MAXIMIZING CONSERVATION BENEFITS FROM THE 2007 FARM BILL: HOLISTIC POLICY OPTIONS FROM THE INSTITUTE FOR AGRICULTURE AND TRADE POLICY

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IATP

INTRODUCTION

The landscape of the upper Midwest is one of the most altered in the world. For example, Iowa ranks far and away last of all states in the amount of public lands, and has lost almost all of its native prairies and wetlands. Much of the Midwest landscape is predominantly in row crops, dominated by the ubiquitous corn and soybean. This came about from the progression of technologies, markets and national and state farm policies. The recent emphasis on ethanol from corn grain and biodiesel from soybeans threatens to make this monoculture even more dominant by moving land out of hay, grazing, conservation reserve and soybean into corn.

This landscape is identified with high rates of soil erosion, overabundance of nutrients in waters, loss of biodiversity, and rural depopulation with subsequent economic collapse of rural communities. Farms become larger and farmers decline in number. Did it have to be this way?

This white paper will set the framework for a better national farm and food policy that enhances conservation, provides clean water, healthy lakes and rivers, enhanced biodiversity, and more viable rural communities. We will cover the relentless march of technology, control of markets, and the influence of past policies especially at the federal level that have aided and abetted the direction of technology and markets. Finally we will recommend ways the next Farm Bill, currently scheduled to be written in 2007, can be changed to enhance conservation benefits while lowering taxpayer costs. We also will discuss the implications of the expanded federal funding in biofuels research and incentives.

CONSTRAINTS ON AGRICULTURE

Agriculture is a high-risk enterprise. Changing markets, plant diseases, insects, and especially weather give farm planners pause when they enter into a crop year. It has always been thus. The lack of diversity of the current cropping system leads to even greater risks than in the past when anyone of several farm enterprises could be counted on to provide income should others fail. Further, continued overproduction and underutilization of corn and other feed grains has driven prices to low levels, usually below that required to produce and harvest the crop. Yet the farmer is offered few alternatives that can pay the bills and make a living equal to that of their urban counterpart. Government intervention in the form of price supports, loans, insurance and crop guarantees have helped agriculture remain somewhat profitable, but at much cost. The results have been loss of cropping options, increased production of commodity crops, and erosion of public support for agriculture, along with the environmental problems
associated with row crops. The Midwest “Farm Belt” states produce over one fourth of the nation’s farm income, but receive over one-third of the price supports.

Many approaches have been attempted to minimize risk and maximize crop yields. These include: technologies such as irrigation, crop varieties, fertilizers, pesticides, and large machinery; policies such as market development and price and loan guarantees, irrigation and transportation subsidies, loan deficiency payments, emphasis on grain commodities, free trade agreements; and market development such as encouraging commodity check off programs, development of animal agriculture with consumer advertisements for meat and milk consumption, development of the high fructose corn syrup and transportation fuel industries that rely on corn and soy. The list goes on in details.

Politics not surprisingly plays an important role in the way agricultural policy has developed. Lobbies and PACS have existed for some time to promote cheap grains and to subsidize their marketing and transportation. Beneficiaries include grain and animal meats processors and exporters, animal producers, wholesalers and retailers, and now the transportation fuel industry. Regional differences are important in the give and take in Congress. Southern politicians protect their rice, cotton and sugar industries, while others protect coarse grain-based industries. While the international World Trade Organization (WTO) litigation has influenced subsidies for cotton, other crops remain on the political protection docket. International pressures have the potential to influence the way other commodities are supported. The WTO classifies agricultural policy as amber, green or blue box (WTO, 2002: Keeney and Kemp, 2005). The amber box is to include market-distorting payments, blue box is direct subsidies to farmers for land in production at some previous time, and green box payments are non-distorting. It is the aim of policy reform to bring more agriculture payments into the green box as conservation payments (Nassauer et al, 2006). Two excellent examples are the Conservation Reserve Program (CRP) and the Conservation Security Program (CSP).

**UNITED STATES FARM POLICY GOALS**

The U. S. has stated goals for its farm policy (Cochrane, 1999, 2003). But as Cochrane pointed out, only the production goal is easily met. Smith (2001) and Dimitri et al (2005) emphasize that while the goals of farm legislation have not changed much over the past 60 years, everything else changed. Small farms are a disappearing minority of the farm scene. High levels of subsidies are needed to keep the agricultural system running, while water and air pollution are major issues lowering the quality of life in the country-side, and furthering the loss of population in rural areas.

The failure of U. S. agricultural policy to enhance conservation has led consistently for calls for a complete retooling of farm policy (e.g., Smith, 2001) but change comes slowly. Let us examine the past of our farm policy to see if it can point ways to move in the future.
The Goals of U.S. Farm Policy.
The stated goals of U.S. agricultural policy have remained fairly constant over the last 70 years. As recently articulated by Willard Cochrane, the USDA’s chief economist during the Kennedy Administration, these include:

- The production of a healthful, abundant supply of food, at reasonable prices, for all Americans;
- Maintaining a prosperous and productive economic climate for the commercial farmer producers of that food supply;
- Protecting the remaining small to medium-sized family farm units from disappearing from the face of the earth; and
- The realization of a high quality of life for all people living in rural areas, together with a vibrant physical environment.

The general consensus is that USDA has had limited success in achieving most of these goals except for one – the United States undoubtedly has an abundant supply of reasonably priced food. While a healthful food supply has been a stated goal, it has been more of an afterthought of policy development rather than a driver.


THE START OF FARM BILLS

The economic collapse from 1929 to 1940 often referred to as the “great depression” hit the U. S. farm sector very hard. Farm income declined by more than half, and dropped much faster than urban incomes. Franklin Delanor Roosevelt, under the leadership of Iowa native and Secretary of Agriculture Henry A. Wallace, introduced the first farm bill, the 1933 Agricultural Adjustment Act (AAA) as a way to transfer funds to farmers. At that time this would have been very beneficial to the total economy because farmers and rural dwellers comprised much of the population in the U. S.

Because direct farm payments were regarded as politically impossible (they would be seen as socialistic), farm programs were seen as the best way to get cash to the rural economy. The AAA regarded supply control as the best way to increase farmer prices, and set parity prices as a floor level. While the AAA provisions were only available to producers who participated in voluntary production reduction, such as acreage set aside, virtually everyone participated. The program was funded by a tax on the commodities, increasing the food and fiber prices for the consumer. But the tax soon was declared unconstitutional. This was when the government entered into conservation contracts with farmers.

The first conservation initiatives were designed to get around the tax issue through the Soil Conservation Act of 1935. The act made funding available to farmers who established soil conservation practices. The Soil Conservation Service (SCS) was created. Soil conservation was a public supported expenditure, driven by evidence of the disastrous affects of the Dust Bowl. This funding provided a way to funnel money into a
depressed rural economy, illustrating that even then farm policy was more political than addressing real needs... The funding was significant (Table 1 from Cain and Lovejoy, 2004). In constant dollars, nearly twice as much funding was available for conservation programs in 1937 as in 1999.

<table>
<thead>
<tr>
<th>Table 1. Conservation expenditures</th>
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<tr>
<td>Year</td>
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<tr>
<td>------</td>
</tr>
<tr>
<td>Financial assistance</td>
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<td>Technical assistance</td>
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<tr>
<td>Land reserve</td>
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<tr>
<td>Total</td>
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<td>Constant 1996 $</td>
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CONSERVATION POLICIES ARE EFFECTIVE, BUT OFTEN ARE UNDER FUNDED

The WWII years completely changed the government’s views on farm policy. Farm income increased markedly, government programs emphasized production for food security and for Food for Peace, and conservation took a back seat. After WWII, SCS programs were developed that funded local watershed projects, seen by some as the evolution of local pork (now called earmarks). But these programs also did much to enhance the visibility of soil conservation and habitat enhancement. They were local, on the ground, and well publicized. SCS probably went overboard in building small check dams and terraces where they were not needed, but waterways and crop rotations were also emphasized.

By late 1940’s, surpluses began to accumulate, as the output of agriculture could not be assimilated in the local markets. Farm policy did not address conservation or surpluses significantly until the Agricultural Act of 1956. This legislation started the first set-aside known as the Soil Bank. There were two programs, an acreage reserve program that made farmers refrain from planting crops in surplus, and a conservation reserve program that called for a 3-year contract that had the government pay for land improvements that increased environmental quality. It took 29 million acres out of production. The purposes were to transfer soil bank acres into conserving practices and decrease surpluses. But a phenomenon that has repeatedly frustrated supply/conservation attempts reared its ugly head. Advances in technology enabled rapidly increased crop yields on fewer acres. Farmers put poorer soils in reserve and used funds to increase inputs on their best soils. So, while the Soil Bank did its job in enhancing conservation practices, surpluses continued to accumulate.

The Soil Bank was a good experiment. It illustrated the importance of limiting retirement on a per county basis so as not to devastate rural economies (a lesson not entirely learned in the CRP), and the importance of a bid system rather than fixed payments. However, this system was ended in 1958 because it failed to reduce production (Baker et al, 1984).
Surpluses continued in the 1960s and supply control continued to be the preferred solution. However, to show the dichotomy of farm policy, conservation payments were made through the ACP for lime and drainage, both of which increased yields. Farm productivity grew by 49% between 1950 and 1970, largely through adoption of hybrid corn, improved plant breeding, increased acres in row crops, and improved management, including fertilizers, pesticides, and favorable weather.

The Emergency Feed Grain Act of 1961 began a trend that paid farmers to replace production acres with conservation acres. In 1965 the act was amended to provide for 5 to 10 year contracts for farmers to take corn and grain sorghum out of production and use the land for conservation purposes. Again, farmers removed the least productive land from production and used the income for more inputs, thus supply continued to increase. At least more sensitive lands were protected.

In the 1970s a short-term rainbow turned into a long-term disaster for agriculture. With the Soviet Union running out of grain for their beef herds and the need to prop up the Communist regime, Russia went on a grain buying spree. Grain prices rose dramatically and the infamous “fence row to fence row” policy was established by the Secretary of Agriculture, Earl Butz. The government saw agricultural exports as the way to pay for imports of goods and fuel. Lands that the government had spent millions helping to establish in conservation uses went under the plow as soon as their conservation contracts expired. Pasturelands and woodlands turned into row crops, land prices skyrocketed and the stage was set for the next farm crisis. However, farm programs continued to offer conservation benefits. There were allowances for payments to farmers for letting hunters and trappers to use conservation lands, and in 1973, language was added to authorize long term (up to 25 years) conservation contracts.

Because of growing concerns that land and water conservation were not being adequately protected, Congress enacted the Land and Water Resources Conservation Act of 1977 (P.L. 95-192), commonly referred to as the Resources Conservation Act or RCA. Analysis of resource data to develop and implement the initial RCA program stimulated some change in the national debate on conservation. These analyses showed that despite intensive control efforts, erosion was still occurring at unacceptable levels on large portions of the country's cropland. The Senate Agriculture Committee took the lead in using this information to redefine the conservation agenda by creating new and innovative approaches to solving this ongoing problem. The Act required the Soil Conservation Service to conduct a continuing appraisal of soil, water, and related resources, and to use that appraisal as the basis for developing a national comprehensive soil and water conservation program Commodity Program Provisions under the Food and Agriculture Act of 1977.

The enhanced productivity of agriculture had a devastating effect on commodity prices (Figure 1). The real price of corn and soybeans has steadily fallen to the current levels and in most cases the market value of these crops is less than what is required to produce the crop. But farmers continue to farm (Ray et al., 2003) rather than let the land go idle.
1985 FARM BILL, THE CONSERVATION BREAKTHROUGH

Farm policy in the 1980’s moved the conservation debate beyond erosion control and water quantity to issues such as soil quality, water quality, air quality, biodiversity and wildlife. As Cain and Lovejoy (2004) state: “conservation programs started to focus on conservation, not supply control or rural development”. Sustainable agriculture programs were established. The environmental lobby became engaged, as they realized that agriculture had major impacts on environmental quality and that changes were easier under agricultural than environmental legislation. This set the stage for the conservation provisions of the 1985 Farm Bill. The 1985 Farm Bill was the first to have a true Conservation Title, and Sodbuster, Swampbuster, Conservation Compliance, and the Conservation Reserve Program (CRP) were established. The true breakthrough of the 1985 Bill can be found in the change in the language it uses to describe the importance of soil conservation for reasons other than productivity gains. It also added several new programs. Sustainable agriculture appeared on the horizon in response to continuing exodus of smaller farms, another downturn in the farm economy, and growing awareness of non-point source pollution of ground and surface waters from agriculture.

CONSERVATION COMPLIANCE

It was realized that the unintended effect of income and farm price support programs was to actually expand acres of erosive row crops. This was working in opposition to the conservation programs that congress was trying to promote. So, the 1985 Food Security Act required farmers to engage in conservation programs in order to receive government payments. This was termed “Conservation Compliance”. Claassen (2004) gives a good summary of conservation compliance and the initial difficulties in establishing the program. For example, they debated the controversial soil tolerance level (T) concept. Ultimately the SCS gave up on T (or even 2T), admitting that if this concept was enforced; much of the highly erodible land (HEL) would not be farmed. Therefore a more flexible approach was adopted. Conservation Compliance was tied to other that if farmers are to receive program benefits they should adopt conservation practices. If
owners of highly erodible lands (HEL) did not develop and implement a farm conservation plan by 1995, severe penalties could be set. These include loss of price support programs, government crop insurance FHA loans, CCC storage loans and CRP payments. If HEL were to be taken from permanent grass or legume, the Sodbuster provision required complete implementation of a conservation plan or all program benefits was lost. Wetland areas could not be converted to production under provisions of Swampbuster. Between 1992 and 1997, conservation compliance, along with adoption of other conservation measures independently such as no-till and conservation tillage, reduced soil erosion up to 295 million tons per year (Claassen, 2004).

However, when conservation compliance provisions were enforced, a political uproar occurred. Neighbors and SCS employees ended up being cast as “soil cops”. Enforcement was spotty and mostly local. That lesson cast a cloud over restoring conservation compliance provisions in future farm bills. (Zulaug, 2003). Thus, conservation compliance largely disappeared in the 2002 farm bill because of the difficulty and unpopularity of enforcement (Zulag 2003).

In 2002, conservation policy shifted to incentives and cost share of practices to encourage adoption. However, Conservation Compliance may be getting renewed interest. Enforcing conservation compliance evenly across the country would allow Congress to reduce outlays but will farmers go along? A survey by Lubbens et al (2001), cited by paper quoted in Zulag (2003) found farmers were acceptable of reduced tillage cross compliance but not strong on requirements for all lands. Likely that is because reduced tillage already is cost effective.

THE CONSERVATION RESERVE PROGRAM

The CRP is the largest and most successful land retirement program in Farm Bill history. It was established in the 1985 Farm Bill and reauthorized in the 1990 and 1996 Farm Bill. While the stated purpose of the program is to convert highly erodible cropland or other environmentally sensitive acreage to resource-conserving vegetative cover, it also served as a way to reduce crop production especially when initially written in 1985. It operates by providing annual rental payments for 10 to 15 years to landowners through the Commodity Credit Corporation (CCC) based on the agriculture rental value of the land (as determined through competitive bids). The CRP also provides up to 50% cost share for approved conservation practices.

In total 36.4 million acres have been placed in conservation reserve. Over time, the CRP has become a useful soil conservation and wildlife enhancement program as the SCS (now the NRCS) learned how to meet congressional mandates. Many, especially wildlife conservationists, would hate to see the long-term benefits of the CRP wiped out in one quick stroke of the plow. So they will lobby hard to maintain CRP in the next farm bill. Numerous wildlife groups have endorsed CRP and pushed for its continuation.

Currently, 16 million acres of land under CRP contract are scheduled to expire in 2007, 6 million more in 2008, 4 million in 2009 and 2 million in 2010 (Johnson, 2005). In 2004, President Bush called for reversal of this schedule, and stated the administration was
committed to full enrollment of up to 39.2 million acres. The sunset of the CRP could be a downturn for U.S. land conservation policies. Grain prices are showing some upward pressure from rising use of corn-based ethanol and soy diesel. Higher grain prices would work against re-enrollment of CRP lands. Hence government policies to encourage grain based biofuels may work against effective conservation policies. The HEL provisions of CRP have been highly successful. Not only was there a high acreage enrollment but also there was over a 25% reduction in soil erosion (as calculated by USLE).

The CRP plays an important role in the Upper Mississippi River Basin and the attempts lower nitrate loss to the Gulf of Mexico. The five states (Illinois, Iowa, Minnesota, Missouri, and Wisconsin); in the basin currently has a total CRP enrollment of 7.0 million acres, or approximately 19 percent of the national CRP acreage. This represents 41 percent of the total number of CRP contracts, 40 percent of the total number of farms enrolled nationwide in the CRP, and 32 percent of the total annual CRP rental payments. (UMBRA, 2006). In 2007, nearly 39,000 CRP will expire, representing 29 percent of the CRP acres currently enrolled in these states. USDA estimates that virtually all of these contracts will be eligible for re-enrollment.

CRP Assessment

CRP has had many measurable benefits. Feather et al (1999) have estimated that the CRP generated as much as $500 million per year in conservation enhancements such as freshwater recreation, wildlife hunting and viewing. A more recent national survey of CRP participants (Allen and Vandeven, 2003) found that the current enrollment of over 34 million acres has led to substantial environmental and social benefits. In addition to reduction of surplus commodities, reducing soil erosion, protecting and improving soil quality and productivity, there were many pervasive benefits to wildlife. However, they stressed that management of CRP land in the coming decades will be more effective if local goals and needs, priorities and constraints are addressed. And these benefits come at a public cost of about $2 billion per year.

The National Ag Law Center summarized the status and issues of the CRP as of 2005 (Johnson, 2005). The 2002 law increased the CRP enrollment cap from 36.4 million acres to 39.2 million acres; some contracts could be extended up to 15 years. The general signup was announced in 2004, and two CRP initiatives were added, 250,000 acres for bobwhite quail habitat and 250,000 acres of non-floodplain wetlands. The CRP was expanded to include broader environmental goals including carbon sequestering, wildlife habitat, water quality improvement from reduced erosion and longevity of benefits.

The bobwhite quail and non-floodplain wetlands had continuous signup (enrolled at any time). Additionally, a joint Conservation Reserve Enhancement Program (CREP) was announced. It also had continuous signup.

The Congressional Budget Office estimated that CRP cost $1.9 billion in FY2004 and $2 billion in FY2005. NRCS estimated that monetized CRP benefits yearly prior to 2003.
This does not include environmental services benefits. Currently, the environmental benefits index is used to guide acceptance of CRP bids. While critics have said that CRP is expensive, and its benefits are temporary, supporters point to the documentation of estimated benefits to prove the programs worth, and that it provides incentives for smaller farmers to do environmental programs they otherwise might not afford. The FSA estimated that compared with 1982 baseline, CRP has reduced erosion by over 44 million tons per year on the 34 million acres enrolled. Other documented benefits include over 3.2 million acres of wildlife habitat and reduction in nitrogen and phosphorus nonpoint source pollution.

Upcoming issues with CRP are the expiration of over 28 million acres under contract between 2007 and 2010 (USDA 2006). Changes in grain prices, particularly corn, with the advent of high demanding ethanol plants, could entice many farmers to return to corn on the expired CRP lands. Other issues include how to address changes in the environmental benefits index and more targeting to problem areas such the lower Mississippi River basin. To further complicate matters, the Iowa Farm Bureau has called for elimination of the CRP program to enable more production of corn for ethanol (Beeman, 2006). This article quoted the Farm Bureau as urging more use of “vacant land” giving the impression that the CRP is an ecological empty space, whereas the opposite is true.

There has long been concern that CRP was reducing rural populations and impacting rural economies. While a recent USDA ERS report found that nationally there was little impact of CRP (Sullivan et al, 2004) local economic adjustments might be sizeable. This issue will remain one for debate.

Carbon sequestration is a major co-benefit of conservation programs (Feng et al, 2004). These authors emphasize that if storing of carbon in the soil is the primary focus of conservation programs, numerous co benefits will occur. These include improved wildlife habitat, improved water quality and a more aesthetic landscape. Carbon trading the long established CRP and the newly initiated CSP both offer the opportunity to integrate co benefits of carbon storage.

Feng et al (2004) have quantified the benefits of targeting CRP based on carbon sequestration or erosion reduction in the Upper Mississippi River Basin. CRP has had an enormous influence on non point source pollution discharges as it was put into the basin, but if it were targeted to either carbon or erosion, different benefits emerge. Interestingly from the standpoint of reducing hypoxia, targeting CRP on erosion gives almost a three fold reduction in soil loss and double the N runoff reduction compared to the actual CRP. Clearly CRP is important to the basin, but can be even more so if the re-enrollment is targeted.

Table 2. Total acres and annual change for some environmental indicators as a result of land retirement in the Upper Mississippi River basin. (Feng et al., 2004)

<table>
<thead>
<tr>
<th>Policy</th>
<th>Carbon</th>
<th>Erosion</th>
<th>N Runoff</th>
<th>Acres</th>
</tr>
</thead>
</table>

9
<table>
<thead>
<tr>
<th>scenarios</th>
<th>sequestration (tons)</th>
<th>reduction (tons)</th>
<th>reduction (pounds)</th>
<th>enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual CRP</td>
<td>1,054,000</td>
<td>15,293,000</td>
<td>4,654,000</td>
<td>3,122,000</td>
</tr>
<tr>
<td>Targeting carbon</td>
<td>4,141,000</td>
<td>4,699,000</td>
<td>6,365,000</td>
<td>3,926,000</td>
</tr>
<tr>
<td>Targeting erosion</td>
<td>988,000</td>
<td>43,744,000</td>
<td>9,399,000</td>
<td>3,972,000</td>
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</tbody>
</table>

**MEASURING OUTCOMES**

A further difficulty is the problem of measuring outcomes of conservation programs. Smith and Weinberg (2006) point out how difficult it is to assess why farmers may adopt conservation practices. Conservation program payments may well induce farmers to adopt good conservation practices. But these may well be adopted within the complexity of a farm operation, making it difficult to link programs to actions. Smith and Weinberg use as an excellent example the findings that annual soil erosion on U.S. cropland declined 40% between 1982 and 1997 suggesting that compliance mechanisms encouraged greater soil conservation. However, during this same time soil erosion also declined on farms not subject to compliance mechanisms. After accounting for other factors, the ERS showed that only about 25% of the reduction in erosion could be directly attributed to conservation compliance.

**OTHER CONSERVATION PROGRAMS**

The *Food, Agriculture, Conservation and Trade Act of 1990* initiated the Wetland Reserve Program (1 million acres) and the Ag Water Quality Protection Program (10 million acres). Ground water pollution, water quality and sustainable agriculture were addressed and the landscape, watershed and ecosystem level scales were acknowledged. In 1996 CRP signups were extended, and a new structural, vegetative and land management program was established. EQIP (Environmental Quality Incentives Program) was extremely poorly funded ($200 million). Half of the funds went to livestock producers with technical and cost-share assistance; the other funds went to consolidate programs such as ACP (which is now out of existence), and WQIP. The Wildlife Habitat Incentives Program (WHIP) was established. EQIP was a more targeted program than ACP, but in reality targeting remained elusive, as environmental objectives often were not prioritized in fund disbursement (Claassen, 2006).

**THE 2002 FARM BILL: SETTING THE STAGE**

In 2002 (just before the latest economic downturn), large appropriations were made for EQIP ($1.3 billion over several years), and the Conservation Security Program (CSP) was
established. Funding looked promising but bad weather meant that the CCC had to spend funds on disaster payments to support farmers whose crops had been devastated.

THE CONSERVATION SECURITY PROGRAM
The 2002 farm bill was resolved by a remarkable compromise among conflicting visions. It seemed unthinkable that Congress or taxpayers would support continuation of the fixed payments, emergency payments, and commodity price subsidies as a perpetual entitlement to commodity crop growers, with no policies to alter the prospect of an endless bailout. Nevertheless, Congress did just that, passing the largest commodity title ever, including a continuation of both fixed payments and commodity price subsidies, while raising the maximum amount any single farmer could receive.

However, at the same time, the farm bill embraced a new direction, nearly doubling promised conservation spending and creating a revolutionary new holistic conservation initiative called the Conservation Security Program (CSP). In a manner not all that unusual for democratic compromise, the two competing visions were both moved forward simultaneously. Crop subsidy spending was to total $125 billion over the next ten years, including new funding of $47 billion, while conservation spending would total $39 billion, including $17 billion in new dollars, according to estimates by the Congressional Budget Office (Claassen 2006).

Stewardship incentives, sometimes called ‘green payments’, are an alternative farm policy intended to create profitable farms that protect the environment by rewarding the conservation benefits achieved by farmers. In the future, stewardship incentives could become the alternative to some or all of the current system of commodity based payments and is the answer to WTO rules on lowering amber box subsidies. For now the Conservation Security Program is an additional option for farmers who voluntarily choose to enroll. It was shaped by numerous sustainable agriculture and activists farm groups. However, it has suffered from lack of sufficient funding since its inception.

The vision for the CSP is to reward farmers who voluntarily implement effective conservation on their working lands, thus integrating production of economic products and environmental benefits on the land. The goal is to improve a robust range of environmental concerns, including surface water quality, groundwater protection, air quality, fish and wildlife habitat, energy conservation, soil quality, biodiversity, and genetic preservation. Farmers would receive annual payments as they provide public benefits to the nation’s natural resources and environment. Participants will solve critical resource problems while receiving graduated rewards for increasing efforts.

The CSP envisions a farming systems approach and will eventually move toward a performance and outcome-based reward structure. Both current and new conservation practices and systems will receive incentives – thus recognizing the good stewards of today while encouraging others to join their ranks. Farmers who have long maintained good conservation practices will not be left out and those who have done little will not be disproportionately rewarded for fixing their problems. In previous programs funds were
largely targeted to remediation of poor practices, annoying those who did it on their own. The highest rewards in the CSP encourage sustainable land, energy, and resource use over the long term, including diversified resource-conserving crop rotation systems, managed rotational grazing systems, conservation buffers and other multiple benefit conservation measures.

All regions of the country and all types of agriculture could participate on a fair and equitable basis, including livestock, fruit, vegetable and organic farms. No longer will commodity producers have the advantage. Payments per farm will be capped at a modest amount annually so that large farms will not benefit disproportionately, but support will be ongoing for the life of the individual five to ten year conservation plan and contract, and contracts may be renewed.

The CSP is the first conservation program designed as an open-enrollment entitlement program, in the same category as commodity subsidies. With an open enrollment program the demand for the program drives actual funding levels rather than being subject to the whims of the appropriations process that could leave some otherwise eligible farms without benefits. All is not perfect, however. Congress subsequently placed a ten-year funding cap on the program. If this cap is not removed the goal of automatically enrolling all farmers with approved conservation plans, without competitive bidding or waiting lists, would be jeopardized.

Substantial funding will be necessary to implement the program. Beyond funding for payments to farmers, adequate resources will be required for outreach and education to farmers; additional agency staff and training; and on-farm planning assistance by conservation professionals, third party consultants, non-profits, and experienced farmers. Continuing demands on the nation's finances to support military commitments, and the decline in revenues from tax cuts tax cuts, are threatening the funding levels for the CSP along with a host of other government programs.

The CSP will base each contract on a conservation security plan in which the farmer documents a combination of practices designed to resolve one or more of the natural resource concerns identified specifically for that site. On-farm and watershed level monitoring and tracking of environmental improvements will be an important part of the program. On-farm research and demonstration of new or not widely adopted systems and practices will be encouraged.

The CSP can be the most innovative and exciting program in the federal agricultural conservation toolbox, and could become a critical new component of U.S. farm policy for years to come. It gains further importance through the WTO negotiations as it does not count toward production payments (amber box). A second and equal goal of the CSP is to improve income for farmers. While part of the benefits reimburse farmers for conservation costs, other parts financially reward farmers for participating and reaching high levels of sustainability. The CSP began in 2003 as a revolutionary conservation program for working lands that financially rewards farms for the numerous environmental benefits they provide. If it proves popular and successful at reducing
agriculture’s environmental impacts, then it could become the model that will be expanded into a national green payment program that will displace some significant portion of the failing commodity subsidy policies of the U.S. CSP could well be the beginning of a transformation in US policy (Keeney and Kemp, 2003).

**How CSP Works**

The Conservation Security Program is structured around three tiers, from which farmers may choose a level of involvement based on their own stewardship goals.

**Tier I:** Annual payments up to $20,000 for resolving to a nondegradation level at least one of the identified natural resources of concern on a selected part of the farm.

**Tier II:** Payments up to $35,000 annually for resolving to a nondegradation level at least one identified resource of concern on the entire farm.

**Tier III:** Up to $45,000 annually for resolving to nondegradation level all of the identified resource concerns on the entire farm.

The one practice excluded is manure storage, partly because such facilities are usually required by feedlot regulations, and partly to prevent subsidizing further concentration of livestock into confinement operations. Manure management and land application are eligible practices for all.

Each locally approved conservation security contract will result in annual payments combining three payment components, but not to exceed the cap for the selected Tier. A **base payment** consists of a per acre payment for each acre covered by the conservation plan, based on a graduated percentage of the average rental rate. $5,000 is the maximum base payment for Tier 1, $10,500 for Tier 2, and $13,500 for Tier 3. A **cost-share payment** covers up to 75% of the costs of installing new practices or maintaining existing practices. Beginning farmer costs are covered up to 90%. An **enhanced payment** will be a bonus to reward exceptional conservation plans that exceed requirements, address additional resource concerns, conduct research and demonstrations, are part of a larger watershed project, or include monitoring and assessment. The law specifies that diversified resource-conserving crop rotation systems, managed rotational grazing systems, conservation buffers and other high payoff, multiple benefit conservation measures will receive enhanced payments.

Keeney and Kemp, 2005

**REALITY CHECK**

Agriculture is in a unique position. Grain farmers especially, and independent animal producers, are in a noncompetitive situation, that is they have no independent control of prices they receive for their products, but also no control over the prices paid for inputs.
Society is only recently recognizing the impacts of agriculture to water, soil and air, and that federal policies have had much to do with the current sad state of affairs. That said, agriculture is doing what is asked of it, produce commodities at lowest price. Technologies continue to increase yield, corn yield trend line continues linear at about 1.6 bu/year for example. This increased yield must go somewhere, and hence more uses for corn and soybean are being developed. Supposedly product development helps the farmer through increased demand and higher prices, but in reality, prices have not responded. And we know that farmers will not hold back on production in response to low price (Ray et al., 2003). Farmers will continue to produce regardless of price signals. And apparently surpluses will continue, as they have with few exceptions for close to 50 years. Will WTO amber box rules be sufficient to cause changes in the way agriculture is supported? Some feel that if agriculture commodity support is completely withdrawn, the cropping mix would change little. There would be short term impacts until agriculture adjusts, especially a drop in land prices.

**BIOFUELS AND BIOMATERIALS**

A unique opportunity to add conservation benefits to the landscape on working lands while enhancing farm income lies in the use of cellulosic crops for energy and materials (Kleinschmit and Muller, 2005, Johnson et al., 2006). However, much research and development will be needed before cellulosic crops become a large part of the nation’s energy and materials mix.

In July 2005, Congress passed the Energy Policy Act of 2005. The bill authorized $14 billion to promote energy efficiency and conservation, modernize the domestic energy infrastructure and provide incentives for both traditional energy sources and renewable alternatives. (Genomics:GTL, 2006). This legislation led in part to the rapid increase in use of biofuels, primarily ethanol from corn grain and soy diesel. Section 932 calls for partnerships between DOE and industrial and academic institutions to advance the development of biofuels and includes commercial application of integrated biorefineries that use a wide variety of lingo-cellulosic feedstocks. Section 941 calls development of cellulosic crops, Section 942 provides production incentives for cellulosic biofuels “to assure that annual production of one billion gallons of cellulosic biofuels by 2015”. Section 1501 called for a minimum of 250 million gallons of cellulosic ethanol by 2013. The Biomass Research and Development Act (revised by the Energy Policy Act of 2005) (U.S. Dept of Energy, 2006) is a comprehensive program that calls for cooperation between the USDA and the DOE to conduct research and demonstration on the development of biofuels at prices competitive with fossil fuels. Further, Title IX of the 2002 Farm Bill establishes new programs and grants that support increased use of biofuels and biobased products, advance biorefinery development and reauthorize the bioenergy program (USDA-ERS 2006). If the biomass legislation is adequately funded, considerable advancement in research and development will occur to accelerate production of cellulosic energy crops.
The shift of farming systems to one that includes a significant amount of crops grown for energy is rapidly occurring. To date the shift is only in the use of corn and soybean, but if the research on cellulosic energy crops advances, significant changes in land use will occur. Worst case scenarios have far more land going into row crops. Best case scenarios have far more perennials than now.

REFERENCES

Max cons benefits refins


Max cons benefits refns


USDA 2006. Conservation reserve program and conservation reserve enhancement program. Farm Bill Forum Comment Summary & Background.
RECOMMENDATIONS
THESE NEED TO BE EXPANDED AND PERHAPS COORDINATED WITH SOPHIA AND DENNIS OLSON'S POLICY PAPERS IN PROGRESS?
To maximize conservation benefits means compromise. We recommend

(1) That LDP be dropped and the money saved put into CSP, biomass research, WRP and CRP. (somewhat naive to think this will be a dollar for dollar tradeoff?) need to understand more of what Ray has said about LDP

(2) The research and development into cellulosic biomass energy is expanded 100 fold on the scale of a Manhattan project.

(3) Carbon credits be instituted on the open market (will this really help conservation programs)

(4) CRP program continued with increased payments to match commodity price increases, open enrollment for conservation practices increased

(5) The WRP program be given increased emphasis, maintain open enrollment

(6) CREP be funded at full levels, made part of the hypoxia task force recommendation?

(7) Remove subsidies on corn-based ethanol, and add additional subsidies for cellulosic ethanol (but not from corn stover based ethanol).

(8) Bring back conservation compliance

(9) Increase tech assistance budget and training
(10) Do more for certification of tech advisors at ag schools

(11) Bring in TMDLs on conservation plan (point source issues)

(12) Evaluate impact of grain ethanol/biodiesel on conservation, perhaps a major panel from Pew

(13) Change ag title to food and energy bill from old farm bill

(14) Resolve conflicts between conservation and sustainable ag communities

(15) More targeting of incentives

(16) Farmland protection issues, esp urban sprawl

(17) Create a more rigorous definition of HEL

(18) Encourage Science to help shape expectations, too much politics?

(19) Statement on crop insurance? Disaster payments?

(20) Privatization of some conservation benefits

(21) How much to tie in with rural development?

(22) Any issues with supply control (ala Dennis O?)

(23) Do incentives really help?

(24) Insist on outcome based programs (include Keeney Boody paper, which is not yet linked)
APPENDICES

This is an array of stuff I did not know what to do with. Could put all the NGO recommendations in this section. They are changing rapidly and would likely be out of date.

Currently a wide variety of conservation programs are available for farmers (see box from Lambert and Sullivan, 2006).

An Array of Conservation Programs Is Available to Farmers

Efforts to mitigate unwanted environmental side effects of agricultural practices are not new. For more than a century, the Federal Government has managed programs to curtail soil erosion caused by farming. Earlier conservation efforts focused on the onsite benefits of reducing soil erosion. But in recent decades, USDA has broadened its emphasis to include water and air quality improvement and wildlife habitat protection. The following programs support these goals by reimbursing farmers and farmland owners for eligible conservation practices.

- The *Conservation Reserve Program (CRP)* was authorized by the Food Security Act of 1985 to retire environmentally sensitive land from agricultural production for 10-15 years. In return for an annual rental payment and partial reimbursement for the cost of establishing and maintaining approved groundcover, program participants agree to take enrolled land out of production and plant grasses, trees, and other conservation-cover crops. Since 1996, farmers have also been allowed to enroll land through a continuous signup program focused on developing riparian buffers and other working-land conservation structures. On roughly 35 million acres of enrolled cropland in 2004, farmers and landowners received $1.8 billion in cost-share and rental payments from the CRP.

- The *Wetlands Reserve Program (WRP)* was first implemented in the early 1990s to retire and restore wetlands that had been converted to cropland. The Farm Security and Rural Investment Act of 2002 (the 2002 Act) authorized enrolling slightly over 2 million acres in WRP.

- The *Conservation Reserve Enhance-ment Program (CREP)* was initiated in 1997. This Federal-State partnership targets farmland for retirement in specific geographic areas to achieve local conservation goals. Nearly 600,000 acres have been enrolled in
CREP, which is administered through the Conservation Reserve Program.

- The **Environmental Quality Incentives Program (EQIP)** provides financial and technical assistance to help participants adopt conservation practices on eligible agricultural land. EQIP is a working-land program that shares with farmers the costs of installing approved structural practices (grassed waterways, riparian buffers, etc.) or of implementing conservation management practices (integrated pest management, fertilizer management, etc.). Funding for EQIP increased substantially under the 2002 Act, from roughly $200 million annually in the early part of the decade to $1.3 billion in 2007. By statute, at least 60 percent of EQIP funds go to livestock producers, including large confined-livestock operations.

- The **Conservation Security Program (CSP)** was authorized in the 2002 Act to support continuing conservation practices on working lands. In 2004, the first year of the program, 2,200 farmers received $35 million for conservation practices on roughly 2 million acres of working land.

Other conservation programs administered by the Federal Government include the Farm and Ranch Lands Protection Program, the Conservation Technical Assistance Program, the Grassland Reserve Program, the Wildlife Habitat Incentives Program, and Agricultural Management Assistance.

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**Conservation Security Program 2006 Sign-up Information** (from SAWG, use as an appendix?)

On June 6, 2006, USDA Secretary Johanns announced that 4,404 farmers and ranchers in the 60 eligible watersheds were enrolled in the Conservation Security Program (CSP) during the 2006 sign-up. A total of 8,570 applications were submitted, of which 7,548 were eligible to enroll. With the $259 million funding cap placed on the program by the FY2006 appropriations bill, only $50 million was available for new sign-ups, with the remainder spent on existing contracts and technical assistance. As a result, only 58 percent of the eligible farmers were able to enroll. Within the ranking categories, category A and category B1 were enrolled, though B1 contracts were pro-rated as not enough money was available to cover the full amount. Over 99 percent of the accepted contracts were whole farm contracts, either Tier 3 (45 percent) or Tier 2 (55 percent). The total eligible applications represented 6 million acres and would have cost $99 million. The accepted contracts represented 3.7 million acres at a cost of $50 million.

The top dozen states in number of farmers enrolled in 2006 were Oklahoma (439), Ohio (389), Missouri (360), Nebraska (348), Maryland (253), Idaho (248), Michigan (192),
Wisconsin (155), Colorado (141), Iowa (133), Oregon (101), and Tennessee (99). The states with a significant number of contracts offered but a low percentage of contracts accepted included California (216 applications, 28 percent acceptance rate), Illinois (326 applications, 20 percent acceptance rate), Iowa (822, 16 percent), Kansas (126, 33 percent), Minnesota (83, 17 percent), and Wisconsin (586, 26 percent). At the other end of the spectrum, Maryland had 321 applications and 79 percent accepted, Michigan had 274 applications and 70 percent accepted, Oklahoma had 525 applications and 84 percent accepted, and Oregon had 116 applications and 87 percent accepted. We will attempt to find out what factors were at play in these divergent experiences.

The Sustainable Agriculture Coalition (SAC) issued a press release on the sign-up announcement that emphasized that the 2006 sign-up should be a clear message to both the White House and Congress that the continual practice of cutting CSP funding promised by the 2002 Farm Bill in order to use that funding for discretionary programs and pork-barrel earmarks is harming farmers and the public good. Despite the Administration’s announced intention of bringing CSP to all watersheds in the country within an eight year period, if the very low 2006 rate were continued it would take over 30 years to achieve that objective. (MAKING HAY: SUSTAINABLE AGRICULTURE COALITION FEDERAL ADMINISTRATIVE NEWSLETTER: June 2-July 20, 2006)

Leverage Points for Future Change (taken from SAWG, not sure these are very realistic)

Fiscal resources: An expanded green payments program such as CSP should not be viewed as competing for scarce conservation dollars. It must be viewed as an alternative way of distributing some portion of the commodity subsidies. The money would still flow to support farmers, but Americans would be getting something in return: a cleaner environment. Public concerns about farm subsidies are increasing, with media attention focusing on payments accruing to large corporate and absentee owners.

Favorable Trade Rules: The Conservation Security Program is likely to gain momentum because it is a farm policy that fits the future. U.S. trade commitments at the World Trade Organization obligate farm policy to move toward subsidies that do not distort trade under WTO rules. Export subsidies and production limiting programs are subject to severe limitations. The CSP seems to fit into the “green box” of allowable farm subsidies directed to legitimate environmental concerns or other forms of domestic support that do not influence trade.

Water Quality: Federal and state agencies are moving forward to address pollution from nonpoint sources, including the leading source which is agriculture. Impaired watersheds may undertake a process of allocating responsibility for pollution reduction to various sources. Reducing nitrate export to the Gulf of Mexico to control and reduce the area of the Gulf experiencing hypoxia is of critical importance. Agriculture is sure to be a major source in many watersheds, and watershed plans to reduce those pollution loads will have to be developed. The CSP provides an avenue for significant money to flow to farmers to help reduce their pollution without the need for onerous regulations and the resultant political backlash.
Geographic Fairness and Public Support: The likely distribution of payments under the CSP will differ from current patterns of farm payments. Some areas that have not benefited from commodity programs might do better under the CSP. A base of support for stewardship incentives comes from urban and suburban voters who care about farmers, but care a lot more about the environment. Farmers wishing to transition to organic, or carry out their organic certification plan could use the CSP as a major means of support, thereby building the support of the organic industry and organic consumers.