

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Historical Materials from University of Nebraska-
Lincoln Extension

Extension

1996

CC363 Revised 1996 1996 Agriculture Outlook and Policy Issues

Lynn Lutgen

Follow this and additional works at: <http://digitalcommons.unl.edu/extensionhist>

Lutgen, Lynn, "CC363 Revised 1996 1996 Agriculture Outlook and Policy Issues" (1996). *Historical Materials from University of Nebraska-Lincoln Extension*. 3359.

<http://digitalcommons.unl.edu/extensionhist/3359>

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

CYT
S
544.3
N2
C33x
no. 363
REV

1996 AGRICULTURE

Outlook & Policy Issues

Agricultural
Economic
Department

Nebraska Cooperative
Extension Service
CC
Received on: 03-11-97
University of Nebraska,
Lincoln — Libraries

Coordinated by Lynn Lutgen

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Kenneth R. Bolen, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.

University of Nebraska Cooperative Extension educational programs abide with the non-discrimination policies of the University of Nebraska-Lincoln and the United States Department of Agriculture.



University of Nebraska-Lincoln Institute of Agriculture and Natural Resources

IANR Divisions

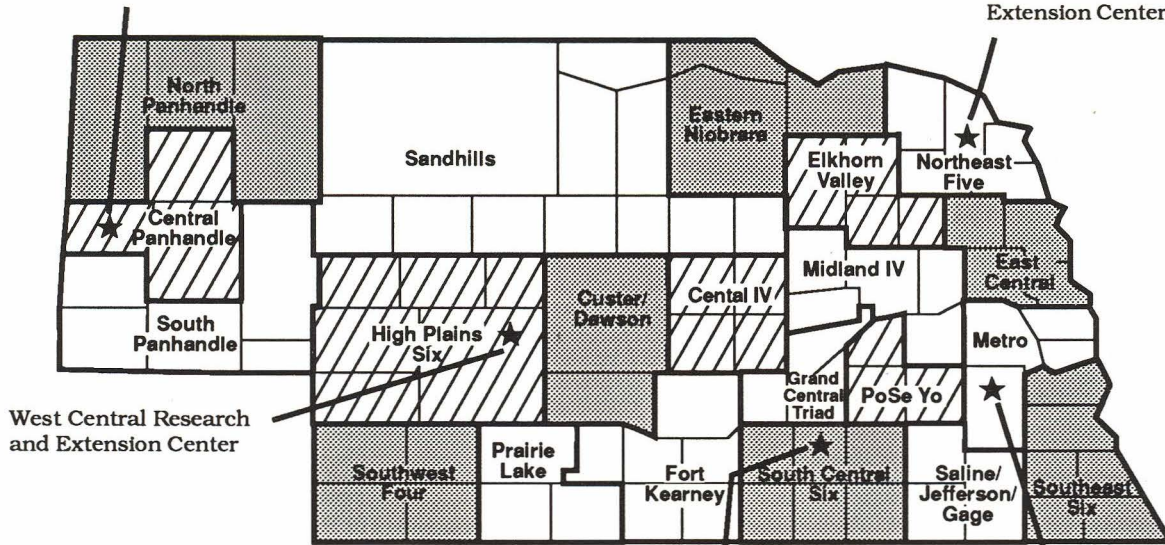
Agricultural Research Division
College of Agricultural Sciences & Natural Resources
College of Home Economics

Conservation and Survey Division
Cooperative Extension Division
International Programs

Extension Programming Units

Panhandle Research and Extension Center
Panhandle Education Center

Northeast Research and Extension Center



West Central Research and Extension Center

South Central Research and Extension Center

UNL East Campus and Southeast Research and Extension Center

Agricultural Economics Outlook Reports

Introduction

Gary D. Lynne	Introduction	3
---------------	--------------------	---

General Outlook Issues

Evert Van der Sluis Sam Cordes	Contributions of Federal Transfer Payments to Nebraska's Economy	4
-----------------------------------	--	---

Richard K. Perrin	Productivity Gains in Nebraska Agriculture	6
-------------------	--	---

Dennis M. Conley Olivier Le Boulanger	Exchange Rates and Agribusiness Trade with Mexico	7
--	---	---

J. David Aiken	District Court Rules Nonstock Cooperative Exempt from Initiative 300	9
----------------	--	---

Agricultural Inputs and Management Issues

H. Douglas Jose	Trends Continue Up in Farm Production and Family Living Costs	10
-----------------	---	----

Paul H. Gessaman	Transition Management — A Look Ahead	12
------------------	--	----

William Miller Raymond J. Supalla Benedict Juliano	How are Management Decisions Shared Between Land Owners and Tenants?	13
--	---	----

H. Douglas Jose	Crop Insurance Reform Plus One Year	15
-----------------	---	----

Commodity Outlook and Issues

Lynn H. Lutgen	Corn Outlook for 1996	16
----------------	-----------------------------	----

Lynn H. Lutgen	Soybean Outlook for 1996	18
----------------	--------------------------------	----

Lynn H. Lutgen	Wheat Outlook for 1996	20
----------------	------------------------------	----

Allen C. Wellman	Slaughter Cattle Outlook - 1996	21
------------------	---------------------------------------	----

Allen C. Wellman	Feeder Cattle Outlook - 1996	22
------------------	------------------------------------	----

Allen C. Wellman	Slaughter Hog Outlook - 1996	23
------------------	------------------------------------	----

James G. Kendrick	Multiple Year Pricing of Grains and Oilseeds	24
-------------------	--	----

Dale G. Anderson	Changing Patterns of Grain Flows from Nebraska Elevators	26
------------------	--	----

Jeffrey S. Royer	Further Developments in the Changing Pork Industry	27
------------------	--	----

Land and Tax Issues

George H. Pfeiffer Tax Law Changes for 199629

Bruce Johnson Impacts of Changing Farm Policy on Agricultural Land Values30

Evert Van der Sluis

Government Programs and Implications

Roy Frederick The 1995 Farm Bill — Some Reflections32

Roger Selley Assessing the Impact of Adjusted Farm Program Provisions34

Environment Concerns and Issues

Maurice Baker Irrigation Development — Past and Future35

Wanda Leonard Recycling Comes of Age in Nebraska, Elsewhere37

Siva rama Krishna Valluru Agricultural Competitiveness and Environmental Regulations38

E. Wesley F. Peterson

J. David Aiken Federal Conjunctive Use: Kansas v. Colorado40

Authors41

Introduction



Agricultural Economic Outlook is a peculiar thing. It suggests we might be able to see the future. It seems to be in our nature to want to believe in that possibility. Unfortunately, the old maxim "if you're so smart why aren't you rich" holds here.

So why do we produce a report called *Agriculture Outlook and Policy Issues*? Can economists really see the future? No, clearly not. What the economists writing in this report can bring, however, is the knowledge that comes from hard thinking in their specialized fields. They can point out the intricacies of arguments "on the one hand..." and then equally as skillfully point out "while on the other hand..." with this give and take reflecting the economic way of reasoning about alternative futures. One of our presidents (I forget which) said he wanted to hire a one-handed economist! Why is there this "one hand, other hand" aspect to economic dialogue especially as we reason with you the reader about the future?

It stems from the very nature of economics. Economic science is fundamentally behavioral science, so *Agriculture Outlook and Policy Issues* is about how humans might behave in the future as they engage economic matters. The "one hand, other hand" approach, then, leads to reasonable speculations about what economic choices individual people might make in the markets and in other economic decision circles. This *Agriculture Outlook and Policy Issues* report is all about what economic minded human beings might do in the future.

We encourage you to engage along with us in this kind of futuristic economic conversation. We can, together, help ensure a long term sustainable agricultural prosperity in Nebraska with good economic conversation.

Professor Lynn Lutgen and office staff member Diane Wasser continue to work hard at producing this Outlook report, and we thank them for it. Please let us know how we might make it even better next year.

Gary D. Lynne
Professor and Department Head

Contributions of Federal Transfer Payments to Nebraska's Economy

Evert Van der Sluis and Sam Cordes

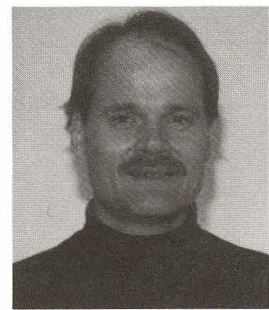
Reducing federal expenditures to attain a balanced federal budget is a common theme among many politicians. While reduced federal spending may stimulate the national economy through reduced interest rates and other factors, the short-term consequences for local and regional economies may be quite different. This is because federal spending is an important contributor to the economic engine of many locales. Nebraska is no exception, and this may lead to an interesting paradox or value conflict for many Nebraskans. Many Nebraskans are fiscally conservative, independent by nature, and may tend to be somewhat skeptical or suspicious of the federal government. At the same time, their individual incomes and the health of their local economies may be quite dependent on federal largess.

Federal subsidies, or government transfer payments, are shifts of income from tax-paying units—mostly households, but also businesses—to recipient units. Nationally, nearly \$1 trillion in transfer payments were made in 1993 by the federal government, exclusive of farm program payments. Over 95 percent of this \$1 trillion was paid to individuals.

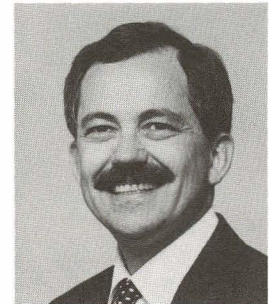
Transfer payments to individuals can be grouped into

four major categories: retirement and disability insurance programs; medical programs; income maintenance programs; and "other programs." More than one-half of all transfers to individuals are tied to the first category. The largest single program in that category is Social Security. About one-third of government transfers to individuals fall into the medical programs category. Medicare and Medicaid are the two largest specific programs in this category. About one-tenth of all government transfers to individuals are associated with the income maintenance category. Examples of specific programs within this category are Aid to Families with Dependent Children (AFDC), Supplementary Security Income (SSI), and Food Stamps. The "other" category includes various programs, most of which are quite small in comparison to programs such as Social Security. Examples include unemployment insurance and veterans benefits programs.

In addition to these four major categories of transfers to individuals, the federal government also spent \$13.4 billion on farm program payments in 1993. Farm program payments are of obvious importance to the economy of Nebraska and surrounding states.



Evert Van der Sluis



Sam Cordes

The accompanying table provides data on the role played by these five different categories of federal payments. Data are provided for the U.S., Nebraska, and for five different types of counties within Nebraska. The county groupings and the number of counties in each group are: Metro — six Nebraska counties that are part of the Omaha, Lincoln, and Sioux City metropolitan areas; Large Trade — 12 nonmetro counties with a city of at least 7,500 people; Small Trade — 19 nonmetro counties with the largest city between 2,500 and 7,499 people; Rural — 24 nonmetro counties with no town larger than 2,500 people and with a population density of at least six persons per square mile; and Frontier — 32 nonmetro counties with no town larger than 2,500 and with a population density of less than six persons per square mile.

In 1993, Nebraska received about the same amount of federal transfer payments per

capita as did the U.S. as a whole (\$3,409 compared to \$3,442). However, because Nebraska's per capita Total Personal Income (TPI) is somewhat below the national average, these federal payments represent a somewhat larger share of the state's economy than is true for the U.S. (17.3 percent compared to 16.5 percent).

Within Nebraska, certain parts of the state are much more dependent than others on federal transfer payments. In general, the nonmetropolitan counties within Nebraska are considerably more dependent on federal transfer payments than are the metropolitan counties. Indeed, 23 cents out of every dollar of personal income in Nebraska's nonmetropolitan counties came from federal transfer payments (compared to 13 cents out of every dollar in Nebraska's metropolitan areas). This difference can be explained in part by the increased importance of farm program payments in nonmetropolitan Nebraska. Virtually none of TPI in metro-

politan areas in 1993 came from federal farm program payments, but in Nebraska's nonmetro counties, 5.4 percent of TPI was attributed to farm program payments.

While farm program payments are obviously of greater importance to the nonmetropolitan economy than to the metropolitan economy, the same phenomenon is true for three of the other four categories of federal transfer payments. In at least two of these categories—retirement and disability insurance programs, and medical programs—this difference is partially due to differences in age structure. Specifically, in 1990, 17.2 percent of Nebraska's nonmetropolitan population was at least 65 years of age, compared to 10.6 percent for metropolitan areas.

Reliance on federal transfer payments was also greater for each of Nebraska's four different types of nonmetropolitan county categories than for the state's metropolitan county cat-

egories. The economies of the least populated nonmetropolitan county categories (i.e., Rural and Frontier counties) had the greatest dependence on federal transfer payments. For example, 28.8 percent of the TPI came from federal transfer payments in those 32 Nebraska counties categorized as Rural. In Rural and Frontier Counties, farm program payments alone accounted for nearly 10 percent of the TPI.

The information provided here indicates the level of dependence of local economies on federal transfer payments. It is clear that in the short run efforts at reducing the federal budget deficit through reduced federal transfer payments will have an adverse effect on many local economies—especially in Nebraska's nonmetropolitan areas. Over the longer run, it is possible that these adverse effects will be more than offset by new economic opportunities stemming from the potential for lower interest rates and increased export opportunities.

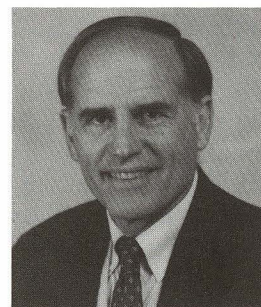
Table I. Transfer payments per capita and as percent of total personal income, U.S. and Nebraska

	United States	Nebraska		
		All Counties	Metro Counties	Nonmetro Counties
<i>Transfer payments in dollars per capita</i>				
Retirement & disability insurance programs	\$1,707	\$1,624	\$1,498	\$1,753
Medical programs	1,101	951	892	1,010
Income maintenance programs	336	177	189	165
"Other" government payments to individuals	246	157	164	151
Farm program payments	52	500	42	968
TOTAL*	\$3,442	\$3,409	\$2,784	\$4,047
Transfer payments as percent of total personal income				
Retirement & disability insurance programs	8.2%	8.3%	7.0%	9.7%
Medical programs	5.3%	4.8%	4.2%	5.6%
Income maintenance programs	1.6%	0.9%	0.9%	0.9%
"Other" government payments to individuals	1.2%	0.8%	0.8%	0.8%
Farm program payments	0.2%	2.5%	0.2%	5.4%
TOTAL*	16.5%	17.3%	13.1%	22.5%

NOTE: Of the five categories of transfer payments, farm program payments represent the greatest year-to-year variation. For example, in the seven-year period, 1987-1993, farm program payments to Nebraska ranged from a low of \$479 million in 1992 to \$1,275 million in 1987 (without adjusting for inflation). The 1993 amount was \$806 million.

* Totals may be slightly different from the sum of the columns due to rounding.

Productivity Gains in Nebraska Agriculture



Richard K. Perrin

Richard K. Perrin

The output from Nebraska's farming sector is threefold the level that prevailed during the first half-century (the production line in *Figure 1*). We do not have good information on inputs used prior to 1936, but total input use has increased only by about two-thirds since then (the dashed line in *Figure 1*). This means that only about one-third of the increase in production in the last half-century was due to increased inputs — the other two-thirds we attribute to increased **productivity**. The productivity of Nebraska's agricultural resources has increased by about 80 percent since mid-century (the dotted line in *Figure 1*).

An increase in productivity implies that **fewer inputs are required per unit of output**.

Labor hours per unit of output have declined by about 80 percent since mid-century, for example, and total hours of farm labor have decreased by about 40 percent. Not everyone agrees that this should be regarded as progress because the number of farms and farmers has decreased accordingly, inducing many changes in rural lifestyle. Among the inputs that have increased in use are irrigation water and agricultural chemicals, which have brought other undesirable side effects (although nearly all measures indicate that these side effects are now becoming less severe).

Who has benefited from the increase in agricultural productivity?

Fundamentally, it is consumers, including farmers and other Nebraskans. Because fewer inputs are required to produce foodstuffs, real food prices have fallen by more than 50 percent since mid-century, and food-hungry nations abroad have benefited as well as U.S. consumers. In fact, without these productivity gains in the U.S. and elsewhere, there would scarcely be sufficient resources to feed today's 5.7 billion earthlings at any price, let alone at lower prices.

But Nebraska farmers gain too. Farm families are much wealthier than they were 50

years ago; they live better, and the real value of agricultural land and structures has risen. Furthermore, without these reductions in input requirements, Nebraska farmers would not be able to compete with food producers elsewhere in the U. S. and abroad, where productivity gains have also occurred. Research by IANR, other public institutions, and by an increasing array of private companies promises to provide continued opportunities for Nebraska farmers to reduce inputs per unit of output. Recent experience and promises from biotechnology suggest that they will also be able to do so with reduced undesirable side effects, as well.

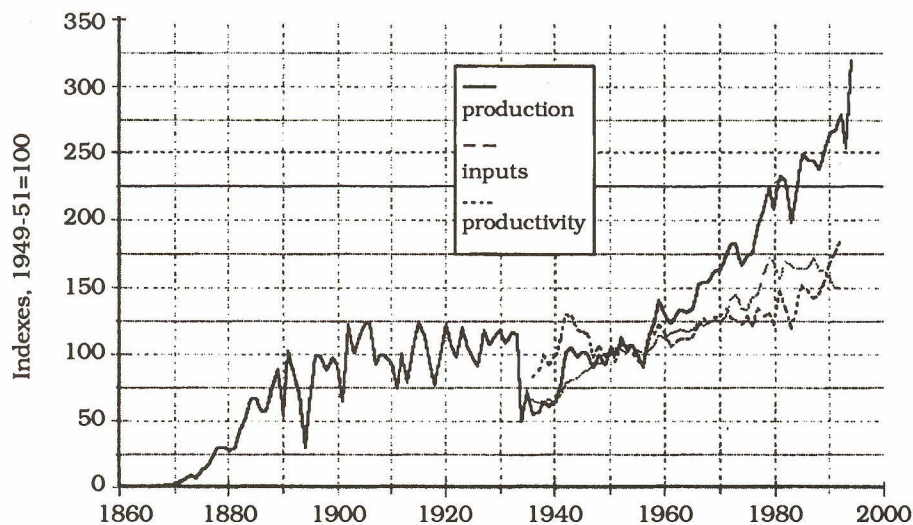
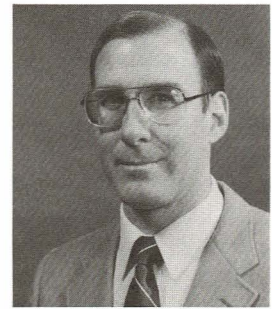


Figure 1. Productivity of Nebraska Agriculture.

Exchange Rates and Agribusiness Trade with Mexico

Dennis M. Conley and Olivier Le Boulanger



Dennis M. Conley

Recently, Mexico's economic development was still depicted as an exemplary one by the International Monetary Fund. As the Mexican economy opened itself more to foreign investors, the country entered the OECD (Organization for Economic Cooperation and Development), and others started to believe that Mexico was an industrialized country.

However, in 1994, investors seemed to forget that Mexico owed a huge debt of almost \$125 billion. As its current account experienced an enormous deficit, the Mexican government was in a dilemma. It had to devalue its currency to rebalance this deficit. Because

Mexico had promised to always keep its currency pegged to the dollar, the devaluation which began on December 20, 1994, felt like a shock for the foreign investors and firms involved with the Mexican market.

During July 1995, four executives who work for agribusinesses of different sizes that trade with Mexico were surveyed. The purpose was to learn how the companies started to do business with Mexican customers; and if the recent, severe devaluation changed their strategic planning for the Mexican market.

The four companies we surveyed have very different characteristics which are

summarized in *Table I*. The names are generic for confidentiality.

As *Table I* indicates, size is directly related to a foreign exchange management plan. Midwest Foods and Soy Business, the two largest companies maintain a plan to manage currencies fluctuations in the foreign exchange market, Nebraska Co-op and Grain Inc., the two smallest businesses, do not.

Table II summarizes the key findings for each of the four agribusinesses. The left-hand column lists the survey questions asked of each agribusiness with their responses given in the rest of the table.

Table I. Characteristics of companies doing business with Mexico.

	<i>Nebraska Co-op</i>	<i>Grain Inc.</i>	<i>Soy Business</i>	<i>Midwest Foods</i>
Annual Sales	\$20 million	\$1 billion	\$1.5 billion	Over \$10 billion
Type of Business	Grain sales and farm supplies	Grade trade	Soybean processing, grain trade, feed for livestock	Produces all kind of foods; grain merchandising
Foreign markets experience	Mexico only	International trade of grain	Canada and Mexico	30 different countries
Percentage of export in total sales	Mexico irregular	Constant sales to foreign countries	10% of sales to Mexico	15% outside the U.S. market
For how long?	For 3 years	Mexico for 15 years	For 3 years	For a very long time
Foreign exchange management	No	No for Mexico	No for Mexico Yes for Canada	Yes

It was surprising to learn that the devaluation had almost no real negative consequences for these agribusinesses and their strategic decisions. The smaller ones were only dealing in U.S. dollars and obtained government credit to guarantee the payment of the sales. Only the biggest one would eventually take pesos for payment, but

would immediately hedge it on the foreign exchange market. Technically, none of these companies suffered from exchange rate risks.

It was also surprising to learn that these agribusinesses, except the biggest one, had no forewarning of a coming devaluation. Only Midwest Foods was

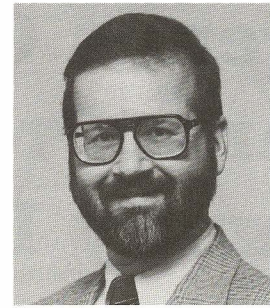
aware that a devaluation was probably going to happen.

It was found that the strategic decisions of these firms concerning the Mexican market remained almost unchanged despite the devaluation. Even if they act more cautiously, they all want to serve the Mexican market in the future.

Table II. Effects of devaluation on companies doing business with Mexico.

	<i>Nebraska Co-op</i>	<i>Grain Inc.</i>	<i>Soy Business</i>	<i>Midwest Foods</i>
Strategy for Mexico before the devaluation	Making better margins on grain sales	Making better margins on grain sales	Increasing market shares for oil products	Increasing market shares on the long-term
NAFTA's effects	New opportunities	Reduction of bureaucracy	Increase trade	Reduction of bureaucracy
Anticipated devaluation?	No	No	No	Yes
Major risks of doing business with Mexico	Transportation	Payment risks	Political risks	Payment risks and political risks
Trade response after the devaluation	Low during six months but now recovering	Low during six months but now recovering	Low during six months but now recovering	Low during six months but now recovering
Strategy for Mexico after the devaluation	Be more cautious but trade when viable	Making better margins on grain sales	Be cautious but definitively serve the Mexican market in the future	Stay in Mexico and serve the Mexican market in the future

District Court Rules Nonstock Cooperative Exempt from Initiative 300



J. David Aiken

J. David Aiken

In November 1982, Nebraska voters authorized a constitutional amendment prohibiting 1) non-family farm or ranch corporations or 2) "syndicates," i.e. non-family farm limited partnerships from 3) acquiring interests in agricultural land or 4) engaging in farming or ranching. Farming and ranching is defined as 1) the cultivation of land for the production of agricultural crops, fruit or other horticultural products or 2) the ownership, keeping or feeding of animals for the production of livestock or livestock products. This provision, which is article XII, section 8(1) of the Nebraska Constitution, is more popularly known as Initiative 300 or I300.

Exceptions to I300 include family farm or ranch corporations and family farm or ranch limited partnerships. Another exception is for non-profit corporations. For the complete text of I300, obtain a copy of NF95-209, *Official Test of Initiative 300*, from your local extension office.

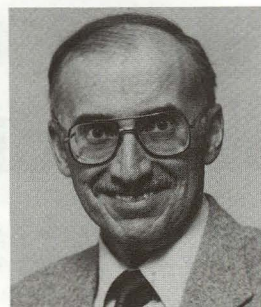
Under Nebraska statutes, cooperatives have the legal option of being legally organized either as a for-profit corporation, or as a nonprofit corporation. The nonprofit corporation option for cooperatives has suggested that cooperatives organized as nonprofit corporations would qualify for the nonprofit corporation exception under I300.

Pig Pro Litigation. On September 18, 1995, District Judge Earl Witthoff of Lincoln ruled that a properly organized nonstock marketing cooperative would qualify for the nonprofit corporation exception under I300. (A non-stock cooperative is one where members are given "certificates of participation" instead of shares of stock in the cooperative.) The lawsuit was brought by five Dawson county farmers who sought to acquire and operate a swine farrowing operation and nursery as a nonstock marketing cooperative called Pig Pro. Pig Pro members would be required to purchase

feeder pigs from the cooperative at cost on a rotating delivery schedule. Pig Pro sued to obtain a court determination of whether its proposed swine operations would violate I300. Judge Witthoff ruled that Pig Pro is a nonprofit corporation and was exempt from I300. Consequently, Pig Pro could therefore acquire agricultural land, facilities and livestock needed for swine production in order to provide feeder pigs to its members on a cost-of-production basis.

Judge Witthoff's decision has been appealed to the Nebraska Supreme Court. If the Nebraska Supreme Court accepts the case for review, its ruling is not likely to occur before spring 1996 at the earliest. If Judge Witthoff's opinion is confirmed by the Nebraska Supreme Court, producers wishing to network their operations might examine nonstock cooperatives as a possible method for doing so.

Trends Continue Up in Farm Production and Family Living Costs



H. Douglas Jose

H. Douglas Jose

Farm input prices, in aggregate, remained relatively stable from the late 1980s into the early '90s. But in the past four years there have been some significant upward trends. *Figure 1* shows the price indexes for fuel, fertilizers and chemicals for the past 10 years.

Agricultural chemical prices have shown a consistent upward trend since 1987, averaging about a 4 percent increase per year in that period. Compared to the base period of 1990 to 1992, the price of agricultural chemicals are now at an index level of 115 or 15 percent higher. Look for this trend to continue due to general inflation and the cost of developing new chemicals. Plan on an increase of at least 5 percent when planning input costs for 1996.

Fertilizer prices have increased significantly after a period of relative stability for 5 years. This has been driven largely by a push upward in anhydrous ammonia prices which began in the fall of 1994. There have been a number of factors involved. Reduced supply due to plant shutdowns in the U.S. and reduced imports occurred simultaneously with increased demand from both agriculture and from nonagricultural uses. Plan on an increase in 1996 but less than the jump we saw in 1995.

Fuel prices have remained steady to lower and have helped to mitigate the impact of increases in the prices of other inputs. Difficulties still exist in getting the energy reserves of the former Soviet Union onto the market but production in other parts of the world have kept prices low. The prospects

are still favorable for consumers for the next three years. Look for prices in 1996 to be stable to up slightly compared to 1995.

Family living costs are not a farm production input but they represent a significant cash flow consideration. Data from the Nebraska Farm Business Association show the average family living cost in 1994 was \$33,650 for an average family size of 3.4. *Figure 2* shows the trend over the past 10 years. Farm family living costs have increased faster than the general consumer price index in recent years. From 1986 to 1994 the reported average family living costs increased 68 percent and the consumer price index increased 35 percent. Health costs, including insurance, now account for 16 percent of the family living costs. In budget projections, plan for an increase in 1996 of about 5 percent.

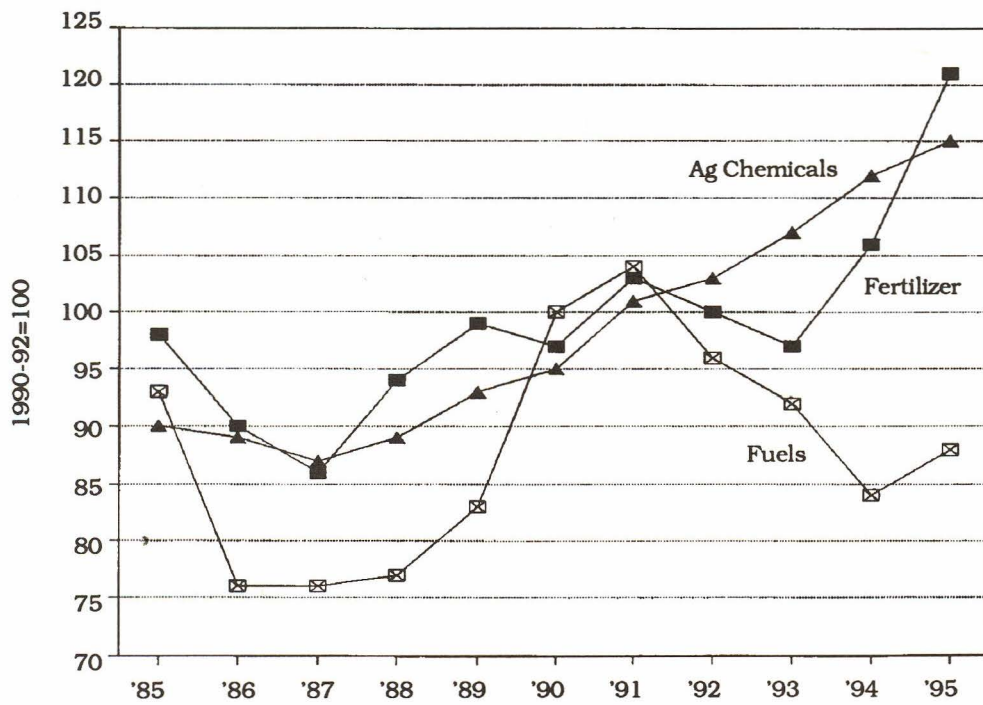
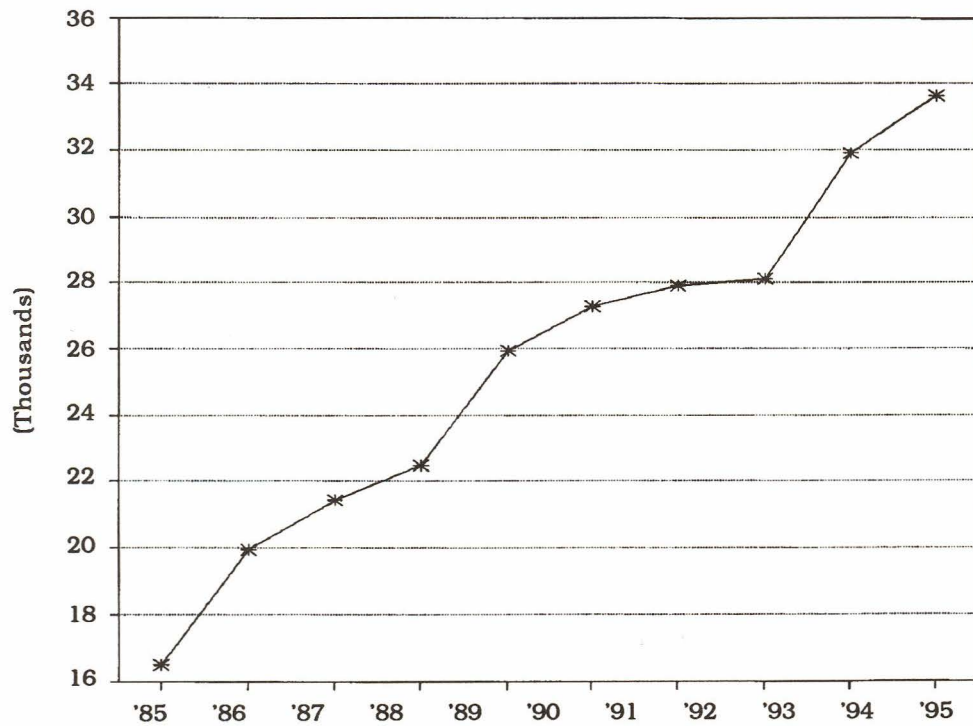


Figure 1. Indexes of Prices Paid by Farmers.

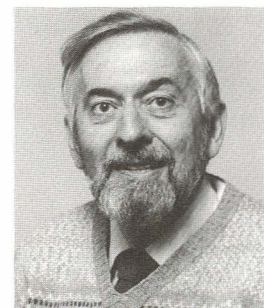


Source: Nebraska Farm Business Association

Figure 2. Nebraska Farm Living Costs

Transition Management — A Look Ahead

Paul H. Gessaman



Paul H. Gessaman

Frequent transitions have become a reality in the U.S. ag sector as production technology, communications, economic policies, international and domestic markets, environmental regulations, farm programs, and other aspects of ag production have changed. The traditional causes of change—inheritance and farmland sales—are important in reshaping ag production units. However, they now are only two of many forces causing transitions in agricultural production and marketing.

Managing ag production now requires the manager to be effective in planning transitions that alter the size, structure, technology, scale of operations, product mix, and/or internal dynamics of production processes and production units. While insights and skills from training and experience remain the foundations of production management, the ability to plan for and to manage repetitive transitions has become increasingly important in determining production unit viability.

Transition planning:

Transitions are important junctures in the life of a farm or ranch. A transition is a time of

opportunity **and** a time of special vulnerability. A successful transition often sets the stage for further growth and development. A marginal transition can lead to stagnation or decline. A transition that fails often ends with a farm sale.

Transition planning for intergenerational succession (estate planning) has become a major specialty of legal, accounting, and financial planning professionals as individuals and families have responded to the need to plan for the inevitable consequences of old age and death. Interest in planning for other transitions is increasing — the increase is rapid in locations where lenders require a written business plan as a basis for extending credit.

Agricultural lenders' increasing interest in business plans reflects experience with the payoff from business planning by nonfarm firms. A well-prepared business plan generally is viewed as a means of reducing risk and improving the odds of profitable operations during and after a transition.

What lies ahead?

Transitions in the ag sector and in ag production units will

continue to be major management challenges. For managers, learning and applying new management skills, modifying production and marketing practices, restructuring enterprises, changing the enterprise mix, or coping with larger units will be a continuing challenge. The range of knowledge and skills needed may be greater than one person can supply when he or she also is the principal worker in a farm or ranch operation. Skill development and business planning involving **all** family members and/or managers has become an important basis for quality management and rapidly is becoming an important factor in access to needed credit.

Business climate changes, production unit and family unit interactions, and the generational cycle will continue to make farm and ranch business planning complex and challenging. However, the payoff from transition planning can be high if it improves linkages with lenders while increasing management effectiveness. In a world that has few certainties, at least one certainty is emerging: the future will bring many transitions and continuing challenges to managers of Nebraska's farms and ranches.

How Are Management Decisions Shared Between Landowners and Tenants?

William Miller, Raymond J. Supalla, and Benedict Juliano

A recent survey of Nebraska farmers asked them about the role that they and their landowners have in making farm management decisions. Questions were asked about the role of each in decisions on crop choice, tillage management, fertilizer management, irrigation management, pesticide management, and government program participation. The majority of the farmers who completed the survey said they made the decisions without input from the landowner, except for government program participation (Table I).

It is not surprising that tenants make most of the decisions relative to management of the farm. Only about one-third of the tenants receive landowner input. Several factors support this division of responsibility for decisions. Farming is a highly technical operation and many landowners have little knowledge of the technical issues so they leave the decisions to the operator. Some leasing arrangements, such as cash rent, are not conducive to management advice from landowners. Even with crop share leases, the landowner will normally rely upon the tenant to make the appropriate management decisions. Often a long-time personal relationship exists between neighbors so the landowner trusts the tenant and

does not interfere.

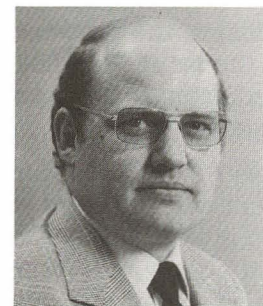
Some situations do involve more landowner interaction with the tenant about management decisions. Professional farm management firms and bank trust departments, for example, often provide extensive management suggestions to tenants. Farms where the tenant is related to the landowner are more of a puzzle. Often the landowner previously farmed and remains actively involved in management long after retirement. However, it is also true that when the tenant is a relative, the landowner is more likely to be confident in the tenant and the tenant is less likely to feel threatened with losing the land. This would suggest less need for the tenant to consult with the owner.

Decisions regarding government program participation were found to involve much more landowner input. Some programs are exclusively landowner programs requiring only

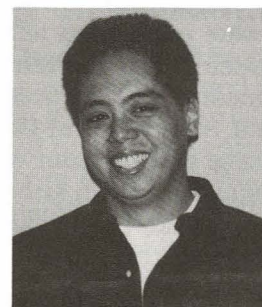
landowner approval, such as, the Conservation Reserve Program, the Wetland Reserve Program, and many of the soil conservation programs. In contrast, other government program decisions, such as deciding whether to enroll for



William Miller



Raymond J. Supalla



Benedict Juliano

Table I. Management Decisions by Landowner and Tenants

Farming Decision	No Landowner Input	Some Landowner Input	Landowner Decides
Crop Choice	59%	38%	3%
Tillage Practice	72	26	2
Fertilizer Mgt.	70	29	1
Irrigation Mgt.	78	21	1
Pesticide Mgt.	73	26	1
Government Program Participation	48	45	7

deficiency payments, may involve both the landlord and the tenant but are often made by the tenant alone. It is surprising that tenants reported consulting the landowner about government programs only about one-half the time and the landowners made the decision only about 7 percent of the time. This implies that tenants are making the participation decisions most of the time even though the issues are not technical and directly impact the landowner.

These Nebraska results are consistent with a recent study conducted with Wisconsin farmers. That survey was unique because it asked similar questions about who makes the management decisions to both the tenant and to the landowner. Their replies were consistent with both agreeing that the tenant makes most of the decisions more than 80 percent of the time. These results from Wisconsin suggest that a survey of Nebraska landowners would probably elicit the same response as was received from these tenants about management decisions.

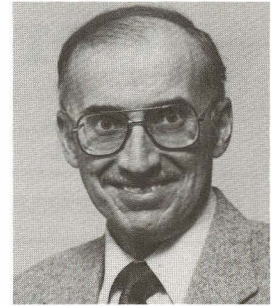
The average age of farmers in the survey who indicated that they were renting land from others and therefore had a landowner/tenant relationship was lower than the average age of the population of farmers who responded to the survey. That is consistent with the belief that beginning farmers need to rent to get started in farming and to achieve a reasonable scale of operation. However, there was no relation between the role of the landowner in the decision process and the age of the tenant. There also was no relationship between farm size and the role of the landowner in the decision making process.

Since this survey was sent to farm operators not landowners, an area which was not explored in this survey is total custom operations, i.e. contracting for all farm operations directly by the landowner without engaging the services of a tenant. With improved equipment and the shift to no-tillage systems of management, landowners may be contracting directly with custom operators to plant the crop, apply the needed chemicals and fertilizer, and to harvest the crop. In this

situation, the landowner provides all the operating capital, assumes all the risk associated with farming, and receives all the revenue from the operation. If total custom operations are important in Nebraska, landowners have a stronger role in decision making than is indicated by this survey.

The limited information available from this survey suggests there may be several farm owners directly contracting full custom operations. For example, 10 percent of the wheat farmers indicated they hired custom operators for all aspects of wheat production and 32 percent indicated they hired a custom operator to harvest the crop. For all the crop farmers surveyed, 10 percent indicated they hired someone to plant their crops. These data suggest custom operations may be more extensively used than has been thought. If total custom operations are an increasing trend, it has implications for the future structure of agriculture. The traditional roles of farm operators and absentee landowners may become indistinguishable if both groups use more custom hiring.

Crop Insurance Reform Plus One Year



H. Douglas Jose

H. Douglas Jose

The Crop Insurance Reform Act was signed into law in October 1994 and applied to crops harvested in 1995. To remain eligible for crop deficiency payments growers are now required to purchase a minimal level of multiple peril crop insurance, referred to as catastrophic or CAT coverage. The mandatory protection covers 50 percent of the yield guarantee at 60 percent of the established price. Additional or "buy-up" coverage is optional.

The maximum coverage available in 1995 under the APH or actual production history plan was 75/100 or 75 percent of the yield guarantee at 100 percent of the established price. Coverage was also available under the GRP or group risk plan which bases protection on an area yield rather than individual farm yields.

Figure 1 shows the numbers of policies in 1995 in a number of Great Plains and Corn Belt states including Nebraska. Nationally, over 2.8 million multiple peril policies were sold in 1995 and almost one-half or 1.4 million had coverage greater than the mandatory coverage. In Nebraska, almost 190,000 policies were purchased in 1994 with almost 130,000 of those being written for more than the mandatory coverage, and 60,000 for CAT coverage only. North Dakota had 76 percent buy-up policies and Nebraska and Iowa had the next highest percentage of buy-up policies, each with 68 percent of the policies being written for coverage above the mandatory level.

Considerations for 1996

1. *Changes in "Unit" Definition.* In 1995 each different rental arrangement constituted a different insurance unit. There could be some changes in these unit definitions for 1996. Check with your agent before the sales closing date of March 15.

2. *Yield Guarantees.* In the APH plan, coverage is based on the established yield for the unit being insured. If actual records are not available, a transition or T-yield is used. It is based on a percentage of the established farm program yield and is a transition between the program or administered yield and establishing an actual yield history. There are significant yield guarantee penalties for using the T-yield. Even with minimal records, yield experiences can be certified to establish

realistic yield expectations for an individual farm.

3. *Premium Subsidies.* The Reform Act basically took the average amount spent on disaster programs over the past 10 years and incorporated that amount into the premium subsidies. Before a decision is made on what coverage level to purchase, growers should compare the premium costs for the alternate coverage levels available.

4. *Coordinated Strategy.* Crop insurance is not a stand alone decision. Coverage levels need to be based on the risk carrying capacity of the operation and coordinated with other risk reduction plans. One of the major potential benefits of crop insurance is combining crop insurance coverage with crop marketing plans to take advantage of forward pricing opportunities.

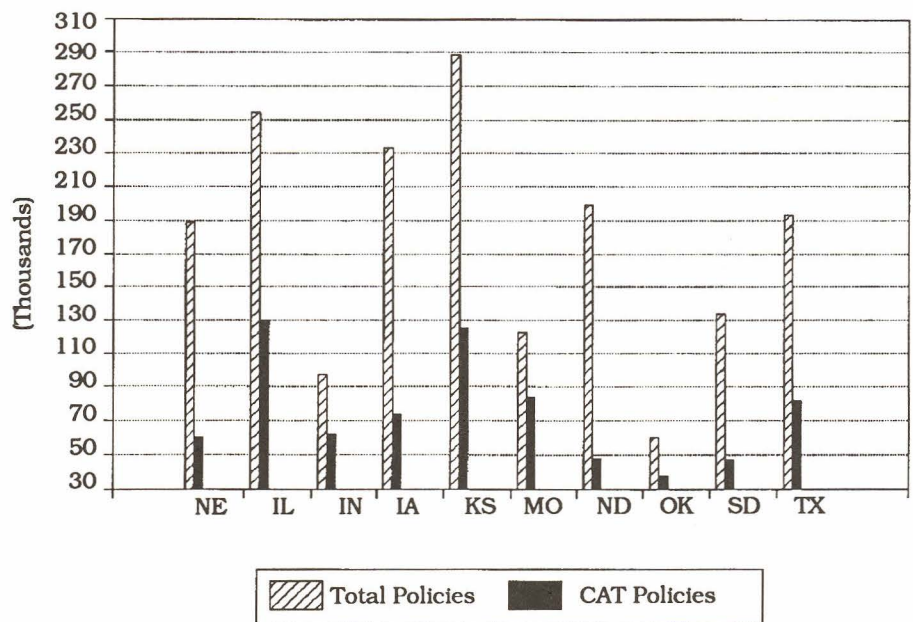


Figure 1. Crop Insurance Policies Sold in 1995, Selected States.

Corn Outlook for 1996

Lynn H. Lutgen



Lynn H. Lutgen

1995 was a year of mixed blessings. We all enjoyed the rise in prices but were fully aware that the rise was due to poor spring planting conditions followed by an unusually hot, dry summer and an early freeze. This led to a substantial decline in overall corn production.

Corn production fell from 10.1 billion bushels in 1994 to 7.374 billion bushels in 1995. This led to a substantial decline in the projected carry-out or ending stocks. Projected stocks fell from a very ample carryover of over 1.5 billion bushels last year to a very tight 617 million bushels for September 1, 1996.

Another very important characteristic in 1995 that contributed significantly to the rise in corn price was that demand, both domestic and foreign, continued strong even in the face of a substantial rise in prices. While domestic demand is expected to decline from 7.2 billion to 6.225 billion, exports are only expected to drop off 77 million from last year's 2.2 billion to 2.1 billion for the '95 marketing year. Neither is an alarming amount in lieu of the present price levels.

While the fall of '95 gave us ample opportunity to price corn in excess of \$3.00, (we all recognize it is rather difficult to make many bad grain marketing decisions at this level) we must be

concerned about storing the '95 grain and pricing the '96 crop.

The natural tendency is to say, "Boy, if the crop was that short it has to be higher next summer when we start running out of feed for the livestock." While cattle and hog numbers are up we must remember two things: One, if prices get too high, livestock will go to market at lighter weights, and since the early '80s we have learned that we don't need as large a carry-out in this country to get by because we are no longer the storage warehouse for the

world. Two, we also must recognize the truth in the old adage "short crops have long tails." Below are a table and graph. The table shows the supply and demand for the '95 crop as of December 12, 1995. The graph shows the average of price declines that have taken place historically following short crop years.

This would appear to be the year when we should consider selling the corn on hand early and taking a serious look at forward pricing some of the 1996 production.

U.S. Corn Supply and Demand

	1993-94	1994-95	1995-96*
Million Acres			
Area Harvested	62.9	72.9	64.7
Bushels			
Yield per harvested acre	100.7	138.6	121.1
Million Bushels			
Beginning Stocks	2,113	850	1,558
Production	6,336	10,103	7,374
Imports	21	10	10
Supply, total	8,479	10,963	8,942
Food/Seed	1,588	1,700	1,700
Feed and Residual	4,704	5,600	4,525
Exports	1,328	2,200	2,100
Use, total	7,620	9,500	8,325
Ending Stocks total	850	1,463	617
Average Price	\$2.50	\$2.25	\$2.95-3.35

*Projections for the 1995-96 crops are USDA's World Outlook Board expectations of supply and disappearance as of December 12, 1995.

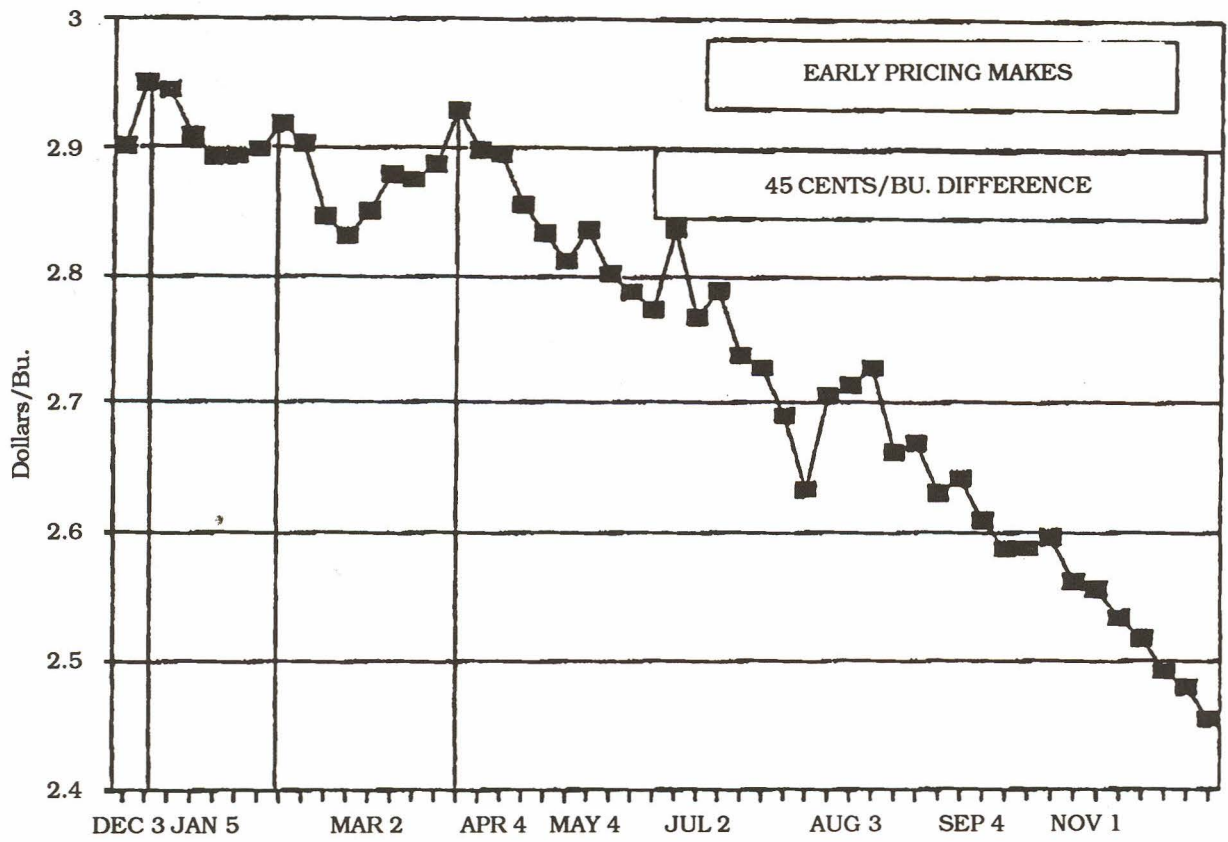


Figure 1. December Corn Futures — Year after short crops, 1975-94.

Soybean Outlook for 1996

Lynn H. Lutgen



Lynn H. Lutgen

The 1995 growing season certainly hurt soybean production compared to 1994. The crop in many parts of the country was quite good. In other parts it suffered from late planting, hot weather, and an early frost. The combination of good and bad resulted in a crop that was about 300 million bushels less than the previous year.

Total production dropped from 2.517 billion bushels in 1994 to 2.183 billion bushels in 1995. This drop in production coupled with a decrease in world oil crops and a fairly strong demand led to higher prices.

The rise in soybean prices was certainly helped by the corn and wheat situation. While a drop of 334 million bushels is not that alarming it has caused ending stocks or projected carry-out to decline from last year's 355 million bushels to only 215 million projected for next September, better than a 30 percent decline. Even with the higher prices in the fall of 1995, demand appears to remain fairly strong as indicated by exports projected to be 800 million, only 45 million less than last year's 845 million bushels; crush levels will decline slightly from last year's 1.405 billion to 1.395 billion bushels for the '95 crop.

Soybean crushing will remain high because of 1) the strong world demand for oil,

and 2) the continued demand for feed due to as livestock numbers increase. With fairly good fall prices behind us we must concentrate on 1996.

There are two questions for 1996: 1) do we have any 1995 soybeans left to sell? 2) what are the prospects for the '96 crop?

The old adage "short crops have long tails" appears to hold true for soybeans as well as other crops. Below is the projected supply and demand table as of December 1995, followed by two charts. The first chart is the average decline in soybean prices following short crops that have occurred in the past. One

important aspect that will impact soybean prices that has to be considered is the planting and projected harvest in South America. Normally the market starts to react to the South American rumor mill in February.

The last chart shows what has happened to the soybean hectares planted in South America, during the fall when the United States has experienced good prices. In most years the amount of hectares has jumped substantially, and if this historical trend should again happen this year, it will not bode well for our prices this spring.

U.S. Soybeans Supply and Demand

	1993-94	1994-95	1995-96*
Million Acres			
Area Harvested	57.3	61.1	61.7
Bushels			
Yield per harvested acre	32.6	41.9	37.0
Million Bushels			
Beginning Stocks	292	209	335
Production	1,871	2,558	2,183
Supply, total	2,170	2,773	2,523
Crush	1,272	1,400	1,395
Exports	589	845	800
Seed/Residual	100	173	113
Use, total	1,961	2,418	2,308
Ending Stocks total	209	355	215
Average Price	\$6.40	\$5.45	\$6.30-7.30

*Projections for the 1995-96 crops are USDA's World Outlook Board expectations of supply and disappearance as of October 11, 1995.

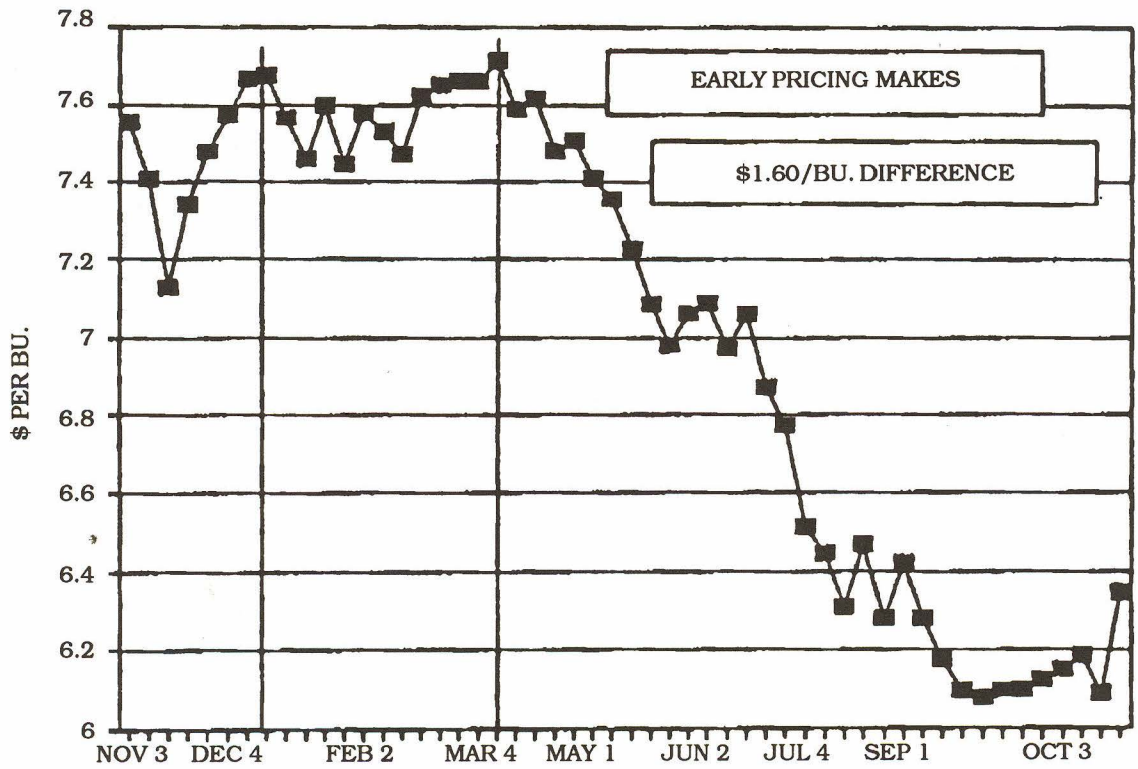


Figure 1. November Soybean Futures — Years after short crops, 1981-89.

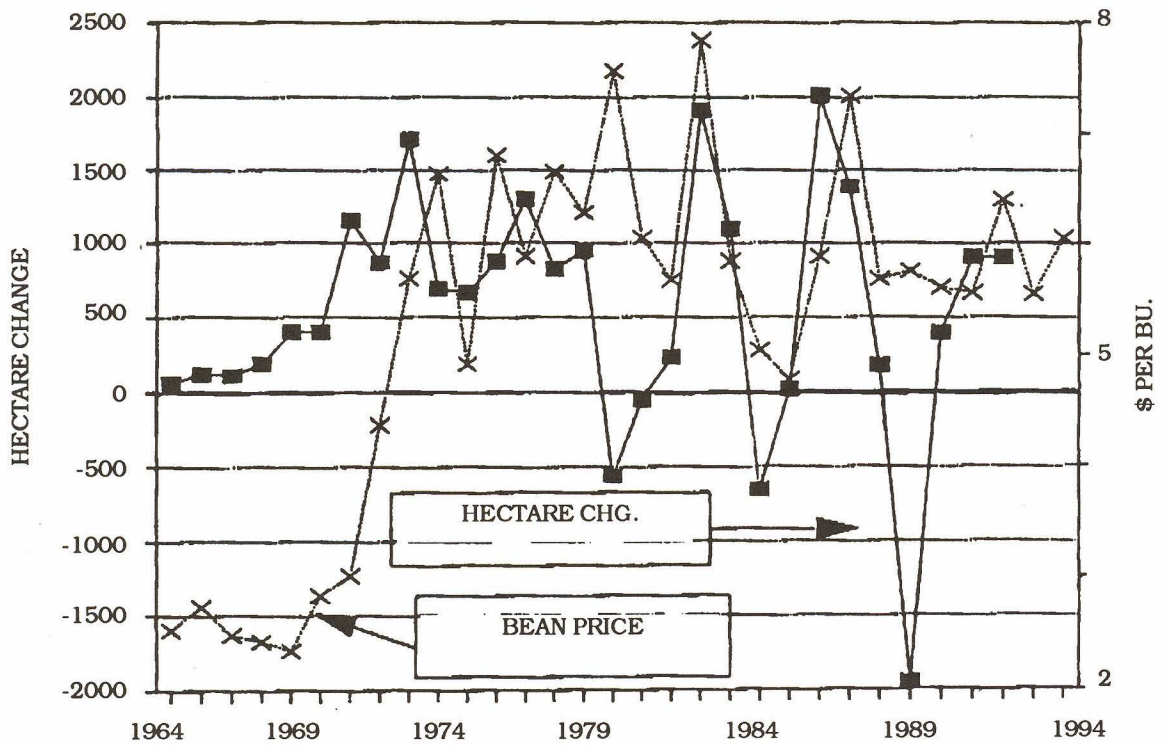


Figure 2. South America — Change in soybean area vs. price

Wheat Outlook for 1996

Lynn H. Lutgen



Lynn H. Lutgen

Wheat prices reached 15-year highs in the fall of 1995. Increased worldwide demand coupled with a decline in overall production has caused the United State's projected wheat ending stocks to fall below 400 million bushels.

USDA's December report placed the ending stocks at 385 million bushels. The last time the U.S. fell below 400 million was in the 1973-74 marketing year. At the same time world ending stocks were reduced from 113.8 million tons a year ago to 97.4 million tons. In analyzing USDA's December report it appears that very little price rationing is expected, even though wheat is around \$5.00. Total use, which includes both domestic and foreign exports is only expected to drop 85 million bushels from a year ago or a decline from 2.475 billion bushels to 2.390 billion for the coming year. It appears then that the present price picture will be supported by the demand side, but with all equations there are always two sides.

When thinking about future prices it is the supply side of the equation we look at. In the short run we can expect wheat

prices to continue strong, but in looking at the long term we can expect the major wheat exporting countries to produce more total wheat than a year ago. For instance, we can expect India to be larger player in the export market in order to get rid of record stocks and earn additional needed income. With Russia announcing no imports and all of Eastern Europe hav-

ing a large crop, we can expect more competition in the export market. In fact, there will be substantial competition from all the major exporting nations as we compete for world market share. This indicates we should carefully review selling the present supply and forward pricing upcoming production. Below is USDA's December supply and demand balance sheet.

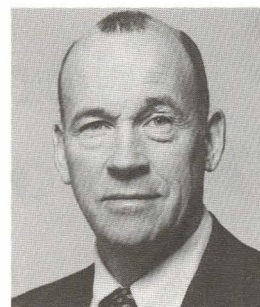
U.S. Wheat Supply and Demand

	1993-94	1994-95	1995-96*
	Million Acres		
Area Harvested	62.7	61.8	60.9
	Bushels		
Yield per harvested acre	38.2	37.6	35.9
	Million Bushels		
Beginning Stocks	531	568	507
Production	2,396	2,321	2,183
Imports	109	92	85
Supply, total	3,036	2,981	2,775
Food/Seed	968	942	965
Feed and Residual	272	340	225
Exports	1,228	1,188	1,190
Use, total	2,467	2,471	2,390
Ending Stocks total	568	510	385
Average Price	\$3.26	\$3.45	\$4.25-4.45

*Projections for the 1995-96 crops are USDA's World Outlook Board expectations of supply and disappearance as of October 11, 1995.

Slaughter Cattle Outlook - 1996

Allen C. Wellman



Allen C. Wellman

Slaughter cattle prices during 1995 ranged between \$60 and \$74 per cwt. The difference between the highs and lows in 1994 was about \$11 per cwt. Cattle feeders keep feedlots current in 1995, but beef production was up in every quarter. Cow slaughter continued to pick up in 1995. Total beef production for the year ended up about 3 percent above 1994. Returns to cattle feeders in 1995 were positive January through March but then turned negative until late summer.

Supply Forecasts

Placement of cattle into feedlots and resulting feedlot inventories in the first half of 1996 are likely to run larger than the same period in 1995. Some increase in cow slaughter, continuing a trend that started in 1992, could result in beef production the first half of 1996 running 2-4 percent above the same period a year earlier. Cattle feeders should guard against increasing marketing weights, or holding cattle to insure that beef production increases come slowly so the market can consume the additional pounds without severe price pressures.

Cattle placements in the last half of 1996 will reflect market conditions at the time the decisions are being made. Declining feed grain prices, larger feeder cattle supplies and some optimism for increased beef trade will likely generate increased placements. If feedlot close outs are near break-even or negative then placements will likely be reduced.

The slow expansion in total cattle numbers that started in 1991-92 suggests continued increases in cow slaughter. Beef production the second half of 1996 will continue to exceed year earlier levels.

Demand Prospects

Consumer demand for beef continues to stabilize. Beef and veal exports were running about 10 percent above a year earlier in late 1995. Supplies of competing meats were also increasing during 1995.

It appears in the 1990s that beef promotion will play an important role in shaping consumer preferences. Educational programs about the nutritional value and wholesomeness of beef should continue to be made available to the consumer. The competition from other red

meats and poultry will continue to increase.

Marketing Plan

Cattle feeders should continue to update their marketing plan in 1996. Price risk management strategies should be formulated to handle a wide range of market outcomes.

Price Forecasts

First quarter 1996 prices are expected to average near or below year ago levels. Prices averaged \$70-71 per cwt. in the January-March period in 1995.

Second quarter 1996 prices are also expected to average near or below the April-June 1995 prices. Prices averaged about \$65 during the 2nd quarter of 1995.

Prices the second half of 1996 are likely to continue to average near to slightly above 1995 levels. Top managers should always be on the lookout for forward pricing opportunities or chances to reduce costs. Cattle cycle theory suggests that gradual feeder cattle price declines can be expected to continue during 1996 and 1997.

Feeder Cattle Outlook - 1996

Allen C. Wellman



Allen C. Wellman

The July 1, 1995 U.S. total cattle inventory was estimated to be 114.3 million head, up 2 percent from a year earlier. The inventory expansion is likely to be over by the end of 1996 or early 1997.

The number of heifers being held as beef cow replacements on July 1 was reported 3 percent smaller than last year's, but equal to July 1993. Heavier beef cow-herd culling and reduced numbers of beef cow replacements will lead to a smaller 1997 calf crop. In the short term beef production will continue to grow.

Feeder cattle and calf prices are likely to continue the downward trend started in 1994. Returns to cow-calf operations in 1996 will be negative, the second year of red ink. The expansion decisions made in 1993-95 will increase total cattle inventories throughout 1996 and into 1997.

Feeder Cattle Supplies

Although the current total feeder cattle inventory is larger than last year's, it is still relatively small, compared to the mid-70s. Estimates of supplies of feeder cattle over 500 pounds were 1 percent larger than the year ago count. Supplies of

calves under 500 pounds were 3 percent larger than a year ago.

Imports during the year will increase feeder supplies. Shipments of feeder cattle from Mexico and Canada will add 1-2 million head to feeder cattle numbers.

Range, Forage and Feed Conditions

Relatively high corn prices last fall were negative to feeder cattle prices. For example, for 700-800 pound feeder steers, each 10 cents per bushel increase in corn prices raises the projected break-even by about 40 cents per cwt. Or, to keep break-even unchanged, feedlot operators would decrease the amount paid for feeder steers by about 60 cents per cwt.

Should 1996 turn out to be a good corn year then declining feed grain prices by mid-year will slow the rate of price declines for feeder cattle.

Prices

Prices for yearling steers in late 1995 were trading \$20 per cwt. below the average for the 1989-93 period. As long as feed

grain prices stay near harvest levels, then early 1996 yearling steer prices may trade near \$65 per cwt., \$10-12 per cwt. below year ago price levels. During the last half of 1996, heavy feeder steer prices may be in mid-\$60s near late 1995 levels.

Prices for 500-600 pound steer calves will have the same potential ups and mostly downs as the yearling steers. Prices on steer calves late in 1995 were averaging in the low \$70s per cwt., \$8-10 per cwt. below 1994 prices. Early 1996 seasonal strength may hold prices in the low-\$70s but steer calves are likely to be under some downward pressure if feed grain prices stay near the top of the current range. Prices for 500-600 pound steer calves during the last half of 1996 may average \$2-5 per cwt. below 1995 levels.

Declining feed grain prices and steady fed cattle prices could improve the feeder cattle and calf outlook by mid-1996.

Feeder cattle and calf marketing plans should be continually updated in 1996. Marketing strategies, including retained ownership, should be evaluated as market prices and production costs change.

Slaughter Hog Outlook - 1996

Allen C. Wellman



Allen C. Wellman

Hog inventory reports have confirmed the hog expansion that started in 1993 moderated during the last half of 1995. Cash Omaha slaughter hog prices ranged from near \$36 to just over \$50 in 1995. Hog prices averaged about \$43 per cwt. for the year, up about \$3/cwt. from 1994.

Supply Forecasts

Recent hog and pig reports suggest that inventories may decline slightly, about 1 to 3 percent the first two quarters of 1996. It appears likely that hog numbers the last two quarters of 1996 may be about equal to the second half of 1995.

Hog producers will be closely watching corn prices in 1996. Higher feed costs early in the year may encourage producers to decrease farrowings or not feed market hogs to heavier than normal weights. Generally, market weights for slaughter hogs continue to increase. Average weights are near 250 lbs. per market hog, up from 239 lbs. ten years ago.

The structure of the hog industry continues to undergo noticeable changes. Generally there are fewer and larger firms.

In many cases the construction of new very large hog operations are in nontraditional hog producing areas. North Carolina is the fastest growing hog producing state.

How these structural changes impact on hog supplies, during the expansion and liquidation phases of the hog industry are yet to be determined. But it seems reasonable to suggest that the managers of these large hog facilities are less likely to adjust hog numbers to changes in market prices. Especially if the facility is owned and operated by a corporation that is vertically integrated into the packing and retail side of the industry.

Demand Prospects

Pork demand has remained remarkably strong during the last two or three years. Total per capita meat supplies are record large but pork demand remains steady to slightly improving. Pork promoters are suggesting that opportunities exist for expanding the market for pork. Net pork exports were running sharply ahead of year earlier levels in late 1995.

Marketing Plan

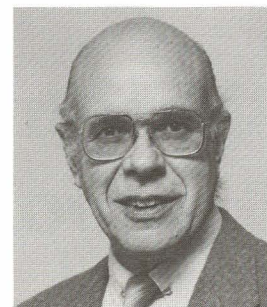
Steady to slightly increasing market hog prices often lull some producers into inaction. Producers must watch for forward pricing opportunities that achieve pricing goals and reduce price risk. The objective of your marketing plan strategy is to attain monthly-yearly average selling prices that are \$3-5 per cwt. higher than average cash prices reported at your local market.

Price Forecasts

Cash hog prices in 1996 are expected to trade near 1995 levels. Prices in the first half of the year should average in the low-\$40s. Seasonal price strengths should result in summer prices in the upper-\$40s. Prices for the second half of the year may also average in the lower-\$40s. Hog producers' production decisions for the second half of 1996 will depend on production cost and market hog price trends in the first half of 1996. At midyear feed grain production and price prospects, supplies of competing meats and pork export levels also will be influencing the market.

Multiple Year Pricing of Grains and Oilseeds

James G. Kendrick



James G. Kendrick

Prices of corn, wheat, and soybeans for delivery in the fall of 1995 are markedly above the average of recent years. Of particular interest are the prices the futures market is currently quoting for 1996 and 1997 crops (see *Table I*).

Grain and oilseed production in the next two years is likely to be above 1995 levels since it is unusual to have a three-year sequence of adverse planting and growing conditions. Yet, the market is currently assigning considerable risk premiums to traditional harvest-time prices in future years. These risk premiums are likely to evaporate quickly if crop production in 1996 and 1997 is projected to return to levels of recent years.

Some producers consider the current quotes on 1996 and 1997 crops very attractive. At these prices they are interested in pricing some fraction of expected 1996 and 1997 production and are seeking advice on techniques that would accomplish this task. Three alternatives follow:

Set Hedge (sell futures) on 1995 crop futures months for some fraction of 1996 and 1997 production. This alternative will require a "roll forward" of the futures contracts to other crop years, i.e., buy back the 1995 crop futures and reestablish the short positions by selling 1996 or 1997 harvest

month's futures. The reason this alternative appears attractive is that 1995 crop futures months have prices notably above those quoted for the 1996 and 1997 crops. Of course, when the hedged position is rolled forward the advantage of the higher price on 1995 crop futures is lost. In truth, this strategy embodies a purely speculative component that hopes the current spread between crop years will narrow. Mixing speculative adventures with prudent business decision making is seldom wise.

This alternative is often promoted by commodity brokers who will earn extra commissions as the positions are rolled forward. In addition, selling futures for 1996 and 1997 production may require considerable margin deposits, and will result in margin calls if prices rise above current levels. If the *Hedge* alternative is chosen, the preferred method is to sell futures on the 1996 or 1997 new crop months, noted in *Table I*.

Sign a Forward Price contract (a.k.a. *Flat Price* contract) with a local elevator for some fraction of 1996 and 1997 production. This alternative eliminates the margin deposit or margin calls associated with positions in the futures market. The disadvantage of this alternative lies in the weak basis the local elevator will often use in calculating the forward contract

Table I. 1996 and 1997 New Crop Futures Prices As of Early November, 1995 (cents per Bushel)

Futures	1996	1997
SEP Wheat	414	375
NOV Soybeans	667	636
DEC Corn	280	269

price on crops that will not be delivered for months or years. A basis weakening of 20 cents or more per bushel is not uncommon.

Sign a Hedge-to-Arrive contract with a local elevator for some fraction of 1996 and 1997 production. Here, the futures price is established when the contract is signed with the basis to be established later—typically anytime between when the contract is signed and when the bushels are delivered to the elevator. As in the *Forward Price* contract, margin deposits and margin calls are eliminated. The significant advantage of a *Hedge-to-Arrive* contract is that the producer can choose the date when the basis is established to compute the sale price (futures minus basis). *Hedge-to-Arrive* contracts are not favored by local elevators since they give up the advantage of using a weak basis in establishing price. These contracts are typically offered only in areas where there is more than one elevator competing for purchase of grain

or oilseeds, and typically offered only to those producers who have a reputation for supplying bushels of sufficient quality and quantity that elevators wish to aggressively compete for their business.

Generally, elevators do not advertise the availability of *Hedge-to-Arrive* contracts because with these contracts they forfeit the opportunity to use a weak basis (and thus an opportunity for higher profits) in establishing the price paid to the producer. To recover some

of these forgone profit opportunities, often those elevators who will sign *Hedge-to-Arrive* contracts advertise heavily *Deferred Pricing* contracts (deliver grain to the elevator now, establish price later) with phrases such as "Free storage until September." As many producers know, the elevator does not store the grain while awaiting the producer's decision to set price. Rather, the grain is immediately sold and the risk of a price rise covered with a long (buying) hedge. The result is that the producer has supplied the

elevator with an "interest-free loan" while becoming an "unsecured creditor" of the elevator—highly profitable for the elevator and highly undesirable for the producer. With the money saved because of the interest-free loans associated with *Deferred Pricing* contracts, elevators are less reluctant to offer *Hedge to Arrive* contracts to selected producers. In my judgment, the *Hedge to Arrive* contract is the preferred alternative for multiple-year pricing of grains.

Changing Patterns of Grain Flows from Nebraska Elevators

Dale G. Anderson



Dale G. Anderson

Nebraska's location near the heart of the nation and far from major centers of population is both a handicap and an opportunity for the state's grain producers and handlers. Producer prices for these generally heavy and bulky products are discounted by transport costs to distant markets. But relative equidistance to potential market opportunities in several directions allows shippers to take advantage of alternative markets when and where they may develop. UNL surveys, made during the years 1954-59, 1969, 1977 and 1985, along with Interstate Commerce Commission (ICC) railroad data, provide a picture of the more important trends.

Trends include the development of Pacific coast gateways and a growing reliance on trucks for shipments within the state. The latter reflects the almost total disappearance by 1985 of grain transited through Nebraska terminals or subterminals. Feed grains move increasingly to interstate destinations directly from train-loading elevators across the state.

Rail carriers compete nationally with barges for the greater part of the long-haul traffic, although barges are of minor significance in Nebraska's transport picture. Railroads carried more than one-half of Nebraska's feed grain shipments in 1985, compared with 7-16 percent in the

mid-1950s. The trend toward rail is consistent with the state's production of a growing exportable surplus, the development of train-loading elevator facilities, and growing foreign markets.

The proportion of wheat moving by rail from Nebraska country elevators has declined, however, from 98 percent in 1954 to only 56 percent in 1985. Capitalizing on their comparative advantage in long-haul traffic, railroads have abandoned much of their branch-line mileage since the 1950s and reduced the availability of transit rates, with resulting erosion of their shorter-haul traffic.

Trucks carry feed grains from country elevators to local feed lots and processors. They are competitive for some hauls to points as far as Arkansas and the High Plains of Texas, 1980 deregulation having facilitated access to back-hauls. Tight supplies of rail equipment have at times contributed to movements of several hundred miles. Wheat has sometimes been trucked from western Nebraska to facilities in the east, in direct competition with railroads. Railroads carried 75 percent of the soybeans in 1954; they now move mainly by truck to processors in eastern Nebraska.

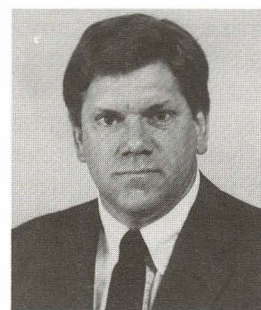
Nebraska's wheat goes to many destinations, some to domestic millers, some to ports of export. Minnesota was a key

market as late as 1969. Major rail destinations in 1992 included Texas, (nearly one-third of the rail volume); the Pacific Northwest (PNW), and western states, generally; and Kansas and Missouri (together one-third), much of the latter probably destined ultimately for the Gulf.

One-fifth of rail shipments of corn went to the PNW in 1992; California took almost that much and 8-10 percent went each to Texas, Arkansas and the "southwest." About one-third of rail sorghum shipments went to St. Louis, while 15 percent were to Texas, another 13 percent to the southern region. California was a major market in 1954, remaining so as late as 1969. The Gulf has also long been important.

The integration of the nation's agricultural enterprise into world commodity markets has created an interdependence of economic interests between Nebraska grain producers and producers and consumers in nearly every corner of the world. This interdependence is reflected in a highly variable pattern of grain shipments leaving the farms and markets of the state. The volume and pattern of shipments in the future will depend upon the forces of supply and demand in local, national and world markets.

Further Developments in the Changing Pork Industry



Jeffrey S. Royer

Jeffrey S. Royer

Important developments continued to occur in the U.S. pork industry during the past year. Given extremely low prices during the fall of 1994, many hog producers, particularly independent producers in the Midwest, reduced the size of their breeding herds. This past fall, U.S. breeding inventories were 5 percent lower than a year before, and total hog and pig inventories were 2 percent lower. In Nebraska, breeding inventories were 6 percent lower while total hogs and pigs were down 7 percent.

While some large pork firms have continued to grow, overall expansion has been slower because of price uncertainties. Although the nation's largest pork firm, Murphy Family Farms, increased its sow herd 26 percent to 227,500 head in less than a year, two other large producers, Carroll's Foods and Premium Standard Farms, did not add to their herds. The expansion that has occurred has met increasing resistance and concerns about odor, waste management, and water quality. Meanwhile states continue to struggle with setting policies that balance economic development, environmental concerns, and the interests of independent producers. The following is a summary of some developments during the past year.

Iowa. In May, after three years of debate, the state legislature passed a law strengthen-

ing the environmental control of livestock operations. The law requires large livestock operators to file detailed manure management plans, increases the minimum distances between new confinements and neighbors, and establishes an indemnity fund for cleaning up abandoned lagoons. It also provides producers increased protection from nuisance lawsuits. A backlog of permit applications stemming from the new regulations was blamed for bringing the construction of new livestock facilities in the state to a virtual halt during the summer. Missouri, North Carolina, Oklahoma, and Texas also revised their regulation of livestock operations in 1995.

North Carolina. In June, 25 million gallons of slurry escaped from an eight-acre lagoon operated by a 1,200-sow hog farm. The spill, which occurred 30 miles upstream from the Atlantic Ocean, destroyed neighboring soybean and tobacco fields and threatened commercial fishing. As a result of the spill, the governor ordered an intensive review of the 4,500 livestock waste lagoons in the state, exposing numerous leaks and other problems. The spill and several smaller spills in Iowa, Minnesota, and Missouri have intensified criticism of large confinement operations.

Oklahoma. It appears Oklahoma will soon emerge as a major pork producing state.

Tyson Foods and Cargill have been steadily increasing their sow herds in eastern Oklahoma, making it one of the fastest growing hog producing areas in the nation. However, this growth has been overshadowed by the giant Seaboard packing plant that was scheduled to open in the panhandle area this past fall. In two years, when it is operating two shifts at full capacity, it will require the output of 200,000 sows in Oklahoma, Texas, Kansas, and Colorado. Although the plant is stimulating local industries, current attempts to establish large contract production units in the area have met opposition by citizen groups concerned about water depletion and pollution.

Kansas. In September, Clay County commissioners authorized corporate hog production in this northeast Kansas county. Unless overturned by voters, Clay County would become the twenty-fourth county to allow corporate production under the 1994 revision of the state's corporate farming law giving counties the option to allow corporate hog farming. Most of the counties to authorize corporate hog operations are in southwestern Kansas near the new Seaboard plant. Voters in six northwestern counties overturned decisions to allow corporate farming, largely because of groundwater concerns.

Nebraska. In September, a Lancaster County district judge ruled that a swine farrowing operation organized as a nonstock cooperative was a nonprofit corporation under the state constitution and could acquire agricultural land and livestock. The state attorney general's of-

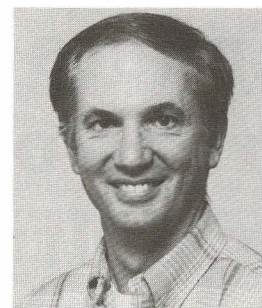
fice planned to appeal the ruling to the Nebraska Supreme Court.

Recently, higher hog prices have cut into packer margins, and some packers have sought long-term contracts with large producers to smooth out prices and ensure a steady supply of uniform hogs. This concerns

some observers who believe packers will eventually use contract hogs to bid down the market price, further threatening independent producers. The incentives for packers to contract may increase during the next few months as new and expanding packing plants enlarge packing capacity by 20 percent.

Tax Law Changes for 1996

George H. Pfeiffer



George H. Pfeiffer

As this is written (October 1995) Congress is in the final stages of writing tax legislation to be submitted to the President for either his signature or his veto. It is impossible to tell at this point exactly what changes might be made as the House and Senate legislation is reconciled, and what further changes might be made if the tax package is vetoed. However, some fairly substantial changes appear to be in the works which will have a significant impact on the taxpayers of Nebraska.

A permanent tax credit for children appears to be a certainty in future tax legislation. It seems now that a \$500 per child credit for each child under age 18 will be enacted as of January 1, 1996 (for the '96 tax year). Uncertain still are any income limitations on the credit. House legislation allows the full credit for families earning up to \$200,000, while the Senate bill limits the full credit to most families earning less than \$110,000. In either case, however, the tax credit is not "refundable" meaning that it will only benefit those who have tax liability. An estimated 43 percent of children in the U.S. are from families too poor to qualify for the full credit.

Increased opportunity for personal savings appears to be likely in both the House and Senate versions of the tax bill. The Senate version is most expansive: it would raise the

income cap for deductibility of IRA contributions over time to as much as \$85,000 for singles and \$100,000 for married couples, and permit both husband and wife to make a full contribution. Taxpayers who choose to make deposits to IRAs with after-tax dollars could withdraw funds prior to retirement tax and penalty free after five years. Withdrawals from IRAs would also become penalty free for medical, college, first home purchase and unemployment related expenses. Under consideration too are so called "health care savings plans" which permit the savings of pre-tax dollars in accounts which permit tax-free and penalty-free withdrawals only to pay for medical services.

The two changes that may affect agriculture most substantially are changes in the taxation of capital gains and changes in estate tax law. Currently, capital gains are taxed at the taxpayer's ordinary tax rate up to a maximum of 28 percent. Both the House and the Senate propose a 50 percent exclusion for individual capital gains, making the effective top rate 19.8 percent. Most taxpayers would find their capital gains tax rate cut in half. The effective date for the House version is transactions on or after January 1, 1995, while the Senate capital gains rate would be effective October 13, 1995. Landowners in particular contemplating substantial sales may wish to

delay the transaction until the effective date is settled, because missing the effective date of the change will substantially affect tax liability. The corporate capital gains rate is also slated to decrease under both bills.

Federal estate taxation has not changed materially since 1987. Currently, an estate valued up to \$600,000 passes without federal estate tax. Many farms and small businesses in Nebraska exceed this amount. The Senate tax bill expands the size of the estate that passes tax free to \$750,000 by 2001 while exempting the portion of estates made up of farm or small business property as large as \$1.5 million, and lowers the tax current tax rate by 50 percent on the next \$3.5 million of estate value composed of farm or business property.

In writing tax law, Congress is always faced with a difficult balancing act. The current majority in Congress campaigned and was elected on the twin platforms of balancing the budget and providing tax relief. Obviously, these objectives are often contradictory, and compromise is inevitable. It is likely, however, that most of the provisions discussed will be enacted in some form. Taxpayers contemplating or anticipating transactions in the areas discussed should consult their tax advisor regarding the final outcomes and dates that changes may have become effective.

Impacts of Changing Farm Policy on Agricultural Land Values

Bruce Johnson and Evert Van der Sluis

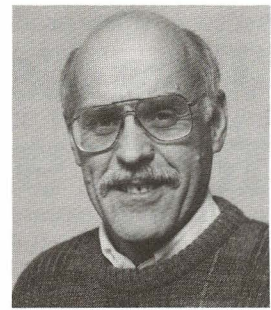
Now that the specifics of the emerging farm bill are unfolding there is little doubt that substantial change is underway in farm policy. Current proposals of the farm bill emphasize a decreasing role for government intervention in agriculture with less financial support to reduce budget outlays but with fewer restrictions than under the current policy. Commodity programs as historically structured will likely be phased out over several years, and the acreage enrollment in the Conservation Survey Program (CRP) will likely be decreased.

Farm programs have provided both income enhancement and price stability over time. Since farmland values are primarily based on what the land can earn, the increased earnings due to the programs have been "capitalized" into agricultural land values—in short, land values today are higher by some amount than they would have been without the programs. It follows then that the removal of these programs would decrease land values. Recent estimates by the Food and Agricultural Policy Research Institute (FAPRI) suggest a gradual decline in land values of an additional 2 to 2.5 percent in each year of the commodity program phase out, resulting in a 11 percent total

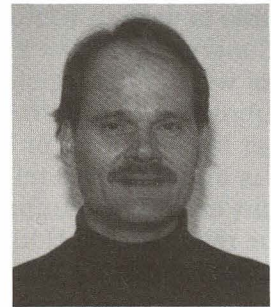
decline in values by the last year. It must be noted, however, that this does not mean that land values will in fact go down from current values. It only means that they would go down from levels had the programs been in effect.

The exact impact on land values due to program scale-down in Nebraska is dependent upon a number of factors. First, is the relative dependency an agricultural area has upon farm program participation and relative acreage base signed up. As a state, Nebraska has relatively high participation and acreage sign-up, partly because of large crop acres and partly because of considerable irrigation of land in feed grains under continuous or near-continuous production. Thus, particularly land values in cash grain areas of the state will likely be affected.

Second, the impact on land values depends on what the agricultural economy is experiencing at the time of the phase out. Those advocating farm program termination argue that global markets conditions will improve, leading to export expansion and commodity cash price increases sufficient to negate the effects of the program phase out. The current low level of global commodity reserves lends support for this argument.



Bruce Johnson



Evert Van der Sluis

Third, the decline in land values will be influenced in part by the length of time allowed for program phase out. If policy dictates a phase out over several years rather than an abrupt termination, the market will more likely experience a "softer landing." The annual changes would be smaller and also reflective of greater potential for the commodity market forces to adjust.

Fourth, land market participants may have already factored in value adjustments for eventual termination of farm program benefits. In recent years, agricultural land values in Nebraska and other major farm states have moved slowly upward, perhaps suggesting that the land value adjustment process has already absorbed the expected decrease in land earnings in anticipation of program payment cuts.

Fifth, the magnitude of land value declines will depend on land quality. Farm programs have taken marginal land out of crop production, and in effect

reduced the relatively greater financial risk associated with farming this type of land. By scaling down the programs, crop production risk could increase with expected earnings from the land going down, thus decreasing the price of land.

But, while the impact on agricultural land values may be

hard to estimate at this time, there are a number of issues for the Nebraska producers and land market participants to consider. First, if one is in an area of heavy program participation (such as the Platte Valley), the declining role of government involvement in farm programs will result in a dampening

impact on land values. Second, it will be increasingly important to compensate for the risk increase associated with program termination. Producers will individually need to adjust via marketing strategies to compensate for the fact that program payments will no longer buffer price shifts.

The 1995 Farm Bill— Some Reflections

Roy Frederick



Roy Frederick

Throughout the past year, development of a new farm bill has been the headline event in agricultural policy circles. With the focus on reduced spending, the question was *how much* the cuts would be, not *whether* they'd occur.

Nebraska wheat and feed grains producers must reckon with new program provisions as they assess cash flow possibilities for 1996 and beyond. It would be easy to focus on lowered support levels and ignore other provisions in the new legislation. But in my judgment, that would be a mistake. When all is said and done, the combination of policy provisions that affect farm incomes will continue to be complex, as it's been in the past.

Production flexibility will be greater than it's been in many years. Opportunities to plant any of several different crops without losing either payments or crop base will be available. This means that producers need to think seriously about production costs and potential market prices of alternative crops. Government support, albeit at lower levels than in the past, generally will be available without regard to the crop combination selected.

Of equal or greater importance, the government apparently will no longer be able to ask producers to retire land

from production as the price of admission to a commodity program. This removes a major reason for *not* participating. But it means that the government will have little or no way to balance supplies with demand, should a strong need arise to do so. (Admittedly, acreage reduction requirements have been only marginally effective in reducing production in recent years.) It's another reason to suggest that producers will need to give increased attention to market prices under the new legislation.

I have been asked many times how producers would fare if the government offered no price and income supports. My reaction has always been that it would depend on what happens to demand for agricultural commodities. While the government is not exiting from agriculture in 1996, it's a step in that direction. Over the next few years, we may see just how important demand growth is to commodity prices.

We have known for at least 25 years that the collective ability of American farmers to produce exceeds domestic food needs. Thus, if production is essentially unrestricted, demand must grow in other sectors. It could come in the form of nonfood demand in the U.S. Or it could come from foreign buyers.

Improved technology has made it possible to convert agricultural commodities to industrial products on a more competitive basis with products that come from petroleum-based technology. The U.S. Department of Energy estimates, for example, that ethanol production approached 1.5 billion gallons in 1995. This compares to less than 100 million gallons in the late 1970s. More efficient production has been a big contributor to this growth, although tax breaks at the federal and state level also have supported industry expansion. Assuming that federal and state policies remain supportive, the industry should continue to grow in the future.

Other industrial products range from those in significant use (soy ink) to others in the experimental stages (compressed wheat straw boards for walls and ceilings). Further experimentation and growth is anticipated.

This past year was a banner year for exports of U.S. agricultural products, with total shipments up nearly 20 percent from 1994's record high. Much of this recent growth comes from Asia, where both population and incomes are rising rapidly. China offers particularly intriguing opportunities. Somewhat longer range, U.S. producers might also anticipate

expanded sales potential in a number of Latin American countries.

While I see good opportunities evolving in both the non-food (industrial) and export markets for agricultural commodities, it's too much of a stretch to suggest that demand will increase in lock-step with American farmers' expanded production capacity. If nothing else, worldwide weather condi-

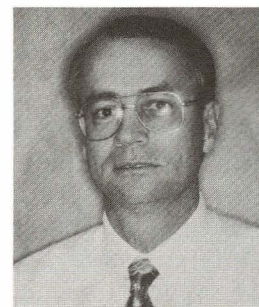
tions will continue to be erratic from year to year, impacting both on importers' needs and competing exporters' stocks. Foreign demand for U.S. commodities also will ebb and flow with changes in political/diplomatic relationships (although I believe this will be less of a factor in the future than in the past).

Some producers will want to respond to a lower government

safety net with an increased individual effort to control price and income risks. Cash contracting, futures and options are among the possibilities. Still, it's almost a certainty that the previous level of government payments will be missed. How much they're missed will probably vary widely from year to year and from producer to producer.

Assessing the Impact of Adjusted Farm Program Provisions

Roger Selley



Roger Selley

As of this writing, Congress was considering a number of changes in the wheat and feed grains program including: 1) increasing the normal flex acres (NFA), 2) reducing or eliminating set aside (ACR), and 3) reducing the per bushel deficiency payment. Determining the magnitude of the impact of any of these changes will require more detail on the changes and specific information on the farm situation including the 1) cropland acres and base acres, 2) payment yield (HWY), and 3) expected program crop and alternative crop yields and costs of production. However, we can identify the general direction of the impact of each of these changes and recognize some of the differences that will occur between farms.

The intent of the changes being considered is to reduce total governmental expenditure with some attention given to maintaining participation levels. To illustrate, increasing normal flex (unpaid) acres and reducing deficiency payments per bushel will tend to reduce expenditure and discourage participation while reducing or eliminating set aside would be expected to make the program more attractive. Program participation has been intended to have two primary producer benefits in recent years: 1) income support, and 2) reduced risk. Reducing

government expenditure would be expected to negatively affect both of these objectives. However, program participation may remain attractive for a number of producers. For example, producers with full base will still receive an income support and realize a reduction in down side price risk if set aside is eliminated.

A full base and zero set aside results in no cost to participation beyond the paper work and the purchase of CAT insurance if still required. If a set aside requirement remains, the effect of increasing the NFA is to reduce the break-even price, reduce the down-side price protection, and increase the income sacrifice from

participation between the break-even price and the target price (Figure 1). The net effect may be that the income support and the down-side price protection is sufficiently reduced to result in producers deciding to drop out of the program. On the other hand, if NFA is increased while the set aside is reduced or eliminated, the effect could be to actually increase the break-even price between participation and nonparticipation, maintain protection for down-side price risk and reduce the sacrifice of participation with high prices. The bottom line is whatever the changes, farm program participation may still be beneficial even if not as attractive as previous programs.

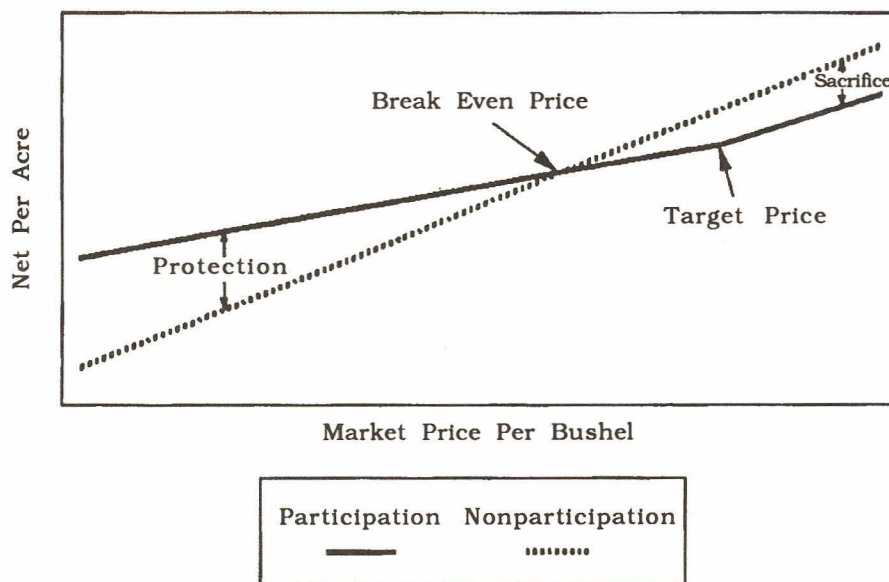
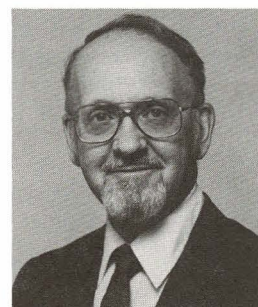


Figure 1. Participation vs. Nonparticipation.

Irrigation Development — Past and Future



Maurice Baker

Maurice Baker

Irrigation continues to be of great economic importance to Nebraska with over 8 million irrigated acres in 1993 (Table 1). This is a growth of more than 100 percent or 4.1 million acres over the past 23 years. As would be expected, this growth was not uniformly distributed within the state. The East Agricultural Statistics District had the greatest growth in acres with 815,000 more irrigated acres in 1993 than in 1970 (Table 2). However, the greatest percentage increase in acreage was in the Northeast District with a 400 percent increase during the period of analysis. This huge percentage increase represented about 85 percent as many acres increase as in the East District.

The growth in the total irrigated acres has continued throughout the 23-year period in all Agricultural Statistics

Districts except one. The number of irrigated acres in the Southwest District has declined by about 1 percent since 1985. This decline reflects adjustments to such things as changing water supplies and the irrigation of some marginal land associated with some aggressive irrigation development during the 1970s and early 1980s.

The North District also had fewer irrigated acres in 1993 than in 1985. However, the 1993 figures indicate a rebound from fewer acres just 3 years before. Some of this variation may reflect the difficulty of irrigating large parts of the district. New lands are occasionally brought under irrigation only to return to nonirrigated use later.

While irrigation acreage has tended to continue to increase, much of the growth in irrigation occurred in the 1970s. Seventy-eight percent of the increased

irrigated acres in the 23-year period were developed in the 1970s. Almost all (98 percent) of the irrigation development in the North District took place in the 1970s.

The rapid growth of irrigation reflected a number of factors which encouraged it in the 1970s. Prices for corn and other crops normally irrigated were favorable for producers. Exports were generally strong and were expected to remain so adding support for the higher commodity prices. Federal tax laws also encouraged rapid irrigation development.

Land shaping could generally be considered an expense rather than an investment; therefore, it did not have to be depreciated for federal income tax purposes. Depreciation schedules permitted early deductions as well as a much shorter time to fully depreciate

Table 1. Total irrigated acres by Agricultural Statistics District, Nebraska, 1970 - 1993.

Agricultural Statistics District	Year					
	1970	1975	1980	1985	1990	1993
Northwest	514,600	626,000	695,000	764,000	769,000	802,000
North	188,500	372,000	578,500	647,000	574,000	585,000
Northeast	171,900	350,000	690,000	820,000	853,500	860,000
Central	801,600	982,000	1,190,000	1,311,000	1,307,000	1,322,000
East	863,000	1,114,000	1,478,000	1,577,000	1,647,000	1,678,000
Southwest	428,000	681,000	916,000	1,013,000	1,002,000	1,001,000
South	554,900	700,000	873,000	954,000	994,000	1,008,000
Southeast	475,500	575,000	714,000	813,500	838,500	844,000
NEBRASKA	3,998,000	5,400,000	7,200,000	7,900,000	8,000,000	8,100,000

Source: Nebraska Agricultural Statistics

Table 2. Change in acres and percentage change in irrigated acres by Agricultural Statistics District, Nebraska, 1970-1993.

<i>Agricultural Statistics District</i>	<i>Acreage Change</i>	<i>Percentage Change</i>
Northwest	287,400	56
North	396,500	210
Northeast	688,100	400
Central	520,000	65
East	815,000	94
Southwest	573,000	134
South	453,100	82
Southeast	368,500	77
Nebraska	4,102,000	103

Source: Calculated from Nebraska Agricultural Statistics

investment items than previous tax regulations had permitted. Capital gains were taxed at one-half the rate of ordinary income. All of these things were incentives for rapid irrigation development.

Real interest rates were lower than had been observed for many years. This made borrowing for irrigation development profitable even with highly leveraged loans. The favorable investment opportunities also encouraged intensification of

farming operations since land prices were rising rapidly and there were many potential buyers for each parcel of land which came on the market.

While many farmers were experiencing disastrous economic conditions during the early 1980s, many others were making substantial profits which resulted in still more irrigation development. Lower commodity prices, lack of high quality irrigable dryland, concerns about long-term water

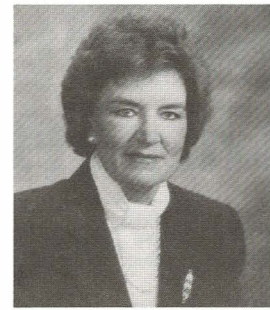
availability and other issues have slowed the rate of irrigation development in the past few years.

Will irrigation development take another big jump in light of recent increases in commodity prices? If export demand and commodity prices remain strong for more than this year, I anticipate some increased interest in additional irrigation development; however, it will not be as dramatic as in the 1970s and early 1980s.

There are a variety of reasons rapid development will not take place. Current tax regulations are not as favorable to development as in the earlier time period. The more easily and lower cost land development has been completed. Greater regulation of water development has taken place and the possibility of conjunctive use management will make future water development more difficult than in the past.

Recycling Comes of Age in Nebraska, Elsewhere

Wanda Leonard



Wanda Leonard

The volatile, cyclical past of recycling markets appears to be diminishing. An improved economy, government support, new recycling facilities, increased exports and intensified consumer demands have all contributed to the turnaround.

Commercial recycling has suffered through its growing pains. Initially, record low prices were due to temporary shortages in disposal capacity and increases in municipal recycling programs. However, business opportunities developed as supplies of materials increased.

Governmental protection of the natural environment evolved into further recycling and increased business development and processing. For example, in 1988 only nine facilities in North America could produce recycled content newsprint. Today 35 such facilities exist. Paper manufacturing investments in the last decade are estimated around \$7 billion.

Also consider plastic. The PET — plastic bottle — recycling capacity has surged by 300 million pounds in the last two years. About one-third of PET reclaimers in the U.S. started in the last 12 months; a number of firms plan to expand or even double in the next one to two years.

A weak U.S. dollar has attracted overseas buyers to purchase U.S. fiber, which has especially helped newspaper and cardboard recycling. This, too, has evolved into market advancement.

This recycling growth will continue improving, as the public demands better use of natural resources. National polls indicate the environment ranks fourth in issues of public concern, following health care, crime, and the deficit.

These points further explain the developing attitudes and conditions that will contribute to the continued growth and expansion of recycling.

- Consumers demand that external costs associated with the manufacture of billions of disposable products be considered. Using recycling materials to make new products saves energy, air, water, and water treatments.

- Privately owned Material Recovery Facilities (MRFs) accept both presorted and non-sorted waste. To stay competitive, be profitable and meet consumer needs and goodwill, private waste processors are stepping up recycling capabilities. Facilities are developing in Nebraska as well as nationally.

- "Pay as You Throw" or variable rate pricing provides a means for people to manage household disposal costs and add value to their discards. Material diverted from the landfill by initial reduction, composting or recycling saves money. As communities initiate variable rate systems, ore recycling will occur.

- Legislation also could shape a segment of recycling. A 1995 Nebraska Legislature resolution called for a study of beverage container deposit programs. If subsequent bottle bill legislation passes, it will definitely increase the number of recycled beverage containers in Nebraska. Approximately 75 percent of the beverage containers are returned for recycling in the 10 states that have a beverage container recycling law.

In addition, talk of a national beverage container legislation also is in the air.

The bottom line: recycling will likely continue to increase, grow, and prosper in Nebraska as well as the nation, to meet the demand of the citizenry and the public and private recycling support base.

Agricultural Competitiveness and Environmental Regulations

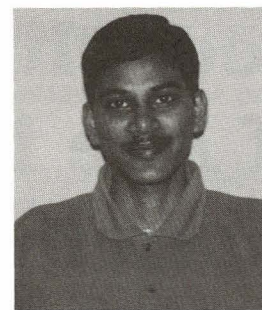
Siva rama Krishna Valluru
E. Wesley F. Peterson

During the debates over ratification of NAFTA and the GATT Uruguay Round agreement, the relationship between international trade and environmental regulation emerged as a highly contentious issue. Some environmental groups argued that trade liberalization leads to the expansion of polluting industries, generates pressures to weaken environmental regulations, and subjects national environmental policies to the decisions of a world trade bureaucracy that is not overly sympathetic to concerns about global environmental protection. In contrast, trade advocates worried that a new set of trade barriers based on environmental criteria of dubious validity would be imposed with the result that the benefits of a free and open trading system would be lost. Another issue raised in these debates concerned the effects of environmental regulations on the international competitiveness of domestic industries. Some business interests, for example, have argued that environmental regulations increase their costs of production making them less competitive on world markets. This issue is the focus of this note.

There has been a great deal of recent research on the impact

of environmental regulations on competitiveness. The concept of "competitiveness" is not well-defined and is frequently misused in the popular press. One way in which it is misused relates to the notion of "costs of production." It is often assumed that if, say, wages increase by 10 percent, labor costs will increase by 10 percent and overall costs of production will be 10 percent higher. But such an outcome would only be true if labor were the only input used in producing the product and if output is not affected by the change in costs. In reality, labor (or any other productive input) constitutes only one part of total production costs and as its price increases, firms will generally be able to substitute other inputs for the relatively more costly labor and make other adjustments in their operations that reduce the impact of the wage increase on total costs of production.

In terms of international competitiveness, these adjustments may leave the firm with slightly higher costs but still able to compete with foreign firms in international markets. The same line of reasoning applies to arguments that stricter environmental regulations in the United States raise costs and make U.S. firms



Siva rama Krishna Valluru



E. Wesley F. Peterson

uncompetitive. The actual effect of environmental regulations can only be determined by study of specific cases. Many such studies have been done for manufacturing industries in the United States. (Jaffe et al.) review a large number of them and conclude that there is "... little evidence to support the hypothesis that environmental regulations have had a large adverse effect on competitiveness, however that elusive term is defined" (p. 157). Tobey reaches the same conclusion in analyzing five manufacturing industries identified as "polluting."

There is some evidence that similar conclusions would apply to agriculture. In a recent study conducted by the authors, a sample of forty grain-trading countries was analyzed (Valluru and Peterson). The results showed that world grain trade patterns are well explained by the amounts of various factors of production found in the different countries. In particular,

countries endowed with large amounts of tropical land tend to import grains while countries with large amounts of temperate and Mediterranean land are exporters. Capital, skilled labor and agricultural labor are also important in explaining grain trade patterns. A variable designed to measure the impact of environmental regulations was added to the analysis. Countries were divided into those with strict regulations and those with less strict regulations and a statistical test was performed to determine whether this variable has an impact on trade patterns. The results show that it does not.

These results are consistent with those found by Leamer, Jaffe et al. and Tobey for manufacturing industries. They suggest that environmental regulations have an insignificant impact on grain trade. Further research will be conducted to refine these results and extend the analysis to other agricultural sectors. However, based on the analysis so far, it appears that export-dependent sectors, such as the U.S. grain industry, need not worry about the impact of environmental regulation on their ability to export.

References:

- Jaffe, Adam B., Steven R. Peterson, Paul R. Portney, and Robert Stavins. "Environmental Regulation and the Competitiveness of U.S. Manufacturing," *J. of Econ. Lit.*, 33-1 (1995):132-163.
- Leamer, Edward E. *Sources of International Comparative Advantage: Theory and Evidence*, MIT press, Cambridge, MA, 1984.
- Tobey, James A. "The effects of Domestic Environmental Policy on Patterns of International Trade," in *The Environment, Government Policies and International Trade: A Proceedings*, (eds.) Mathew D. Shane and Harold Von Witzke, ATAD/ERS/USDA, Staff report No.AGES9314, Washington (1994):67-87.
- Valluru, Siva ram Krishna and E. Wesley F. Peterson. "The Impact of Environmental Regulations on Agricultural Trade," *Agric. and Resource Econ. Review*, in review.

Federal Conjunctive Use: Kansas v. Colorado

J. David Aiken

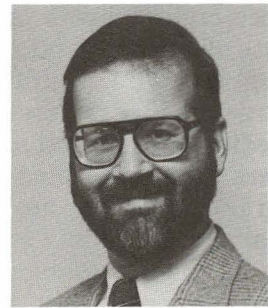
The flow of the Arkansas River is allocated between the states of Colorado and Kansas in the Arkansas River Compact. In December 1985 Kansas sued Colorado in the U.S. Supreme Court, arguing that Colorado irrigation wells junior to the 1949 Arkansas River Compact were depleting the flows of the Arkansas River into Kansas in violation of the compact. The Supreme Court appointed a special master, California water attorney Arthur Littleworth, to hear the evidence in the case and make recommendations to the Supreme Court. On February 9, 1994, the special master issued his 346-page two-volume report. The special master found that the junior Colorado wells did indeed deplete Arkansas flows in violation of the compact. These findings were confirmed by the Supreme Court in a 1995 decision.

Kansas is also threatening to sue Nebraska to enforce the Republican River Compact similar to its Arkansas River Compact suit against Colorado. Concerns regarding the potential Kansas lawsuit have persuaded legislators to give serious consideration to legislative proposals to deal with the conjunctive use of surface water and groundwater.

Colorado will likely make a settlement proposal to provide

replacement water to Kansas to compensate for the stream depletion effect of post-compact wells. Presumably well owners would be required to purchase their share of the 30-40,000 AF/yr required or else stop pumping. A statute establishing a new program to make low-interest loans to groundwater irrigators to purchase replacement water was adopted in Colorado in 1995.

This observer expects Kansas and Colorado to settle the case. Major issues involved in the settlement include 1) specifying how much water post-compact wells deplete Arkansas river flows into Kansas, 2) determining whether Colorado compensates Kansas for past water depletions with water or money and the quantities thereof, and 3) determining how Colorado will provide replacement water to offset the depletion by post-compact irrigation wells (perhaps 25 percent-35 percent replacement of current pumping). If a settlement is reached, post-compact wells in Colorado will likely be able to continue pumping only if they comply with augmentation requirements. Augmentation could be provided by purchasing and retiring surface water appropriations, by purchasing stored water in reservoirs, or by pumping directly from wells into streams.



J. David Aiken

For example, an irrigator who pumps 300 acre-feet of water per year to irrigate 100 acres would have to replace 90 acre feet of water each year if the augmentation requirement were 30 percent. This could be done by buying up 90 acre feet of senior surface appropriations and retiring them, buying 90 acre feet of stored water from a reservoir to be released during low flow periods, or some combination thereof. A groundwater irrigator who refused to provide augmentation water would probably be prohibited from pumping by Colorado water officials.

If there is no settlement, the Supreme Court will likely grant Kansas' motion to prohibit pumping from the approximately 1,400 post-compact irrigation wells.

Kansas water officials indicate they will sue Nebraska regarding alleged Nebraska water overuse under the Republican River Compact between Kansas, Nebraska and Colorado. While Kansas would have a more difficult time against Nebraska than it did against Colorado, Kansas' claims do have some merit. Nebraska public policy makers should consider whether they wish to have Nebraska water law determined by the Unicameral or by a federal judge.

THE AUTHORS

J. David Aiken

Agricultural Economics Department
103D FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1848

Dale G. Anderson

Agricultural Economics Department
307B FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1940

Maurice Baker

Agricultural Economics Department
314D FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1796

Olivier Le Boulanger

B.P. 1607 ENESAD
2100 Dijon
FRANCE

Dennis M. Conley

Agricultural Economics Department
307A FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-2034

Sam Cordes

Agricultural Economics Department
58 FYH - University of Nebraska
Lincoln, NE 68583-0947
(402) 472 - 3401

A. L. (Roy) Frederick

Agricultural Economics Department
207B FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-6225

Paul H. Gessaman

Agricultural Economics Department
205A FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1748

Bruce Johnson

Agricultural Economic Department
314B FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1794

H. Douglas Jose

Agricultural Economics Department
304C FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1749

Benedict Juliano

Agricultural Economics Department
212 FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-2543

James G. Kendrick

Agricultural Economics Department
308B FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1933

Wanda Leonard

Southeast Research & Extension Center
209 MusH - University of Nebraska
Lincoln, NE 68583-0714
(402) 472-3674

Lynn H. Lutgen

Agricultural Economics Department
217 FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-3406

Gary D. Lynne

Agricultural Economics Department
102B FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-3401

William Miller

Agricultural Economics Department
304B FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-0661

Richard K. Perrin

Agricultural Economics Department
314A FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-9818

E. Wesley F. Peterson

Agricultural Economics Department
314C FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-7871

George H. Pfeiffer

Agricultural Economics Department
205C FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1775

Jeffrey S. Royer

Agricultural Economics Department
207A FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-4634

Roger Selley

South Central Research & Extension Center
Clay Center, NE 68933
(402) 762-3535

Raymond J. Supalla

Department of Agricultural Economics
307C FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-1792

Sivarama Krishna Valluru

Agricultural Economics Department
212 FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-2543

Evert Van der Sluis

Agricultural Economics Department
308C FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-8480

Allen C. Wellman

Agricultural Economics Department
208B FYH - University of Nebraska
Lincoln, NE 68583-0922
(402) 472-2039