

Chapter 3. The Price of Feed

Almost half of every dollar earned by livestock and poultry producers pays for feed. Any government program or policy that impacts the availability or cost of feed will, as a result, impact animal agriculture.

Farmers producing the feed grains and oilseed proteins fed to animals, in turn, are heavily dependent for their economic viability on the government. In testimony before Congress in February 2001, Keith Collins, the Chief Economist of the USDA, said –

“Direct government payments accounted for three-fourths of net cash income for major field crops in 1999 and more than two-thirds in 2000.” (*Feedstuffs*, February 26, 2001)

Direct payments to farmers in 2000 reached near-record levels – \$23.3 billion. Overproduction and low commodity prices led Congress to authorize additional subsidies for farmers, beginning in 1998. According to the Environmental Working Group, a D.C.-based think-tank, “In particular, the Market Loss Assistance program provided American farmers with \$2.8 billion in additional subsidies in calendar year 1998, on top of the roughly \$6 billion that farmers were paid in 1998 under the Freedom to Farm law enacted in 1996. Market Loss Assistance payments surged to nearly \$5.5 billion in the 1999 and 2000 calendar years, effectively doubling the payments that farmers were slated to receive under Freedom to Farm” (Environmental Working Group, 2000). Disaster relief and other so-called emergency “one-time” payments added billions to total payments in 1999 and 2000.

According to USDA’s Economic Research Service (*Agricultural Outlook*, October, 2000) –

“In 1999, a dramatic fall in crop prices plunged estimated nonmetro gross farm receipts down \$17.8 billion from their 1997 level. Farm aid to nonmetro areas increased by an estimated \$10.6 billion between 1997 and 1999, offsetting 60 percent of the decline in gross receipts.”

“Nearly 40 percent of these [1999 and 2000] direct payments have been disbursed as emergency assistance.”

The rapid increase in payments the last three years creates all sorts of problems for American agriculture. For example, the financial viability of many crop farms will be threatened if the economy falters or if Congress and the new Administration pass broad-based tax reform, virtually guaranteeing that farm program payments will be scaled back quickly, regardless of commodity market conditions. Current payment levels also place the U.S. on a collision course with its trading partners and within the World Trade Organization, given progress made around the world in weaning crop farmers from production-enhancing payments.

In a February 14, 2001 testimony before the House Committee on Agriculture, Dr. Daryl Ray, a well-respected University of Tennessee agricultural economist, stated bluntly that the 1996 farm bill was based “on speculation” that turned out wrong and that the Congress and USDA remained “in denial” (*Feedstuffs*, February 19, 2001). He explained the three pillars of the FAIR Act –

- Export growth would bring on a new “era of prosperity.”
- Farmers would respond to market forces and produce less when prices dropped.
- Demand growth would raise overall prices.

“It just didn’t work out,” according to Ray. In his testimony and recent writing, he explained why and also pointed out that “Lower prices have not caused our fiercest competitors to reduce production.” A case in point –

“Brazil increased its soybean acreage 13% from 1996 to 2000 during the years U.S. soybean prices dropped nearly 40%...and U.S. farmers increased their soybean acreage by more than 13 million acres during the same period.” (*Feedstuffs*, February 19, 2001)

The consequences of a continuation of the basic commodity policies in the FAIR Act were the subject of a gloomy forecast by Ray –

“Left to itself, it [crop agriculture] would continue its downward spiral, bankrupting successive farmers on a given piece of land, forcing bank foreclosures and, in general, wreaking devastation on all rural areas.”

Given the near universal view among farmers that the 1996 farm bill has failed to deliver as promised, commodity policy will almost certainly change in the 12 to 24 months as a new farm bill takes shape. Its evolution will be driven by a myriad of political forces and realities. Impacts on livestock agriculture could change, for better or for worse. In this chapter we describe how government commodity and conservation programs and policies impact the price and availability of feed, and in turn impact animal agriculture. We also review the likely impacts of a range of policy reforms.

A. Commodity Programs Sustain Production of Major Field Crops

Commodity price support programs have had by far the biggest impact on the price of feed of any government program or policy since the 1950s. The programs have gone through many permutations and market cycles, but in general crop farmers have counted on them to assure an adequate return in years when market prices have been depressed, as they typically are three to five years in most decades.

Until the 1970s, most livestock and poultry producers were also crop farmers, so the benefits of commodity price support payments tied to bushels of grain also supported

livestock producer income. To a large extent, this linkage is now a thing of the past and most large-scale animal producers do not directly benefit from the programs.

1. The 1996 Farm Bill Tries to Get Government Out of Agriculture

The 1996 seven-year farm program titled the Federal Agricultural Improvement and Reform Act (FAIR), also called Freedom to Farm, was created to eliminate the New Deal system of production controls and federal price supports. It provides farmers with a guarantee of fixed but declining payments that end in 2002. In return, Freedom to Farm grants farmers greater flexibility in choosing which crops to plant (hence its nickname).

Before the 1996 farm bill, price supports and deficiency payments were available to farmers to ensure that prices received for commodities such as corn, soybeans, cotton, rice and wheat met the cost of production. If the price of a commodity fell below a predetermined floor linked to production costs, the government would cover the difference. Freedom to Farm eliminated price floors and removed production controls such as land set-asides and farmer-owned grain reserves -- policies that had given farmers (and policy-makers) some control over crop prices (and government program costs) by limiting the amount of commodities on the market.

FAIR legislation was supposed to eliminate direct income support payments to farmers by 2002. For details on specific provisions and much more detailed data on program impacts, see the various USDA resources listed in the reference section.

The FAIR Act's commodity program changes were driven largely by the political agenda of the grain trade and those wanting to expand U.S. agricultural exports. Passage was justified on the belief that the program would increase exports, raise commodity prices, lessen inefficiencies in U.S. agriculture from "farming the program," and help get the government out of the business of moderating commodity cycles. But instead, exports for corn, wheat, soybeans and sorghum have fallen about 10 percent since enactment and global market prices are way down.

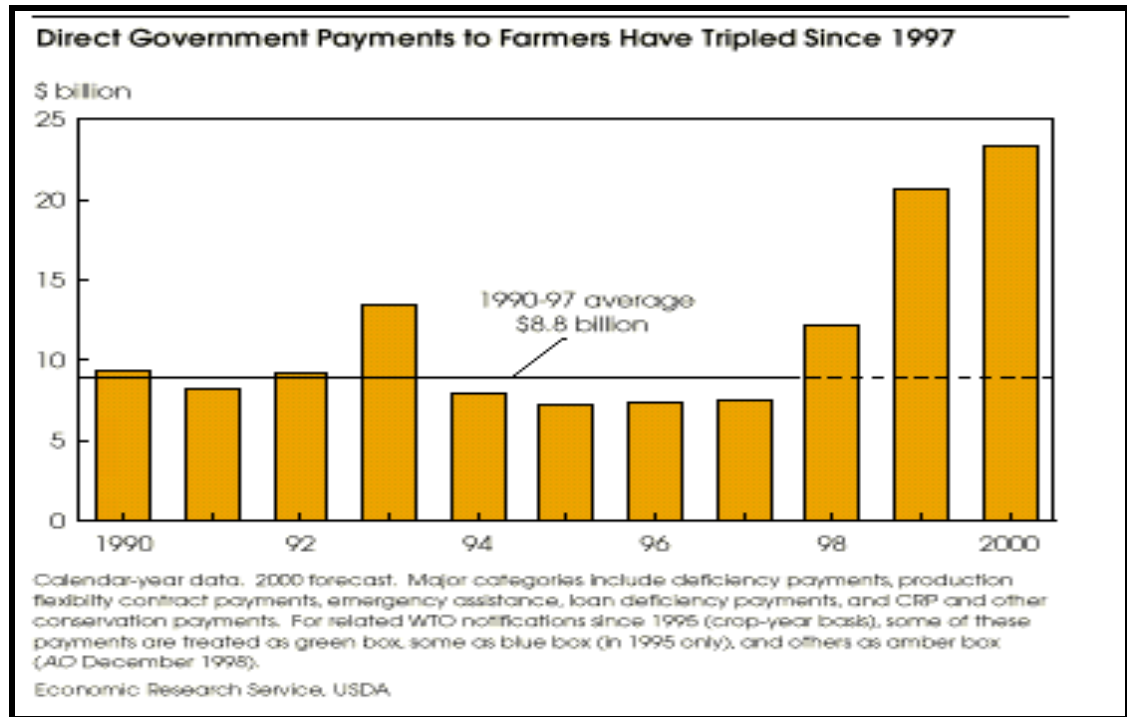
USDA statistics show that the farm-level price of corn has gone from around \$3.25 per bushel in 1995-1996 to below \$2.00 in 1999-2000. The October 2000 Farm Journal broke down the components of the "Total realized price" for a bushel of corn in recent years, as shown in Table 3.1 below. The cash market price of corn accounted for 75 percent of the full-realized price, but declined to under 70 percent in 2000.

Table 3.1. Cash Price and Government Program Payment Contributions to the "Total Realized Price" per Bushel of Corn					
	1998		1999		2000
Cash Price	\$	1.94	\$	1.90	\$ 1.75
AMTA	\$	0.27	\$	0.27	\$ 0.25
Supplemental	\$	0.27	\$	0.27	\$ 0.27
Marketing Loan	\$	0.10	\$	0.21	\$ 0.26
Total Realized Price	\$	2.58	\$	2.65	\$ 2.53
Cash Price as Percent Realized Price		75.2%		71.7%	69.2%

Notes: AMTA is Agricultural Market Transition Act payments.

Source: *Farm Journal*, October 2000, data provided by Dr. J.B. Penn, Sparks Commodities. 2000 values are forecasts.

Wheat has dropped from \$4.30 to \$2.50 per bushel; soybeans have declined from around \$7.35 to \$4.75 and at times much lower; and, sorghum \$3.20 to \$1.60 (page 6, *Agricultural Outlook*, January-February 2001). Congress has had to appropriate ever-large sums of money each of the last three years to keep a farm recession from dragging down the whole economy. Direct government payments have risen from \$12.2 billion in 1998 to \$20.6 billion in 1999 and \$23.3 billion in 2000 (Table 29, *Agricultural Outlook*, January-February 2001). From 1994 through 1997, direct payments remained roughly stable, fluctuating between \$7.3 billion and \$7.9 billion. From 1990 through 1997, direct payments averaged \$8.8 billion, as shown in the following ERS table.



Farmers have grown bitter as the economic impacts of the FAIR Act diverge farther and farther from what the legislation was supposed to deliver. The Act contains no provisions to control supply and every bushel produced is marketed no matter how depressed prices are. Rather than discourage growers abroad from expanding production, the FAIR act simply accelerated the rate of investment and innovation abroad so that foreign producers could compete.

Agribusiness, especially grain traders, supported the Act. “Freedom to Farm has really positioned the U.S. very well to take advantage of the opportunities in the world market,” declared Cargill’s Dan Pearson to the Canada Financial Post in 1996, just after the law’s enactment. Depressed grain prices have allowed grain conglomerates to increase the volumes of grain moving around the world, taking advantage of cross-continent profit opportunities not accessible to individual farmers.

According to Sheila Ehrich, a Minnesota grain farmer, large grain buyers have benefited from Freedom to Farm at the expense of farmers. “Cargill is buying corn damn cheap – we’re back to overproducing” (*Fedgazette*, 2000?).

Further compounding the problems on the farm is the growing concentration of agribusiness companies. The Ehrich’s produce corn and soybeans. In the past there were five grain elevators in their area, each independently owned, competing for farmers’ business through price. Today, two companies own the five elevators and the prices paid for grain reflect, in part, this lack of competition.

Lower grain prices brought about by Freedom to Farm have not been passed on to the consumer. According to C. Robert Taylor, professor of agriculture and public policy

at Auburn University, since 1984 “the real price of a USDA market basket of food has increased 2.8% while the farm value of the food has fallen by 35.7%. The gap between retail price and farm value for many components of the market basket is widening” (Taylor, 1999?).

2. Support Grows for a Return to a Counter-cyclic Farm Program

According to the Congress Daily, House Agricultural Chairman Larry Combest says the farm economy is “worsening” and that he “will push for enactment this year of a counter-cyclical farm program for the 2002 crop year.” Senator Daschle (D-SD) and 18 other Senators have introduced Senate Resolution 13, which calls on Congress to take action this year (2001) because “the farm economy and the financial condition of farm and ranch families and rural communities continue to decline.”

In testimony before Chairman Combest’s committee in late February, the USDA chief economist Keith Collins shared the “grim news” that farm income is projected to decline \$5 billion in 2001, driven by higher energy and fertilizer costs and slumping commodity prices (*Feedstuffs*, February 26, 2001). A well-respected academic farm policy institute had testified just the day before, and reported that its model predicts a decline in farm income from \$45.4 billion in 2000 to \$36.3 billion in 2002 – a 20 percent drop over two years.

The projected drop in farm income will hasten commodity program policy reform. The recent escalation in direct payments will capture the attention of everyone in agriculture and anyone interested in cutting federal spending. Several core counter-cyclic provisions are likely to be restored including –

- Payments will be triggered by and a function of low prices.
- Production controls covering key commodities will be restored and linked to market conditions.
- Incentives will again be offered for onfarm storage of grain.

Congress will attempt to reintroduce these provisions with minimal impact on international markets. An effort will be made to not undermine crop rotations and conservation systems, a major downside of past counter-cyclic programs linked to base acreage allotments and variable annual percentage set-asides. Abuses of the disaster relief and crop insurance programs will be addressed through reforms intended to tighten up eligibility requirements.

New policy instruments may be adopted, such as revenue insurance. But at the end of the process, federal dollars will continue to flow to commodity farmers at about the same levels as in recent years in relation to net farm income, and with about the same impacts. It is hard to imagine changes in commodity policy having any significant or near-term impacts on the location, scale, or intensity of livestock operations. Still, this area of policy has had, and will continue to have enormous longer-run impacts on animal agriculture through the price and availability of feed, and if Congress put its mind to the

task, commodity program reforms could help level an economic playing field now sharply skewed toward large scale, vertically integrated operations.

B. How Commodity Program Policy Impacts Animal Agriculture

Nearly all acreage producing corn, other feed grains, soybeans, wheat and other small grains, rice and cotton is enrolled in whatever commodity programs are offered each year. Long ago farmers learned that not enrolling their eligible acreage is flirting with disaster.

As the average size of crop farms has grown, Congress has relaxed and reformed payment limitation policy so that nearly all acres are still enrolled each year and eligible for payments. Accordingly, payment limitation policy has been and is likely to remain an ineffectual policy tool. To the extent payment limitation policy was supposed to target government support payments toward smaller and mid-size farms, it has been a total failure, as evident in the table below from a recent Environmental Working Group report (EWG, 2000). The top 10 percent of recipients receive 61 percent of total payments.

Table 4: The top 10 percent of all recipients in the United States were paid 61 percent of all USDA subsidies.

Percent of recipients	Percent of payments	Number of recipients	Total payments 1996-1998	Average Payment per recipient 1996-1998
Top 1%	16%	14,434	\$ 3,605,246,059	\$ 249,774
Top 2%	24%	28,868	\$ 5,583,250,053	\$ 193,406
Top 3%	31%	43,302	\$ 7,189,204,390	\$ 166,024
Top 4%	37%	57,736	\$ 8,540,559,309	\$ 147,924
Top 5%	42%	72,170	\$ 9,707,547,371	\$ 134,509
Top 6%	47%	86,604	\$ 10,730,666,489	\$ 123,904
Top 7%	51%	101,038	\$ 11,637,229,400	\$ 115,176
Top 8%	54%	115,472	\$ 12,448,441,953	\$ 107,804
Top 9%	58%	129,905	\$ 13,177,981,478	\$ 101,443
Top 10%	61%	144,339	\$ 13,838,571,867	\$ 95,875
Remaining 90%	39%	1,299,050	\$ 9,017,799,889	\$ 6,941
All recipients	100%	1,443,389	\$ 22,856,371,757	\$ 15,835

Source: Environmental Working Group. Compiled from USDA data.

The biggest impacts of commodity policy reforms in the FAIR Act on animal agriculture have been brought about by changes in the price and availability of feed. FAIR ended four decades of policy incorporating a significant degree of counter-cyclic supply control as an inherent feature. Supply control through acreage set-asides linked to deficiency payments served three basic purposes – it reduced commodity surpluses to

help the market recover more quickly; lessened long-term government expenditures required to maintain commodity prices, and hence farm income, at a given level; and, it required farmers to bear a part of the cost of the measures needed to sustain farm income at higher levels than it would otherwise be.

1. The Dynamics of Commodity Policy – Livestock Sector Interactions

In years when commodity supplies were short relative to demand, cash market prices would rise, government payments would fall, and acreage set-asides would be reduced or dropped altogether. Mixed crop-livestock farmers who grew all or most of their own feed were insulated from the gyrations of the cash market, since they marketed their corn, soybeans and other feed grains through animal products. But cattle feedlots and other animal operations not linked to cropland would face rising costs, with sometimes enormous impacts on profits.

Compared to livestock farms not raising feed, mixed crop-livestock farmers with cropland in traditional commodity programs benefited directly from the programs in both phases of market cycles. They would get direct payments when prices were down, in addition to access to cheaper feed. When prices were high, they would be able to expand their crop production because supply controls would be relaxed. On many farms this would allow farmers to reduce their average cost of producing a bushel of feed, while also supporting herd expansion when other operations dependent on the open market for higher-cost feed tended to cut back animal numbers.

When FAIR ended the link between supply control and government payments, and adopted a “full production” policy, the poultry industry and beef and swine producers not growing their own feed were among the major beneficiaries. This shift in policy increased feed supplies and assured lower prices. And because there are no counter-cyclic provisions to correct supply-demand imbalances, market cycles tend to last longer and dip deeper, since many farmers still try to produce their way around slumping farm income.

Generally lower prices since the passage of the FAIR Act and less chance for sharply rising prices removes a major cost-of-production uncertainty from large-scale animal operations and for this reason, has accelerated the trend toward vertical integration and concentration.

2. Byproduct Feeds Provide a New Way for Integrators to Increase Profits

Changes in policy since 1996 have also diversified the range of food processing and energy manufacturing wastes destined for livestock feed markets. Significant tax incentives continue to be granted to ethanol producers in the name of clean air and to reduce reliance on imported oil. Cheap and abundant supplies of corn, soybeans and other basic commodities have expanded an array of new industries and manufacturing enterprises producing non-edible oils, building materials, fiber products, chemical feedstocks and energy products. These industries are often closely linked, if not owned

by the same agribusiness integrators that dominate the animal feed manufacturing industry and either own or contractually control most large scale animal production enterprises.

Integrators have unique opportunities to provide preferential access to low-cost, often high quality byproduct feeds for their own feeding operations, or those operations working under contract to them. The integrator can afford, and is able to write off the research and capital investments needed to develop ways to efficiently handle waste products, transport them, and mix them with other feeds into farm-ready formulated feeds. Unit costs per calorie of such feed inputs are kept low because they utilize what would otherwise be a waste product and are handled and shipped in large quantities, utilizing large-scale equipment on both ends of the transaction.

Plus, the processing wastes and byproducts never really change ownership. This gives the integrator the opportunity to set prices internally, in the process moving costs -- and hence profits and tax liability -- from one stage of the production process to another. While difficult to quantify or prove, this capacity to move costs, profits, and tax liability around is probably one of the major reasons why vertical integration has proven so "profitable," despite its other problems and inefficiencies.

3. The Commodity Policy Reform Agenda

As the next farm bill takes shape, modest steps will be taken to reduce program costs and future budget exposure, in part by restoring some counter-cyclic provisions. But given the election of President Bush and continued Republican control of Congress, a pro-export bias will continue to drive the policy process and the influence of agribusiness will be markedly more pronounced than in the last farm bill cycle. Both factors truncate the list of policy reforms with a realistic chance of adoption.

On the other hand, the new farm bill will likely be completed as the mid-term Congressional elections approach in November 2002. Historically, the majority party in Congress uses its control over farm programs, and the federal purse, to assure a heavy and positive turnout in rural America. But the Congress is close to evenly divided now and support for policy change is bipartisan, so the opportunity to gain advantages may be limited for both parties, regardless of how the politics unfold.

If Democrats regain majorities in Congress in the mid-term election, farm policy will almost certainly be reopened in 2003 and the just passed farm bill (if one does pass in the current Congress), will be redone. It may actually take several years for this round of commodity program reforms to crystallize and garner support strong enough to weather inevitable changes in the fortunes of national political parties. Likely key changes, once it does stabilize, will include –

- Counter-cyclic provisions.
- A role for supply control, probably achieved in a more diverse set of ways.

- More dollars allocated to farming system design and management changes linked to conservation and pest and animal disease management performance goals, and fewer dollars dedicated to straightforward income support.
- New attempts to target benefits to small and moderate size operations, especially beginning farmers, through sliding scale payment schedules.
- More dollars flowing to segments of agriculture not historically served by USDA commodity programs, more to risk-sharing policy tools, and a smaller share of total dollars flowing to core commodity program crops.

The way these shifts in policy goals and expenditure priorities will be achieved will determine impacts on animal agriculture. The impacts could be neutral, accelerate the shift toward vertical integration and separation of livestock farming and the production of feed, or begin to turn the tide back toward more geographically disperse, and diverse farm operations.

4. A Reform Agenda to Disperse Animal Agriculture and Promote Disease Prevention and Food Safety

Counter-cyclic provisions linked to acreage set-asides will restore a traditional source of economic advantage enjoyed for decades by farmers with mixed crop-livestock farms.

Assuming that a counter-cyclic program is restored, dispersal of livestock and environmentally sound manure management could be encouraged by exempting mixed crop-livestock farmers from periodic set-aside requirements on the portion of their cropland base producing animal feed for consumption on the farm. If needed, this will give farmers a chance to increase the acreage of crops that can utilize high volumes of nutrients in manure.

The 1985 farm bill's historic resource conservation title included cross-compliance, a policy that required farmers cropping highly erodible land in the commodity programs to comply with government approved soil conservation plans in order to remain eligible for payments. Similar cross-compliance provisions have been embedded in other subsidy programs and are bound to become more common because of their acceptability under WTO rules.

The next farm bill could, and indeed should, impose new cross-compliance provisions on any and all major flows of federal dollars. Fruit and vegetable growers, in line for more direct support, could be required to take the next steps in their transition to prevention-oriented Integrated Pest Management, and livestock farmers could be required to implement manure management plans, biosecurity procedures, and adopt proven disease prevention and animal health promotion practices.

Creating New Market-based Incentives

The new Administration has stated its preference for market-based incentives to achieve environmental goals (see section 11, “Protect the Environment,” in the Bush Administration’s overview of its FY 2002 budget). Congress could build a powerful incentive into farm commodity (and conservation) policy by placing payment rates and/or eligibility requirements on a sliding scale linked to a producer’s willingness to work toward higher performance standards embedded in cross-compliance provisions.

A mixed hog-crop farm that enrolls its corn acreage in the program would be required, as the price for admission, to develop and adhere to a manure management plan that achieves, for example, a minimum 50 percent recycling of manure nitrogen into subsequent corn crops and keeps soil phosphorous levels below thresholds associated with surface water problems.

Farmers willing to increase the efficiency of manure N-cycling back into crops, coupled with other proven water quality “Best Management Practices,” could be offered higher payment rates and/or the opportunity to grow non-program crops on set-aside acres, rather than leave them idle as crop farmers without livestock would be required to do.

Mixed crop-livestock farms willing to participate in ongoing USDA and/or state disease surveillance and prevention programs could be offered higher commodity program payment rates linked to verified achievement of animal health and disease prevention performance goals.

Other livestock and poultry farms producing up to the equivalent of 1,000 animal units, but not growing their own feed, could also be offered incentives by USDA for participation in disease surveillance and prevention programs and for changes in facilities, management systems, and performance goals. The program could work most cost-effectively by offering farmers marketable certificates to take possession of feed grains owned by the USDA’s Commodity Credit Corporation (CCC) at a prescribed price, somewhat below average market prices. The certificates could be sold on the cash market for prevailing market prices at any time, and the proceeds used to buy local feed. By allowing farmers to hold the certificates for up to say five years, farmers could redeem them in years with high prices, gaining critical insulation from rising feed prices.

Helping Independent Farmers Compete with Integrators

Under current policy, integrators and agribusinesses capture most of the benefits from the billions in public subsidies supporting ethanol and other biofuels. Integrators also in the energy business gain economic advantages from the use of byproducts and other energy-related manufacturing wastes, through their wholly owned or controlled livestock enterprises. Politicians defend these subsidies because they serve, indirectly, three goals – propping up farm income, reducing dependence on foreign oil, and helping to achieve clear air goals.

The first goal – increasing farm income -- could be achieved much more efficiently, while still benefiting the ethanol industry, by a creative change in policy designed to take advantage of market forces. Congress could allow farmers meeting cross-compliance goals to devote their set-aside acres to commodities destined only for nonfood uses. Again, the CCC could be the intermediary. Congress would set the CCC payment rate for each bushel grown on qualifying set-aside acres. The payment scale could be linked to achievement of environmental and animal disease prevention goals.

Each year a given quantity of these bushels would enter CCC storage under the program. As part of the plan, Congress would direct the CCC to periodically hold auctions to sell some portion of this grain or other crops, with the bidding open only to domestic nonfood users of the commodities. By scheduling the auctions during the upward portion of farm commodity cycles, the program would keep energy feed stock prices down – helping the ethanol and other nonfood industries – while generating enough added revenue for the CCC to cover the overall costs of the program, including even the incentive payments for farmers willing to push the envelop.

This and other novel approaches could go a long way toward using market-based incentives to finance the attainment of widely embraced rural community, farm sector, and energy goals. The core provisions will include a counter-cyclic strategy, variable eligibility requirements linked to willingness to achieve and verify attainment of environmental, disease prevention and food safety goals, and cross-compliance.

Two other key policy reform goals should also rise in prominence. Both should appeal to the Bush Administration and those members of Congress that want to contain expenditures and cut corporate welfare.

First, there should be a much **firmer and more transparent link between the flow of public dollars, whether through direct payments or tax subsidies, and the documented and cost-effective attainment of widely embraced goals.**

Second, large-scale operations and integrators should not expect public subsidies in return for adherence to essential environmental, disease prevention, and food safety performance standards. **Like any business, they should be expected to pay all costs of production, including a living wage for workers and costs required to limit adverse impacts on the environment and on public health.** They should also pay their fair share of federal, state, and most important, local taxes. If they cannot do so while still returning a decent profit to shareholders, capital should and will flow elsewhere and the now markedly tilted playing field will begin to right itself. Policy will determine whether this happens and how quickly it progresses.