

# Green Payment Programs

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## **Green Payment Programs**

While farm programs have been largely crop commodity focused, the notion of green payments is gaining more support. Green payments can generally be defined as payments to farmers and ranchers for performing environmental services. These types of programs are also often labeled conservation programs.

The potential exists for green payments to substitute for more traditional income supports. In the past, green policies have been policies such as the Conservation Reserve Program (CRP) and its precursor Soil Bank, the Wetlands Reserve Program (WRP), and the Environmental Quality Incentives Program (EQIP). The CRP has taken highly erodible land out of production in contrast to programs like EQIP that provide cost shares for individual projects.

Green policies, with respect to dairy are being driven, not necessarily by farm policy, but by environmental regulations promulgated by the EPA. Green payments, then, can be provided to offset the cost of economic compliance. WTO constraints also figure into the equation. Policies tied to price and production are classified as amber or red box policies and, as such, are limited. Green payments provide a mechanism to support agriculture without tying the support to production. There is also an income enhancement element to green payments, e.g. redirected money that would have been spent in agriculture anyway.

This paper looks at the notion of green payments for dairy by examining various options proposed by the industry, elected officials, and non-agricultural policy drivers of change.

### **Historical Perspective on Green Policies**

Green policies are not new in agriculture, but they have differed from traditional commodity policies. Perhaps the impetus for green policies in the U.S. began with the dustbowl and policies designed to retain topsoil. These programs were cropland focused and often largely directed at cost sharing farmer investments in wind breaks or shelter belts of trees, contour farming, land

leveling, and the like. In fact, the predecessor to today's Natural Resource Conservation Service (NRCS) was the Soil Conservation Service. Livestock directed programs were also cost share programs for fencing, water development, ponds, pasture improvement, etc.

The best known current U.S. green policies include the CRP, EQIP, and the WRP. The CRP has served a number of purposes during its existence. It has served to take highly erodible land out of row crop production and has reduced soil erosion and improved water quality. An additional benefit has been the increase in wildlife on CRP land and the associated recreation opportunities. All of these have been served along with reducing the acreage and production of crops that have been in surplus from time to time. In these roles, the CRP has transferred income to producers in contrast to the other mentioned programs that have not.

While these policies were often designed to deal with erosion and conservation issues, animal waste is the driving issue for green policies/payments in animal agricultural today. These issues are being driven by the EPA as directed by their mandate under the Clean Water Act. Regulations on confined animal feeding operations (CAFOs) have been in place since the 1970s. New CAFO regulations are in the review process at this time following the comment period which ended on July 30, 2001.

#### *CAFO Regulations*

Current EPA regulations under the Clean Water Act define confined (concentrated) animal feeding operations as point sources of pollution and require that they maintain a National Pollutant Discharge Elimination System (NPDES) permit. A CAFO is any facility that confines more than 1,000 animal units, which translates to 700 dairy cows. The NPDES permit requires that a CAFO maintain enough waste storage to handle stormwater from a 25-year, 24-hour rain event. The permit allows that no discharges into waters of the U.S. can be made unless rainfall from a 25-year, 24-hour event causes the runoff.

Recently, EPA released proposed rules for new and tighter CAFO regulations. The proposed rules include reducing the number of animal units to define a CAFO to between 300 and 500, eliminating the 25-year, 24-hour rule, and for dairies, counting replacement animals in the animal unit calculation. Dairies with as few as 200 to 250 cows could be affected under this rule. In fact, EPA states that all dairies could be regulated as CAFOs because they have milking parlors where cattle stand some portion of the day, every day (EPA). Currently, operations may be defined as an animal feeding operation (AFO) and then as a CAFO if animals are stabled, confined, fed, or maintained for a total of 45 days or more in a 12 month period.

EPA estimated compliance costs associated with the various options around the proposed rule to range from \$16.83 to \$235.23 per head. Their analysis suggests that relatively few dairies would experience financial stress from these regulations. However, the EPA analysis probably underestimates the impact of the rule on dairies for several reasons:

- EPA's economic analysis overestimated gross and net returns to milk production.
- Estimated costs of compliance are based on frequency factors; i.e. the cost of the technology times the percent of operations that would have to do it, leading to underestimation of the impact of regulation.

The financial impact of the proposed rule by size of dairy farm is highlighted by EPA's analysis. In each case analyzed by EPA, compliance costs were lower, per animal, for larger dairies. That should make sense because larger dairies have more animals (and production) to spread additional fixed costs over. In fact, estimated annualized per cow compliance costs for smaller dairies were often more than double those of large dairies.

This exposes a critical point for the dairy industry, that of industry structure. As is well documented elsewhere, the dairy industry is undergoing rapid structural change. The number of dairies has declined by 4-5 percent annually, the average number of cows per dairy is increasing,

and the number of dairy cows has declined to about 9 million head while production per cow and total milk production has increased.

These environmental regulations are not scale neutral in financial impact. Their impact on the structure of the dairy industry is important. FAPRI analyzed the EPA analysis of the proposed rule. Using a group of university dairy economists to estimate costs and returns to dairying their results indicated that the impact on the smaller farms exceeded that on large farms. For a 250 cow Midwest dairy the proposed rule resulted in a \$9,380 reduction in net cash income, a \$19,441 reduction in ending cash position, and an increase of 7 percentage points, to 35 percent, in the probability of a negative net farm income. In contrast, results for larger dairies indicated only 2-3 percentage point increases in the probability of negative net farm income.

Outlaw, et al. (1993) indicated that regulation compliance costs in Texas would result in insolvency for smaller Texas dairies. Anderson and Schwart (2001) examined compliance costs for composting dairy wastes in Central Texas and found about 40 percent lower costs for large dairies involved in composting operations. The end result is further loss of smaller dairies that can not pay for the investment in additional technology without assistance.

It's reasonable to point out that dairies of 250 cows are considered large in many parts of the country. Small dairies have been exempt from CAFO designation and resulting compliance. The notion that only large livestock operations pollute is one that should be challenged. Certainly there has been that concern as livestock agriculture has become increasingly concentrated and intensive. Large operations do produce more waste than do small farms. However, the idea that small operations don't cause problems may be anecdotal at best. To add to this anecdotal evidence, Wayne Gieselman, Iowa Department of Natural Resources animal feeding operations coordinator was recently quoted as saying "experience shows that the smallest operations can have as great an impact on water quality as mega producers (Farm Journal)."

## **Alternatives and Consequences**

In recent farm bill hearings held by the House of Representatives Agriculture Committee, each livestock group; National Milk Producers Federation, National Cattlemen's Beef Association, and National Pork Producers Council testified for funding to offset the cost of complying with new environmental regulations. In addition to funding this request the groups urged doubling of funding for EQIP and increasing research funding for animal agriculture. A number of alternatives are available for consideration.

### *Status Quo*

Maintaining current programs and current funding levels is the status quo option. However, this option provides no additional incentives to improve environmental quality nor does it aid producers in complying with new regulations. The consequences of this option would be that producers would bear the brunt of compliance costs with the associated disproportionate loss of smaller producers.

### *EQIP*

The EQIP program provides technical and financial assistance for a wide range of conservation practice investments. EQIP was established in the 1996 farm bill and is a voluntary program to aid producers in dealing with environmental and conservation issues. Projects receiving EQIP funds have to be implemented according to a conservation plan.

The EQIP program has been underfunded when you consider that only about one-third of the 250,000 applications were accepted. The demand for this program has been huge. It is common to apply for this program only to find that no funds were available.

An additional complaint has been the targeted nature of the funds. Only producers with less than 1,000 animal units are eligible, with a payment limit of \$50,000. Relaxing this provision has been a major suggestion of livestock industry groups.

The House Agriculture Committee proposed farm bill, HR 2646, includes an increase in EQIP funding from \$200 million to \$1.2 billion with 50 percent going to livestock. Increasing funding would cost share more conservation projects. This alternative funds actual conservation projects rather than simply providing income enhancement.

#### *Increased Research Funding*

Many of the issues facing livestock production involve considerable research on technical solutions. Increased research funding would provide considerable aid in finding new solutions to waste problems. This type of alternative, when coupled with increased costs share program funding or conservation payments would move the industry toward greener, more conservation oriented technology. Unless targeted, benefits would likely accrue to larger farms.

#### *Other Proposals*

Other proposals have been made over the last couple of years. Two of those, offered by Senator Tom Harkin (D-Iowa) were the Animal Agriculture Reform Act and the Conservation Security Act. An important component of the AARA was to quadruple EQIP funding to \$800 million per year. The CSA is designed to encourage the adoption of conservation practices on farmland. Payments to livestock producers under this proposal would be limited to land management practices and not manure handling facilities. In this tiered program the more conservation practices performed the higher the payment.

These programs have been largely thought of as crop oriented policies. However, there is nothing that indicates that they must remain focused on crops. Programs of this type need not be directed toward land management practices only. Livestock management practices could be designated that would make producers eligible for payments.

With Senator Harkin's ascension to the chairmanship of the Senate Agriculture Committee earlier this year, it is clear that conservation will play a larger role in the farm bill. He has said that the CSA will become the centerpiece of the new farm bill.

### **Summary**

Clearly, what happens on the subject of green payments in the farm bill will be important for dairy. Expansion of cost sharing programs and the implementation of new green programs will allow dairies to make it over the hurdle of new regulation driven by other interests. Targeting of those benefits to smaller producers may allow them to make the transition as the structure of the industry changes.

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