

CHAPTER 1

Current Topics: Selected Issues in American Agriculture Today





This section gives a brief overview of a few current issues facing American agriculture—and therefore the U.S. Department of Agriculture (USDA). Further information on these current topics can be found on the Web sites indicated.

Homeland Security

What is USDA doing to ensure the well-being of America's agriculture and food supply? The Department has in place an overall biosecurity system designed to prevent the harmful introduction of plant and animal pathogens into America's system of agriculture and food production. From the farm to the table, USDA enforces biosecurity measures designed to protect against all animal and plant pathogens.

Following September 11, 2001, USDA took immediate steps to secure sensitive facilities and examine vulnerabilities throughout the food chain, and it conducted assessments to identify the critical needs to fill security gaps. USDA continues to take the necessary steps to ensure that its programs and services are responsive to potential biosecurity threats. USDA programs aim to meet two very important objectives: first, to prevent the entry of plant or animal diseases, and second, to contain and eradicate the problem if we do face an emergency.

USDA is looking at short- and long-term needs to ensure that the Department continues to protect America's food supply and agriculture against pests and diseases of any kind. In 2001 and 2002, USDA took steps to strengthen USDA's agricultural infrastructure—the programs, the research, the coordination, and the resources—to ensure that the Department has the ability to prevent pests and diseases from harming agriculture and our food system.

The Department's efforts on homeland security are based on a longstanding commitment to food safety and to securing the food supply and agriculture from threats. For example, in 2001, the Department dealt with the threat of foot-and-mouth disease as a widespread outbreak occurred in the United Kingdom and other parts of Europe. USDA strengthened surveillance and response systems as it dealt with the threat of this disease that we had not seen in this country for over 70 years.

However, since September 11, 2001, USDA is also examining threats to our food supply as homeland security issues. The Department is now concerned about intentional as well as unintentional threats.

“The best way to deal with threats to the Nation’s food supply and agricultural infrastructure is to prevent and deter intentional or unintentional introduction of plant and animal diseases into the United States. I have said many times that pests and animal disease prevention and eradication programs are central to USDA’s ability to protect the Nation’s food supply and agricultural infrastructure. Simply put, the best offense is a good defense.”

Secretary Ann M. Veneman, May 9, 2001

USDA has stepped up its ongoing efforts to protect American agriculture against potential threats. Key homeland security activities include protecting the food supply and agricultural production, as well as protecting USDA staff and facilities and ensuring emergency preparedness. Some of the key biosecurity enhancements being implemented include the following:

- Security has been increased at appropriate USDA facilities.
- At ports of entry, personnel are conducting intensified product and cargo inspections of travelers and baggage to prevent the entry of animal or plant pests and diseases. The Agricultural Quarantine Inspection program has been strengthened, and an automated system of inspections is being developed in coordination with the U.S. Customs Service. USDA is purchasing 100 rapid pathogen identification devices and hiring additional inspection personnel. USDA also has doubled its inspection dog teams. Port inspection responsibilities will be transferred to the Department of Homeland Security during 2003.
- Food safety inspectors have been given additional guidance to be alert to any irregularity at food processing facilities. USDA constantly reviews and updates its biosecurity procedures as laboratory methods and science improve. FSIS has increased monitoring, provided training to inspectors, hired additional inspectors for imported meat and poultry, and expanded technical capabilities.

Modern information technologies allow for improved responses to plant and animal pest and disease outbreaks. For example, USDA is also developing a system that relies on geographic information system technologies to provide capabilities for real-time mapping to predict spread and consequences of outbreaks. And the Agricultural Research Service is improving rapid detection technologies for foot-and-mouth disease as well as other animal diseases. The Department is also addressing the possible disruption to its computer systems.

Training exercises, as well as more communications and technical assistance, have been conducted and improved to ensure readiness should we face an animal, pest, or food emergency.

Federal and State Coordination

USDA works with the Congress, States, other Federal agencies, academia, and the private sector to make sure that the Nation has a strong line of defense. USDA is coordinating with other Federal agencies—such as the Food and Drug Administration, the Centers for Disease Control, the U.S. Customs Service, and law enforcement agencies—on biosecurity issues, and with appropriate State and local agriculture offices and industry organizations on emergency preparedness, in order to provide training and strengthen resources where appropriate.

State grants and cooperative agreements help bolster food and agricultural homeland security protections. These grants are an important component of U.S. efforts to strengthen homeland security protections as they relate to food and agriculture. States and local communities, along with academia and the private sector, are critical partners in making sure the Nation is prepared in the event of an emergency.

USDA conducts regular training, meetings, and conferences to discuss planning and preparedness issues as they relate to pest and animal diseases and food safety issues. USDA communicates with producers, farmers, and food manufacturers via industry associations, industry media, and cooperators on State and local levels regarding ongoing agricultural issues such as biosecurity. USDA officials in every State continue to meet and discuss with producers and farmers the importance of heightened awareness as a protection measure against biosecurity threats, urging responsible and cautious monitoring of the Nation's food and agriculture system.

Protecting Meat and Poultry

USDA's Food Safety and Inspection Service (FSIS) has a team of more than 6,000 food safety inspectors working throughout the United States at meat processing facilities. These are specialists who are trained to look for and prevent adulteration and foodborne contamination of meat and poultry products that could threaten the safety of our food supply.





FSIS continues to strengthen meat, poultry, and egg food safety systems that protect consumers, and it has taken actions that continually improve food safety protections.

USDA has a responsibility to protect public health, and it incorporates proven scientific principles throughout the food safety system to enhance our food safety infrastructure. The agency has the most advanced food safety system in the world and it continually works to enhance it.

This food safety system has achieved some measurable successes. For example, *Salmonella* testing data show that the prevalence of this pathogen has significantly decreased in all product categories, including turkey. Also, data from the Centers for Disease Control show significant reductions in foodborne illness.

In the wake of September 11, 2001, and potential threats to the Nation's food supply, FSIS has strengthened food protection programs and is spending an additional \$15 million to bolster food safety protections. Additional resources will be provided to strengthen USDA's foreign meat inspection program and to enhance laboratory systems and research. USDA has formed several homeland security teams to specifically examine new ways to strengthen protections against intentional threats to the food supply.

In November 2001, USDA released a landmark study conducted by Harvard University that showed the risk of BSE (bovine spongiform encephalopathy, or mad cow disease) entering the United States is very low. Even so, USDA announced several actions to strengthen protection systems, including:

- Doubling the number of BSE tests,
- Publishing a policy options paper outlining additional regulatory actions that may be taken to reduce potential risks,
- Developing a proposed rule to prohibit the use of certain stunning devices used to immobilize cattle during slaughter, and

- Publishing an Advance Notice of Proposed Rulemaking to consider additional regulatory options for the disposal of dead stock on farms and ranches.

The FY 2002 budget included \$13 million for additional BSE surveillance, research, and laboratory activities.

Furthermore, new inspection positions have been added to improve FSIS' capacity to detect and prevent food safety problems. In addition, supplementary education and specialized training will be provided for existing FSIS inspection personnel. FSIS has hired 17 District Veterinary Medical Specialists. These new positions will ensure that all plants, regardless of size, appropriately address their humane handling responsibilities and other slaughter issues. Additionally, FSIS is training 75 Consumer Safety Officers to conduct on-site food safety and other consumer protection assessments in meat and poultry establishments, and make determinations about the scientific efficacy of a plant's Hazard Analysis and Critical Control Point operating plan.

FOR MORE INFORMATION:

For more information on USDA's homeland security efforts, visit: www.usda.gov/homelandsecurity

For more information on food safety issues, visit <http://www.fsis.usda.gov>

Consumers concerned about their meat or poultry products should contact USDA's Meat and Poultry Hotline at: 1-800-535-4555. A USDA compliance officer will follow up on reports of product tampering and adulteration.

Consumers who believe they have eaten suspect product should contact a physician immediately.

Conservation Measures in the 2002 Farm Bill

The Farm Security and Rural Investment Act of 2002 (called the Farm Bill), which governs Federal farm programs for 6 years, was signed into law on May 13, 2002. It contains record levels of support for environmental stewardship and conservation of soil and water quality on working lands. Following are highlights of the conservation measures in this legislation.

Conservation Funding Increased

The 2002 Farm Act increases funding for almost every existing agri-environmental program. Overall spending for conservation and environmental programs will rise by 80 percent to a projected 10-year total of \$38.6 billion, according to Congressional Budget Office (CBO) estimates (based on the April 2002 baseline). It continues and expands the programs that support conservation on land in production, including livestock operations. New programs, including the Conservation Security Program and the Grassland Reserve Program, further expand the objectives and role of agri-environmental policy.

This legislation responds to a broad range of emerging natural resource challenges faced by farmers and ranchers, including soil erosion, wetlands and wildlife habitat enhancement, and farmland protection.

Conservation Provisions in the 2002 Farm Bill

Under the 2002 Farm Act, producers can choose from a wide range of voluntary conservation and environmental programs—including cost share, land rental, incentive payments, and technical assistance—designed to protect a wide range of resources. Like the three previous Farm Acts, the 2002 Act continues the trend of increasing the size and scope of agri-environmental programs. While programs that support better conservation and environmental management on working land have accounted for less than 15 percent of Federal conservation expenditures over the past 15 years, they receive more than 60 percent of the \$17.1-billion increase in conservation spending.

Here is a summary of existing conservation programs covered in the 2002 Farm Bill. Most of the following programs get acreage or funding increases:

The **Conservation Reserve Program (CRP)** offers annual payments and cost sharing to establish long-term, resource-conserving cover on environmentally sensitive land. It provides technical and financial assistance to reduce soil erosion, protect the Nation's ability to produce food and fiber, reduce sedimentation in streams and lakes, improve water quality, establish

Environmental quality matters a great deal to Americans today, whether preserving wetlands, improving wildlife habitat, or maintaining water quality in rivers, streams, and lakes. Agriculture, vast as it is, holds a special responsibility for resource stewardship. How farmers address this environmental responsibility...has shown steady improvement, but remains a matter of both public and private concern.





wildlife habitat, and enhance forest and wetland resources. CRP encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover. The acreage cap is increased from 36.4 million acres to 39.2 million acres. Funding is through the Commodity Credit Corporation (CCC). CBO estimates increased spending of \$1.5 billion over 10 years.

The **Conservation Reserve Enhancement Program** (CREP) is part of the CRP. It is a voluntary program designed to address specific grassroots environmental issues related to agriculture. The CREP combines the CRP with State programs to provide a framework allowing USDA to work in partnership with State government and local interests. Because the Farm Bill increases acreage caps for the

CRP, it will provide more opportunities to create partnership agreements. More information on the CRP and the CREP can be found at <http://www.fsa.usda.gov/dafp/cepd/default.htm>

The **Wetlands Reserve Program** (WRP) is USDA's premier wetland restoration program. It provides cost sharing and/or long-term or permanent easements for restoring wetland on agricultural land. The acreage cap is increased from 1.075 million acres to 2.275 million acres. The Secretary of Agriculture is required (to the greatest extent practicable) to enroll 250,000 acres per year. Funding is through the CCC. CBO estimates increased spending of \$1.5 billion over 10 years. The WRP is offered on a continuous signup basis. Applications are available at local USDA Service Centers, NRCS field offices and conservation districts, or on the Web at <http://www.sc.gov.usda.gov>

The **Environmental Quality Incentives Program** (EQIP) provides technical assistance, cost sharing, and incentive payments to assist livestock and crop producers with conservation and environmental improvements. The Farm Bill reauthorizes EQIP through 2007. EQIP is slated to receive \$5.8 billion in CCC funding for FY 2002-07 and a total of \$9 billion over 10 years. Funding is phased up to \$1.3 billion annually by FY 2007, compared with annual funding of roughly \$200 million per year under the 1996 Farm Act. Additional CCC funding of \$250 million over FY 2002-07 is provided for ground and surface water conservation. An additional \$50 million is allocated to water conservation activities in the Klamath Basin.

The Farm Bill reauthorizes the popular **Wildlife Habitat Incentives Program** (WHIP) to improve fish and wildlife habitat on private lands. Through WHIP, landowners can receive financial and technical assistance to help reverse the trend in the decline of available wildlife habitat and contribute to the recovery of many of the Nation's species that are currently at risk. Total CCC funding of \$360 million is mandated over FY 2002-07, ranging from \$15 million in FY 2002 to \$85 million in FY 2005-07, and a total of \$700 million over 10 years. WHIP is offered on a con-

tinuous signup basis. Applications are available at local USDA Service Centers, at NRCS field offices and conservation districts, or on the Web at <http://www.sc.egov.usda.gov>

The **Farmland Protection Program** (FPP) provides funds to State, tribal, or local governments and private organizations to help purchase development rights and keep productive farmland in agricultural use. The Farm Bill reauthorizes this program and extends it to nongovernmental organizations to purchase conservation easements. It also expands the program to protecting farms and ranches that contain historical and archaeological sites.

Total CCC funding of \$597 million is mandated over FY 2002–7, ranging from \$50 million in FY 2002 to \$125 million in FY 2004–05, and totaling \$985 million over 10 years.

The Farm Bill permanently reauthorizes the **Resource Conservation and Development Program** (RC&D). This program provides tools and technical support to help local people improve their quality of life; address social, economic, and environmental concerns; and use natural resources wisely. The focus on local direction and control has made RC&D one of the most successful rural development programs of the Federal Government.

The following new programs will also receive significant funding while expanding the overall scope of USDA conservation programs:

The Farm Bill creates a new **Conservation Security Program** to financially recognize ongoing stewardship efforts and to help producers address additional resource concerns on agricultural working lands. The Conservation Security Program will provide payments to producers for maintaining or adopting a wide range of structural and/or land management practices that address a variety of local and/or national resource concerns. The Farm Bill establishes the program for FY 2003 through 2007. CSP will be funded through the CCC. CBO estimates spending of \$369 million for FY 2003–07 and \$2 billion over 10 years.

The **Grassland Reserve Program** will protect up to 2 million acres of grassland. CCC funding of up to \$254 million is available.

Also included in the Farm Bill are new initiatives that address challenges in water quality and quantity. A new ground and surface water conservation initiative will help farmers improve irrigation, grow less water-intensive crops, or convert to dryland farming. A new grassroots source-water protection initiative will provide for wellhead and groundwater protection by working with State programs.

FOR MORE INFORMATION

The day after President Bush signed the Farm Security and Rural Investment Act of 2002 into law, USDA launched a new Web site aimed at helping farmers, ranchers, and the general public learn the latest information about the new Farm Act. The Farm Act is very broad and contains many new programs. The new Web site helps users find information at one site that includes Farm Bill program details, questions and answers, program applications and signup forms, as well as other important materials from USDA agencies on Farm Bill implementation. The Web site will also contain advanced electronic applications to help program applicants receive program benefits faster and more efficiently.

The Web site can be directly accessed at <http://www.usda.gov/farbill>, or by simply clicking on the 2002 Farm Bill icon on USDA's main Web site at <http://www.usda.gov>

The Farm Service Agency administers the Conservation Reserve Program, the Conservation Reserve Enhancement Program, and other conservation programs. Its Web site is <http://www.fsa.usda.gov/pas/default.asp>

The Natural Resources Conservation Service administers the Environmental Quality Improvement Program, Wetland Reserve Program, Wildlife Habitat Improvement Program, Farmland Protection Program, and other conservation programs. Its Web site is <http://www.nrcs.usda.gov/>

Conservation programs can help reduce the gap between the level of environmental quality the public demands and the level of environmental quality that farmers and forest landowners would otherwise provide.

Biotechnology in Brief

USDA is one of three Federal agencies—along with the Environmental Protection Agency and the U.S. Food and Drug Administration—that have primary responsibility for regulating biotechnology in the United States. Products are regulated according to their intended use, with some products being regulated under more than one agency.

Biotechnology is another tool that promises to help meet consumers' demand for services, illustrating how demand and technology interact to create new markets.

Agricultural biotechnology has been advancing rapidly; and for all the promises it offers, it poses as many questions. Agricultural biotechnology is rewriting the rules in several key areas—agricultural research policy, industry structure, production and marketing, consumer preference, and world food demand—and public policy is struggling to keep up. Much of the current interest in biotechnology stems from the rapid diffusion in North America and other exporting countries, such as Argentina, of genetically engineered crops such as cotton, soybeans, corn, and canola, and from the uneasy consumer response in Europe as compared with the United States.

Biotechnology is a collection of powerful tools that can be used to increase production or cut costs, develop product attributes desired by consumers, or enhance environmental quality.... Additionally, the tools of biotechnology can address environmental challenges. Prospects include pollution remediation, increased bioenergy availability, enhanced carbon sequestration, and reduced fertilizer runoff.

The emergence of agricultural biotechnology is occurring at a time when the whole world is the marketplace. With rapid economic growth in much of the world, consumers are more affluent and demand more variety and higher quality in the food they eat. Agricultural biotechnology provides a means to meet these demands. But at the same time, international consumer preferences can steer the development of technology and heighten the uncertainty surrounding the use of agricultural biotechnology.

The array of issues surrounding biotechnology includes the legal, ethical, environmental, and economic—including the rate of and reasons for adoption of biotechnology by farmers. Other issues include marketing, labeling, and trade in biotechnology products. Variety approval processes here, labeling requirements, and expressed market demand for crops that have not been genetically engineered could contribute to the transformation of the global food marketing system.

Intellectual property rights and market concentration in the agricultural input industries are intertwined areas that are shaped by public policy. Large biotech firms have merged with seed companies to obtain sources of germplasm to spin off genetically modified seed varieties and to secure outlets for delivering the new products. Concentration in the input industry raises questions about the direction for future agricultural research. Critical to the efficient and equitable advance of agricultural biotechnology is determining the unique role of public research and when and how the public sector should interact with the private sector.

For more information, see USDA's Agricultural Biotechnology Web site: <http://www.usda.gov/agencies/biotech/index.html>

Certified Organic: Update

Organic farming became one of the fastest growing segments of U.S. agriculture during the 1990s. State and private institutions also began emerging during this period to set organic farming standards and provide third-party verification of label claims, and legislation requiring national standards was passed in the 1990s. Although farmers have been developing organic farming systems in the United States for decades, more U.S. producers are now considering organic farming systems in order to lower input costs, conserve nonrenewable resources, capture high-value markets, and boost farm income.

Organic farming systems rely on ecologically based practices such as cultural and biological pest management, and they virtually prohibit the use of synthetic chemicals in crop production and antibiotics or hormones in livestock production. Many producers, manufacturers, distributors, and retailers specialize in growing, processing, and marketing an ever-widening array of organic food and fiber products.

Organic Food Standards and Labels: The Facts

The U.S. Department of Agriculture has put in place a set of national standards that food labeled “organic” must meet, whether it is grown in the United States or imported from other countries. After October 21, 2002, when consumers buy food labeled “organic,” they can be sure that it was produced using the highest organic production and handling standards in the world.

What is organic food? Organic food is produced by farmers who emphasize the use of renewable resources and the conservation of soil and water to enhance environmental quality for future generations. Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones. Organic food is produced without using most conventional pesticides, petroleum-based fertilizers or sewage sludge-based fertilizers, bio-engineering, or ionizing radiation. Before a product can be labeled “organic,” a Government-approved certifier inspects the farm where the food is grown to make sure the farmer is following all the rules necessary to meet USDA organic standards. Companies that handle or process organic food before it gets to your local supermarket or restaurant must be certified, too.

USDA makes no claims that organically produced food is safer or more nutritious than conventionally produced food. Organic food differs from conventionally produced food in the way it is grown, handled, and processed. At the supermarket, in order to distinguish organically produced food from conventionally produced food, consumers must look at package labels and watch for display signs. Along with the national organic standards, USDA developed strict labeling rules to help consumers know the exact organic content of the food they buy. The USDA Organic seal also tells you that a product is at least 95 percent organic.

The word “organic” and a small sticker version of the USDA Organic seal will be on organic vegetables or pieces of fruit, or they may appear on the sign above the organic produce display. The word “organic” and the seal may also appear on packages of meat, cartons of milk or eggs, cheese, and other single-ingredient foods.

The use of the Organic seal is voluntary. People who sell or label a product “organic” when they know it does not meet USDA standards can be fined up to \$10,000 for each violation.

“Natural” foods are not necessarily organic foods. Truthful claims, such as free-range, hormone-free, and natural, can still appear on food labels. However, this does not mean that they are “organic.” Only food labeled “organic” has been certified as meeting USDA organic standards.

FOR MORE INFORMATION ABOUT ORGANIC FOODS

For more detailed information on the USDA organic standards, visit the Agricultural Marketing Service’s National Organic Program Web site at <http://www.ams.usda.gov/nop>. The site contains a complete list of applicants for accreditation, application information, and more information on the National Organic Program. You may also call the National Organic Program at 202-720-3252, or write USDA-AMS-TM-NOP, Room 4008 S. Bldg., Ag Stop 0268, 1400 Independence Ave., SW, Washington, DC 20250.

Energy and Agriculture

Implementing the National Energy Policy at USDA

In May of 2001, President Bush unveiled his national energy policy, which included a greater reliance on alternative and renewable energy sources, including the use of biofuels and biomass energy sources. The U.S. Department of Agriculture has made important efforts to implement these recommendations.

One major effort at USDA is to develop renewable energy and bioproducts. USDA ordered increased use of biofuels in its motor vehicles and improved energy conservation at its facilities around the country. USDA is also evaluating the potential to convert USDA fuel tanks to biodiesel and ethanol use. The Commodity Credit Corporation (CCC) Bioenergy Program signed up increases of 141.3 million gallons in ethanol production and 6.4 million gallons in biodiesel production in FY 2001. The program is extended through FY 2002, with \$150 million in funding for production incentives fully subscribed. Also, USDA’s rural business program area has increased loan guarantees and grants to support new ethanol and bioproduct plants. And USDA has an increased research budget for renewable energy.

A second key effort involves the management of public lands. For example, the USDA Forest Service is working with other Federal Departments on an Inter-agency Hydropower Committee to implement agreements from the old Hydropower Task Force to improve the hydropower licensing process, and has participated in a national energy industry review group in discussing changes to improve hydropower licensing. The Forest Service is also increasing research and development for renewable energy, including biomass heat and energy distribution projects and development of well-designed combined heat and power units, and is cooperating with DOE to purchase 6 turbines to place in small communities to produce electricity as a demonstration project.

In a third key area, USDA’s Rural Utilities Service is actively seeking to make loans and loan guarantees to rural electric cooperatives interested in developing electric power generation fueled partially or totally by renewable feedstocks.

Here are some further specific efforts that USDA has undertaken in support of the national energy policy:

Iowa State and USDA Cooperative Agreement. In September 2002, Secretary Ann M. Veneman announced a cooperative agreement between the U.S. Department of Agriculture and Iowa State University to help implement provisions of the 2002 Farm Bill Energy Title that provides for preferred procurement of biobased products by Federal agencies. This initiative will help expand markets for farmers and foresters through the use of value-added bioenergy agricultural products. Under the cooperative agreement, USDA will provide \$1 million annually for testing biobased products which will help enable USDA to move more quickly to get the biobased product procurement program in operation.

USDA, DOE Team Up To Produce Bioenergy.

USDA and the Department of Energy are evaluating whether a microturbine generator that runs on methane biogas from animal manure can be a good source of electricity and heat for a research dairy farm. This cooperative project involves USDA's Agricultural Research Service, the U.S. Department of Energy's Office of Bio-Power, and the National Energy Technology Laboratory. The microturbine system could generate as much as 26 kilowatts of electricity and approximately 400,000 British thermal units per hour of heat for small dairy operations of less than 250 cows. The project will be conducted at the Henry A. Wallace Beltsville Agricultural Research Center (BARC) at Beltsville, MD.

This technology provides an alternate use of dairy cow manure. Tons of manure are produced by the 1,400-pound dairy cows and pumped from the barn into an anaerobic digester, where the liquid and solids are separated. The solids go to composting and the liquids are further processed in the digester to produce a biogas that contains methane. The methane gas is captured and used in the microturbine generator, and the remaining liquid—with odor significantly reduced—is used for fertilizing the crops at BARC.

The ARS research team will also evaluate the technology's environmental and economic impact. If this type of system proves to be efficient and cost-effective, it could provide an alternative energy source for dairy farmers. Energy costs are a large portion of dairy operating costs. The system also could help reduce methane emissions that contribute to greenhouse gas concentrations in the atmosphere.

Rural Development Funds to Help Support Rural Energy and Business Efforts. In December 2001, USDA announced over \$260 million in loan and grant funds for 24 States to boost bioenergy production, expand rural business ventures, and improve economic and community development.

These loan and grant funds are being provided through USDA's Rural Development programs. Over 90 percent of the funds announced will provide guaranteed loans to electric cooperatives in 14 States to increase access for nearly 19,000 rural consumers to rural electric service. The guaranteed loans are provided in cooperation with the Federal Financing Bank (FFB).

Office of Energy Policy and New Uses

USDA established an Office of Energy Policy and New Uses (OEPNU) to assist the Secretary of Agriculture in developing Departmental energy policy and coordinating Departmental energy programs and strategies. The Office provides economic analysis on energy policy issues, coordinates USDA energy-related activities within and outside the Department, and studies the feasibility of new uses of agricultural products.

Research is currently underway on biodiesel fuels, ethanol fuels, and other sources of biomass energy. Measurement of atmospheric emissions associated with renewable energy also is under study. The potential effects of deregulation of electric utilities on rural communities are being studied in cooperation with the Department's Rural Utilities Service.

In August 2002, the OEPNU released a report that confirmed the energy efficiency of ethanol and its positive role in reducing U.S. dependence on imported oil. The report, *The Energy Balance of Corn Ethanol: An Update*, concludes that ethanol production is energy efficient because it yields 34 percent more energy than is used in growing and harvesting the corn and distilling it into ethanol.

The report says that the net energy value of corn ethanol has become positive in recent years due to technological advances in ethanol conversion and increased efficiency in farm production. Ethanol produces much more energy than it consumes when compared to other products such as petroleum. Moreover, ethanol production uses abundant domestic supplies of energy to convert corn into a premium liquid fuel that can displace petroleum imports.

Ethanol production has grown in the United States from a few million gallons in the late 1970s to about 1.8 billion gallons in 2001, spurred by national energy security concerns, new Federal gasoline standards, and government incentives. The increase in ethanol production has stimulated the U.S. agricultural economy because most ethanol is made from corn. The boost in ethanol demand has created a significant new market for corn.

According to the report, today's higher corn yields, lower energy use per unit of output in the fertilizer industry, and advances in fuel conversion technologies have greatly enhanced the economic and technical feasibility of producing ethanol. Studies using older data tend to overestimate energy use because the efficiency of growing corn and converting it to ethanol has improved significantly over the past 20 years. The report is available on the Web at <http://www.usda.gov/oc>.

Energy Policy in the 2002 Farm Bill

The 2002 Farm Bill was the first in history to contain a separate energy title, reflecting a fundamental policy linking of agriculture to energy. Title IX of the Farm Bill establishes new programs and grants for procurement of biobased products to support development of biorefineries; to educate the public about benefits of biodiesel fuel use; and to assist eligible farmers, ranchers, and rural small businesses in purchasing renewable energy systems. Here are some of the key new provisions of this legislation:

- **Federal procurement of biobased products** establishes a new program for purchase of biobased products by Federal agencies, modeled on the existing program for purchase of recycled materials. A voluntary biobased labeling program is included. It mandates funding of \$1 million annually through the CCC for FY 2002–07 for testing biobased products.

- A competitive **Biorefinery Grants Program** supports development of biorefineries to convert biomass into multiple products such as fuels, chemicals, and electricity. For FY 2002–07, appropriations are authorized as necessary to implement this provision.

- The **Biodiesel Fuel Education Program** establishes a competitive grant program to educate government and private entities with vehicle fleets, as well as the public, about the benefits of biodiesel fuel use. The program is funded at \$1 million annually through the CCC for FY 2003–07.

- The **Energy Audit and Renewable Energy Development Program** authorizes a competitive grant program for entities to administer energy audits and renewable energy development assessments for farmers, ranchers, and rural small businesses. For FY 2002–07, appropriations are authorized as necessary to implement this provision

- The **renewable energy systems and energy efficiency improvements** establish a loan, loan guarantee, and grant program to assist eligible farmers, ranchers, and rural small businesses in purchasing renewable energy systems and making energy efficiency improvements. This effort provides CCC funding of \$23 million annually for FY 2003–07.

- Under a provision concerning **hydrogen and fuel cell technologies**, the Secretaries of Agriculture and Energy are directed to enter into a Memorandum of Understanding regarding hydrogen and fuel cell technology applications for agricultural producers and rural communities. The Secretary of Agriculture is required to disseminate information on these technologies to agricultural producers and rural communities.

In addition, previously existing programs were expanded under provisions of the 2002 Farm Bill:

- The Biomass Research and Development Act of 2000 had directed the Secretaries of Agriculture and Energy to cooperate and to coordinate policies and procedures that promote research and development leading to the production of biobased industrial products. The 2002 Farm Bill extends the termination date to September 30, 2006, and provides \$5 million of CCC funds for FY 2002 and \$14 million annually for FY 2003–07.

- Under the Bioenergy Program, the Secretary of Agriculture makes payments through the CCC to eligible producers to encourage increased purchases of eligible commodities (energy feedstocks) for the purpose of expanding production of bioenergy and supporting new production capacity. Payments to eligible producers are based on the increase in quantity of bioenergy they produce during a fiscal year over the quantity they produced during the preceding fiscal year. The new Farm Bill reauthorizes the program and broadens the list of eligible feedstocks to include animal byproducts and fat, oils, and greases (including recycled fats, oils, and greases). The Secretary is required to use up to \$150 million annually for FY 2003–06.

- Under the Renewable Energy Development Loan and Grant Program, USDA business loan programs provided financial assistance to various kinds of businesses, including value-added agricultural enterprises. Under the new legislation, business and industry loans and guarantees will be allowed for more types of renewable energy systems, such as wind energy systems and anaerobic digesters.

The Biobased Products and Bioenergy Coordination Council

The Biobased Products and Bioenergy Coordination Council was established by the Secretary of Agriculture to provide a forum through which USDA agencies will coordinate, facilitate, and promote research, development, transfer of technology, commercialization, and marketing of biobased products and bioenergy using renewable domestic agricultural and forestry materials.

