

## **Public Policy for Agriculture After Commodity Programs**

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The *Federal Agricultural Improvement and Reform (FAIR) Act* of 1996 opted for the market rather than the government to allocate resources and set returns in agriculture. A modest safety net of marketing loans and crop insurance remains but the era in which government managed the supply of major crops appears to be ending.

The objective of this paper is to consider appropriate public policy for American agriculture without supply-control programs. We discuss options for policies addressing key concerns: economic efficiency, equity, the environment, instability, the family farm, and rural communities. The discussion is suggestive, not exhaustive, and is intended to stimulate thinking on how post-commodity program policy might better serve the needs of agriculture and the public at large.

### The Changing Agricultural Policy Paradigm

Table 1 shows elements of the old and new paradigm for public policy toward agriculture. We define the paradigm in terms of its central concepts, underlying beliefs, political situation, and resulting public policies.

#### *Central Concepts*

Central to the old paradigm was the concept of agriculture in chronic economic disequilibrium. Disequilibrium were viewed as the result of (1) rapid technological advances

increasing output and saving labor (Cochrane), (2) slowly increasing demand (Houthakker), and (3) cyclical demand (Schultz) acting on an industry characterized by limited ability to adjust (Johnson and Quance). Consequently, agriculture was characterized by excess production capacity (production chronically exceeding what the market could absorb at politically and/or socially acceptable prices), excess operator and family labor, and persistent low rates of return even for commercial farming resources.

**Table 1. Old and New Public Policy Paradigm for Agriculture.**

OLD PARADIGM	NEW PARADIGM
<i>Central Concepts</i>	
Chronic economic disequilibrium <ul style="list-style-type: none"> <li>• Excess production capacity</li> <li>• Excess labor</li> <li>• Chronic low rates of return</li> </ul>	Approximate long-term economic equilibrium <ul style="list-style-type: none"> <li>• Importance of off-farm income</li> <li>• Economic efficiency</li> <li>• International competitiveness</li> </ul>
<i>Underlying Beliefs</i>	
Farm fundamentalism Agriculture as family-farm way of life Market failure Food security through government	Democratic capitalism Agriculture as big business Government failure Food security through private sector
<i>Political Situation</i>	
Pivotal popular vote at margin United agricultural establishment Hold key Congressional leadership	Weakened plebiscite power Fragmented interest groups Increased reliance on monetary contribution
<i>Public Policies</i>	
Public stabilization of markets and incomes <ul style="list-style-type: none"> <li>• Income transfers tied to production base</li> <li>• Supply control</li> <li>• Demand expansion (e.g., export, ethanol subsidies)</li> </ul>	Economy-wide economic growth Provide public goods and correct externalities Conditional safety net

In contrast, the new paradigm views the agricultural economy as near long-term economic equilibrium in which rates to return on resources on reasonably well-managed commercial farms are comparable to rates of return elsewhere except for transitory deviations (Tweeten, ch. 4). Furthermore, agriculture is capable of adjusting to shocks so that chronic intervention by government is not needed for reasonably well-managed commercial farms to earn returns as high as their resources would earn elsewhere.

In 1994, a reasonably representative recent year, income of all U.S. households averaged \$43,133 while income of farm households averaged \$44,140 (U.S. Department of Agriculture, December 1995, p. 4). Farm and nonfarm households have similar incomes largely because farmers and their families have transferred their excess labor off the farm — either as part-time farmers or by leaving the farm for other work. Off-farm income comprised 88 percent of total income of farm households in 1993, 1994, and 1995 (U.S. Department of Agriculture, December 1995, p. 31). For most farm families, farm income is not of much consequence.

A central concept of approximate long-term economic equilibrium carries with it the corollary that economic efficiency will result from competitive private markets with a supporting government providing public goods and correcting externalities. Such efficiency ensures competitiveness in a global economy increasingly open to trade.

### *Underlying Beliefs*

A cornerstone of the old paradigm belief system was farm fundamentalism. It viewed the family farm as an essential part of our national heritage which must be preserved (see Tweeten,

p. 77). Agriculture was synonymous with family farmers pursuing a way of life. Another cornerstone, largely coming from the Great Depression, was that government intervention was justified because market failure was viewed as common even for rival and exclusionary goods such as farm commodities. This belief was one reason government was charged with safeguarding food security by diverting acres and storing commodities.

In contrast, the public under the new paradigm increasingly views agriculture as big business. This belief justifies “mainstreaming” — treating agriculture the same as other business sectors. With many Americans holding the populist belief that “big is bad and small is beautiful,” farmers will find economic rents more difficult to obtain from taxpayers. Farmers will find the public more willing to use the stick rather than the carrot to correct externalities.

With the failure of communism and the success of market economies such as Chile and Hong Kong, democratic capitalism has received new respectability. Democratic capitalism emphasizes the efficiency of the private sector for establishing prices through supply and demand for *market* goods. Although the public values government intervention to improve private market efficiency, it recognizes that special interests, bungling, and other shortcomings make government failure at least as great a threat as market failure. This recognition constrains government intervention.

### *Political Situation*

The political process translates concepts and beliefs into public policy. Agriculture is confronted with not only a new set of concepts and beliefs, but also a new role of agriculture in

the political process. Under the old paradigm, agriculture had enough political votes to be an important player in the political coalition that governed the country. Furthermore, the agricultural establishment mostly cooperated with other policy actors to further the legislative agenda of each member. For example, land grant colleges of agriculture provided intellectual justification for income transfers to commercial agriculture and commercial agriculture supported research and extension funds for land grant colleges. Environmentalists supported commodity programs and farm groups supported environmental measures as long as farmers were paid rather than mandated to protect the environment. And legislators were compensated for their part with campaign contributions and votes.

The new paradigm recognizes declining agricultural political strength from a falling farm population and a declining relative contribution to aggregate economic activity. Fewer key Congressional committee chairs and other legislative leaders are coming from farm states. In many states, agriculture has too few votes to decide even fairly close elections. The political base is weakened if farmers no longer view land grant colleges as useful to preserve commodity programs, farm interests view environmental measures as a threat, and if food stamps are combined with other welfare assistance and administered by the Department of Health and Human Services or by states. Political power has fragmented among specialized commodity groups as farms have become more specialized and bifurcated into a few large farms producing most farm output and many small operations accounting for most farms. These specialized commodity groups often have competing, rather than complementary agendas. An example is that high grain prices, desired by crop organizations, are not viewed favorably by livestock

organizations.

With agriculture viewed as businesses rather than family farms and with erosion of farm fundamentalist attitudes among the public, agriculture will depend less on plebiscite political power — with legislators voting for farmers because their urban constituency insists (Table 1). Instead, agriculture's political behavior will become more like nonfarm corporate business — using campaign contributions and direct links to members of Congress to influence legislation.

### *Public Policies*

As might be expected, changing concepts, beliefs, and political reality give rise to changing public policy prescriptions (Table 1). The old paradigm emphasizing entitlements (e.g., income transfers to farmers), supply controls, demand expansion, and public stabilization of markets is giving way. The new paradigm holds that the role of government is to promote broad-based economic growth, supply public goods, internalize externalities, and provide a conditional safety net for the disadvantaged. The safety net will no longer pay farmers not to produce, will be more class (e.g., poor) than sector oriented.

Components of public policy for agriculture under the new paradigm are discussed in more detail in the following sections. The fact that much of the following discussion is about government policy should not veil the reality that allocation of most agricultural goods and services will be left to the private sector.

## Removing Barriers to Economic Efficiency and Growth

Because farmers derive so much of their income off the farm and because over time incomes of farm and nonfarm people tend to equalize, it follows that in a post-commodity program world of exposure to market forces, incomes of farmers will be determined by incomes of nonfarmers. Thus progress in raising the incomes of farmers will depend on national economic growth and the availability of and earnings from off-farm employment. This highlights the importance to farmers of broad-based national economic growth and efficiency (Table 1). Economy-wide economic progress requires that the government removes economic distortions. The FAIR bill, NAFTA, and the Uruguay Trade Round reduced market interventions for agriculture and the nation, but numerous trade and commodity distortions remain. Examples within the U.S. agricultural sector are the sugar, tobacco, and peanut programs.<sup>1</sup>

Monopoly power distorts marginal prices. Concern has been expressed about market distortion and exploitation of farmers by, among others, meat packers and vertically integrated livestock and poultry contractors. While there is no evidence of systematic exploitation of farmers or distortion of prices by agribusiness, a case can be made for continued monitoring of the situation (see Tweeten, ch. 8). An emerging issue is possible monopoly power of very large farms, some vertically coordinated under integrated ownership or production and marketing contracts. This issue is of particular concern at the local level.

Policy reform options are not confined to agriculture — the need is to encourage national economic progress to benefit farm and nonfarm people alike. With agriculture receiving much



smaller subsidies from the federal government, it has a much greater stake in ensuring sound macroeconomic policy.

A key consideration in enhancing economic growth is increased national savings. Options for raising savings rates include eliminating full employment federal deficits, ending double taxation of corporate earnings, and privatizing social security. Full employment federal deficits are called dissavings because they utilize mostly for consumption the funds that savers (who finance the debt) would invest in productive private human and material capital. Thus lower deficits increase national savings, investment, and long-term economic growth.

Corporations are a bright spot of high savings rates in an American economy characterized by very low personal savings rates. Among all taxes, those on corporate profit provide some of the highest deadweight costs (foregone national income) per dollar of taxes (Ballard *et al.*). Thus, taxing corporate profits only once and at the individual investor's tax rate would promote economic efficiency as well as savings. Chile and other countries have shown that privatizing of social security can replace a pay-as-you-go retirement system, sharply raise savings, and give citizens a stake in sound macroeconomic policies.

### Provision of Public Goods and Internalizing Externalities

Public goods are a special case of externalities, which are defined as a divergence between marginal private and social costs (benefits). Markets work best for rival and exclusionary goods, externalities exist for goods which are at least partially nonrival and/or nonexclusionary, and pure public goods are unequivocally nonrival and nonexclusionary. When

goods are nonexclusionary, firms are unable to appropriate marginal social benefits, i.e., private marginal benefits accrued by firms fall short of marginal social benefits. Thus too little of the good is produced by private firms. When goods are nonrival, consumption by one consumer does not diminish consumption available to another consumer. Marginal cost is zero. If firms set price above marginal cost to cover expenses, private cost exceeds social cost (measured by foregone output of other goods and services) and again too little of the good is produced.

Economic efficiency and growth are served by provision for public goods and services such as infrastructure and information systems. Research, education, the environment, instability, the family farm, and rural communities all have externality dimensions appropriate to address in public policy.

### *Research*

A typical rate of return on private conventional investment in the farm and nonfarm sectors is 10 percent (Malkiel). In contrast, rates of return on public agricultural research and extension (R and E) range from 27 percent to 93 percent (Table 2). Many estimates cluster in the 40-50 percent range.

Estimates by Chavas and Cox and by Makki *et al.* (1994) are significant departures from traditional methodology (Table 2). Both studies attempt to correct shortcomings of previous estimates, and both show lower rates of return for public and private R and E than found in most other studies. Even these lower returns (approximately 27 percent) on public R and E substantially exceed typical private returns and hence justify additional investment. Such effort

could promote food security, international competitiveness, and economic equity by lowering resource costs of food.

**Table 2. Internal Rates of Return to Public and Private Investments to Raise Productivity of American Agriculture.**

	Time Period	Public R&E	Private R&D	Estimation Procedure
		-----Percent-----		
Makki, Thraen, and Tweeten (1994)	1930-90	27	6	Cointegration/ECM
Makki and Tweeten (1993)	1930-90	93	45	Polynomial distributed Lag
Huffman and Evenson (1993)	1950-82	41	46	Zellner's SUR
Chavas and Cox (1992)	1950-82	28	17	Nonparametric
Huffman and Evenson (1989)	1949-74	62	0 <sup>a</sup>	Zellner's SUR
Braha and Tweeten (1986)	1939-82	50	b	Polynomial distributed Lag
Davis (1981)	1964-74	28-52	b	Polynomial distributed Lag
Knutson and Tweeten (1979)	1969-72	28-35	b	Polynomial distributed Lag
Cline (1975)	1939-72	41-50	b	Polynomial distributed Lag
Griliches (1964)	1949-59	300	b	Production Function

<sup>a</sup>Estimates were slightly negative or near zero.

<sup>b</sup>No estimate available.

### *Education*

Rates of return also are favorable on public elementary and secondary schooling for farm and nonfarm persons (Tweeten and Brinkman, pp. 126-129; Council of Economic Advisors, p. 203). Despite evidence of aggregate benefits from more schooling investment, specific practices to improve *quality* of schooling often are not successful.<sup>2</sup> An even surer route to enhance student achievement is greater *quantity* of schooling, for example by lengthening the school year by one month or by adding another hour to each school day.

On efficiency and equity grounds, a case can be made for greater federal funding of education. Spillovers across school district boundaries distort incentives and create inequities in funding education. Approximately one-third of Americans live in a state other than where they

received their education — a figure that has not changed much in several decades based on an earlier study by Hines and Tweeten and more recent data reported by the Council of Economic Advisors (p. 209). Many students take their state and local investment in education to generate earnings and taxes in another state. Poor school districts and states with high net outmigration rates are often rural and experience the greatest loss of hard-earned investment in schooling. While the U.S. is better off from the education provided by schools in these areas, the local areas are actually worse off in many instances. Compensation for net spillovers and attendant promotion of equity and efficiency in schooling would require the federal government to fund a larger share of common schooling costs. It currently pays 7 percent of elementary and secondary schooling costs compared to 10 percent in 1980 (Council of Economic Advisors, p. 209). Some possible sources of funds are listed later.

### *Environment*

Environmental problems of agriculture include soil loss, water and food quality, agricultural nuisances, and species preservation. The Environmental Protection Agency will continue to address problems of point-source pollution and associated air and water quality problems on large livestock farms. Attention here is on nonpoint-source water quality and soil erosion problems.

Commodity programs covering only one-third of all farms and one-half of the nation's land in farms (Padgitt, p. 49) are an inadequate delivery system for environmental programs. However, potential termination of commodity programs raises difficult issues of what, if any,

public policy is needed to follow up the sodbuster, swampbuster, conservation compliance, and water quality features of existing commodity programs. We propose two options to replace these environmental features of commodity programs, the Conservation Reserve Program, and the Wetland Reserve Program: (1) an Environmental Compliance Program (ECP), and (2) a Cropland Environmental Easement Program (CEEP). These would supplement and not replace current Environmental Protection Agency programs and Natural Resources Conservation Service programs of technical assistance and cost sharing.

The ECP would be similar to but broader than Conservation Compliance. It would require a plan for all land in farms on all U.S. farms by a prescribed date and then implementation by a later prescribed date. To be manageable, it would initially address mostly soil erosion.<sup>3</sup> In time, ECP might be extended to address water quality issues including synthetic chemicals, livestock manure disposal practices, filter strips, protection of stream banks, and the like.

ECP would be voluntary, financed by “green payments” from the government, or it could be mandatory. The attraction of green payments is that they would use the carrot rather than the stick to bring compliance. Green payments would maintain the long tradition of compensating producers for environmental measures deemed to serve the public interest.

An important constraint on identifying and implementing appropriate environmental programs is the inability of economists to calculate social benefits and costs of environmental measures with acceptable accuracy. Existing measures sometimes exceed and sometimes they fall short of *appropriate* public action. Improved models built for watersheds with detail for

individual farms are needed to allow more careful selection of environmental policies and to compensate losers. The difficulty of trying to tax operators based on how much environmental harm they do or subsidizing operators based on how much environmental good they do has prompted a search for alternatives to green payments.

An option would be to require ECP of all operators in keeping with Napier's contention that "... [compulsory approaches] will be required to motivate a significant number of land operators to adopt and continue using farming systems that minimize degradation of environmental quality." But only operators with problems above a certain threshold would have to implement a preventive plan. Several reasons for requiring compliance are listed below.

(1) Modern conservation tillage practices (including no-till) have greatly reduced the cost of protecting the environment from soil erosion while maintaining farm productivity and profits (Hopkins *et al.*). In many cases the operator is only being asked to do what increases his income and saves his soil — actions in his self interest but currently not done because of lethargy, lack of knowledge, or other reasons. Millions of acres once classified as "highly erodible" can now be cropped with conservation tillage at tolerable erosion rates.

(2) Requiring environmental compliance reduces "taking." An operator has reason to control soil erosion that is reducing his net income and net worth. But over half the costs of soil erosion are not borne on-site but instead are borne by "downstream" parties subject to sedimentation or chemical contamination of their farmland, streams, urban reservoirs, and the like (Ribaud). Thus the farmer allowing erosion is "taking" from downstream parties. If he does not have to pay for such taking, downstream damage is an externality unlikely to change his

behavior. The ECP requires the operator to stop doing what he should not be doing — taking someone else’s property.

(3) ECP is efficient public policy because of the high cost and administrative difficulty of monitoring non-point source effluents.

(4) Requiring compliance would bring agriculture in line with standard procedures applied to other industries. This more uniform public policy environment could create more efficiency in the allocation of private investment capital among industries.

How to enforce ECP would be a delicate issue. As a start, the only penalty on violators might be denial of federal program benefits including catastrophic insurance and disaster payments. If that does not bring sufficient compliance, enforcement using approaches employed for other industries could be instituted. It is important to note that over half of all cropland has already met requirements of the Conservation Compliance Program, easing problems of compliance for the ECP.

The companion Cropland Environmental Easement Program would compensate those who would experience a significant loss of earnings (taking) from implementing the ECP. CEEP would have similarities to the Conservation Reserve Program but would concentrate more narrowly on highly erodible cropland that cannot achieve an acceptable erosion rate even with modern conservation tillage. It would also include acres in unique wildlife habitat and the Wetland Reserve to compensate for “taking” of cropland for filter strips and other water quality control purposes. Perpetual and 30-year easements would be offered and the program could be limited to (say) 30 million acres. To reduce economic and taxpayer costs, easements would

allow haying, grazing, recreation, wildlife habitat, trees, or other noncropping uses consistent with soil and water protection and species preservation.

Other efforts ordinarily not viewed as environmental programs will continue. An example is agricultural research and development which has played an important role in allowing the nation to supply its food and fiber needs on only one-fifth of the nation's land area. Continued improvements in technology will hold down requirements for cropland, thereby freeing land to be used for species preservation, forests, recreation, and other purposes favored by society.

### *Instability*

Economic instability, long a major economic problem for commercial agriculture, may be an even larger problem in the absence of deficiency payments and substantial government reserves of grain stocks and set aside acres. Presence of a problem is not a *prima facie* case for government intervention, however, as explained below.

Instability has dimensions of income security for producers and food security for consumers. An important issue regarding food security is market imperfections interfering with the ability of the private sector alone to hold sufficient buffer food stocks:

- Because of high risks faced by an individual firm that average out for the government, the private discount rate is higher than the public discount rate. This keeps private firms from holding socially optimal reserves.

- The public may be highly risk averse to food shortages. Carryover buffer stocks of



U.S. wheat would be only 400 million bushels in a well-functioning market with risk-neutral stockholders according to estimates of Makki *et al.* (1995, p. 31). If the private market acts as if consumers are risk neutral when in fact they are highly risk averse, the result is inadequate reserves.

- Americans have a tradition of responding to humanitarian food needs at home and abroad. The private sector is unlikely to hold reserves to deal with the rare catastrophic world food crisis. Such an event is especially likely to leave the third world short of food as available supplies are consumed by more wealthy countries.

- Finally, the fear that governments might intervene in markets in ways that reduce profits from storage is self-fulfilling. Private firms will not hold adequate reserves if the government threatens to embargo exports or control prices (profits) in times of short food supplies. This concern creates a buffer stock vacuum the government may feel compelled to fill.

On the other hand, governments do not have a good record of managing stocks (Gunasekera and Fisher). They frequently change the rules for acquisition and release. The resulting uncertainty reduces the willingness of the private trade to hold stocks. Furthermore, the U.S. has massive reserves to buffer almost any food supply-demand shock by exporting less, by importing more, or by consuming grains directly rather than through livestock. Hence buffer stocks above those held by the private trade are primarily for consumers in low income countries. These consumers often do not have sufficient private income or access to government programs, such as food stamps, which allow them to purchase food security in the market place.

Under the FAIR bill, the Security Wheat Reserve was renamed the Food Security

Commodity Reserve. Rice, corn, and sorghum, along with wheat were made eligible for the reserve. The reserve cap of 4 million tons was retained by the FAIR act. Wheat can be used for food or feed but adding feed grains dilutes the ability of the reserve to respond to *food* shortages in the third world. A middle ground between massive reserve capacity frequently held by governments since World War II and *laissez faire* is merely to expand an emergency wheat and rice reserve beyond the current 4 million tons. That is a relatively low cost and unobtrusive way to provide food security, especially in response to acute food shortages affecting developing countries.

In contrast to public buffer stocks mainly for consumers, public insurance of crops, revenue, or net farm income is mainly an issue for American producers (and taxpayers). A justification for public insurance is an externality — a family farm is prized more by society than by the market. However, most noncommercial farm families are protected from farm income risks by their off-farm income. Most commercial farm families can afford to pay for their own insurance. Thus few farm families would seem to warrant subsidized insurance against risks, especially when the difference between success and failure comes at a considerable cost to taxpayers.

The case for taxpayers bearing the cost of farm risk is further undermined by widespread mismanagement of public insurance and disaster programs. Furthermore, government financed crop or revenue insurance has an unfortunate tendency to get more of what society does not want but pays for — unstable production and more farming in high risk areas with fragile ecosystems. In addition, nowhere in the world have producers been willing to pay premiums essential for

economically viable all-risk private crop insurance.<sup>4</sup> Part of the problem is inability of insurers to adequately deal with adverse selection, moral hazard, and the risk of widespread crop failure from bad weather. Also, all-risk private insurance is not viable partly because many farmers are not risk averse or are clever at devising alternative, cheaper risk-reducing strategies such as self insurance through storage of previous crops and accumulation of financial resources. Government-assisted insurance faces similar obstacles.

Despite criticisms, some type of subsidized insurance is likely to continue for agriculture after year 2002, especially if subsidized insurance is chosen as the policy tool to ensure participation in environmental compliance programs. It is well to draw on the varied Canadian experience with government programs especially designed to address farm risk (U.S. Department of Agriculture, November 1995, pp. 24-28). Several Canadian provinces are adopting the Net Income Stabilization Account (NISA). Meanwhile, the Gross Revenue Insurance Program (GRIP) is being phased out in Saskatchewan, Alberta, and British Columbia because of its cost. NISA is somewhat like an Investment Retirement Account (IRA) which can be drawn on when net farm income is low.<sup>5</sup>

NISA provides several advantages:

- Significant stabilization of net farm income, not just of price, production, production expenses, or gross revenue.
- Ease of administration (could be done by the IRS in the U.S.)
- Cost-effectiveness of public funds in reducing variation in net farm income.
- Encouragement to save.

NISA also has strong disadvantages. The account must be built by each farmer; funds are not pooled. An unfortunate turn of events could create a need to draw on the fund before it has had time to build or after it has been depleted. By modifying the program to accentuate advantages and to reduce disadvantages, a NISA-type effort offers significant potential advantages. A program built on all net income rather than just farm net income and administered by IRS could help farmers to protect net income at low cost to taxpayers.

### *The Family Farm and Rural Farm Communities*

Farmers and rural people retain unique social characteristics prized by society (Drury and Tweeten, 1995b). In 1986, 82 percent of a random sample of all adult Americans agreed with the statement that “the family farm must be preserved because it is a vital part of our heritage” (Jordan and Tweeten). While family farms and rural communities seem to possess positive externalities (social value in excess of monetary value), the difference appears to be small based on revealed political preferences. That is, the modest annual public outlays for rural development and farm programs under the FAIR bill suggest the public is unwilling to pay much to preserve family farms and rural farm communities. Another interpretation is that the small outlays reflect public recognition that current (past) programs do not preserve this heritage.

Family farms and rural farm communities left mostly to market forces will continue to fade as family farms slowly exit due to technological change and a variety of other reasons.<sup>6</sup> Current efforts will not stem that fade partly because programs to preserve prime farmland and promote rural development often work at cross purposes. Low interest federal loans and grants

subsidize rural utilities. These plus subsidies to mail delivery, school busing, and housing encourage nonfarm developmental sprawl into the countryside where hobby farmers compete with other farmers for land. Losing farmland to developmental sprawl effectively removes the option of bringing it back to farming if needed some day to produce food. Loss of this option may be regarded as a negative externality, inappropriate to encourage with “rural development” subsidies. Before attempting draconian measures such as strict zoning or regulation forbidding conversion of prime farmland to other uses, it is well to promote preservation by terminating community service subsidies that promote developmental sprawl. Given greater public than private value in preserving farmland, a useful additional option is for public and private entities dedicated to farmland preservation to expand purchases of development rights from farmland owners.

### Economic Equity and the Safety Net

People on small farms and in rural communities have a special stake in programs to reduce poverty and inequality because a disproportionate share have low incomes and are the working poor. Rural counties account for 21 percent of the nation’s population but for 25 percent of the nation’s poor and 30 percent of the nation’s working poor (U.S. Department of Agriculture, February 1995).

Even as the disparity in incomes between farm and nonfarm America is narrowing, the disparity of income between upper and lower income Americans is growing. The share of wealth held by the richest 1 percent of Americans increased from 22 percent in 1979 to 42 percent in

1992 (Mobility in America, p. 30). Despite President Clinton's efforts at tax reform and creating economic opportunity for the disadvantaged, the percent of income held by the top 5 percent of earners went from 18 percent when he took office to 21 percent in early 1996 (Mobility in America, p. 30).

Technological change, freer trade, less labor union strength, and illegal immigration have been blamed for the growing dispersion in income among Americans. Freer trade creates earnings disparities by rewarding those with the education and/or talents for high technology and pop culture industries of comparative advantage while exposing American workers in labor intensive industries to competition from lower cost labor in developing countries. American manufacturing industries such as textiles are especially affected. The wage of the lowest-paid 10 percent of workers has fallen in real terms since 1979 (Mobility in America, p. 33). The seemingly permanent underclass is disproportionately associated with single parenting, public welfare, school dropouts, drug addiction, crime, and prison populations.

The cost to middle and upper class Americans from social pathologies attending low income is huge. It includes direct and indirect costs for crime, security, incarceration, medical care, and the like. Thus the widening distribution of income may be view as an externality — social costs exceed private costs of America's relatively open economy, now extended to agriculture in the FAIR bill. The existence of externalities gives Americans of means more than altruistic reasons to raise living standards of low income families and individuals.

Furthermore, Blue and Tweeten and Tweeten and Mlay find that a typical American family with a very low income receives 50 percent more utility from an additional dollar of

income than does a family with average income. On the other hand, a family receiving five times the national mean income is estimated to derive only one-fifth as much utility from an additional dollar of income as a family with average income. Of course, personal values and incentives for economic efficiency, savings, and investment must be accounted for in redistribution policies.

Finding politically and socially acceptable policies to narrow the distribution of income is not easy in an era of budget stringency and doubts about the competence of government to administer programs. One approach to the problem is to force firms to pay higher wages and retain workers. Several Western European countries have done this at huge cost in unemployment and lost output.

A wage supplement is an alternative program to promote economic equity without marked loss of economic efficiency. The supplement would harness the efficiency of the private market and is consistent with the work ethic. The many low-skilled, low education, low paid workers residing in rural areas (including hired farm workers) would especially benefit from the program.

The supplement would pay (say) 60 percent of the difference between a target wage of (say) \$10 per hour and the wage a person actually receives from an employer. For a worker worth only \$2 per hour to an employer, the wage of \$2 would be supplemented by a payment of  $0.6(\$10-\$2)$  or \$4.80 per hour for total earnings of \$6.80 per hour. Income of a worker employed 2,000 hours per year would total \$13,600. At that rate, two workers in a family would bring overall family income well above the poverty threshold.

Among other advantages, the wage supplement could:

- Expand unemployment of disadvantaged people, unlike raising the minimum wage which puts disadvantaged people out of work. Ability to pay a low wage to low-skill workers gives firms more flexibility to provide on-the-job training, the major source of vocational-technical education. Experience builds better work habits and skills, allowing wage supplement recipients to move up to more lucrative employment. The wage supplement does more to encourage hours of work than does the Earned Income Tax Credit which could be retained for low income salaried or self-employed workers. A family could claim either the wage supplement or Earned Income Tax Credit, but not both.

- Encourage disadvantaged workers with a high reservation wage to be employed. Many potential workers today reject low wage work in favor of unemployment or welfare.

- Encourage workers to seek and receive the highest private wage possible because (for the example above) each additional \$1 per hour earned from employers loses only 60 cents of supplement.

- Allow American marginal workers and firms to better compete globally with third-world labor without the nation resorting to costly trade barriers.

- Create incentives to complete high school if the supplement is unavailable to a dropout until (say) 20 years of age.

At issue is how such a supplement would be financed. Some of the financing would come from lower conventional welfare and law enforcement spending. Other potential funding sources include an end to tax-exempt bonds, limiting home mortgage interest deductions, and a



tax on fossil fuels to improve air quality, encourage energy efficiency, reduce dependence on foreign oil, and conserve resources.<sup>7</sup> Another alternative is a value added tax (VAT) which has low deadweight cost per dollar of taxes. Billions of tax dollars also could be saved by indexing government benefits such as social security to a price index that, unlike the current CPI, does not overestimate inflation.

## Conclusions

For much of the 20th century, agriculture existed in a policy paradigm rooted in chronic excess production capacity. Farm commodity programs not only cushioned but attenuated adjustments to an industrialized agriculture. Now, excess labor and other resources are minimal. Household incomes of farmers and nonfarmers with similar resource levels will follow similar paths in the future. With agriculture closer to long-term economic equilibrium, agriculture will operate under a new policy paradigm in the 21st century. Within this new paradigm, public policy toward agriculture will be rooted in stimulating economy-wide growth, providing public goods, correcting externalities, and providing a conditional safety net.

Under the old paradigm, it was difficult for farm groups to advise sound economic policies when following that advice would “hoist farmers on their own petard” of lost subsidies. With an end to supply control and to major transfers of income from taxpayers to farmers, farmers now have a greater stake in and can be more nearly unequivocal advocates for sound economic policies contributing to broad-based national economic growth.

Greater attention can be given to low cost sources of food and international competitiveness — funding public agricultural research and eliminating trade and other market

distortions. Commodity programs, once central to correct externalities regarding the environment and instability, no longer will be satisfactory delivery vehicles. Several options were proposed: Environmental Compliance Program (ECP) to bring sound environmental practices to all farmland, a Cropland Environmental Easement Program (CEEP) by “buy out” environmental degradation on cropland with severe soil erosion or water quality problems, and a net income stabilization program patterned after Canada’s Net Income Stabilization Program (NISA) to dampen variation in net income of farmers at low administrative and taxpayer cost.

Despite progress, farms and rural communities contain a disproportionate share of the poor, many of them working poor. Thus, residents of farms, rural communities, and cities have a stake not just in policies raising national income but also in policies addressing poverty, underemployment, widening distribution of income, and social disintegration. A wage supplement was proposed herein to promote economic equity as well as growth.

Finally, commercial farming has moved beyond industrialization, characterized by mass production of standardized commodities, to the *post-industrial era* of service industries and occupations emphasizing information systems, finance, insurance, management, and marketing. Precision application of inputs and precision production of output to meet varied demands will be central to survival in a post-industrial era of advanced science, high technology, and specialized management. Farm operators and families will emphasize acquisition of skills and strategies to succeed in this post-industrial era rather than chase more transfers from taxpayers. That means greater private and public investment in human resource development, including changes in funding to recognize spillover of benefits among entities that finance schools.

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## Endnotes

<sup>1</sup>The minimum wage is another example of a market distortion. Later we suggest an alternative to the minimum wage that can raise wages of limited resource workers while promoting employment and international competitiveness.

<sup>2</sup>Practices that could raise the payoff from education include rigorous selection for and rewarding of competent teachers, more intensive training of teachers in subject matter, standardized testing to measure progress and promote competition among schools, more freedom of students (parents?) to select schools, demands on students for drill in basics and for more homework, greater quantity and quality of preschool education, and more involvement of parents in reading to and otherwise preparing their children for school. Greater use of apprenticeship vocational training programs in conjunction with the private sector could raise the payoff from vocational schooling. Vocational-technical education supported by the public has had a mixed and for the most part disappointing record (Training and Jobs, pp. 19-21). If common schools will provide better literacy and numeracy, private firms can be counted on to provide on-the-job vocational training, helped by the wage supplement discussed later.

<sup>3</sup>Reducing soil erosion also reduces water quality problems, other things equal.

<sup>4</sup>Hail and selected other types of coverage have been provided successfully by private insurers.

<sup>5</sup>Canadian farmers can contribute up to 3 percent of their sales (net of purchased feed and seed, and excluding dairy and poultry) matched by a government contribution (U.S. Department of Agriculture, November 1995, p. 26). In addition farmers can make unmatched contributions up to 20 percent of sales, a provision that is little used. Contributions can be made on a maximum of Can \$250,000 of sales in any one year, and contributions to the stabilization fund must cease when the fund reaches 150 percent of a 5-year average of eligible sales. The account receives the market interest rate plus a 3 percent interest rate supplement from the government. Withdrawals are allowed when net farm income falls below its 5-year average or below Can \$10,000. The farmer may withdraw all funds to drop out of the program because of retirement or other approved reasons. Only government contributions are taxed upon withdrawal.

<sup>6</sup>Farm numbers will diminish approximately 1.5 percent per year and noncommercial farms (sales under \$100,000 per year) will decline at 2.0 percent per year (Drury and Tweeten, 1995a). Commercial farm numbers will grow slowly. Rural farm communities on average will lose population, but other rural communities adjacent to cities or dependent on growing retirement, higher education, or manufacturing economic bases will prosper. The overall nonmetropolitan population will continue to grow.

<sup>7</sup>Some of the current tax-expenditure programs are inequitable *and* inefficient. Tax-free bonds, for example, benefit mainly the very rich and encourage public low-yield investment, often in competition with the private sector. Subsidies to ethanol and the maritime industry could be ended with gains in both equity and efficiency.

