] and its structures of command economy and Party discipline evaporating, the milkmaids suspected the director of selling off the farm's herd and pocketing the profits. They were furious both with the apparent theft of an asset and with the disappearance of cows whom they had nurtured and spent hours with, daily, since calfhood. Thus it was, in a scene repeated across Ukraine (and a decade before legislation instituted rural decollectivation *de jure*), that each village family went home with a cow and the milkmaids decollectivized the dairy holdings of Gruzenske.[3] Although commonly glossed as a national matter of economic policy,[4] "privatization" here is revealed as a local dispute

---

[1] This paper follows disciplinary conventions in anthropology for protecting confidentiality of interlocutors in the field. *See*, *e.g.*, MARIANE C. FERME, THE UNDERNEATH OF THINGS: VIOLENCE, HISTORY, AND THE EVERYDAY IN SIERRA LEONE ix (2001) (foregrounding the anthropological practice of concealing identities of specific interlocutors). Accordingly, throughout this article, I have anonymized names of people and places in references to my own fieldwork; "Gruzenske village" is an example. Names of publicly recognized historical events and places, or contemporary officials, public figures, or works of published authors, however, are referenced without alteration. Translations, except as noted, are the author's.

[2] Decree of the Parliament of Ukraine [hereinafter PVRU],"On the Declaration of Independence of Ukraine," № 1427-XII, Aug. 24, 1991 *in* VIDOMOSTI VERKHOVNOI RADI [RECORD OF THE PARLIAMENT OF UKRAINE, hereinafter VVR] 1991, № 38, at 502, *adopting* DECLARATION OF INDEPENDENCE OF UKRAINE, Verkhovna Rada of Ukraine, Aug. 24, 1991 https://zakon.rada.gov.ua/laws/show/1427-12 (declaring Ukraine independent by act of Parliament); Belavezha Accords, Dec. 8, 1991, Ukraine, Belarus, and Russia (agreement signed by heads of three Soviet Republics -- of the four original signatories to the 1922 treaty establishing the U.S.S.R. -- proclaiming the Soviet Union ceased to exist); Alma-Ata Protocol, Dec. 21, 1991 (agreement signed by representatives of eleven of twelve then-remaining U.S.S.R. republics, confirming extinguishment of the U.S.S.R.).

[3] Interviews with Tyotya Doyarka, head dairy maid of Gruzenske village collective farm, Sept. 15-19, 2009.

[4] *See*, *e.g.*, First Plenary Session of U.S.-Ukraine Binational Commission, Joint Statement of the Kuchma-Gore Commission, May 16, 1997, *reprinted at* http://www.ukrweekly.com/old/archive/1997/219724.shtml (showing that privatization was seen as both a national project and an economic matter for Ukraine); *see also*, *e.g.*, Law of Ukraine, "On the Privatization of State Property"] № 2163-XII, March 4, 1992 *in* BBP, 1992, № 24, at 348, Art. 1 http://www.spfu.gov.ua/en/documents/3050.html (describing privatization as the alienation of state property in exchange for payment and specifying privatization

within gendered domains of practice over emergent norms and divergent practices: the director's alleged action, pursued in secret and publicly reviled, and the milkmaids', carried out in public view, permitted at the time and valorized in the retelling.

The dissolution of dairy collectives in Ukraine was part of a vast national political and economic transformation.[5] As the episode from Gruzenske shows, post-Soviet "privatization" in Ukraine has involved disputes over legitimacy; norm formation in real time; conflicts settled within the parameters of legal conduct that may go on to reshape the basic grounds of legality itself;[6] and assertions of agency alongside the re-formation of legal subjects within shifted modes of power. As dairy cattle became a part of a village economy reestablished around households, multinational food processing companies organized morning milk collection throughout rural Ukraine[7] and administrative measures introduced health and safety regulations to make Ukrainian dairy products compatible with European markets.[8] Presidential decrees ordered dissolution of collective farms and legislation instituted private property ownership of collective farm assets.[9] Law reestablished the conditions of possibility for dairy production. Ukrainian milk has become big business and, with daily milk sales one of the steadiest sources of cash for otherwise autarkic-tending households, milk has become a point of articulation into an international economy.

At the same time, milk remains deeply local. In fact, contemporary Ukraine and the place of milk in it presents a puzzle to

---

as a national project undertaken "with the aim of improving the socio-economic efficiency of production and raising funds for structural adjustment of the national economy").

[5] For work describing its complex of legal, economic, political, and social effects, *see* Monica E. Eppinger, *Property and Political Community: Democracy, Oligarchy, and the Case of Ukraine*, 47 GEORGE WASHINGTON INT'L L. REV 825 (August 2015).

[6] *See* Monica E. Eppinger, *On Common Sense: Lessons on Starting Over from post-Soviet Ukraine*, *in* STUDYING UP, DOWN, AND SIDEWAYS: ANTHROPOLOGISTS TRACE THE PATHWAYS OF POWER (Rachael Stryker and Roberto Gonzalez eds., 2014) (outlining contestations of legitimacy and reshaping the grounding of legality in post-Soviet Ukraine).

[7] *See* text *infra* notes 173-175 below.

[8] *See generally* Monica E. Eppinger *Nation-building in the Penumbra: Notes from a Liminal State*, 32 HASTINGS INT'L & COMP. L. REV. (2009) (giving an overview of legal aspects of European integration).

[9] *See* text *infra* notes 137 - 146 below.

some analytic frameworks[10] in which milk has come to be understood as emblematic of settler-colonialism.[11] As elsewhere, in Ukraine the milk economy may, in part, index market hegemony,[12] but colonialism is a different matter. Debate over how to characterize Ukraine's past, either within Russian or Austro-Hungarian empires[13]

---

[10] *See*, *e.g.*, Kelly Struthers Montford, *Securing Animal-Based Ontologies in Canada*, 16 J. FOOD L. & POL'Y 48 (2020) (seeing milk in the Canadian context as sign and perpetrator of settler-colonialism); Maneesha Deckha, *Something to Celebrate?: Demoting Dairy in Canada's National Food Guide*, 16 J. FOOD L. & POL'Y 11 (2020) (viewing milk's presence with a healthy skepticism). *See also* Merisa S. Thompson*, Milk and the Motherland? Colonial Legacies of Taste and the Law in the Anglophone Caribbean*, 16 J. FOOD L. & POL'Y 135 (2020) (analyzing the place of milk among colonial legacies in the Anglophone Caribbean).

[11] "Settler colonialism," a term coined by Australian anthropologist Donald Denoon, describes an imperial formation distinct from the "de-development" typical of colonialism. Donald Denoon, *Understanding Settler Societies*, 18 HISTORICAL STUDIES 511 (1979). Though also premised on exogenous domination, setter colonialism "seeks to replace the original population of the colonized territory with a new society of settlers ... ." Tate A. LeFevre, *Settler Colonialism*, *in* OXFORD BIBLIOGRAPHIES (May 29, 2015) http://www.oxfordbibliographies.com/view/document/obo-9780199766567/obo-9780199766567-0125.xml. In it, "the colonizers came to stay," making "invasion ... a structure, not an event." PATRICK WOLFE, SETTLER COLONIALISM AND THE TRANSFORMATION OF ANTHROPOLOGY: THE POLITICS AND POETICS OF AN ETHNOGRAPHIC EVENT 2 (1999). For further discussion of this analytic, *see also* Monica Eppinger, *The Challenge of the Commons: Beyond Trespass and Necessity*, 66 AM. J. COMP. L. SUPP. 1 (June 2018). For extension of metaphors of milk and power to critique of post-colonialism, *see*, *e.g.*, FRANZ FANON, BLACK SKIN, WHITE MASKS 28-30 (Richard Philcox trans., 2008 (1952)) (calling colonized peoples' identifying with whiteness a pathological "striving for lactation": at the expense of "'the originality of that part of the world in which they grew up,'" they try to "save the race" by "ensur[ing] its whiteness").

[12] Xiaoqian Hu, *"A Glass of Milk Strengthens a Nation": Global Markets, State Power, and the Rise, Collapse, and Restructuring of China's Dairy Farms*, 16 J. FOOD L. & POL'Y 78 (2020) (looking at milk as both a sign of market intrusion and as indexing state power in contemporary P.R. China); Erum Sattar, *Can Small Farmers Survive?: Problems of Commercializing the Milk Value Chain in Pakistan,* 16 J. FOOD L. & POL'Y 228 (2020) (examining market incursions and transformations of the "traditional" in regard to milk in Pakistan). *But see* Mathilde Cohen, *Toward an Interspecies Right to Breastfeed*, 26 ANIMAL L. REV. 1, 13–14 (2020) (analyzing ideologies and practices, such as rights, that would limit markets and reconfigure the bases for circulation and exchange in regard to milk).

[13] On Ukraine as a "colony" or zone of exploitation of the Russian empire, *see generally* OREST SUBTELNY, UKRAINE: A HISTORY 268-269 (1988) (summarizing social critics' and historians' analysis of Ukraine under the Russian empire), *quoting*, *e.g.*, Vladimir Ilyich Lenin, "it [Ukraine] has become for Russia what Ireland was for England: exploited in the extreme and receiving nothing in return," *cited in Lénine et la question ukrainienne en 1914: le discours 'séparatiste' de Zurich*, 25 PLURIEL 83 (Roman Serbyn ed., 1982); *and citing*, *e.g.*,

or under Soviet governance,[14] is largely beyond the scope of this article, but in order to assess dairy in Ukraine as a "colonial" import, in Part II the body of the Article starts with a very brief treatment of origins in order to reconsider and argue for milk's indigeneity.

Even if indigenous, milk in Ukraine does not figure in a simple or straightforward story, as succeeding sections of the Article show. It is laden with power and inequalities that take some background understanding of context to recognize, and the Article brings to bear sources and methods of both history and anthropology (including my own fieldwork conducted 2002-2019)[15] to decipher the present. Milk provides a through-line through which to follow the transformation of subjectivities and structures via some of the

---

Mykhailo Volobuev, *Do problemy ukrainskoi ekonomiky*, *in* DOKUMENTY UKRAINSKOHO KOMMUNIZMU 132 (1962) (characterizing Ukraine within the Russian empire as a "European" rather than "Asiatic" type of colony, industrially well-developed and yet deprived not so much of its resources as of its capital and potential profits). For those arguing contra, *see* SUBTELNY, *id*., *citing* IVAN HURZHYI, UKRAINA V SYSTEMI VSEROSIISKOHO RYNKU 60-90KH ROKIV XIX ST. 168-78 (1968). On Western Ukraine under the Austro-Hungarian (Habsburg) Empire during the same period, *see* SUBTELNY, *id*. at 212-219 (summarizing reforms that raised the status of peasants in what is now Western Ukraine, but still left them in an "oppressed and backward state").

[14] For a view of Soviet governance as a version of colonialism, *see*, *e.g.*, SUBTELNY, *id*. at 537 (describing Soviet Ukraine's situation as "the Great Discrepancy," with Ukraine playing a large economic role and boasting a "numerous, well-educated population," but "still unable to decide its own fate"). For scholarship recognizing roles that Ukrainians played in the Soviet project, *see*, *e.g.*, Orysia Maria Kulick, When Ukraine Ruled Russia: Regionalism and *Nomenklatura* Politics after Stalin, 1944-1990, doctoral dissertation, Stanford University, 2016; MAYHILL C. FOWLER, BEAU MONDE ON EMPIRE'S EDGE: STATE AND STAGE IN SOVIET UKRAINE (2017). *See also*, *e.g.*, Orysia Maria Kulick, *Soviet Military Production and the Expanding Influence of Ukrainian Regional Elites under Khrushchev and Brezhnev*, 25 UKRAINA MODERNA (2018) http://uamoderna.com/images/archiv/25-2018/UM_25_texts/UM-25-Kulick_120-142.pdf.

[15] I conducted field research over several periods of longer duration, for fourteen months over 2006-2007 and for five months in 2017, as well as several intense shorter periods in summer 2002, 2012, 2013, 2014, and 2019, and in autumn 2009 and 2016. My fieldsites included an agricultural consulting enterprise in Kyiv, and former collective or state farms in northern Ukraine (Sumy oblast'), western Ukraine (Ivano-Frankivsk oblast'), central Ukraine (then-Kirovohrad oblast'), and southern Ukraine (Kherson oblast' and Crimea). My methods included interviews (with farmers, agricultural experts and consultants, managers in agricultural holding companies, agricultural traders, food processing concerns, policy-makers, members of parliament, and consumers), life histories, and participant-observation (both on farms and among agricultural experts in Kyiv). I use statistics, journalistic reporting, experts' assessments, private consultants' and government advising documents, official reports, as well as legal and regulatory material to inform the account I draw from the qualitative data.

most formative social experiments of the past century, through the present day.

The Article thus turns to its main focus, tracing processes of collectivization and decollectivization of agriculture in Ukraine through the story of milk. In Part III, the Article follows how Soviet law and practice collectivized agricultural production in Ukraine, and how milk production figured in the new rural register. It relates how, as a part of a household economy within collective agriculture, milk production provided a residual source of nutrition and income that, through periods like the Great Famine and the Nazi occupation, proved crucial to family survival. It further explores how, against vast state practices in applying science to agriculture, milk production resisted mechanization and industrialization.[16] In Part IV, it traces Ukraine's post-Soviet transformation through the story of milk. Building on the approaches of Sol Tax, Sidney Mintz and Laura Nader,[17] it situates study of micro-practices within the context of national laws, international trade, and global shifts in modes of power, following the reach and limits of multinational corporations into the daily routines of remote villagers. In local enactments, it finds both the disintegration of some forms of collective life and the emergent reorganization of daily life along the lines of new collectivities,[18] including gendered dynamics within legal disputes and social transformation. The Article concludes that milk has served as the ground of specific social relationships and networks, and analyzing it as such, this Article brings to light the resilience of relationships between dairy cows and their keepers, and the organizational power of dairy maids.

II. Origins and Indigeneities

The record is clear that dairying on Ukrainian territory, or milk in Ukrainian diets, is neither of recent nor "external" origin. Archeological evidence places dairying in the earliest sites of human occupation on the territory of Ukraine thus far uncovered there, from the 4th millennium B.C.E., making it perhaps the earliest practiced in Europe.[19] Historical linguistics corroborates the early and

---

[16] *See* Part III below.

[17] *See*, *e.g.*, SOL TAX, PENNY CAPITALISM: A GUATEMALAN INDIAN ECONOMY (1953); SIDNEY MINTZ, SWEETNESS AND POWER: THE PLACE OF SUGAR IN MODERN HISTORY (1985); LAURA NADER, HARMONY IDEOLOGY (1990).

[18] *See* Part IV below.

[19] For evidence of dairying as early as the 4th millenium B.C. in "mega-sites" of the Tripillya culture of Neolithic Ukraine, *see* Olive E. Craig, *The Development of*

enduring presence of dairy with words in Slavic (a linguistic group believed to have originated in the vicinity of Ukraine in roughly the 5th century B.C.E., and still the native language family of most current-day residents of Ukraine) for "cow" and for "milk" traceable from contemporary Ukrainian and Russian through proto-Slavic (approximately 2500 B.C.E.-500 C.E.) to Indo-European (approximately 4500-2500 B.C.E.) origins.[20]

Moving from prehistory to history, in the oldest written records describing lifeways of the Ukrainian steppe, milk stands out. Herodotus distinguished its people in their "living not by tilling the soil but by cattle rearing,"[21] famous in the ancient Greek imagination as the *Galaktophágoi* -- "Milk-eaters" -- of the northern Black Sea

---

Dairying in Europe: Potential Evidence from Food Residues, 29 DOCUMENTA PRAEHISTORICA 97 (2002) https://www.researchgate.net/publication/228581338_The_development_of_dairying_in_Europe_potential_evidence_from_food_residues_on_ceramics; R.P. Evershed, et al., *Identification of Animal Fats via Compound-Specific δ13C values of indiviual fatty acids: assessments of results for reference fats and lipid extracts of archeological pottery vessels*, 29 DOCUMENTA PRAEHISTORICA 73, https://revije.ff.uni-lj.si/DocumentaPraehistorica/article/view/29.7. *See also* J. Chapman and B. Gaydarska, *The Provision of Salt to Tripolye Mega-Sites*, *in* TRIPOLIAN SETTLEMENTS-GIANTS: THE INTERNATIONAL SYMPOSIUM MATERIALS (National Academy of Sciences of Ukraine, Institute of Archeology, 2003) at 203 http://community.dur.ac.uk/j.c.chapman/tripillia/pdf/Chapman_and_Gaydarska_2003.pdf. *See also* Oliver E. Craig et al., *Did the First Farmers in Anatolia and Europe Produce Dairy Foods?* 79 ANTIQUITY 882 (Dec. 2005) https://www.cambridge.org/core/journals/antiquity/article/did-the-first-farmers-of-central-and-eastern-europe-produce-dairy-foods/284138196CFD83FA06340C061EDF5F93 (identifying even earlier evidence for dairying in Ukraine, dating back to the Early Neolithic (5900-5500 B.C.)); RENATE ROLLE, THE WORLD OF THE SCYTHIANS 100-101 (F.G. Walls trans., 1980) (describing later populations of Bronze Age Cimmerian people (predating the Scythians) among whom horse-, sheep-, and especially cattle-rearing predominated).

[20] *See*, *e.g.*, entries for: коро́ва укр./р. ["korova (Ukrainian)/(Russian)"], or "cow," traced back to the Proto-Slavic *korva, meaning "cow," in turn traced to the Indo-European root *ker- [horn]; and молоко́ укр./р [moloko (Ukrainian)/(Russian)], "milk," to the Proto-Slavic *melko, in turn traced to the Indo-European root *melg-, "to milk," *in* M.F. VASMER, ETYMOLOGICHESKIY SLOVAR' RUSSKOGO YAZYKA (1964-1973), entries available respectively at https://endic.ru/fasmer/Korova-6357.html and https://endic.ru/fasmer/Moloko-8234.html. *See generally* MARIJA GIMBUTAS, THE PREHISTORY OF EASTERN EUROPE. PART I: MESOLITHIC, NEOLITHIC AND COPPER AGE CULTURES IN RUSSIA AND THE BALTIC AREA (1956) (locating the Proto-Indo-European homeland between the Bug and Volga Rivers, with center around the Dniester and Don in present-day southern Ukraine).

[21] HERODOTUS, THE PERSIAN WARS, vol. II, Book IV, chapter 46, at 247 (Loeb Classical Library edition, A.D. Godley trans., 1920 (first written around 425 B.C.)).

littoral.[22] Southern steppe nomads' reliance on milk supported an admired reputation for practical, virtuous austerity,[23] impressing ancient Greeks as "the lordly *Hippemolgi* [literally, 'mare-milkers'], they that drink the milk of mares."[24] Pastoral impressions continued to dominate later travelers' accounts of verdant Ukraine; one in 1651, for example, was struck by grain "growing uncultivated" and that dairy products were "no less abundant there than grain, whether because of the great number of pastures or the abundance of ponds."[25]

---

[22] HOMER, THE ILIAD, VOL. II, Book XIII, Ch. IV, Section I (Loeb Classical Library edition, Augustus Taber Murray trans., 1924) (describing Γαλακτοφάγοι *Galactophagoi*, the "milk eaters" of the southern Ukrainian steppe). *See also* Claudia Ungefehr-Kortus, *Galactophagi*, *in* BRILL'S NEW PAULY (Hubert Cancik and Helmut Schneider eds., English edition Christine F. Salazar ed., first published online 2006) https://referenceworks.brillonline.com/entries/brill-s-new-pauly/galactophagi e417740?s.num=27&s.start=20; STRABO, THE GEOGRAPHY OF STRABO, Book VII, Ch. III, Sect. VII (Hans Claude Hamilton and William Falconer trans., 1903 ed. (est. 7 B.C. or 17-18 A.D.) http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0198%3Abook%3D7%3Achapter%3D3%3Asection%3D7 (attesting that, four hundred years after Homer, on the northern Black Sea littoral "even now there are Wagon-dwellers and Nomads, so called, who live off their herds, and on milk and cheese, and particularly on cheese made from mare's milk, and know nothing about storing up food").

[23] D. Braund, *Greeks, Scythians, and* Hippake*, or 'Reading Mare's Cheese,'" in* ANCIENT GREEKS WEST AND EAST (Gocha R. Tsetskhladze ed., 1999) 521, 527 ("*Hippake* [mare's milk cheese consumed by Scythians of the southern Ukrainian steppe] was austere alterity at its best. For Greek audiences, it combined practical utility with a localised simplicity of lifestyle"). *See also*, *e.g.*, THEOPHRASTUS, ENQUIRY INTO PLANTS VOL. II, Book IX, Ch. XIII, Sect. 2 , 281, (Loeb Classical Library edition, E. Capps, T.E. Page, D. Rouse eds., Arthur Hort trans., 1916 (350 B.C.-287 B.C.)) https://archive.org/stream/enquiryintoplant02theouoft/enquiryintoplant02theouoft_djvu.txt (boasting of Scythian milk and stamina that they could, relying only on the liquorice-plant related "Scythian root" and mare's milk cheese, "go eleven or twelve days without drinking"). *See also* IGOR' KHRAPUNOV, THE CRIMEA IN THE EARLY IRON AGE: AN ETHNIC HISTORY (Nikita Khrapunov trans, 2012) at 71, http://открытаяархеология.рф/sites/default/files/Igor_Khrapunov._The_Crimea_in_the_Early.pdf (describing osteological finds on Crimea evidencing cattle-, sheep-, and goat-raising among the pastoralist pre-Scythian Kizil-Koba (Tauris) culture).

[24] HOMER, *supra* note 22, at Book XIII, Ch. IV, Sect. I. *See also* Aeschylus, Prometheus Unbound [*Promētheus Lyomenos*], *in* AESCHYLUS, AESCHYLUS II: AGAMEMNON, LIBATION-BEARERS, EUMENIDES, FRAGMENTS at Fragment 111 (Loeb Classical Library edition, Herbert Weir Smyth trans, 1926 (5th century B.C.), https://www.theoi.com/Text/AeschylusFragments2.html (referring to the law-abiding, "well-ordered Scythians that feed on mares' milk cheese").

[25] Venetian Michele Bianchi served as envoy from a papal nuncio in Warsaw to Ukrainian military-political leader Bohdan Khmel'nits'kyi in 1651 and then published a book of traveller's notes under the pseudonym Alberto Vimina. The quoted excerpt comes from ALBERTO VIMINA, HISTORIA DELLE GUERRE CIVILI DI POLONIA 7-9 (Venice, 1671), *quoted in* Frank Sysyn, *Framing the Borderland: The*

The archeological, linguistic, and historical records concur in finding milk and milk products a part of Ukrainians' production patterns and diets for millennia prior to empires and colonial projects. Present-day Ukrainians -- as it turns out, with scholarly corroboration -- consider milk indigenous.

Though the settler-colonialism critique has made crucial interventions in the social analysis of food systems and power, its application to the Ukrainian context in regard to milk is not as apt a fit. Ukraine thus offers a compelling contrast case of milk holding a firm place in the consumption of the contemporary and, as Part III shows, in the construction of the modern, but not as a dietary transplant. It is in part in this dually situated position -- its indigeneity and its modernity -- that the story of milk in Ukraine may offer some insights of broader interest. This Part has argued a relatively straightforward case for indigeneity based on origins. The next Part examines milk in modernity, some features of which may deromanticize the story and trouble any simple assertion that indigeneity precludes hegemony.

III. Cows and Collectives

A. Land of Milk, Honey, and Tragedy

Post-Soviet Ukrainian milk production was built out of the system of collective farming that independent Ukraine inherited upon dissolution of the Soviet Union. Understanding the post-Soviet requires some understanding of Soviet precursors. This Part offers a short historical overview of the Soviet system of collective farming, attempting to outline both its cataclysmic beginnings and the modernization it achieved over a seventy-year span,[26] in order to understand some of the social, legal, and affective structures that still frame dairy in present-day Ukraine.

Image of the Ukrainian Revolt and Hetman Bohdan Khemel'nyts'kyi in Foreign Travel Accounts, *in* FROM MUTUAL OBSERVATION TO PROPAGANDA WAR: PREMODERN REVOLTS IN THEIR TRANSNATIONAL REPRESENTATIONS (Malte Griesse ed., 2014) at note 32.

[26] For discussion of building collective life, *see* Eppinger, *Oligarchy*, *supra* note 5. For discussion of the association of tragedy with collectivization, *see* Monica Eppinger, *Cold-War Commons: Tragedy, Critique, and the Future of the Illiberal Problem Space*, 19 THEORETICAL INQU. L. 457 (July 2018) https://www7.tau.ac.il/ojs/index.php/til/article/view/1579.

Collectivization of agriculture, though central to Soviet socialism, actually got underway more than a decade after the Socialist Revolution of 1917. Although abolishing private property was an end in itself for Bolsheviks,[27] war and other emergencies initially sidelined it[28] until Stalin's drive for rapid industrialization put it back on the agenda in 1927.[29] Industrialization required grain, both to raise export revenues for purchasing industrial equipment and to feed urban workers;[30] peasants resisted selling grain to state procurement agents at the state's prices;[31] and so, Stalin argued to a Communist Party Congress in 1927, a resulting "grain crisis" demanded that the U.S.S.R. transition to collectivized agriculture to facilitate grain production and collection.[32] Accordingly, government bodies authorized collectivizing agricultural production[33] and the Party adopted, for the first time, a five-year plan for agriculture with collectivization as its central pillar in April 1929.[34]

---

[27] Decree of All-Russian Central Executive Committee, "On Socialist Land Reform and on Measures Leading to Socialist Farming," *Sobr. Zakon. i Rasporiazh. RKP RSFSR* [hereinafter *SZR RSFSR*] No.4 It. 43 (1919), (reaffirming Soviet government's intention to outlaw individual types of farming and set up collectives), *reprinted in* SOVIET LEGAL HISTORY 118 (Zigurds L. Zile ed., 1992) [hereinafter Zile, SOVIET LEGAL HISTORY]. *See also*, *e.g.*, Vladimir Ilyich Lenin, *Otvet na zapros krest'ianina*, *in* VLADIMIR ILYICH LENIN, POLNOE SOBRANIE SOCHINENII 1953 (1919).

[28] Early on, the Soviets did redistribute crown and church estates (but not other kinds of private lands) to local peasants. Second All-Russian Congress of Soviets Decree "On Land," *SZR RSFSR* No. 1, It. 3 (1917-1918), *reprinted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27 at 116-117.

[29] Decree of U.S.S.R. Central Executive Committee (CEC) and the Council of People's Commissars (CPC) [otherwise known by its Soviet neologism, Sovnarkom] "On Collective Farms," *SZP SSSR* No. 15 It. 161 (1927).

[30] On the relationship between food policy and industrialization, *see* Lynne Viola, *Introduction*, *in* WAR AGAINST THE PEASANTRY, 1927-1930, VOLUME 1: THE TRAGEDY OF THE SOVIET COUNTRYSIDE 1-20 (Lynne Viola et al. eds., 2005) [hereinafter Viola, WAR ON PEASANTRY] (arguing that the timing of collectivizing Soviet agriculture was driven by demands arising from a drive for rapid industrialization).

[31] On the grain crisis, *see*, *e.g.*, U.S.S.R. People's Commissar of Trade A.I. Mikoian, "On the Progress of Grain Procurements," Speech to Collegium of Trade Commissariat (October 3, 1927) (transcript available in Russian State Archive of the Economy, f. 5240, op. 9, d. 102, ll. 45-49), *reprinted in part in* Viola, *id.*, at 27-29. *See also* R.W. DAVIES, THE SOCIALIST OFFENSIVE: THE COLLECTIVIZATION OF SOVIET AGRICULTURE 1929-1930 39-40 (1980) [hereinafter DAVIES, COLLECTIVIZATION].

[32] XVth Congress of the All-Union Communist Party (Bolshevik). Stenographic Record. 56 (1928), *cited in* Viola, *id.*, at 386 n. 24.

[33] Decree of CEC and CPC "On Collective Farms," *SZR SSSR* No. 15 It. 161 (1927).

[34] Viola, *Introduction* to Chapter 3, *The Great Turn, 4 May 1929 – 15 November*

Although grain concerns propelled the change, the collectivization drive had deep implications for dairy as well. Collectivation entailed fundamental change to legal doctrines and Soviet law innovated to encompass socialist forms of property and agricultural organization,[35] over time resulting in a hierarchy affording different forms of property differing levels of legal protection.[36] At the top, state property such as "state farm" (*sovkhoz*) holdings, including any dairy cattle, formally belonged to "the people as a whole" and the resident farmers were wage-laborers.[37] Slightly lower, collective farm (*kolkhoz*) assets (including the dairy herd, if any) belonged indivisibly to a distinct group of citizens formed into a collective unit.[38] At the bottom, "personal property" served personal needs and included single-family houses, personal belongings, and, if any, a household cow.[39] Its use for profit-making was largely prohibited.[40]

Beyond legal reforms, the process of collectivizing agriculture in Ukraine changed the social landscape within which dairying took place. Initially participation in collective farming was voluntary (and in 1928, only 1.7% of Soviet peasant households were

---

1929, *in* Viola, WAR ON PEASANTRY, *supra* note 30, at 122.

[35] Art. 5, CONST. OF U.S.S.R. (1936) ("Socialist property in the USSR exists either in the form of state property (belonging to the people as a whole) or in the form of cooperative and collective-farm property (property of collective farms or cooperative societies"). All references to the U.S.S.R. Constitution of 1936 cited here and hereinafter, *reprinted in ISTORIIA SOVETSKOI KONSTITUTSII V DOKUMENTAKH*, *1917-1956* 729 (1957) and *excerpted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27, at 280.

[36] VICTOR P. MOZOLIN, PROPERTY LAW IN CONTEMPORARY RUSSIA 10 (1993) (proposing a Soviet hierarchy of property rights afforded differing levels of protection at law).

[37] Art. 6, CONST. OF U.S.S.R. (1936) (defining state socialist property) and MOZOLIN, *id*. (explaining state property could not be used as security and was inalienable).

[38] Art. 7, CONST. OF U.S.S.R. (1936) ("The enterprises of collective farms and cooperative organizations, with their livestock, buildings, implements, and output are the common, socialist property of the collective farms and cooperative organizations. ..."). *See also* W.E. BUTLER, SOVIET LAW 169-176 (1983). Cooperatives were later disfavored and agricultural holding limited to state farms and collective farms until the re-institution of cooperatives under *perestroika*. Law of the U.S.S.R. "On Cooperatives," June 1, 1988, *VED. SSSR 1988*, no. 22, item 355, *in* INTERNATIONAL LEGAL MATERIALS, VOL. 28 723-753 (William G. Frenkel trans., 1989), *excerpted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27 at 507. *See also* Art. 8, CONST. OF U.S.S.R. (1936) (permitting a *kolkhoz* to occupy its land free of charge and in perpetuity).

[39] Art. 10, CONST. OF U.S.S.R. (1936). *See also* MOZOLIN, *supra* note 36, at 10-11.

[40] Butler, *supra* note 38, at 174.

members of agricultural collectives[41]), but by the end of 1929, the Party abandoned voluntary participation and kicked off a campaign of mass collectivization.[42] In two intense months, Ukrainian landholding went from 16% collectivized to 64%.[43]

Behind these dry figures stands dramatic change involving widespread violence, most recognizably, acts of straightforward physical violence. In January 1930 the Politburo issued a secret decree directing urban Party members to the countryside to effect "*dekulakization*," the "liquidation" of rural small-holders (so-called "kulaks") by February 20, 1930.[44] *Dekulakization* meant seizing assets from small-holders who were then either put into detention, sent into exile or prison in Siberia, or killed on the spot.[45] Some rural small-holders got wind and fled in so-called self-*dekulakization*. Through these processes of exhortation combined with *dekulakization*, dairying was also socialized: by January 1, 1932 (U.S.S.R.-wide), there were 20,811 dairy collectives with a total herd of 3,334,000 cattle.[46]

Production and distribution through the new collectives fell catastrophically short.[47] In 1932, to address dairy shortfalls, the Soviet government created a new type of organization, the

---

[41] DAVIES, COLLECTIVIZATION, *supra* note 31, at 112, 147; KAK LOMALI NEP 2, 8 STENOGRAMMI PLENUMOV TSK VKP(B), 1928-1929, VOL. 5 (V.P. Danilov et al. eds., 2000).

[42] Decree of the Central Committee of the Communist Party (hereinafter CC of CP) "On the Pace of Collectivization and State Assistance to Collective-Farm Construction," Jan. 5, 1930, CPSU IN RESOLUTIONS AND DECISIONS OF CONGRESSES, CONFERENCES, AND PLENUMS OF THE CENTRAL COMMITTEE, VOL. 5, 72-75 *reprinted in* Viola, WAR ON PEASANTRY, *supra* note 30, at 201 (calling for '"wholesale" (*sploshnaia*) collectivization, meaning no less than 75% of every village).

[43] Timothy Snyder, Professor of Modern Central European history at Yale University, lecture at Yale University, New Haven, Conn. (November 8, 2005) (reporting the rate of collectivization between January and mid-March 1930).

[44] Politburo Decree "On Measures for the Liquidation of Kulak Farms in Raions of Wholesale Collectivization," Jan. 30, 1930, Russian Government Archive of Social and Political History f. 17, op. 162, d. 8, ll. 64-69 *reprinted in* Viola, WAR ON PEASANTRY, *supra* note 30, at 228-234.

[45] *See* the implementing order of the secret police (the OGPU), OGPU Order on Measures for the Liquidation of the Kulak as a Class, February 2, 1930, No. 44/21, GARF f. 9414, op. I., d. 1944, ll. 17-25. *reprinted in* Viola, *id*. at 238-245.

[46] U.S. Dep't Agric., Bureau Agric. Econ., Div. Foreign Agric. Service, *Russian Collective Dairy Farming*, 24 FOREIGN CROPS AND MARKETS 478-79 (1932) *quoting* SOCIALIST AGRIC. (Feb. 26, 1932), *cited in* AGRIC. ECON. BIBLIOGRAPHY entry 385 at page 91 (U.S. Dep't Agric., Bureau Agr. Econ., 1937).

[47] DAVIES, COLLECTIVIZATION, *supra* note 31, at 104–05.

"commercial dairy farm" (known by its abbreviation from Soviet Russian, the MTF). An MTF might operate as a branch of a collective farm working on other kinds of agriculture and or it might coordinate efforts between dairy-producing collective farms. Either way, the MTFs were tasked with supervising and rendering assistance to dairy units of the collectives.[48]

While on one hand Soviet authorities were attempting organizational innovations like MTFs to facilitate production, on the other, the violence attending collectivization was thwarting them. Beyond the physical violence of *dekulakization*, structural violence was manifest in mass confiscation of rural foodstuffs by state agents.[49] Recall that a primary impetus for collectivizing agriculture was to facilitate the state collecting grain from the countryside. In rural Ukraine, state agents collected grain even if it took confiscation, producing in rural residents "visible confusion and 'lostness'" and a palpable sense of "unknowability" regarding "what will become of them" as hunger and desperation loomed.[50]

Under these conditions, some rural residents hid grain and slaughtered their cows. Evidence suggests it was to avoid starvation, although at the time the Soviet leadership suspected peasants of

---

[48] U.S. Dept. Agr., *supra* note 46, *quoting* 3 SOCIALIST RECONSTRUCTION AGRIC. 1931, *cited in* AGRIC. ECON. BIBLIOGRAPHY *supra* note 46 at 91.

[49] For discussion of structural violence, *see* Johan Glatung, *Violence, Peace, and Peace Research*, 6 *J. PEACE RES.* 167 (1969). On the distinction between the physical exertions of political and everyday violence on one hand, and structural violence on the other, *see* Philippe Bourgois, *The Power of Violence in War and Peace: Post-Cold War Lessons from El Salvador*, 8 ISTMO (2004) http://istmo.denison.edu/n08/articulos/power.html.

[50] A January 1933 mission in central Ukraine, reporting back to the Central Committee on local reception of rural grain seizure, found that neither notification about impending grain seizure nor the actual carting off of grain had met "active protest": "This measure is generally accepted in silence. But," it continued, "when you have become more attentively acquainted with the moods of individual collective farmers, you see that this operation has acted upon them *en masse* in an overwhelming, depressing way. Among a significant portion of collective farmers it produces a visible confusion and 'lostness,' a fundamental unknowability of what will happen next, of what will become of them." Grigoriev, Head of Dep't of Mass-Agitation Campaigns of the Central Committee of the Communist Party (Bolshevik wing) of Ukraine (hereinafter CC CP(B)U)], Rep. of the Dep't of Mass-Agitation Campaigns of the CC CP(B)U "On the Mood of the Population of Velikotokmak and Bozhedariv Districts of Dnipropetrovsk Oblast, in Connection with Confiscation of the Seed Fund into the Requisitioned-Grain Account," Archives CC of CP Ukr., F.1. Op. 101. Spr. 1244. Ark. 2-5, Jan. 8, 1933, *available at* https://www.archives.gov.ua/Sections/Famine/Publicat/Fam-Pyrig-1933.php#nom-246, at record number 140 (translation my own).

killing cattle to avoid surrendering them to the new collectives.[51] Authorities used the law to clarify the situation and bring the hammer down. In regard to livestock and other assets funneled into the new collective entities, in addition to what was literally "state property," collective farm or cooperative property would also be considered "public property" and as such would be legally held to be "sacred and inviolable" and protected as strictly as if it were the state's own property.[52] Farmers' consuming the produce they grew, livestock they raised, or milk they collected would be considered theft.

Severe confiscations compounded the physical violence of the collectivization campaign. Within two harvests after its start, 10% of the Ukrainian population (by conservative estimates) would die from famine: of a Soviet Ukrainian population of 33 million, an estimated minimum 3.5 million starved to death between 1932 and 1933 alone.[53] With food requisitioned for urban consumption, mortality fell harder on the countryside, village death tolls far exceeding the 10% average. Some Ukrainian villages were completely depopulated in this short period that has come to be known as the *Holodomor*, or Famine.

---

[51] Decree of CEC and CPC "On Measures to Combat Rapacious Slaughter of Livestock," Jan. 16, 1930, SOBR. POST. PRAV. SSSR 1930, no. 6, item 66, *reprinted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27, at 213.

[52] The CEC and CPC of the U.S.S.R. "hold public (state, collective farm, cooperative) property to be the foundation of the Soviet system. They regard such property as sacred and inviolable, and all persons making any attempts on its integrity -- as enemies of the people. In view of this, it is the foremost duty of the Soviet authorities to wage a decisive sturggle against misappropriators of public property. ... [They hereby decree] ... To equate collective farm and cooperative property (harvestable crops, common reserves, livestock, cooperative warehouses and stores, etc.) with state property and to intensify the protection of such property from misappropriation." Decree of CEC and CPC "On Protecting and Strengthening Public (Socialist) Property," Aug. 7, 1932, U.S.S.R. Decrees 1932, no. 62, item 360, *reprinted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27, at 265, 265-66.

[53] Total registered deaths (which likely reflects under-reporting) for 1931-33 in Ukraine is 3,091,809, reflected against a estimated 1930 population of 28,710,628. *See* R.W. Davies' latest calculation at www.soviet-archives-research.co.uk/hunger. Davies and Wheatcroft, adjusting for statistical birth and death rates, estimate 1.54 million "excess deaths," i.e. people who died from famine who would not otherwise have died at that time, in 1932-1933 alone in Ukraine. R.W. DAVIES AND STEPHEN G. WHEATCROFT, THE YEARS OF HUNGER: SOVIET AGRICULTURE, 1931-1933 415 (2004).

B. Socialized Cows and Household Survival

1. Milk and Famine

a. Dairy, Distribution, and Directives

Within the context of the Famine that accompanied collectivization in the early 1930s, dairy took on particular significance in the Ukrainian countryside. Milk, like grain, was subject to requisition and a peculiar form of scarcity took hold in rural areas.[54] The new collective farms introduced a compensation system including a unit, the normative "workday,"[55] as a standard measure for labor effort[56] and terms of trade in the new compensation system shifted disastrously against the Ukrainian villager. One "workday" of a Ukrainian collective farmer was pegged at a value[57]

---

[54] The Ukrainian Famine of the early 1930s was, in Amartya Sen's terms, a case of "food entitlement decline": even when food was available -- farmers had grown it -- they were not entitled to it and thus starved. AMARTYA SEN, POVERTY AND FAMINES: AN ESSAY ON ENTITLEMENT AND DEPRIVATION (1981).

[55] *Trudoden'*, "workday," as a unit of measure for labor on collective farms, *introduced in law in* Model Rules of the Agricultural Artel (Collective Farm), approved by Decrees of CEC and CPC, March 1, 1930 and of April 13, 1930 and by resolution of the Kolkhoztsentr SSSR [USSR Collective Farm Center] of June 7, 1930, USSR Decrees 1930, no. 24, item 255, *reprinted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27, at 207 [hereinafter Model Charter] (instituting, *inter alia*, the "workday" compensation-accounting system).

[56] *See* text *infra* notes 85-88 for more full discussion of the "workday" and its role in post-War collectivization of dairy production.

[57] Records from the time of the Famine show one "workday" of a collective farmer in Ukraine evaluated as being worth roughly 3 rubles. *See*, *e.g.*, P. Lyubchenko, deputy head of the CPC of Ukr. S.S.R. and P. Postishev, Secretary of CC CP(B)U, [Resolution of the CC CP(B)U and CPC of the Ukr. S.S.R. "On the removal of Kamenniy Potolok village, Kremenchug district, Kharkov region from the 'Black Board'" Oct. 17, 1933 (archived Nov. 9, 2017) Archives of the CC CP Ukr., F.1, Op. 6, Spr. 285, Ark. 144-145, *available at* https://www.archives.gov.ua/Sections/Famine/Publicat/Fam-Pyrig-1933.php#nom-246, at record number 246.

insufficient to purchase a liter of milk.[58] In other words, even had it been market-available, milk would have been beyond the purchasing power of the farmers on collective farms producing it.

At the height of the Famine, some local authorities in Ukraine attempting to save rural people from starvation officially turned to the dairy herd. The winter of 1932-33 had decimated villages. By early spring 1933, amidst masses of people in the countryside so staggered by hunger that they lay where they fell, local officials ordered district agents to collect those "found laying down," hospitalize them, and try to fatten them up -- or at least stave off the final throes of starvation (particularly, it seems from internal communications, to save enough bodies to get labor into fields for spring planting). To do this, they temporarily suspended milk requisitions from collective farms. "In view of the exceptionally difficult food situation in Skvyrsky, Belotserkovsky and Volodarsky districts," as one local government order in Ukraine in March 1933 reads, "we hereby suspend the requisition of milk by state procurement agents in these areas, in order to turn it to elimination of the manifestation of starvation, to be used exclusively for the feeding of children and the hospitalized ill."[59] A March 1933 order from Kyiv district obliged Party workers to organize assistance to starving children in the form of milk provision "so that each child would receive half a glass" daily.[60] Another demanded a "norm" of

---

[58] Milk in 1933 cost 4.5 rubles per litre. M. Khataevych, Secretary of the Oblast' Comm. CP(B)Ukr., Supplementary note of the Dnepropetrovsk Regional Party Comm., People's Commissariat of Supply of the USSR, and the CC CP(B)U "On Deterioration of the Food Supply of Industrial Enterprises of the Region and Measures for the Implementation of Plans for Centralized Delivery of Food," March 21, 1933, Archives of the CC CP Ukr. F.1, Op. 1, Spr. 2187, Ark. 103-107, *available at* https://www.archives.gov.ua/Sections/Famine/Publicat/Fam-Pyrig-1933.php#nom-246, at record number 198 (giving the price for a liter of milk as 4 rubles 50 kopeks).

[59] Demchenko, Secretary of Oblast' Comm. CP(B)U, Decision of the Kyiv Regional Committee of the CP(B) "On the Provision of Milk Assistance to Children and the Ill in in Skvyrsky, Belotserkovsky and Volodarsky Districts of the Oblast," March 18, 1933, Archives of the CC CP Ukr., F.1, Op. 1, Spr. 2189, Ark. 172, *available at* https://www.archives.gov.ua/Sections/Famine/Publicat/Fam-Pyrig-1933.php#nom-246, at record number 193.

[60] "Oblige the RPK to organize assistance to desperate children in the form of milk, so that each child would receive a half a glass of milk daily." Demchenko, Secretary of the Oblast' Comm. CP(B)U, Resolution of the Kyiv Oblast' Comm. of the CP(B)U from the Resolution of the Kyiv Oblast' Comm. of the CP(B)U "On Strengthening Party, Soviet, and Economic Organs, On the Rendering of Food Assistance to the Population and On the Responsibility of Leaders for the Realization of these Measures," March 19, 1933, Archives of the CC CP Ukr.,

700-800 calories per day be reached for each child but did not allocate food relief, instead declaring that milk, eggs, and other products of animal husbandry "can and must be mobilized on site."[61]

b. Model Rules and Milk Memoirs

Milk thus played a role in official Famine responses. It also proved key to household survival strategies. Crucially, not all cattle, or milk, had been incorporated into the collectives. The state promulgated a Model Code for collective farms that allowed any rural household who had dairy cattle before collectivization to retain one cow for household use.[62] As local authorities initiated emergency measures in the face of mass starvation, officials exhorted villagers to rely on "internal food resources," significantly among them local milk.[63]

Villagers needed little urging. Memoirs of the Famine reflect the importance of that single cow to a household struggling to survive. One grandmother from Zhytomir oblast, for example, recalls how fellow villagers, unable to withstand hunger, slaughtered their cows for meat and subsequently starved, while her family refrained and survived on their cow's milk.[64] Another remembers at

---

F.1, Op. 1, Spr. 2190, Ark. 1-2, *available at* https://www.archives.gov.ua/Sections/Famine/Publicat/Fam-Pyrig-1933.php#nom-246, at record number 194.

[61] Kharmandaryan, Deputy People's Commissar of Health of the Ukr. S.S.R., Supplemental Note of the People's Commissariat of Health of the Ukr. SSR CC KP(b)U "On the State of the Health of the Population of Kyiv region in Connection with Food Difficulties," June 3, 1933, Archives of the CC CP Ukr., F.1, Op. 1, Spr. 2130, Ark. 41-47 *available at* https://www.archives.gov.ua/Sections/Famine/Publicat/Fam-Pyrig-1933.php#nom-246, record no. 232.

[62] "Milk cows of single-cow households are not socialized. In multi-cow households, one cow is left in personal use; the rest are socialized ... ." Model Charter, *supra* note 55, at 207. The 1936 Soviet Constitution reenforced this one-cow per household allowance. Art. 7, CONST. U.S.S.R. (1936).

[63] *See*, *e.g.*, Resolution of the CC CP(B)U "On the Approach for Preparing for Spring Sowing and Organization of Food Aid to the Population of Kyiv Region," sect. 9(d), March 31, 1933, Archives of the CC CP Ukr., F.1, Op. 6, Spr. 282, Ark. 107-110], *available at* https://www.archives.gov.ua/Sections/Famine/Publicat/Fam-Pyrig-1933.php#nom-246, at record number 204 (urging Kyiv regional officials to undertake emergency aid, including to"strengthen local initiative . . . in the search for internal food resources (milk, eggs for children, etc.)").

[64] Oleksiy Hordiev, *A Cow*, *in* "LET ME TAKE THE WIFE TOO, WHEN I REACH THE CEMETERY SHE WILL BE DEAD": STORIES OF HOLODOMOR SURVIVORS (Euromaidan Press, Nov. 24, 2018) http://euromaidanpress.com/2018/11/24/let-me-take-the-

age ten surviving (after her mother's death and father's exile to Siberia) thanks only to milk from the family cow. She and her sister grew so skinny that it was painful to sit because they were "all bone," reduced to hiding their milk jar from hunger-stricken neighbors, but "the milk saved me."[65] A villager from central Ukraine, Havrylo Prokopenko, recalls of his boyhood:

> We . . . shared joint ownership of a cow with Lina the seamstress. We fed and milked her on alternate days. The cow lived in our adobe block shed. On the street side of one of its white walls was a sign written in red clay: "The struggle for grain is a struggle for socialism." Zirka was a dry cow and gave little milk, but it was tasty and had a high fat content. The shed had heavy oak doors covered with an iron grate and a screw lock. . . .
>
> By springtime . . . thanks to God, we were alive. But in the village and all around us an apocalypse was unfolding. Almost every day the bodies of people who had starved to death were transported past our house on the way to the cemetery ...
>
> Disaster struck the day after Easter [1933]...

Havrylo opened the door of the shed and found Zirka gone. Half of the wall with the sign had been smashed onto the road. The boy was then accused at rifle-point by the village council secretary of having sold the cow (which as kulak-like behavior could have put his life in jeopardy), but was exonerated when, the following day, "they found Zirka's head and hide, and a bucket of lard. Our 'good' neighbours [sic] had stolen the cow and slaughtered it."[66]

---

wife-too-when-i-reach-the-cemetery-she-will-be-dead-stories-of-holodomor-survivors/ (recalling a grandmother from Pylyponka, Zhytomyr Oblast, who survived "thanks to a cow," unlike fellow villagers who couldn't stand the hunger and slaughtered their dairy cow for meat but then subsequently perished from hunger).

[65] Hilary Caton, *Holodomor Surivivor in Burlington shares famine story*, BURLINGTON POST (Nov. 21, 2013) https://www.insidehalton.com/news-story/4230737-holodomor-survivor-in-burlington-shares-famine-story/ (relating Famine survival memories from eastern Ukraine of survivor Maria Sagan).

[66] Havrylo Nykyforovych Prokopenko, Eyewitness Testimony, *in* HOLOD 33: NARODNA KNYHA-MEMORIAL 195-97 (Lidiia Kovalenko and Volodymyr Maniak comp., 1991).

Famine memoir, an emergent genre in post-Soviet Ukraine, captures paradigmatic features that distinguish Ukrainian from other experiences of Soviet collectivization. Soviet historiography left out the Ukrainian Famine; post-Soviet Ukrainian memoirs insist upon remembering and re-collecting it. They relate how, within an increasingly dire regime of food confiscation, milk provided a lifeline for several reasons. The household dairy cow was a legally permitted source of sustenance. Features inherent in dairy production -- daily harvest, the fragmented nature of its collection (individual cows milked separately, with milk going into individual buckets) -- made milk harder to monitor. Helping oneself was easier to pull off and, during severe caloric crisis, more difficult for the state to see and seize.[67]

For all of its demographic disaster and trauma, collectivization took hold: by 1940, on the eve of World War II, 97% of Soviet farming worked collectively.[68] In Ukraine, for those who managed to survive its inception, the village collective's herd and household cow allowance proved significant both in dairy production and household survival, as the coming years of War and occupation would again show.

2. *Hungerpolitik*: Dairy under Wartime Occupation

Recuperation from the Famine over the last half of the 1930s was interrupted by the Nazi invasion of 1941.[69] All of Ukraine was occupied (and then, four years later, liberated), meaning that the front swept across Ukraine twice, first with Nazi attack and then with Red Army counter-attack. In retreat, both the Soviet (1941) and Nazi (1944-45) command ordered a "scorched earth" policy in regard to Ukrainian village agriculture. As Himmler instructed his troops, "It

---

[67] For the creation of collective farms as part of a modernist scheme of rural surveillance, *see* JAMES C. SCOTT, SEEING LIKE A STATE: HOW CERTAIN SCHEMES TO IMPROVE THE HUMAN CONDITION HAVE FAILED 209-220 (1998).

[68] Zvi Lerman, Karen Brooks, Csaba Csaki, Land Reform and Farm Restructuring in Ukraine, 270 World Bank Discussion Papers 23 (1994) http://documents.worldbank.org/curated/en/122021468109448366/pdf/multi-page.pdf at 23.

[69] Adolph Hitler, Reichfuehrer Adolph Hitler's Proclamation on War with Soviet Union (Berlin, Germany, June 22, 1941) http://www.ibiblio.org/pha/policy/1941/410622a.html (statement of the Fuhrer of Germany declaring war on the U.S.S.R.); Joachin von Ribbentrop, Statement by Joachim von Ribbentrop, German Foreign Minister, On the Declaration of War on the Soviet Union (Berlin, Germany, June 22, 1941) http://www.ibiblio.org/pha/policy/1941/410622b.html (statement of the Foreign Minister of Germany on Hitler's declaration of war against the U.S.S.R.).

is necessary that in retreating from the regions of Ukraine we do not leave behind a single person, head of livestock or measure of grain ... "[70]

Once again, in addition to overt violence, the village was an object of structural violence through food policy. In areas under Soviet governance, the "workday" system was pressed into wartime service. The law specified a minimum number of obligatory "workdays" devoted to collective work per year and provided criminal sanctions to enforce it.[71] Payment in-kind, i.e. in foodstuffs, to farmers was suspended. Food was once again subject to requisition; farmers were made to pay; and terms of trade again turned against rural Ukrainians.

In areas under German occupation, a different picture of rural-urban suffering emerged. Nazi forces exterminated a large portion of the civilian population[72] and pressed others into forced labor in Germany. Of the remaining inhabitants, Nazi policy dictated that the Slavic subhumans, the *Untermensch* of Ukraine, would (still collectively) farm its steppe and feed Germany, at least for the duration of the war.[73]

---

[70] Heinrich Himmler, *Reichsführer* of the SS, *quoted in* I. RYBALKA AND V. DOVHOPOL, ISTORIIA UKRAINSKOI RSR: EPOKHA SOTZIALIZMU 366, *cited in* SUBTELNY, *supra* note 13, at 477.

[71] Resolution of the CPC of the U.S.S.R. and the CC of the All-Union CP(B), April 13, 1942 *cited in Trududen'*, VIKIPEDIYA [Russian-language Wikipedia], https://ru.wikipedia.org/wiki/%D0%A2%D1%80%D1%83%D0%B4%D0%BE%D0%B4%D0%B5%D0%BD%D1%8C#cite_ref-1 (last checked Feb. 7, 2020) [hereinafter *Trudoden'* workday].

[72] Current scholarship estimates 1.5 - 1.6 million Jewish citizens were killed in the Holocaust in Ukraine. Wendy Lower, *Introduction to Special Volume on the Holocaust in Ukraine: Selected Articles from Holocaust and Genocide Studies*, HOLOCAUST AND GENOCIDE STUD. 1, 2 (United States Holocaust Memorial Museum 2014) https://academic.oup.com/DocumentLibrary/HGS/holocaustinukraine_intro.pdf.

[73] *Reichskommisar* of Ukraine Erich Koch, upon his arrival in Ukraine in September 1941, told his staff, "Gentlemen, I am known as a brutal dog. Because of this reason I was apponted as *Reichskommisar* of Ukraine. Our task is to suck from Ukraine all the goods we can get hold of, without consideration of the feelings or the property of the Ukrainians. Gentlemen, I am expecting from you the utmost severity towards the native population." Erich Koch, German *Reichskommisar* of Ukraine, *quoted in* SUBTELNY, *supra* note 13, at 467; policy of adapting Soviet collective farming to German ends *summarized in* SUBTELNY, *id*. at 468-69.

In fact, food lay behind some of the Nazis' acquisitive military designs on Ukraine,[74] food policy and territorial acquisition interconnecting with Nazi racial ideologies. A Nazi goal of reducing dependence on food "imports" would be reached by expanding Germany's borders to encompass a larger "domestic" agricultural base (incorporating the rich "black earth" lands of central and southern Ukraine into Germany), through conquest.[75] Meanwhile, Nazi race theory considered inhabitants of Ukraine racially inferior "useless eaters" who, once defeated militarily, could be "dealt with" by lowering their food rations below subsistence levels.[76] After a "Holocaust by bullets," food confiscation was an intentional Nazi strategy for feeding its army and, through mass civilian starvation, for clearing Ukrainian territory for eventual resettlement by Germans.[77] As historian Gesine Gerhard puts it, the Nazis counted "without regret" on the "massive starvation" to come[78]: under German occupation, food policy became *Hungerpolitik*, "hunger policy."

Indeed, of the food supplies that Nazi Germany obtained from the occupied U.S.S.R., an estimated 85% came from Ukraine.[79] Between military operations and starvation, the toll was beyond decimation: approximately one in six inhabitants of Ukraine perished.[80] In reverse of the pattern during the Soviet collectivization

---

[74] Gesine Gerhard, *Food and Genocide: Nazi Agrarian Politics in the Occupied Territories of the Soviet Union*, 18 CONTEMP. EUR. HIST. 45, 45 (2009) [hereinafter Gerhard, *Food and Genocide*].

[75] *Id*. at 55-56. *See generally* GESINE GERHARD, NAZI HUNGER POLITICS: A HISTORY OF FOOD IN THE THIRD REICH (2015).

[76] Gerhard, *Food and Genocide*, *supra* note 74 at 46 (outlining Backe's plans for feeding the German army and homeland during the war by starving Ukraine).

[77] On the "Holocaust by bullets," genoicidal massacres at the time of invasion or shortly thereafter in which half a million people, the majority Jews, were shot within the first nine months of the war, *see* United States Holocaust Memorial Museum, *Einsatzgruppen: An Overview, From Security Measures to Mass Murder*, HOLOCAUST ENCYCLOPEDIA https://encyclopedia.ushmm.org/content/en/article/einsatzgruppen. On starvation as a strategy, *see* Gerhard, *Food and Genocide*, *supra* note 74 at 58-59. *See also* Alex J. Kay, *Germany's Staatssekretäre, Mass Starvation and the Meeting of May 2, 1941*, 41 J. CONTEMP. HIST. 685, 685 (2006); Aktennotiz über die Besprechung der Staatssekretäre am 2.5.1941, *partially reprinted in* DER KRIEG GEGEN DIE SOWJETUNION 1941-1945. EINE DOKUMENTATION 44 (Reinhard Rürup ed., 1991).

[78] Gerhard, *Food and Genocide*, *id*. at 46.

[79] SUBTELNY, *supra* note 13 at 469.

[80] Figures are steadily revised upwards as historians do their forensic work. To give a general idea of scale, as of 1988 an estimated minimum 5.3 million inhabitants of Ukraine perished during the War, with some estimates ranging to 7 million, with an additional 2.3 million deported to forced labor in Germany. As of

Famine, this time cities were targeted first for starvation and their inhabitants fled, when they could, to the countryside.

During this ruinous time, again, milk provided a crucial reservoir of calories for Ukrainians. Milk did not feature prominently in the Nazis' schemes regarding provisions to be extracted from Ukraine. The time-sensitivity of milk spoilage may have made it less a target for rendering back to Germany than, say, crop harvests. Moreover, as during the Soviet collectivization-era Famine, milk was easier for peasants to conceal or consume directly after milking. That did not mean that dairy was exempt from wartime predations; for example, per German army policy, German troops routinely requisitioned rural households' dairy cows in order to provision themselves.[81] It did mean that a household's access to milk raised the odds of possible survival if other stars also aligned.

Legal disputes from the War years offer an intimate look into the lifesaving significance of milk for rural households. Consider *Generalova v. Shagov*, a dispute that came before Soviet courts after liberation.[82] During the occupation, German forces demanded six cows of a village; owners of two cows agreed that one (Ms. Generalova's) would be surrendered and the other (Mr. Shagov's), milked by the two households and the milk, shared. After liberation from German occupation, Mr. Shagov refused to continue the milk-share arrangement; the householder who had surrendered her cow to the occupying forces for the common good, Ms. Generalova, brought suit. The parties pursued the case up to the Supreme Court of the U.S.S.R. which affirmed the trial court judgment for Generalova, reasoning with an almost Coasian logic that villagers entered into the agreement "to distribute equally, to the extent feasible, the burden of the forcible extortion by the Germans" and thus "it corresponded to the interests not only of those who gave up their cow to meet the German demands, but also of those who kept in their possession cows for the benefit of the owners who had to give theirs away."[83]

2014 historians estimated that an additional minimum of 1.5 million from Ukraine were murdered in the Shoah. SUBTELNY, *id*. at 479 (giving casualty tolls aside from the Shoah); Lower, *supra* note 72 (giving figures of those citizens of Ukraine murdered in the Holocaust).

[81] On the policy for troops to feed themselves from the Ukrainian countryside, formulated during a meeting of top war-planning bureaucrats on May 2, 1941, *see* Gerhard, *Food and Genocide* , *supra* note 74 at 58 –59; Kay, *supra* note 77 at 685.

[82] The case, though from a village in Russia, offers a fact pattern illustrative of the Ukrainian experience as well.

[83] *Case of Generalova v. Shagov*, Civil Division of the Supreme Court of the U.S.S.R., 1943, *in* 4 *SUDEBNAIA PRAKTIKA VERKHOVNOGO SUDA SSSR, 1943* 31-32,

C. Cattle and Dairy in High Socialism

1. Collectivization in Legal Imagination and in Practice

After World War II, the structures of collectivism were harnessed to incentivize production for post-war reconstruction in new ways. As already discussed, the state's "Model Charter for Collective Farms" contained a one-cow provision[84] that secured the household milk supply to which many who made it through Famine and the War owed their survival. Recall also that the Model Charter had introduced a unit of measure for collective farm labor, the *trudoden'*, a standardized "workday," for calculating compensation, pegging different farm tasks to different numbers (or portions) of "workdays" earned based on level of difficulty, skill, or prior training required.[85] An individual's "workdays" were recorded weekly,[86] with collective farm proceeds divided up annually proportionate to each member's accrued "workdays."[87] The milkmaids' "workday" aligned with output; in 1956, for example, a milkmaid accrued 1.8-2

---

reprinted in Zile, SOVIET LEGAL HISTORY, *supra* note 27, at 329.

[84] Model Charter, *supra* note 55. *See also* text *infra* notes 55-57.

[85] *See* Model Charter, *id*. Discussion here is also informed by the *Trudoden'* workday entry, *supra* note 71. *See also* text *infra* notes 55-57 and *infra* note 71 for discussion of the "workday" in the context of the Famine and World War II, respectively.

[86] The system encouraged labor zeal by recognizing both its service to group aims and the individual's heroic feats of labor. *See*, *e.g.*, LEWIS H. SIEGELBAUM, STAKHANOVISM AND THE POLITICS OF PRODUCTIVITY IN THE U.S.S.R, 1935-1941 (1988) (describing the movement inspired by a heroic Donbas (Ukraine) coal miner. *See also* R.W. DAVIES, THE INDUSTRIALIZATION OF SOVIET RUSSIA, VOL. 2, THE SOVIET COLLECTIVE FARM, 1929-1930 (1980); SHEILA FITZPATRICK, STALIN'S PEASANTS: RESISTANCE AND SURVIVAL IN THE RUSSIAN VILLAGE AFTER COLLECTIVIZATION (1994); MARY BUCKLEY, MOBILIZING SOVIET PEASANTS: HEROINES AND HEROES OF STALIN'S FIELDS 115133 (2006) (describing collective farming labor practices patterned after heavy industry). *See generally* OLEG KHARKHORDIN, THE COLLECTIVE AND THE INDIVIDUAL IN RUSSIA (1999) (describing conditions of possibility within Soviet labor collectives for the development of a certain kind of individual).

[87] Obviously, this compensation system was disastrously disrupted by the forced requisitioning of foodstuffs that precipated mass famine in Ukraine. Adopting the "workday" as a unit of measure obviated the need for cash to enter into the "mutual settlements" (взаиморасчёты) internal to the collective farm. *See Trudoden'* workday, *supra* note 71. Excluding cash payments increased the corresponding importance of internal grain distribution and thus increased collective farmers' vulnerability to external (state) grain confiscation. *See* Part III.A. *supra* (describing mass commodity seizures and Famine in Ukraine 1930-33).

"workdays" for every 100 liters of milk (which entailed, generally, her milking 8-10 cows).[88]

These and other measures were meant to foster collectivized subjectivities through collective responsibility. Another decree provided that a collective farmer's income be based on the productivity of her work "brigade" and of a new inter-brigade unit called the *zveno*, or "link,"[89] predicating individual compensation on group performance. Milkmaids' brigades, too, were linked; in collective farm milk production, they were in it together. The law eventually permitted individual collective farms some latitude in setting compensation rates[90] and the "workday" as a normative unit of measure was eventually replaced in 1966[91] by fixed compensation

---

[88] "For hand milking in the collective farm for every 100 liters of milked milk a milkmaid receives on average 1.8-2 workdays (for the servicing of 8-10 cows)." V.A. Olenev, Yu. I. Belyaevskiy, researchers in the laboratory of the All-Union Scientific-Research Institute of Electrification of Agriculture, "Effectiveness and Benefits of "Milking Sites" (1956), *reprinted at Istoriya doeniya* [History of Milking], *available at* http://agrotehimport.ru/national_history_of_dairy_equipment_ussr/effektivnosti_i_preimushhestva_doilnyix_ploshhadok/ [hereinafter Olenev and Belyaevskiy, Milking Sites].

[89] Decrees of the Council of Ministers of the U.S.S.R. "On Measures for the Improvement of the Organization, Raising the Productivity, and Streamline Payment of Labor on Collective Farms," April 19, 1948 *cited in* G.A. AKSENENOK, V.K. GRIGOR'EV, P.P. PYATNITSKIY, COLLECTIVE FARM LAW, CH. IX Legal forms of organization and payment of labor on collective forms, §4 Payment of Labor, *available at* http://istmat.info/node/23766 (providing for the *zveno*, or "link," organization).

[90] Decree of CC of CPSU and Council of Ministers of the U.S.S.R., March 6, 1956, *cited in Trudoden'* workday *supra* note 71 (allowing each collective farm to set its own minimum number of "workdays"); *see also* Charter of Agricultural Cartel, Art. 11 (1956), *described in* entry for Dokhody kolkhozov ["Income of Collective Farms"] FINANSOVIY-KREDITNIY SLOVAR' TOM I 406 (V.P. D'yachenko ed., 1961) 406, *available at* https://economy-ru.info/page/015051140096162202142062081044017249179120054120/ (allowing collective farms, after having fulfilled annual obligations to the state, flexibility to distribute the collective income in a manner decided by a group meeting of all farmers). Some farms formed cash and in-kind funds to be distributed to individuals as a monthly advance, with a final settling of work accounts at the end of the year. *Trudoden'* workday, *supra* note 71.

[91] Decree of the CC of the CPSU and the Council of Ministers of the U.S.S.R., "On Raising the Material Interestedness of Collective Farmers in Development of Societal Production," May 18, 1966, *discussed in* Sergey Ivanovich Shubin, *Istoriya Trudodnya (1930-1966) Kak Mery Truda I Instrumenta Yevo Stimuliravaniya* 31, 34 (at text *infra* his note 10) *available at* https://cyberleninka.ru/article/n/istoriya-trudodnya-1930-1966-kak-mery-truda-i-instrumenta-ego-stimulirovaniya/viewer. *See also*, *e.g.*, Rekomendatsii po oplatye truda v kolkhozach Ukrainskoi SSR 107 (Kiev, 1977).

rates more like wages (like those already used on state farms),[92] though the "link" unit persisted.[93]

In milkways, such organizational forms of high socialism left surviving legacies. Milking workers had long since emerged as a gendered cohort. Though not exclusively performed by women, normatively milking was "women's work": something women were considered better at and better suited to, and as a practical matter, under a near-monopoly of milkmaids,[94] who became a distinct and privileged labor and social group within the collective farm.[95] The collectivist practices of high socialism intensified relationships between village milkmaids working in the collective farm dairy, establishing and reenforcing patterns of cooperation, pressure, support, and self-organization that left their imprint on milkmaid cohorts in Ukrainian villages long after the "workday," or even the collective farms, had disappeared. The "workday" also left a lasting legacy in its influence on the adoption of mechanized milking (or lack thereof), which the next subsection briefly describes.

2. Milk Dreams: Reconstruction, State Science, and the Limits of Big Agriculture

a. Cattle Feed and Consumption

Premier Khruschev in 1958 promised to raise U.S.S.R. agricultural production over capitalist countries'[96] and linked

---

[92] Shubin, *id*. at 34-35 (decrying abolition of the workday as leading to the eventual demise of the collective farm) and at 32 (calling for a more "objective" reappraisal of the workday).

[93] On Khrushchev's enthusiasm with "links" and further literature on them, *see* GEORGE BRESLAUER, KHRUSHCHEV AND BREZHNEV AS LEADERS 94 (1982).

[94] This gendered division of labor, with women primarily responsible for milking, has lasted to the present. "Rural women are key players in milk production as they are largely responsible for cow milking and care." Improving Milk Supply in Northern Ukraine, FAO Investment Center/EBRD Cooperation Program Report Series, no. 18 at xiii (September 2013), http://www.fao.org/3/a-i3346e-pdf [hereinafter FAO/EBRD Report No. 18].

[95] Soviet Ukrainian milkmaids typically earned more than their counterparts in the *intellegentsia* and, like (mostly male) tractor and combine drivers, were privileged to purchase cars and imported clothes at special stores in the district center reserved for *nomenklatura*. Oksana Hasiuk, personal communication, Jan. 3, 2020.

[96] *Control Figures for the Economic Development of the U.S.S.R., 1959-1965: Theses of N.S. Khrushchov's Report to the Twenty-First Congress of the CPSU*, at 7-8, 9-10, 11-12 (1958), *excerpted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27, 383, 384.

increasing production with restoring consumption. As the Program of the Communist Party of the Soviet Union of 1961 promised, "In the current decade (1961-70) the Soviet Union ... will surpass the strongest and richest capitalist country, the U.S.A. ... ; everyone will live in easy circumstances; all collective and state farms will become highly productive and profitable enterprises ... "[97]

Where before and during the War collectivization had organized the countryside in a way visible to the state and thereby facilitated seizing foodstuffs,[98] in decades after the War, emphasis switched to facilitating delivery of knowledge and other inputs, including applied agricultural science, considered crucial to the drive to enrich Soviet consumption. One example is cattle feed. During World War II, Soviet scientists had begun large-scale production of single-celled protein (SCP)[99] from microbial biomass to meet human protein needs.[100] The Soviet Council of Ministers decided in 1960 to pursue SCP as a source of protein-rich animal feed additive[101] and set up a new administration, the Main Administration of the Microbiological Industry, to organize efforts.[102] By 1990, U.S.S.R.-wide production of SCP was reported at 1,680,000 tons, roughly equivalent to the addition of 8.4-11.8 million tons of grain to feed supplies.[103]

b. Mechanization: Losing Time, Losing Touch

---

[97] Program of the Communist Party of the Soviet Union Adopted by the Twenty-Second Congress of the CPSU, Oct. 31, 1961, *excerpted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27, at 384, 385.

[98] *See* Parts III.B.1. and III.B.2, *supra*; *see also* SCOTT *supra* note 67 (interpreting measures like collectivization as ways of making the countryside legible to the state).

[99] Single cell protein was called in Russian "protein-vitamin concentrate," (*belok-vitamin konsentrat*, or BVK for short).

[100] Anthony Rimmington, *Soviet Biotechnology: The Case of Single Cell Protein*, *in* TECHNICAL PROGRESS AND SOVIET ECONOMIC DEVELOPMENT 76 (R. Amann and J. Cooper eds., 1986).

[101] A.E. Humphrey, *Soviet Technology: the Case of Single Cell Protein*, 23 SURVEY 102:81 (1977-78).

[102] Resolution of the Council of Ministers of the U.S.S.R., "On the Development of Microbiological Industry and on the Administration of that Industry," Feb. 18, 1966, *in* 6 DECISIONS OF THE PARTY AND GOVERNMENT ON AGRICULTURAL QUESTIONS (1968) at 19-21.

[103] ANTHONY RIMMINGTON & ROD GREENSHIELDS, TECHNOLOGY AND TRANSITION: A SURVEY OF BIOTECHNOLOGY IN RUSSIA, UKRAINE, AND THE BALTIC STATES 12 (1992).

While the state intensively applied science and industry to livestock husbandry in attempt to expand meat and milk production, the milking process itself remained stubbornly un-industrialized. Although engineers designed devices to mechanize milking,[104] even disseminating detailed disinfection instructions,[105] milking machines themselves remained rarely used and dairying remained literally in the hands of milkmaids. As of the mid-1950s, compared with an estimated 50% use in the West, only 30,000 milking machines had been procured for 3 million dairy cows across the U.S.S.R. -- and of those, less than an estimated one-fifth (that is, a maximum 6,000 machines for 3 million cows) were in actual operation.[106]

Why did milking resist mechanization? In 1956, two agricultural machinery designers from the All-Union Scientific-Research Institute of Electrification of Agriculture undertook to answer that very question.[107] Their analysis is a remarkable resource, affording a contemporaneous view of sociological and organization features of Soviet dairying under high socialism and revealing how bovine subjectivity -- considerations like cow comfort, preferences, or well-being -- feature in their situational awareness. A few exemplary points:

- Machines made milkmaids' and cows' lives worse, imposing a "whole series of manual operations" that milking by hand did not entail[108] while failing to accommodate adequate care for cows. For example, on a mass-production line a

[104] *See*, *e.g.*, Milking system Milk pipeline-100, Milk pipeline-200 "Daugava" brand: Operation and maintenance manual (1966) (operation and maintenance manual for a milk machine for 100 head of cattle produced in the Latvian S.S.R. intended for use in milk operations across the U.S.S.R.), *description of holding in Russian State Library available at* https://search.rsl.ru/ru/record/01008921371. *See also*, *e.g.*, Milk pipeline 100 head restored, https://molservis.com.ua/p1267456-molokoprovod-100-golov.html (showing images of a restored "Milk pipeline-100" system, the piping system for a milk machine serving 100 head, currently for sale on the used agricultural products market in Ukraine) (last visited Feb. 8, 2020).

[105] *See*, *e.g.*, Sanitary Rules for Care of Milking Stations, Apparatuses, and Milk Dishes, for Monitoring their Sanitary Condition and the Sanitary Quality of Milk, confirmed by the Head of the Veterinary Administration of the Ministry of Agriculture of the U.S.S.R. and with the agreement of the Head of the Sanitary-Epidemiological Administration of the Ministry of Health of the U.S.S.R., Jan. 12, 1967 *available at* http://www.alppp.ru/law/hozjajstvennaja-dejatelnost/selskoe-hozjajstvo/62/sanitarnye-pravila-po-uhodu-za-doilnymi-ustanovkami-apparatami-i-molochnoj-posudoj-kontrol.html.

[106] Olenev and Belyaevksiy, Milking Sites, *supra* note 88.

[107] *Id*.

[108] *Id*.

milkmaid could no longer wash her cow's udder with clean, warm water as soon as she was finished milking, but rather washed udder after udder "out of the same bucket of rapidly cooling water."[109]

- Existing spatial arrangements catered to cows and milkmaids, not machines.[110] Making architecture work for the piping systems, washing rooms, and other parts of the mechanized milking system would reconfigure space in ways less cozy, comfortable, or convenient for cows and milkmaids.
- Mechanization violated rhythms and temporality best suited to cows and milkmaids. Tending multiple cows at a machine required a milkmaid interrupt herself and cow to empty milk from bucket, adversely affecting "both the process of uniform milking and the condition of the animal."[111] Milkmaids milking by hand worked in rhythm and cows fed in rhythm; machines meant some finished earlier, throwing the work collective out of sync and "violating the general feeding rhythm of the herd. . . "[112] Moreover, a stationary milking installation "[could not] be used in summer camps or in pastures," keeping all indoors during the glorious temperate months.
- Machines played havoc with milkmaid compensation. Equipment could malfunction; the electricity supply, prove inconsistent; or milkmaids, "lose a lot of time on transitions and downtime,"[113] all of which, along with measuring malfunctions, occurred at the expense of milkmaid compensation.[114] Mechanization would decrease compensation-per-liter by a third (from 1.8-2 "workdays" accrued for every 100 liters hand-milked[115] to 0.6-0.4 "workdays" for every 100 liters machine-milked).[116] Despite techno-optimists urging slow transition in "workday" evaluation norms[117] lest milkmaids simply refuse to adopt milking machines,[118] milkmaids and machines got off on the

[109] Olenev and Belyaevksiy, Milking Sites, *supra* note 88.
[110] *Id*.
[111] *Id*.
[112] *Id*.
[113] *Id*.
[114] *Id*.
[115] *Id*. (which entailed, generally, "serving" 8-10 cows).
[116] *Id*. (which involved "serving" 40-50 cows").
[117] *Id*.
[118] *Id*.

wrong foot, and at least some of that seems attributable to milkmaids' understanding of machines' future effects on compensation.

- Mechanized milking could thus create perverse incentives for the milkmaid-turned-machine operator, resulting in discomfort the cow and depressing production. For best results, a "pulsator operating mode" should be set at 45-50 pulsations per minute,[119] but some milkmaids, seeking to speed up the process, would increase pulsations to 80-90 or more,[120] a frequency at which "the milk-issuing process is not accelerated, but rather, slows down as the sucking cycle is shortened."[121] A second example: machine-inexperienced milkmaids would fasten the apparatus too high, causing "the exit of milk from the nipple canals to become difficult ... ."[122] A third: one milkmaid working simultaneously on eight devices "can not manage to serve her cows in good time, overexposes the udder to the apparatus, and cannot properly monitor the milking process."[123] In addition to reducing milk yield,[124] these glitches also sound painful to the cow. When hand-milking, a milkmaid knew that the typical cow would not tolerate being mishandled; she could kick over the pail, switch her tail at the milkmaid, or step on or kick the milkmaid. When contact with the cow was mediated through machine, and moreover when the milkmaid had to attend to multiple cow/machines simultaneously, she could not stay attuned to the comfort of each.

That leads to the overall problem the Soviet machine designers identified: even if operating flawlessly, milking by machine created "depersonalization in caring for cows," and of all Soviet animal-tenders, they singled out Ukrainian milkmaids as particularly rejecting depersonalized cow care.[125] Dairy cows in Ukraine, I would add, had an expected lifespan of around 25 years; the cows in question were at most one or two generations removed, the calves or grand-cows, of those milk-producers who had seen

---

[119] *Id*.
[120] Olenev and Belyaevksiy, Milking Sites, *supra* note 88.
[121] *Id*.
[122] *Id*.
[123] *Id*.
[124] *Id*.
[125] Olenev and Belyaevksiy, Milking Sites, *supra* note 88. The word the authors use here, *obezlichka*, is very interesting. It can mean "depersonalization," "anonymity," or "a lack of personal responsibility."

villagers through Famine and War. Of those state farms in Ukraine that tried it at all, most dropped mechanized milking after but brief experiments. Even advocates attributed rejection of mechanization to a problem they could not design a way out of, "depersonalization" of the interaction with the cow.[126]

The last decades of Soviet governance saw a few forays into mass milk production and mechanization,[127] but these examples remained relatively uncommon.[128] Whatever its theoretical advantages, machine milking actually "depresse[d] the interestedness of cattle-tenders, which often, instead of being champions of mechanization, impede[d] its implementation" or hastened its abandonment.[129] The features identified as reasons for this still echo in Ukraine today, and Soviet Ukrainian milkmaids' largely successful rejection of machine milking[130] portends their political potency on post-Soviet farms.

3. Milk at the Small Scale, Milk in Aggregate

---

[126] *Id*.

[127] In 1970, a Ukrainian agricultural research specialist pointed to the example of the "Kutuzovka" farm on which cows were not, primarily, pastured, and were milked in "milking parlors." I. A. Danilenko, *The Technology of the Production of Milk on an Industrial Basis* (1970), *reprinted at* Istoriya doeniya, *available at* http://agrotehimport.ru/national_history_of_dairy_equipment_ussr/texnologiya_proizvodstva_moloka_na_promyishlennoj_osnove/ This same technology was the centerpiece of several new dairy operations, enormous by the standards of Soviet dairying practice, in Ukraine -- 800 cows each (on the "Red Army" *sovkhoz* in Kharkiv oblast' and the "Karl Mark" *kolkhoz* in Donetsk oblast') and 1000 cows (on the "Banner" *sovkhoz* in Luhansk oblast') -- on which construction began in 1970. *Id*.

[128] Consider the milking "carousel," for example, common in U.S. dairy operations since the 1960s. *See* George Frisvold, *The U.S. Dairy Industry in the 20th and 21st Century*, 16 J. FOOD L. & POL'Y 197 (describing technology employed, including dairy carousels, in U.S. dairy production). Nearly unknown in the U.S.S.R., the only exemplar failed to increase production and, in fact, was blamed for high mortality rates of cows brought to it. Viktor Madison, *Invent a "Wheel" for Livestock Raising*, DairyNews.ru, April 29, 2014, http://www.dairynews.ru/news/izobresti-koleso-dlya-plemennogo-skotovodstva-k-10.html (describing an early 1980s Moscow-region dairy complex with German technology designed to support 2,000 cows, "the only [such modern] enterprise in the USSR," and reporting that milk production at this "palace" with its "unprecedented milking-'carousel,' . . . began to fall below the level of those households from where heifers had hurriedly been collected for [it]").

[129] *Id*.

[130] Olenev and Belyaevksiy, Milking Sites, *supra* note 88 (attributing the rarity of milking machines in Soviet dairy production to the pre-existing organization of the work and to milkmaids).

One indicator of how limited large-scale big-science interventions (like the feeding program) were in transforming the intimate codes of the dairysphere comes from a small amendment to the criminal law of the Russian Federation of 1963. "In order to stop the feeding of bread and other grain products to cattle and poultry," it reads, the Presidium of the Supreme Soviet of the R.F.S.F.R. makes punishable by incarceration for a second offense, "The buying up in state or cooperative stores of baked bread, flour, groats, and other grain products for feeding cattle and poultry . . ."[131] Farmers, we can infer, had taken to supplementing livestock feed with bread and other products meant for human consumption. The need for this amendment may speak to unmet demand for richer fodder, but it also points to a feature to which my post-Soviet fieldwork attests: the intimacy of the relationship between caretaker and cow, such that each cow's food preferences are known and, when possible, catered to.

Whether a cow belonged to a rural household or was part of a collective or state farm herd, the act of milking remained part of a close and tactile relationship between milkmaid and cow. The part milk played in the survival of rural households through the tumult of the 1930s and 1940s if anything strengthened appreciation for the place of milk in village diets and cows in village life and deepened affective bonds between villagers and their dairy cows. To this day, Ukrainian villagers take their cows personally.[132]

That said, while the relationship of cow to milkmaid remained personal, affective, and tactile, the surrounding rural milieu became the object of intense modernization. After violent beginnings, collectivization -- the pooling of resources, labor, and know-how and the forging of a collective rural subjectivity[133] -- became the social idiom through which modernity came to the Ukrainian countryside, from rural electrification to tractor stations, combines, and mechanized harvesters, to scientific interventions.[134] While the act of milking itself was not mechanized, milk processing was, and milk in excess of its rural producers' uses was trucked to industrial facilities for processing, bottling, and distribution, whence

---

[131] "On Increasing the Liability for Feeding Cattle and Poultry Bread and Other Grain Products," Edict of the Presidium of the Supreme Soviet of the R.S.F.S.R., May 6, 1963, 11 *SOVIETSKAIA IUSTITSIA* 7 (1963), *excerpted in* Zile, SOVIET LEGAL HISTORY, *supra* note 27, at 447.

[132] *See* fieldnotes from periods of observation cited *supra* note 15.

[133] For explanation and description of the forging of collective subjectivities, *see*, *e.g.*, Eppinger, *Oligarchy*, *supra* note 5. *See also generally* KHARKHORDIN, *supra* note 86.

[134] *See* text *infra* notes 98 - 126 *supra*.

milk linked villagers to urban consumers in anonymous networks of production and consumption.

The processes described in the foregoing overview trouble a simplistic description of milk in Ukraine as "indigenous." Over a century of revolution and experimentation, war and self-cultivation, milk production and consumption in Ukraine were the object of intense interventions. In milk, the indigenous, tactile, and personal became enmeshed in the modern, industrial, and impersonal.

IV. From Sheds to Stalls

A. Decollectivization by Law: Land in the Limelight

Beginning in the late Soviet period, the collectivized landscape would face vast transformation anew. Reformers associated with Mikhail Gorbachev introduced the first steps towards decollectivizing agriculture through a late-Soviet law allowing "private farming" on a 99-year leasehold; though response was limited and by 1991, only 3,000 farmers across the U.S.S.R. had availed themselves, the idea was germinating.[135]

After Ukraine became politically independent in 1991, the new Ukrainian government introduced measures towards bringing private ownership of herds and lands to Ukrainian farming.[136] However, even initiatives instituting private property rights were shaped by conceptual categories, allegiances, and habits from collectives. One 1995 presidential order divested the state of agricultural ownership, converting all state farms into collective farms (collectively but undividedly owned by the residents of the farm).[137] A second provided that each member of a collective farm

---

[135] Interview with Bohdan Chomiak, director of agricultural programs for USAID Kiev (June 20, 2002).

[136] Decree of Cabinet of Ministers of Ukr. "On the Privatization of Land Plots," Decree No. 15-92, Dec. 26, 1992, *reprinted in* PRAVO VLASNOSTI NA ZEMLYU TA IOHO ZAKHIST: ZBIRNIK NORMATIVNIKH AKTIV 168-169 (2002) (allowing late-Soviet leaseholders to purchase their plot outright from the government and permitting them to resell it). This would, incidentally, be the last time that the post-Soviet Ukrainian government permitted legal sale of agricultural land for nearly three decades, until at least 2020. *See*, *e.g.*, *Verkhovna rada pristupila k obsuzhdeniyou zakona o rinkye selkhozzemel*, Tass news service (tass.ru) Feb. 7, 2020, *reprinted in* The Dairy News, https://www.dairynews.ru/news/verkhovnaya-rada-pristupila-k-obsuzhdeniyu-zakona-.html.

[137] Order of the President of Ukr. "On the Parcelization of Land, Given into Collective Ownership to Agricultural Enterprises and Organizations," Order No. 720/95 of Aug. 8, 1995 *reprinted in* ZAKONODAVSTVO UKRAINI PRO ZEMLYU 162-

be issued a "land and asset certificate" documenting the person's ownership share (including in dairy cattle). Entitlement to a certificate, in principle based on one's belonging to the collective, would be determined by a "Land Committee" set up by the farm.[138] This measure introduced the concept of divisibility and created an exercise by which farmers imagined division of assets, including the collectively-owned herd. On the other hand, it also reinforced some of the bonds within the collective by forcing local committees to consider who "belonged" to the farm and who did not. Further, it did not change the governance structure of the collective farms and the director (a Soviet-holdover role), not the farm shareholders, still held sway.[139] The government depended on collective farm directors to distribute collective farm assets, leaving them significant discretionary power.[140] In regard to dairy cattle, this structural power and *de jure* authority set the stage for further showdowns between milkmaids and directors like the one recounted above.[141]

Passage of a new constitution for independent Ukraine ensured that private ownership in land was not *per se* illegal and brought the right to own land under constitutional protection.[142] In the executive branch, President Leonid Kuchma's team experimented with issuing land share certificates to collective farmers late in his first term, and when they proved electorally popular, Kuchma disbanded agricultural collectives entirely as a matter of law.[143] In the legislative branch, a new Land Code providing for private ownership of land passed the parliament in October 2001. The record on public reception of privatization shows some ambivalence. Six months after the new Code passed into law, 41% of eligible

---

163 (2002) [hereinafter UKR. LAND LEGISLATION] (converting state to collective farms and reserving 10% of each state farm's landholding to be retained in state ownership and administered by the village council (*silska rada*)).

[138] A Temporary Order for Carrying Out Work of Given Government Acts to Collective Agricultural Enterprises, Agricultural Cooperatives, Agricultural Joint-Stock Companies, and those formed on the Basis of Sovkhoz and Other Governmental Agricultural Engerprises, on the Right of Collective Ownership to Land, confirmed by Order of the State Committee of Ukraine on Land Resources, No. 18, March 15, 1995 *reprinted in* UKR. LAND LEGISLATION, *id*., at 162-163.

[139] Interview with Steve Dobrolovic, Kiev lawyer working for Chemonics on national land titling project, (July 3, 2003).

[140] Interview with Chomiak *supra* note 135.

[141] *See* INTRODUCTION, *supra*.

[142] CONST. UKR. Art. 41 (1996).

[143] "On the Uninvested Means concerning Accelerating Reform of the Agrarian Sector of the Economy," Decree of the President of Ukraine No. 1529/99, Dec. 3, 1999 *reprinted in* UKR. LAND LEGISLATION, *supra* note 137, at 85.

farmers had already claimed a land parcel,[144] but within five years, at least 20% of the overall population, roughly 10 million people, nearly all rural out-migrants, had left their homes and farms.[145]

B. Decollectivization by Act: Disappearance and Democracy in the Dairy

1. Mystery Meat

My introduction to some of the puzzles of cows and cattle within the context of the privatizing Ukrainian landscape came in the summer of 2007. Coming across a word unfamiliar despite decent proficiency in Ukrainian and Russian languages, *govyadina*, ("beef"), made me aware that in twelve years of working in and on Ukraine, I could not recall encountering the word for "beef" in meals at friends' homes or on restaurant menus.[146] Alerted, I subsequently systematically took note in my fieldwork and documented, indeed, not encountering the word for "beef" in normal daily life,[147] a striking absence in a culinary culture that otherwise reveled in meat. Also striking, when traveling through the Ukrainian countryside, is the pervasively derelict state of large cattle sheds. Nearly every village has a long shed for cattle, and, by the summer of 1995 when I first observed the rural landscape, nearly every one gave (and still gives) every appearance of having been abandoned.[148]

A connection between these two observations eventually became clear through interviews with investors in Ukrainian agriculture. While not able to verify the story of beef they tell, I have now attested repeated versions across Ukraine. The story is, in the last year or so of the Soviet period and the first year or so of Ukrainian independence, two brothers (usually described as hailing from Lebanon, explaining or perhaps exoticizing the exogenous element of the story) traveled the Ukrainian countryside, village by village, buying up the cattle. They would strike a deal with the local collective farm director, transfer the cattle from the collective farm's

---

[144] *A Good Deed Indeed for Owners of Farmland*, KYIV WEEKLY, June 14, 2002 at 21.
[145] INTERNATIONAL ORGANIZATION FOR MIGRATION KYIV MISSION, LABOUR MIGRATION ASSESSMENT FOR THE WNIS REGION (October 2007).
[146] Field observation, "говядина" [*govyadina*, beef], sandwich-board menu in front of beachfront restaurant, Sudak, Crimea (June 9, 2007).
[147] Field notes, *supra* note 12.
[148] Observations during author's period of diplomatic service at U.S. Embassy Kyiv, 1995-1997, and thereafter, periods of anthropological fieldwork as noted *id*.

pasture to the nearest truck or train transport depot, get them loaded up, transported to the port of Odessa, and shipped out by sea. No one knew if they went to populate herds elsewhere, or if they were destined for slaughter for meat or leather goods. The collective farm director would pocket the proceeds; the two brothers would move on to the next village. In different villages, locals would point to a satellite dish or a post-Soviet automobile at the home of the former collective farm director -- expensive goods that no one else could afford -- and tell me, "That's our herd."[149]

The apocryphal tale of the sell-off of Ukraine's beef herd, whether accurate in its details or not, reflects local causal explanations of an observed phenomenon, the disappearance of beef cattle, that is borne out in official statistics. The numbers are astonishing. The number of head of beef cattle in Ukraine, estimated at 25,195,000 in 1990 (the year before the dissolution of the U.S.S.R.), fell to 4,100,000 by 2015.[150] Beef production by agricultural enterprises (as opposed to households) crashed from 1,808,000 tons in 1990 to 97,000 tons in 2011.[151]

As related in the Introduction, a second part of the tale -- also fitting a narrative pattern, but this time related by eyewitnesses or participants rather than hearsay -- involves the milkmaids of the collective farm dairy noticing the disappearance of local beef cattle, organizing to confront the collective farm director in a group meeting, and "decollectivizing" the village dairy herd by each milkmaid taking home a cow. In addition to descendants of the household cow allowance under collective farming,[152] the milkmaids' action swelled the ranks of cow-owning post-Soviet Ukrainian households. Village architecture came to include, in the small outbuilding behind each home previously built for a pig, a new stall for each cow.

---

[149] Field notes, *id*.

[150] Rob Cook, *Ukraine Cattle Inventory (1988-2015)*, Beef2live, October 15, 2019, http://beef2live.com/story-ukraine-cattle-inventory-1988-2015-85-122064 (report by a market analyst published by a beef grower's association). The figures given are illustrative of the estimated crash in numbers of beef cattle, but I offer them without claim to exactitude. Beef cattle statistics vary somewhat from source to source. *See*, *e.g.*, S. Bohdanko, *Nevtishni realii*, 2 2 AGRO PERSPECTIVA 40 2009, *cited in* O.G. Kukhar, *Suchasni Tendetsii Rozvitku Tvarinnitstva v Ukraini*, 8 EFEKTIVNA EKONOMIKA 2013, http://www.economy.nayka.com.ua/?op=1&z=2267 (giving the figures as falling from 21,083,000 to 1,511,000 in 2011) [hereinafter Kukhar, *Current Trends*].

[151] Kukhar, *id*.

[152] *See* Part III.B.1.b. *supra*.

2. Milking Machines and Moral Obsolescence

The story of the local revolt of village dairy maids that reached me from participants and eyewitnesses raises the question, How widespread was such action? As with the story of beef cattle, the dairy maids' tale of confrontation and village herd decollectivization is confirmed more widely, at least in its effects, by statistics. Against a backdrop of mass bovine export and slaughter which reduced the beef herd to 1/5 of its late-Soviet ranks, the holding of dairy cows by households skyrocketed over the same period both in absolute numbers and as a percentage relative to agricultural enterprises. In 1990, dairy cows husbanded by Ukrainian households amounted to 3.54 million cows, and by 2000 that number had increased to 4.38 million cows.[153] Between 1990 and 2000, the number of dairy cows raised in individual households increased from 14.4% to 46.5%.[154] By 2010, 65% of the total cattle population (and thus, an even greater percentage of total dairy cattle) was concentrated in household ownership.[155]

In many villages, this shift has resulted in a new informal "recollectivization" of cow herding duties. Back in Gruzenske village, after the confrontation with the collective farm director, each milkmaid returned home with a cow. Rather than duplicate pasturage duties, the milkmaids organized cow-owning families into a cooperative effort, each family taking a turn tending to the group of village cows for a day (multiplied, in the case of a multiple-cow family, by the number of cows a family owned). By 2009, 18 years later, this arrangement had stabilized into a set routine, both for dairy-owning households and for cattle. Cattle leave their own family's courtyard each morning and join the herd heading up the central dirt road of the village out to the nearest pastures. Locals jokingly refer to this as "the morning commute," and the 33 head of cattle plodding together are indeed the most traffic the village road will see in a day. At the end of the day, a member of each family waits at the entrance of the family courtyard to open the gate and let the family's cow or cows in. There is no need to direct or herd the cow; each cow knows her home and trots in at a brisk pace. The joke is, in fact, that one needs to look sharp and get out of the way or a cow could run you over in her eagerness to get back to her stall, where she is fed her favorite foods and her owner-milkmaid attends to her milking.[156]

---

[153] Kukhar, *Current Trends, supra* note 150.
[154] *Id*.
[155] *Id*.
[156] Field observation, Gruzenske village, Ukr., Sept. 2009.

Taken in sum, the results of these processes -- monetization of the beef herd and decollectivization of the dairy herd -- are profound. Practically every village in Ukraine ended up with some households who kept, and still keep, their own dairy cow.[157] Beef, in village diets and urban menus, is largely absent[158] and correlated statistics concern those fixated on beef over dairy.[159] These shifts have also transformed the rural landscape. Nationally, acreage devoted to growing forage has fallen[160] as villages convert to pasturing dairy cattle rather than fattening up beef.[161] Nearly every village has a large cattle shed, part of the former collective farm buildings, that by 1995 was emptied of animals, by 2000 looked abandoned, and by 2020 is largely dilapidated.[162]

Household cows are milked by hand. Some current proponents push for retooling and marketing anew milking machines of the Soviet era that were designed for smaller-scale operations;

---

[157] Of 5.3 million rural households in Ukraine in 2013, nearly 2 million keep their own dairy cow. Milk Supply in Northern Ukraine, FAO/EBRD Report No. 18, *supra* note 94 at xiv.

[158] In the words of a USDA report of 2017, "Beef cattle numbers will remain insignificant." Alexander Tarassevych, Ukraine Livestock and Products Annual Report 2 (September 1, 2017), U.S.D.A. Foreign Agricultural Service Global Agricultural Information Network, https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Livestock%20and%20Products%20Annual_Kiev_Ukraine_9-1-2017.pdf

[159] *See*, *e.g.*, Kukhar, *Current Trends, supra* note 150 (fretting as an agronomist over data that might indicate a problem in beef production but not in dairy, such as in 2000, the average daily increase of cattle amounted to 255 grams/day, 40% less than in 1990, although admittedly the average daily increase in 2011 reached 481 grams/day, exceeding 1990 rates). *See also*, *e.g.*, legislative attempts to promote breeds with greater potential to put on weight as in Law of Ukraine "On the Breeding Business in Animal Husbandry," *passed into law by* PVRU № 3773-XII, Dec. 23, 1993, *in* VVR 1994, № 2, at 7-8, https://zakon.rada.gov.ua/laws/show/3773-12, *and as subsequently amended in* 1999, 2003, 2010, 2012, and 2015, *final amended text available at* https://zakon.rada.gov.ua/laws/show/3691-12.

[160] Between 2009-2011, the number of hectares devoted to growing forage fell by an astonishing 80%, from 11,999,000 ha to 2,477,000 ha. TVARINNITSTVO UKRAINI ZA 2011 RIK. STATISTICHNII ZBIRNIK (N.S. Vlasenko ed., State Committe of Statistics of Ukraine, 2012), *as analyzed by* Kukhar, *Current Trends*, *supra* note 150.

[161] As of 2013, feed for cattle in Ukraine was composed of 19-20% silage, 18% hay and straw, 30% "green forage" of sown grasses, natural meadows, and pastures. O.M. Ribachenko, *Osnovni problem rozvitku kormo virobnitstva v Ukraini*, 10-12 AGRO INKOM (2011) http://archive.nbuv.gov.ua/portal/chem_biol/agroin/2011_10-12/RYBAHENK.pdf, *cited in* Kukhar, *Current Trends*, *supra* note 150.

[162] *See* notes 12 and note 156 *supra*.

however, say skeptics, both the layout of current facilities and the social organization of villages are unsuited to them, or rather, as one specialist from Russia, Vladimir Kirsanov, recently concluded, the old equipment is "morally obsolete."[163]

Regarding household acquisition of dairy cattle, the most notable legal point here, it bears emphasizing, is the absence of formal law: milkmaids' confrontations with local authority, namely their collective farm director, happened largely before presidential decrees had turned state farms into collective farms, turned collective farms into joint stock companies, or specified procedures for dividing assets, or even before parliament had passed privatization laws. Likewise, they did not wait for law to bring accountability or official new governance structures, but rather collectively decided on a solution they found fair (or at least, fairer than the risk of the dairy herd disappearing) and brought it into realization. Local experience with holding authority accountable -- in particular, a gendered confrontation between village dairymaids and the nearly all-male collective farm directors -- became a defining feature of early post-Soviet rural political life. Prior experience with milkmaid brigades, understanding the significance of dairy to village diets and incomes, and the kinds of bonds between milkmaid and cow provided organizational, intellectual, and affective grounds for action.

C. Corporations, Consumption, and Caretaking

Ukrainian cuisine boasts a rich variety of milk products, including many forms meant to preserve milk for later consumption: sour cream, cottage cheese, kefir, a baked whey concoction called "ryazhenka," and other products for which there is no direct English translation.[164] Village dairy maids are adept at preserving milk and extending the period in which it may be consumed.[165] Nonetheless,

---

[163] Vladimir Byacheslavovich Kirsanov, Strukturno-Tekhnologicheskoye Obosnovaniye Effektivnovo Postroyenniya i Funktskionirovaniya Doilnovo Oborudovaniya, doctoral dissertation (2001), at 1, *relevant portion available at* https://www.dissercat.com/content/strukturno-tekhnologicheskoe-obosnovanie-effektivnogo-postroeniya-i-funktsionirovaniya-doiln.

[164] Entries in UKRAINIAN-ENGLISH DICTIONARY (University of Toronto press, C.H. Andrusyshen comp., 1955).

[165] In households, "[m]ilk is produced for family needs and for sale in neighboring urban centers in either fluid milk form or processed into traditional basic dairy products such as soft cottage cheese, sour cream and cream." USDA Foreign Agricultural Service, GAIN Report – UP1824 – Dairy and Products Annual (Oct. 16, 2018)
https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filena

nearly every cow produces more milk than can be consumed or bartered by village households locally.[166] The demise of the Soviet system interrupted former modes and networks for getting milk to food processors and thence to consumers, and a patchwork of practices and new routes and methods arose.

A detailed recounting of the post-Soviet history of food processing is beyond the scope of this article,[167] but several features bear noting. Despite the introduction of milking machines, carousels, and "milking robots" to the imaginary of specialists in the Ukrainian milk-production sphere,[168] most milking of cows is still done by hand, in villages, largely by women, and now largely by women of the family that owns the cow.[169] Processing the milk into

---

me=Dairy%20and%20Products%20Annual_Kiev_Ukraine_10-16-2018.pdf.

[166] The Soviet term for "commercial dairy farm," known by its abbreviation MTF (*see* text *infra* note 48 *supra*), is still used to refer to commercial enterprises in Ukraine today that specialize in producing raw milk for milk processers and bottlers. Of raw milk sent to dairy processers, 78% is from MTF and 22%, from personal farms. Analysis of the Dairy Industry in Ukraine, MilkUA.info, September 26, 2019. The average milk yield per cow from household dairy cows is 4480 kg. *Tvarinnitsvo Ukraini*, 2017 STATISHICHNIY ZBIRNIK 144 (Kyiv, State Statistics Service of Ukraine, 2017), http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/05/zb_tu2017pdf.pdf [hereinafter *Tvarinnitstvo Ukraini*]. Compared with the 4480 kg/cow of milk produced annually, average annual consumption of milk per person in Ukraine is 110 kg of fluid milk (second in the world only to Belarus). Global Per Capita Consumption of Fluid Milk in the World, By Country (Statistica Research Department (Jan. 22, 2020) https://www.statista.com/statistics/535806/consumption-of-fluid-milk-per-capita-worldwide-country/

[167] The latest annual figures (from 2018) show that 26% of the the agricultural sector is involved in animal husbandry, including dairy, and 74% in crop production. Sotsial'no-ekonomichno pokazniki 2018: Sil'ske hospodarstvo, State Service of Statistics of Ukraine, http://ukrstat.gov.ua. For an excellent overview of the Ukrainian food processing sector as regards milk, *see* Anna Gereles and László Szöllösi, *The Current State and Latest Trends of the Ukrainian Dairy Sector*, ANNALS OF THE POLISH ASS'N OF AGRICULTURE AND AGRIBUSINESS ECONOMISTS, June 3, 2019.

[168] *See*, *e.g.*, *V mire doilnoi mekhaniki – traditsii i sovremennost'*, NOVOE SELSKOE KHOZYAISTVO (April 9, 2009), *reprinted at* THE DAIRY NEWS, DairyNews.ru, https://www.dairynews.ru/news/v_mire_doilnoj_tehniki--tradicii_i_sovremennost.html (describing circa 2009 the latest in milking technology in Western Europe, including futuristic "milking robots" that would eliminate the human hand from the work of milking).

[169] A Dairy Revival in Ukraine, Chemonics report, June 12, 2019, https://chemonics.com/impact-story/a-dairy-revival-in-ukraine/. That is not to say dairy enterprises with large herds do not exist at all. *See*, *e.g.*, *Zarplata doyarki 20 tis. hrn ta rivni dorohi: yak zhive hromada na Cherkashchiny,* Fakty ICTV broadcast of April 23, 2018 *available at* https://decentralization.gov.ua/news/9259

a variety of products for home and village consumption falls first to rural women.[170] Milk beyond that needed for family consumption or for barter within the village, or home-processed for sale in markets in nearby urban areas, [171] is collected, largely in metal containers (although increasingly in plastic), and sold to milk processing concerns that operate on the supra-village level.[172] Some milk processors have, since Ukraine gained independence, put together fleets of refrigerator trucks that travel through villages every morning after cows are milked and sent to pasture, to collect each contributing household's container(s) of milk.[173] The income provides supplemental cash to village households. It is not atypical for a household to be self-sufficient in regard to unprocessed foodstuffs, stove-fuel firewood, and winter silage. Cash from milk sales supplements pensions and off-farm wages to pay for gas heating (if the village is connected to the gas grid); for electricity; for other processed foods like flour and sugar; for clothing and other small consumer goods; for taxes; and, notably, for contributions to family members' education. In other words, in regard to foodstuffs, the village household of independent Ukraine is remarkably autarkic.[174] Milk, providing a residual source of cash for necessities that the household does not produce or barter for locally, is a primary nexus

---

(reporting on a rural community that manages its own cattle herd of 1,800 cows, with its milkmaid-employees earning up to 20,000 hryven/month. (compared with official average monthly salaries across all employments, nationally,of UAH 8480. Nominal'na ta real'na zarobitna plata u 2018-2019, State Service of Statistics of Ukraine, http://ukrstat.gov.ua.)). Such large dairy concerns, however, are the exception rather than the rule. *See* Part V below.

[170] FAO/EBRD Report No. 18, *supra* note 94, at xiii and 69.

[171] Gereles and Szöllösi, *supra* note 167, at 72 ("Household milk is processed by families into basic, cheap, dairy products and sold on open-air markets without any statistical record").

[172] Food processing enterprises, including those specializing in dairy, were privatized at a much faster clip than agricultural enterprises early in Ukraine's post-Soviet history. By January 1, 1996, 63 percent of food processing plants legally subject to privatization had been privatized and by mid-1996, that included 55 percent of Ukraine's dairy and cheese plants. Yuri Yekhanurov, *The Progress of Privatization*, 38 EASTERN EUROPEAN ECONOMICS 77, 80 (2000) (describing the fast pace of privatization of food processing industries early on in the post-Soviet Ukraine, in contrast to agricultural enterprises, which resisted privatization). Raw milk that needed a destination found one in a privatized enterprise.

[173] *Described briefly in* USDA Foreign Agricultural Service, GAIN Report – UP1824 – Dairy and Products Annual 2-3 (October 16, 2018) https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Dairy%20and%20Products%20Annual_Kiev_Ukraine_10-16-2018.pdf

[174] Interview with Tytotya Doyarka, September 17-21, 2009; *see also* Serhiy Moroz, *Rural Households in Ukraine: Current State and Tendencies*, 60 ECONOMICS OF AGRICULTURE 565 (March 2017) at Table 7, Structure of Total Resources of Rural Households.

to the national and international cash economy for many village households.

The food processing companies dealing in dairy products include enterprises built on the foundations of Soviet-era food processors, new Ukrainian enterprises, and foreign corporations who have entered into business in Ukraine since the end of the U.S.S.R.[175] Dairy processors produce for domestic consumption (largely urban consumers) and for export.[176] The reach of the state contracted at independence; subsequent years saw the state setting up, anew, legal parameters for food production and processing. Basic legislation regulating food safety was passed in 1998,[177] seven years after independence, and it has been subsequently amended and expanded upon in measures, for example, aimed at consumer protection and information.[178] Although the state's capacity for oversight is limited,[179] there are multiple and overlapping state institutions and

[175] Gereles and Szöllösi, *supra* note 167. The chart of the top ten dairy companies in Ukraine by market share in 2017 is particularly illuminating. *Id*. at Fig. 3. *See also* Chain Comparison of the Dairy Sector in Ukraine and in the Netherlands, Ukrainian Agribusiness Club, October 31, 2017, https://www.agroberichtenbuitenland.nl/binaries/agroberichtenbuitenland/documenten/publicatiens/2017/10/31/2017---dairy-comparison-study-nl-ua/2017++Chain+comparison+of+the+dairy+sector.pdf (listing the top 20 producers of dairy products in Ukraine in 2015).

[176] Gereles and Szöllösi, *supra* note 167.

[177] Law of Ukraine, "On Basic Principles and Requirements for Food Safety and Quality," № 771-97, December 23, 1997, *in* VVR, 1998, № 19, at 98, https://zakon.rada.gov.ua/laws/show/771/97-%D0%B2%D1%80.

[178] *See, e.g*., Law of Ukraine, "On Food Information for Consumers," № 2639-VIII, December 6, 2018, *in* VVR, 2019, № 7, at 41, https://zakon.rada.gov.ua/laws/show/2639-19. Ukraine dropped the Soviet system of standards (acronymed GOST) after the Russian invasion of Crimea in 2014 and subsequent Russian support for armed secession in southeastern Ukraine. *Ukraine Scraps Soviet GOST Standards*, UNIAN News Service, Dec. 16, 2015, https://www.unian.info/economics/1213976-ukraine-scraps-soviet-gost-standards.html However, state regulators still use GOST as a frame of reference. Enterprises must comply with them if they want to label dairy products "manufactured in accordance with GOST," or alternatively must indicate the technical conditions of their non-compliance in product labeling. Mykola Moroz, Director General of the Directorate for Food Safety and Quality, *quoted in* Olena Holubeva, *Milk Market of Ukraine: EU Standards vs. Peasant's Income*, 112.ua, Dec. 18, 2018, https://112.international/article/milk-market-of-ukraine-eu-standards-vs-peasants-income-23732.html.

[179] A "moratorium on verification" puts sole responsibility for compliance with dairy product regulations on the manufacturer. Vitaliy Bashynsky, head of the Public Council under the State Consumer Protection Service, *quoted in* Holubeva, *id*. ("Today, the responsibility for the conformity of food products to the marking is borne by the manufacturer alone"). *See also, e.g*., Borys Kobal, director of the Food Safety and Veterinary Medicine Department of the State Consumer

structures concerned with regulating dairy and other food products.[180]

Exports of dairy products have been affected by two countervailing forces. First, over the last two decades, the national government has promoted the export of Ukrainian dairy products within an overall effort towards bringing Ukraine into membership with international trade organizations and customs unions. In regard to dairy, this has entailed legislation regulating production and bringing safety and quality into conformity with international standards.[181] Regulations on milk products were legislated and subsequently amended in conformity with Ukrainian commitments to the World Trade Organization (WTO).[182] Popular support for membership in international trade and customs unions is strong. In the winter of 2013-2014, massive street protests urged the Ukrainian government to stay the course in regard to integration with European structures, and subsequently, the Ukrainian government agreed to a roadmap, the European Accession Agreement, which sets out policy measures Ukraine must adopt in order to be considered for EU membership,[183] among them standards for raw milk and for dairy products meant for export.[184] Measures to integrate Ukrainian dairy products into world markets are succeeding. The European Commission, for example, has begun granting permission to Ukrainian milk products companies to export their goods to the EU

Protection Service, complaining that inspections of milk collection points and of dairy products manufacturers take place only once every two years, and then with ten days' notice, and thus are insufficient. Kobal, *quoted in* Holubeva, *id*.

[180] For example, food safety is controlled by a number of governmental authorities, including but not limited to the State Committee for Technical Regulation and Consumer Policy, the State Veterinary and Phytosanitary Service, the State Plant Quarantine Service, the Ministry of Health, the State Sanitary and Epidemiological Service, the Ministry of Agricultural Policy and Food, and the Ministry for Environmental Protection.

[181] Law of Ukraine "On Milk and Dairy Products," № 1870-IV, June 24, 2004, *in* VVR, 2004, № 47, at 513, https://zakon.rada.gov.ua/laws/show/en/1870-15, English translation available on the website of the World Trade Organization, https://www.wto.org/english/thewto_e/acc_e/ukr_e/WTACCUKR147_LEG_1.pdf.

[182] *See id*. as amended by Law of Ukraine, № 402-V, Nov. 30, 2006, *in* VVR, 2007, № 4, at 37, https://zakon.rada.gov.ua/laws/show/en/1870-15 (specifying amendments "entering into force on the day of Ukraine's accession to the World Trade Organization").

[183] Association Agreement Between the European Union and Its Member States, of the One Part, and Ukraine, of the Other Part (Sept. 1, 2017), https://www.kmu.gov.ua/en/yevropejska-integraciya/ugoda-pro-asociacyu.

[184] *See, e.g.*, E.U. Regulation No. 853/2004 (April 29, 2004), setting requirements for the quality of dairy raw materials, conformity with which implementation of the Association Agreement between Ukraine and the EU would demand.

market.[185] As of 2019, agricultural and food exports from Ukraine amounted to $22.2 billion, 44% of Ukraine's total exports.[186] Ukraine is a net exporter of food, with food exports dwarfing food imports (which amounted to $5.7 billion in 2019).[187] Ukrainians prefer local milk, but are developing a taste for foreign cheese, as cheese was one of the rare areas in which imports grew between 2018 and 2019.[188]

Trade triumphalism should, however, not obscure one of the most significant developments for Ukrainian dairy products exporters: disruption of relations with Russia, previously Ukraine's largest trading partner in foodstuffs, since the 2014 annexation of Crimea by Russia and war with Russian-affiliated forces in southeastern Ukraine. The government of Russia imposed a ban on importing Ukrainian dairy products on August 1, 2014.[189] Although

---

[185] The European Commission announced the first Ukrainian milk product companies granted permission to export to the EU market in December 2015. *10 Ukrainian Milk Companies Allowed Exporting Products To EU*, 112.ua, Dec. 29, 2015, https://112.international/ukraine-and-eu/10-ukrainian-milk-companies-allowed-exporting-products-to-eu-1973.html. Twenty-seven companies are licensed to export dairy products to China. *Another Nine Dairy Companies are Licensed to Export to China*, Ukrinform, June 22, 2017, http://agroconf.org/en/content/another-9-ukrainian-dairy-companies-licensed-export-china. In 2018, Ukraine opened 85 export markets for various types of products and increased the number of enterprises that received the right to export food products of animal origin. A total of 126 producers of the country can export food products to EU countries. *Ukraine Agrees on Vet Certificate for Dairy Export to Saudi Arabia*, Ukraine Open for Business, June 26, 2019, https://open4business.com.ua/ukraine-agrees-on-vet-certificate-for-dairy-export-to-saudi-arabia/.

[186] Ukraine Agribusiness Club, *In 2019 Agri-food Export from Ukraine Increased by 19%*, Feb. 4, 2020, http://ucab.ua/en/pres_sluzhba/novosti/u_2019_rotsi_eksport_agroprodovolchoi_produktsii_z_ukraini_zmenshivsya_na_19

[187] *Id*.

[188] Livestock products were one of the few areas of food import growth, due to a growth in cheese imports (as well as fresh and frozen fish) which together totalled $153.5 million. *Id*.

[189] For the list of Ukrainian enterprises banned from exporting dairy products to Russia, *see* Rosselkhoznadzor (the Federal Service for Veterinary and Phytosanitary Surveillance of the Russian Federation), Ukraine: Enterprises Licensed to Export to the Russian Federation (Food: Milk and Milk Products) http://www.fsvps.ru/fsvps/importExport/ukrain/enterprises.html?product=26&productType=5&_language=en (last visited February 7, 2020). *See also* USDA Foreign Agricultural Service, GAIN Report – UP1425 – Ukraine Stops Many Exports to Russia (August 11, 2014) https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Ukraine%20Stops%20Many%20Exports%20to%20Russia_Kiev_Ukraine_8-11-2014.pdf.

some workarounds were found, the effects were profound, particularly on cheese exporters (to the extent that Russia's ban was referred to as the "cheese war").[190] In 2013, exports of Ukrainian dairy products totaled $458.6 million, of which $308 million worth went to Russia; in the first 10 months of 2015, the first calendar year after the war started, total dairy exports decreased to $163.4 million, of which only $10.9 million worth found their way to Russia.[191] Against a background of milk as a base of empowerment for village milkmaids, the two countervailing trends described here -- growth in exports to a variety of foreign markets, disastrous contraction with Russia under conditions of war -- also reveal milk as a point of integration, making local milk producers vulnerable to political and structural forces often beyond their control.

D. Foreign Investment and Local Dairy Power

By 2009, some foreign investors, noticing its absence from Ukrainian markets and diets, had become interested in reintroducing beef cattle husbandry to Ukraine,[192] harnessing economies of scale and American production models to create an industry that would out-compete local sources of meat and international competitors in beef. One such firm, working closely with a local labor force of former collective farmers, had established a beef operation outside of Kyiv which I went to observe. Ralph M., an expert from Kansas brought in as a consultant, commented as we approached the cattle sheds, "These are the four-year-olds. You will not even recognize these as the same animals you're used to seeing."[193] The cattle were hefty and healthy -- no surprise there -- but none had been gelded and all still had horns. In the U.S., he noted, beef cattle of that age would be considered aggressive enough that their horns are typically removed, lest they harm farmhands or each other. "These animals are completely docile. They're more like dogs,"[194] which Ralph attributed to the extent and gentleness with which they are handled

[190] Interview with Lina Dotsenko, Director, CNFA, June 15, 2019.
[191] Anastasiya Zanuda, *ZVT z ES: skladnii vibir neminuchovo*, BBC Ukraina, Dec. 30, 2015, https://www.bbc.com/ukrainian/business/2015/12/151223_free_trade_ukraine_eu_az.
[192] The following section reports from field research conducted among U.S. investors in Ukrainian beef production over the first two weeks of November, 2009 in Kyiv oblast'.
[193] Interview with Ralph M. (U.S. beef consultant to Ukraine-based beef start-up), Nov. 14 2007.
[194] *Id.*

by the workers.[195] The farmhands in charge of tending to the beef cattle were uniformly men. Even among a large herd of several hundred cattle destined for beef, the workers knew each one, including where it liked to be scratched.[196]

Even more pronounced was the relationship of care and intimacy between the milkmaids and the business' dairy cattle. In the milking shed, each dairy cow had its name hand painted on a placard at the front of its stall. The milkmaids -- to a person, the dairy cattle-tenders were female -- knew each cow's peculiarities. To avoid causing the cow undue anxiety, they tried not to rotate between cows but rather devoted the same milkmaid to the same cow, day in and day out. Just as in the village with the household cows, a milkmaid knew how her cow preferred to be milked, the rhythm and strength; how long milking would normally take; how much milk the cow would normally give.[197] John S., the American manager, read my thoughts and answered my obvious question before I had even posed it. "You may wonder why we even have dairy cattle. We are not a dairy operation and we have no aspirations to dairy."[198]

This kind of phenomenon, of dairy as a sideline, shows up more widely in general reports; as one recent report puts it, industrial dairy is small and "currently existing dairy farms . . . function as subsidiaries of larger agricultural companies oriented towards crop production."[199] Why would crop producers engage in dairy production? In the jargon of U.S. experts, "Livestock farms are utilized more as social employment projects rather than profitable businesses."[200] The U.S. investors in beef, carrying a dairy operation in which they had no interest, put it in more human terms. "We wanted to get rid of them, but the milkmaids threatened to riot. If we got rid of even one of these dairy cattle, we would have an

---

[195] *Id*.
[196] *Id*.
[197] *Id*.
[198] Interview with John S. (U.S. owner/manager of Ukraine-based beef operation), Nov. 14, 2007.
[199] USDA Foreign Agricultural Service, GAIN Report – UP1824 – Dairy and Products Annual 2-3 (October 16, 2018) https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Dairy%20and%20Products%20Annual_Kiev_Ukraine_10-16-2018.pdf.
[200] *Id*.

insurrection on our hands. It's easier, and cheaper just to keep the dairy cows and keep the milkmaids happy."[201]

E. Farm to Table

Over the nearly thirty years of Ukrainian independence, getting dairy to urban markets has depended on the introduction of new networks of food processors. Some are coops, composed of associations of local milkmaids; increasingly, large foreign concerns are involved. How products then get to consumers is in flux. Cities over the past five years have begun phasing out the open markets from which dairy products, like other produce, used to be sold to urban consumers who were allowed to try (a spoonful on the back of the hand) milk, sour cream, or other dairy products before purchase. During the same period, with a rise in urban real estate prices, the corner milk and produce stores are disappearing, replaced by supermarkets. Milk products increasingly get from processor to consumers via grocery stores,[202] where single-use plastic bottles and tetra paks have replaced the reusable glass containers that urban consumers used to fill from dairy-product sellers at open markets.

There are two significant points of resistance to the hegemonic rise of supermarkets in food retail. One is a new trend towards small urban outlets selling organic products from known individual producers.[203] The other is the village resistance, an autarkic dairysphere in which households serve their own needs or barter with neighbors.[204] Regardless of how milk reaches consumer, the system of dairy production rests on the stall behind many villagers' homes in which the cow and her caretaker go through their daily milking routine.

V. Conclusions: On Herds and Humans

---

[201] Interview with Ralph M. (U.S. beef consultant to Ukraine-based beef start-up), Nov. 14 2007.

[202] Consumption of industrially processed milk as compared with household milk was 3,829,820 tons of processed versus 3,414,460 tons in 2016. European Bank for Reconstruction and Development (EBRD) and Food and Agriculture Organization of the United Nations (FAO), Ukraine's Milk Production Balance, Table 4.6 Milk Balance (2016), *at* Milk Supply and Demand Balance System: Public-Private Policy Dialogue in the Ukrainian Dairy Sector Project, milkbalance.org.ua.

[203] Field observation, Moloko vid Fermera, ul. Volodymyrska 38, Kyiv city, June 2019.

[204] *See* text *infra* note 198 *supra*.

Today, roughly 4 million small family dairy operations and rural households produce 75% of Ukraine's dairy output, and they do so almost exclusively milking by hand.[205] Industrialization of food production has not subsumed the dairysphere. Without romanticizing the situation, and acknowledging some of the systemic problems inherent in human consumption of dairy, it is worth noting that having most of the milk produced in small-scale household operations in Ukraine has several environmental implications. Experts decry the "inefficiency" of household milk production,[206] its average annual milk yield per cow at 4480 kg compared with 6025 kg per enterprise cow.[207] However, with its "inefficient" household dairy production, Ukraine has avoided some of the environmental ills associated with modern dairy production elsewhere. Yield is lower in part because dairy cattle feed more on pasturage than silage,[208] giving Ukrainian dairying a lower carbon footprint. In addition, pasturing cows over large tracts of former collective farm land also means that manure is dispersed, fertilizing fallow fields, rather than concentrated in the sewage ponds common in North American dairy production.

In addition, milk production is dominated by individual relationships between caretaker and cow. Milk cows are tended to

---

[205] In 2017, enterprises produced 2,765,700 tons of milk while households produced 7,514,800 tons. *Tvarinnitsvo Ukraini, supra* note 168, at 26. A Dairy Revival in Ukraine, Chemonics report, June 12, 2019, https://chemonics.com/impact-story/a-dairy-revival-in-ukraine/ (reporting the 75% figure). Other current estimates are that some 80% of Ukrainian milk production comes from small-scale producers. USAID Report, *Ukraine Dairy Coops Get More Competitive: Improved processing, lower costs, more sales for dairy farmers*, https://2012-2017.usaid.gov/results-data/success-stories/project-makes-dairy-cooperatives-competitive.

[206] *See, e.g.*, USDA Foreign Agricultural Service, GAIN Report – UP1824 – Dairy and Products Annual (Oct. 16, 2018) https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Dairy%20and%20Products%20Annual_Kiev_Ukraine_10-16-2018.pdf ("Households practice a low-cost, low productivity approach").

[207] *Tvarinnitsvo Ukraini, supra* note 168, at 144.

[208] *See* Phil Durst, Michigan State University Extension dairy educator, describing feed as a factor in "quality" and yield of Ukrainian household milk production, *quoted in* Addy Battel, *Can Ukraine Regain Its Reputation as the Breadbasket? Improving Dairy Cattle Efficiency on Former Collective Farms in Ukraine* (Aug. 30, 2017), https://www.canr.msu.edu/news/can-ukraine-regain-its-reputation-as-the-breadbasket-improving-dairy-cattle-efficiency-on-former-collective-farms-in-ukraine. *But regarding perceptions of "quality," see* Gereles and Szöllösi, *supra* note 167, at 72 ("There is widespread belief that household milk and dairy products are 'organic,' healthier,' of 'higher quality,' or even 'safer' than industrially processed products").

by caretakers who, in most cases, care for four cows or fewer;[209] they not only know each cow's milk production norms, but her name, food preferences, preferred milking style, tolerance for proximity to strangers, need for warmth or preference for cool, how long milking will take, how the cow should smell, the usual rate of her breathing.[210] The relationship between milkmaid and cow is more intimate in some of its embodied and affective dimensions than industrialized production allows.

Though socialism rendered the means of production a public resource, I propose that connections between cow and caretaker, if anything, grew stronger in the earliest days of collectivization of agriculture in Ukraine. Gaining milk cows for shared use was one of the first tangible benefits to the rural poor of the Communist Party's collectivization campaign and the physical struggle against rural smallholders, the so-called "kulaks." Famine that accompanied collectivization in Ukraine intensified the bond between village and cow. Milk, perishable and easily consumed, was less confiscable by state authorities than grain stores. Rural Ukrainians that survived the Famine understood milk's importance to their survival, and that significance grew during the years of privation during World War II and its aftermath. The insertion of science into agricultural production may have extended into livestock feed but did not reach extensively into the tactile relationship of milk production between milkmaids and cows. Teams of milkmaids worked with state and collective farms' jointly owned or managed herds, but milkmaids specialized by subgroups and knew each cow with whom they worked. For families that kept their own dairy cow, the bond was at least as strong.

The relationship between caretaker and cow remained strong during the period of dissolution of the U.S.S.R. Soviet structures -- such as the command function of a command economy, the ethical commitments of Party membership and socialist futures, and the control exerted by incentives and monitoring systems -- dissolved.

---

[209] 71.1 % of rural households do not keep dairy cattle. 21.7% have only one cow; 5.9% have two; 0.9% have three; and only 0.4% have four or more. Serhiy Moroz, *Rural Households in Ukraine: Current State and Tendencies*, 60 ECONOMICS OF AGRICULTURE 565 (March 2017) at Table 4, Distribution of Rural Households, by Number of Selected Types of Livestock (in %).
According to state statistics, in 2017, agricultural enterprises held 484,600 head of cattle, compared with 1,624,300 held by households. The number held by agricultural enterprises is 466,600 (as of 2018). The total number held by rural households is 1,551,200 (2018). *Tvarinnitsvo Ukraini*, *supra* note 168, at 144.
[210] Field observation, Gruzenske village, Ukraine, September 2009, summer 2016, May-November 2017.

State ownership of property, the keystone feature of state socialism, became a central problematic of the post-Soviet era. Amidst legal incrementalism, parliamentarians debating and policy-makers taking centipede steps towards divesting the state and introducing private property ownership, some village assets were treated locally as up for grabs. Beef cattle disappeared. Milkmaids, canny to the extent to which milk provided a reserve for village sustenance and income and emotionally invested in the cows, took matters into their own hands to prevent the dairy herd from being "liquidated," monetized and pocketed by one local opportunist. Milkmaids saved the village herd by decollectivizing it. The social cohesion of dairymaids on the local level has proved salient; the fact that this was not an organized, national movement makes its patterning nationwide all the more striking. "Privatization" in beef versus dairy thus appears in contrasting forms, secretive and wealth-concentrating versus transparent and wealth-distibuting.

Considering law and milk in Ukraine opens up several insights. It reveals how, during the Soviet period, milk production provided households with a reserve of calories, income, and power within overarching collectivization of agricultural production. The moral of the Soviet story, however, is not one of triumphant individualism or hardy family holdouts. Rather, it shows how household and individual practices found a place within collective structures. Looking at the post-Soviet experience, the story of milk and law in Ukraine reveals some of their continuities, as well as micro-practices at work within the frameworks of national laws, structures of international trade, global shifts in modes of power, and the press of security concerns. Multinational corporations, increasingly involved in dairy processing in Ukraine, have both reached into the daily routines of remote villagers and found their limits; village norms are also reshaping corporate production. In local performances of power, the dairysphere finds both the dissolution of some forms of collective life and the reorganization of daily life along the lines of new collectivities. Milk production also reveals the pragmatic plays of gender dynamics within local disputes and vast social transformations. Milk has remained a reservoir of calories and a ground of social networks; its story shows the resilience of intimate relationships between dairy cows and their keepers and the political strength, untapped nationally but salient locally, of dairy maids.