The Changing Focus of Government Regulation of Agriculture in the United States

J.W. Looney
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by J. W. Looney*

I. INTRODUCTION

Agriculture, broadly defined, is the country's largest industry. Fully one-fourth of the work force is involved in agricultural production, processing and manufacturing, and in the marketing and distribution of agricultural products. Agriculture's contribution to the Gross National Product is at least twenty percent of the total. Agriculture is a highly regulated industry. For example, it has been estimated that to bring an ordinary product such as the hamburger to the American consumer almost 300 statutory programs are involved.1 The cost of regulation for a

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1. Forrest E. Walters, Regulation of Industries Behind the Hamburger, 4 AGRIC. L.J. 125 (1982).

The ground beef industry is subject to a body of law and regulations that relate for the most part to the environment, consumers, labor, industry and health. Ac-
pound of Thanksgiving turkey could be as high as fifteen cents. And, for highly processed products such as microwaveable lasagna or breakfast cereal, with more steps in processing, marketing, and distribution, there is even greater government involvement to bring products from the farm to consumer.

This Article reviews the historical development of United States agricultural regulation and the most important regulatory programs currently in place. Regulatory policy affecting farm level production, processing, and manufacturing, along with marketing and distribution of agricultural products is discussed. An important focus is the evolution of agricultural regulation from economic and business concerns of individual farm producers and consumers of agricultural products toward broader societal concerns such as farm structure, environmental issues, and trade policy. Closely related is a shift in emphasis from purely domestic policies to the global setting, as well as agriculture's role in an interdependent international economy. However, the shift in focus means an increase in certain types of regulatory programs—those most directly affecting farm production. It is this change in focus that is the trend most important to agricultural producers.

II. Historical Development of Agricultural Regulation

Government action affecting agriculture in the United States finds its roots in the beginnings of the nation. Even during the earliest period legislation existed that affected farmers and those who dealt with them. For example, in his Notes on the State of Virginia, Thomas Jefferson explains inspection requirements for tobacco, flour, beef, pork, tar, pitch, and turpentine before they could be exported, and refers to laws related to the preservation and improvement of “races” of useful animals such as horses, cattle, and deer and to the “extirpation” of those considered noxious. Jefferson’s ideal of the agrarian economy saw the individual farmer as necessary for the flourishing of democracy.

Settlement policy from the Northwest Territory through the Homestead Act found the government promoting the development of new lands and encouraging the development of related transportation and commu-
nication systems. With the rise of railroads and big companies, the federal government was increasingly called upon to protect farmers from corporate power. The Granger movement beginning in the late 1860s called for railroad regulation to protect farmers from the growing power of this industry along with that of the other giant corporations and trusts. Antimonopoly sentiment, spurred by agrarian interests, resulted in the Sherman Act of 1890. The Progressive Era saw the growth of other regulation affecting agriculture, but it was not until the 1930s that comprehensive farm level regulation really began.

In a context of general depression, with very low farm prices and widespread distress for farmers, President Franklin D. Roosevelt signed into law on May 12, 1933, the first Agricultural Adjustment Act. This Act dealt with depressed market conditions in agriculture by calling for voluntary acreage reductions in return for payment of certain benefits to individual producers. The Act was rushed through Congress in response to political unrest in the rural areas of the country, including a threatened national farmers' strike called for May 13, 1933. Although portions of the Act were declared unconstitutional by the United States Supreme Court in the 1936 decision United States v. Butler, in part because they dealt with a "local" subject (agriculture), the production control concepts embodied in the legislation reappeared in all subsequent New Deal efforts to address continuing and serious problems in agriculture. A further effort to reduce production by providing incentives for soil conservation was attempted in 1936. This effort may have contributed to improved soil conservation, but it had little effect on reducing acreage of basic crops. Accordingly, the Agricultural Marketing Agreement Act of 1937 called for efforts to stabilize markets and to provide price protection for producers. A comprehensive farm bill, the Agricultural Adjustment Act of 1938, included provisions for production control, payments of benefits, mandatory loans, crop insurance, and soil conservation. In 1942 the United States Supreme Court upheld the constitutionality of the 1938 Act in Wickard v. Filburn, a case concerning the power of the Secretary of Agriculture to promulgate wheat acreage quotas. The Court recognized

7. 297 U.S. 1 (1936).
8. Id. at 74.
the interstate nature of agriculture and the effect of local production on the total sector. The foundation for agricultural regulation, at the farm level, was now firmly established.

Most of the agricultural legislation evolving from the Depression years related to efforts to regulate surpluses in farming. But regulation of agriculture is found in all stages of the process—affecting supplies and inputs, production, and, of critical importance, processing and manufacturing, and marketing and distribution. Agriculture, broadly defined, includes much more than the on-farm activities of the two million or so “farmers.” An elaborate support structure exists that provides both the inputs and supplies used in agricultural production and handles the output in a complex marketing and distribution system for food and fiber. Much of the regulation of the support system, generally called “agribusiness,” comes from legislation in place prior to the 1930s. This legislation was designed to protect farmers or consumers who deal with the firms involved in agribusiness. Regulatory activity with a protective goal first appeared in the latter part of the nineteenth century but was most obvious in a series of statutory programs in the early years of the new century. Among the first permanent programs were a Pure Food and Drug Act and a revised Meat Inspection Act, adopted in 1906 and 1907 respectively. The Federal Insecticide Act in 1912, the United States Warehouse Act of 1916, the United States Grain Standards Act of 1916, and the Packer and Stockyards Act of 1921 focused on industries with which farmers dealt. The Futures Trading Act of 1921, superseded by the Commodities Exchange Act of 1922, focused on industries that affected

13. Id. at 128.
prices for agricultural products. The Plant Patent Act and the Perishable Agricultural Commodities Act, both in 1930, addressed particular problems related to specialized agricultural industries. In addition, agricultural cooperatives received limited antitrust exemptions in the Clayton Act of 1914 and the Capper-Volstead Act of 1922.

Much of this legislation, in amended form, exists today. The consumer and farmer protection goals remain crucial. In addition, some of the legislation exists because the industries themselves desire economic regulation. Added to these goals in recent years have been greater demands for environmental protection and other social concerns.

III. THE NATURE OF FARM PRODUCTION

Agricultural production at the farm level involves a number of inherent characteristics that make any regulatory program affecting producers unique. First, agriculture is made up of a large number of widely dispersed, atomistic producers with no one producer of sufficient size to significantly affect markets. Due to this atomistic nature of agricultural production, some regulatory programs have been designed to facilitate coordination and to protect the individual farm from the harsh effects of dealing with oligopolistic or monopolistic firms, or simply from market instability (boom-bust pricing cycles).

Second, agricultural production depends primarily on a single productive resource, land. This resource is not only the source of production for individual farmers but constitutes the bulk of their wealth as well. Because of the unique nature of land, and its place in agricultural production, a great deal of regulatory activity is directed toward protecting this resource itself and the farmer's proprietary interest in the asset. Institutions peculiar to agriculture have arisen specifically to deal with this crucial asset. Examples include special rules and policies related to alien and corporate ownership, farm estate transfer, soil and water management, and conservation programs.

Finally, the ultimate agricultural product—food or fiber—is totally dependent on a biological process that can be directed, but not totally controlled, by human intervention. Modifications in general rules of law and

institutions are often necessary to take into account the biological nature of production and the natural environment.

IV. THE NATURE OF AGribusiness

The businesses with which individual farmers must deal have become, for the most part, increasingly oligopolistic. Food system consolidation has continued unabated for the past fifty years—even in light of legislation such as the Packers and Stockyards Act that could, conceivably, have limited this trend.26 However, even in the absence of any major braking effect on consolidation, it is clear that much of the legislation initially designed to offer protection to the individual farmer, like the Packers and Stockyards Act or the Perishable Agricultural Commodities Act, continues to be important. Individual producers often must rely on the protection offered in such programs to avoid a drastically inferior bargaining position.27 And, special remedies are afforded in these legislative programs for those harmed in dealings with regulated firms. Considerable regulatory activity of the USDA, for example, focuses on this relationship.28

27. The Packers and Stockyards Act, see supra note 21, has been described as “remedial legislation” that should be construed “to secure to patrons of stockyards prescribed stockyard services at just and reasonable rates,” United States v. Morgan, 307 U.S. 183, 188-89 (1939); to prohibit certain trade practices considered to be unfair and not in the public interest, Wilson & Co. v. Benson, 286 F.2d 891, 895 (7th Cir. 1961); and to prevent “economic harm to the ‘growers’ and the ‘consumers’ through the concentration in a few hands of the economic function of the middle man.” Safeway Stores, Inc. v. Freeman, 369 F.2d 952, 956 (D.C. Cir. 1966).
The Perishable Agricultural Commodities Act, see supra note 25, was designed to suppress unfair and fraudulent practices in the marketing of perishable agricultural commodities and to promote the orderly flow of perishable commodities in interstate commerce. It provides practical remedies to small farmers and growers who have to deal with the “sharp practices of [the] financially irresponsible and unscrupulous.” Chidsey v. Guerin, 443 F.2d 584, 587 (6th Cir. 1971); Rothenberg v. H. Rothstein & Sons, 183 F.2d 524, 526 (3d Cir. 1950).
28. Both the Packers and Stockyards Act, see supra note 21, § 309, 7 U.S.C. § 193, and the Perishable Agricultural Commodities Act, see supra note 23, § 7, 7 U.S.C. § 499g, include reparation procedures for damages arising out of claims that involve a violation of the Act and consequent loss to the complainant. Both statutory programs include statutory trust provisions to benefit unpaid suppliers or sellers. The statutory trust applies to packers under the Packers and Stockyards Act, 7 U.S.C. § 196, and to commission merchants, dealers, and brokers under PACA, 7 U.S.C. § 499e(a). It applies to all inventories of the product sold and to food and other products derived therefrom and applies until full payments have been received by the sellers.
V. TYPES OF REGULATORY ACTIVITY IN AGRICULTURE

Regulatory activity affecting agriculture, of course, varies depending on whether it is directed to activities at the farm level, or to transactions involving farm inputs and supplies, or the marketing of products. Farm level regulation is more limited in scope in the United States than in many other countries, but regulation is of increasing importance here.29

A. Regulation of Inputs

When agricultural inputs are considered as composed not only of the supplies used in the productive process but also land, capital, and labor, a picture can be drawn of the type of regulatory activity most likely to be involved. First, with regard to land, restrictions on alien and corporate ownership are significant. Both types of ownership restrictions have been developed for policy reasons not entirely related to agricultural production. "Anticorporate" farming legislation is in effect in a number of major agricultural states.30 This legislation restricts or prohibits the involvement of corporations in farming activities.31 Most states exempt either small or family owned corporations from the restrictions.32 Similarly, restrictions on alien and alien corporation ownership also exist in some states.33 Some states require reporting of nonresident alien and alien corporation purchases or leases.34 A few jurisdictions prohibit nonresident alien ownership and require divesture.35 Federal involvement in this area includes the 1978 Agricultural Foreign Investment Disclosure Act,36 which requires registration of nonresident alien ownership. Beyond these re-

29. A number of European countries have much more stringent farm level regulation than is common in the United States. For example, Sweden has enacted stringent controls on animal production facilities to achieve goals relating to animal welfare. David Morris, Europe Rejects Factory Farm Practices, ARK. GAZETTE, Jan. 22, 1989. The Netherlands has adopted strict regulations relating to the handling of animal waste. See Wim Brussaard & Margaret Grossman, Legislation to Abate Pollution From Manure: The Dutch Approach, 15 N.C.J. INT'L & COM. REG. 85-114 (1990).
31. Id.
32. Id. at 24-40.
34. Twelve states require reporting. Id. at ch. 123-24 n.60.
35. Nine states restrict acquisition. Id. at ch. 123-24 n.59. Divesture requirements vary considerably. Iowa, for example, requires divesture when land is acquired by devise or descent. IOWA CODE ANN. § 567.5 (West 1992). South Carolina, for example, requires divesture of land in excess of 500,000 acres acquired by foreclosure. S.C. CODE ANN. § 27-13-10 to -40 (Law. Co-op. 1976).
strictions on ownership, access to farm land as an input is largely unregulated.

Capital, as an input, often is in the form of borrowed funds. While much of the borrowed capital in agriculture comes from private sources, including commercial banks, significant amounts are from public or quasi-public bodies—most notably the Farmers Home Administration ("FmHA"), which is a government agency, and the Farm Credit System ("FCS"), which is not.\textsuperscript{37} Because of the financial problems faced by many FCS institutions, access to credit from the FCS is subject to increasing governmental overview. The financial distress faced by many farmers in the early 1980s resulted in difficulties for many cooperative credit institutions within the FCS. Congress reacted with a series of measures designed to save what was perceived as a troubled financial sector. This "bail out" of the system effectively resulted in increased governmental involvement and more control of FCS credit activities. The Agricultural Credit Act of 1987\textsuperscript{38} imposed new requirements affecting the relationship between farm borrowers and credit institutions.

To the degree that farmers are dependent on hired labor (about 2.5 million hired farm workers are used each year), federal and state labor regulatory programs affecting labor are of considerable importance at the farm level. Federal legislation involves not only wage and hour requirements, but safety provisions of the Occupational Safety and Health Act ("OSHA"),\textsuperscript{39} migrant labor provisions of the Migrant and Seasonal Agricultural Workers Protection Act,\textsuperscript{40} and the farm labor provisions of immigration legislation.\textsuperscript{41} At the state level the most obvious programs affecting farm labor are those involving workers' compensation and, in some cases, minimum wages.

Other inputs used in agricultural production are regulated at the supplier level. Often these regulations are designed to offer protection to the farmer as consumers of the products. For example, the Federal Seed Act\textsuperscript{42} requires accurate labeling information on agricultural seeds and prohibits

\begin{itemize}
\item \textsuperscript{37} The Farm Credit System is cooperative in nature and although it has received government capital and is subject to regulation by the Farm Credit Administration the system is owned by the farmer-borrowers.
\item \textsuperscript{39} 29 U.S.C. §§ 651-678 (1988).
\item \textsuperscript{40} Migrant and Seasonal Agricultural Worker Protection Act, Pub. L. No. 97-470, 96 Stat. 2583 (1983) (current version at 29 U.S.C. §§ 1801-1872 (1988)).
\end{itemize}
misleading or false statements concerning the seed.\textsuperscript{43} Similar requirements exist regarding feed for livestock use and fertilizer and chemicals—especially through state regulatory programs directed toward these products.\textsuperscript{44} Much of the regulation at the federal level is directed toward the manufacturers of these products. Not only are farmers offered protection, but the general public interest is protected by the adherence to standards in manufacturing, registration, packaging, and labeling.

B. Regulation of Production

The least pervasive area of agricultural regulation is at the farm level. With the exception of labor provisions, especially in OSHA, which directly affect some farming activities, and those of some environmental protection regulation (especially point source pollution from confinement livestock operations and some pesticide restrictions), few regulatory programs are actually directed toward farming activities and operations. To a degree, there is regulatory activity from the application of price and income support programs that affect farm level decisions, but these programs are voluntary in nature. That is, those farmers who choose to participate in the government support programs (and most do) are bound by program restrictions. For example, the conservation compliance provisions of the 1985 Food Security Act\textsuperscript{45} require the implementation of conservation plans for certain land and prohibit the conversion of some highly erodible soils and wetlands into farming uses.\textsuperscript{46} To remain eligible for program benefits, farmers must comply with these program restrictions.\textsuperscript{47} Effectively, these programs involve regulation through incentives and not by direct restriction.\textsuperscript{48} However, the economic pressure to participate and comply is great enough that farmers generally adhere to program regulations.

C. Regulation of Marketing

The most intensive regulatory programs in agriculture are those directed toward the agricultural marketing sector. Many of those programs

\begin{itemize}
\item \textsuperscript{43} 7 U.S.C. § 1571 prohibits transport or delivery of agricultural seeds in interstate commerce unless the label contains specified information. 7 U.S.C. § 1571(d) prohibits transport, delivery, and sale or offering for sale of seed having false labeling or pertaining to which there has been a false advertisement.
\item \textsuperscript{44} For a list of state fertilizer laws and commercial feed laws and a discussion of the state regulatory programs see 12 Neil A. Harl, Agricultural Law ch. 114 (1981).
\item \textsuperscript{46} 16 U.S.C. §§ 3811, 3821 (1988).
\item \textsuperscript{47} Id. § 3832.
\item \textsuperscript{48} Id. §§ 3833, 3834.
\end{itemize}
are designed to offer protection to individual farmers who deal with agribusinesses in marketing transactions. The Packers and Stockyards Act, the Perishable Agricultural Commodities Act, the United States Warehouse Act, and, to a degree, the Commodity Exchange Act offer this protection. Other programs are designed to assure consumers of a high quality product. Examples are the various inspection programs (for meat, poultry, and eggs) and food and drug legislation. Of course, the industry itself benefits from the presence of many of these programs in that some are directed toward financial integrity of the marketing sector and aid in eliminating the unscrupulous and financially questionable. This gives the industry a degree of stability that otherwise might not exist.

Some marketing programs are closely connected to farm price and income support policies as well. For example, the marketing order programs, while dealing with the marketing of certain commodities, such as fruits, nuts, vegetables, specialty crops, and milk, offer a means by which the income position of producers is strengthened and, at the same time, bring order and stability to the markets for the specific commodities.

VI. OBJECTIVES OF AGRICULTURAL REGULATION

As noted, the United States agricultural industry is pervasively regulated by federal law. The United States Department of Agriculture ("USDA") administers these laws through the promulgation and enforcement of its regulations. Interestingly, agriculture is the only United States industry that is regulated by a federal department that also promotes the special needs of the industry separately from the general economic policies of the government. This is because the production and distribution of food in our economy is of fundamental importance to society.

Despite a presumed high degree of agreement regarding the importance of adequate food supplies for this country, there is much public debate

50. Id. §§ 499a-499a.
51. Id. §§ 241-273.
52. Id. §§ 1-26.
55. See supra text accompanying notes 1-2.
56. Ch. 72, § 1, 12 Stat. 387 (1862) (current version at 7 U.S.C. § 2201 (1988)).
57. The original 1862 Act creating the Department of Agriculture stated as a purpose the acquisition and diffusion of "useful information on subjects concerned with agriculture." Id.
about the role that government should exercise in the agricultural sector of the economy. The most pragmatic reasons for government regulation of the agricultural sector involve the fundamental need to protect national security and public health through the provision of a reliable supply of food and fiber.

The government's role in agriculture is largely designed to protect farmers and farming operations by providing price and income support. Farm operators also receive direct subsidized benefits from programs such as crop insurance, soil and water conservation, farm finance and credit, and commodity exchange regulation. However, the law also extends a great deal of protection to consumers. Most of the federal programs exist to insure that adequate supplies of quality food products are consistently available to consumers at reasonable prices. This consumer protection role is certainly suggested by the wide range of concerns embraced by current programs such as marketing standards, inspections, animal and plant health, agricultural research, food safety and quality standards, and container standards. Methods such as price supports, marketing quotas, marketing agreements and orders, and export/import programs are extensively used to promote orderly marketing and, therefore, also indirectly benefit consumers.

Of the various objectives in agricultural regulation, two have changed little over the years: regulation to protect farmers from unfair treatment and regulation protecting consumers of farm products. Programs for regulation of livestock marketing, perishable agricultural commodities, warehouses, and commodity futures trading still retain their original objectives. The changes in these programs in recent years have tended to strengthen the programs and continue to benefit farmers who deal with


62. The language in the price and income support legislation recognizes the need to protect consumers. "The Secretary of Agriculture is directed to implement policies under this Act which are designed to encourage American farmers to produce to their full capabilities during periods of short supply to assure American consumers with an adequate supply of food and fiber at fair and reasonable prices." 7 U.S.C. § 1282a(d).
other entities. Consumer protection is achieved primarily through the grading, inspection, and labeling of food products. Some increased attention in recent years to food safety has led to calls for strengthening certain of these programs, but budget considerations at both the federal and state level have limited changes. The original program objectives remain intact.

One group of regulatory programs that has shifted in focus includes those designed to protect the economic interests of producers (the price and income support programs) and those aimed at affecting the structure of agriculture. Budgetary considerations and questions concerning the overall effectiveness of these programs have arisen and are likely to continue.

A third group of programs has evolved in recent years to achieve broad social goals. These programs have a significant effect on agriculture. Of particular note are programs in environmental regulation and in labor regulation. New regulatory programs have been developed in these general topic areas and additional change is likely.

Finally, new regulatory programs may come about from a triad of public concerns that have not affected agriculture at the production level as yet but may do so in the future. These are the concerns with “internationalization” of agriculture, the development of new technologies and their application in agriculture, and concern with intensive production methods, in particular, animal welfare and animal rights issues arising from so-called “factory farming.”

A. Regulation to Protect Farmers from Unfair Treatment

A major area of regulation in agriculture revolves around programs designed to protect farmers from unfair treatment at the hands of those firms with which farmers deal. The best examples of this type of regulation are the Packers and Stockyards Act,\textsuperscript{63} the Perishable Agricultural Commodities Act,\textsuperscript{64} and the United States Warehouse Act.\textsuperscript{65}

Livestock Marketing Regulation. Livestock marketing transactions are subject to extensive federal regulation, primarily through the Packers and Stockyards Act,\textsuperscript{66} which regulates the activities of marketing agencies, dealers, and packers, including auctions and terminal markets. The Act also applies to live poultry dealers and handlers.\textsuperscript{67} The Act prohibits various unfair trade practices, and protects consumers from eco-

\textsuperscript{63} Id. §§ 181-229.
\textsuperscript{64} Id. §§ 499a-499t.
\textsuperscript{65} Id. §§ 241-273.
\textsuperscript{66} Id. §§ 181-229.
\textsuperscript{67} Id. § 191.
nomic harm that might result from unfair monopolistic or discriminatory marketing practices. The Secretary of Agriculture is authorized to take action against those believed to have violated any of the provisions of the Act.

Generally, the Secretary's authority extends to the conduct of business and the Secretary may take action against any stockyard, market agency, or dealer that violates provisions of the Act. In addition, individual farmers who deal with these entities are given special rights under the legislation.

One such right is through a procedure known as reparation. In a reparation procedure, an individual who is harmed by a violation of the Act may file a complaint with the Packers and Stockyards Administration and seek money damages for the violation. The reparation procedure is relatively informal, and it is designed to give a quicker remedy for the injured party than litigation. The Agency will conduct an investigation and hearing with regard to the allegations in the complaint. The Agency has the power to order the stockyard, marketing agent, or dealer to pay reparation. Registration can be withdrawn for failure to pay reparation, and the award of reparation can be enforced in court if necessary.

In addition to this procedure, the Packers and Stockyards Act sets out certain rights designed to protect those who deal with registered parties. For example, unpaid cash sellers of livestock are protected through a packer regulation that creates a "statutory trust." Prior to the enactment of this trust provision, a packer's creditors were able to take priority in inventories of meat and meat products, even in cases when a cash seller had provided the livestock but had not been paid. The statutory trust permits unpaid cash sellers of livestock to satisfy their claims against the packer's assets before any other creditors are allowed to enforce theirs. In 1987 this protection was extended to poultry producers who sell live poultry or who raise poultry under contract production agreements with processors.

68. Id. § 192.
69. Id. § 193.
70. Id. § 203.
71. Id. § 209.
72. Id. § 210(a).
73. Id. § 210(e).
74. Id. § 210(f).
75. Id. § 196.
76. Id. § 196(b).
A second example of specific rights given to sellers has to do with the prompt payment provisions of the Act.78 Prompt payment provisions apply to packers, stockyards, market agencies, and dealers and generally give sellers the right to receive payment before the close of the next business day following sale.79 Comparable provisions apply to poultry producers.80

Perishable Agricultural Commodities. In addition to marketing order programs that are designed to affect the marketing of various products, perishable agricultural commodities are covered by the Perishable Agricultural Commodities Act.81 This Act is designed to provide additional protection to farmers who raise these products; to promote the orderly flow of the products in interstate commerce; and to prohibit unfair practices involving brokers, dealers, and commission merchants.82 The primary approach is to require licensing for anyone who wishes to act as a dealer, broker, or commission merchant.83 Part of the approach is to insure financial responsibility so that parties who deal with these persons may receive protection from wrongful conduct. Potential license revocation serves as a deterrent to prohibited activities. Any person who violates the Act, including those who are responsibly connected to those who violate the Act, may be prohibited from engaging in marketing of perishable agricultural commodities.84

A specific provision in the Act provides for reparation to those who are damaged by the wrongful actions of dealers, brokers, and commission merchants.85 This procedure, similar to the reparation procedure under the Packers and Stockyards Act,86 allows for the filing of an informal complaint within nine months after any cause of action occurs.87 The Agency will investigate the complaint to determine whether further action is warranted.88 If so, a hearing may be held, and the Secretary has the power to order payment of damages to the injured party.89 This order is enforceable in court, if necessary.90

78. 7 U.S.C. § 228b.
79. Id.
80. Id. § 228b-1.
81. Id. §§ 499a-499s.
82. Id. §§ 499b-h.
83. Id. § 499c.
84. Id. § 499d.
85. Id. § 499e.
86. Id. § 209.
87. Id. § 499f.
88. Id. § 499f(c).
89. Id. § 499g(a).
90. Id. § 499g(b).
More recently Congress added a statutory trust provision to protect unpaid cash sellers of perishable agricultural commodities comparable to that in the Packers and Stockyards Act.  

**Warehouse Regulation.** The United States Warehouse Act is designed to offer some protection to farmer-depositors in federally licensed grain storage facilities. In addition, warehouses that store grain under Commodity Credit Corporation ("CCC") contracts must meet CCC Standards for Approval. Warehouses have the option of obtaining a federal license and thus becoming subject to federal regulation or of choosing state regulation. State regulations only cover grain storage facilities not subject to the federal law.

Those warehouses that choose to obtain a federal license must meet stringent financial requirements, including insurance and bonding. Annual inspections and audits are conducted and detailed transaction records are required. Financial stability of the operation is of prime concern in the regulations. The intent, of course, is to offer a degree of protection to those who deal with these warehouses by establishing minimum operational standards.

The farmer who sells or contracts to sell grain assumes certain risks. The cash seller assumes the risk of nonpayment, especially if the contract involves a deferred pricing or deferred payment arrangement. The farmer bears not only the risk of nonperformance on the buyer's part, but also the risk of nonpayment following delivery. In addition, the seller may face the risk of competing claims for the grain from inventory financiers of the buyer, and from trustees in bankruptcy if the buyer becomes insolvent. There also may be competing claims of purchasers of the grain who allege that they acquired title from the elevator operator. While special provisions in the federal bankruptcy law give unpaid sellers of grain some limited priority status with regard to interests in the grain, the regulatory programs under the United States Warehouse Act are designed to reduce financial problems and to assure financial stability.

**Regulation of Commodity Futures Trading.** Commodities futures trading is regulated by an independent federal regulatory commission—the Commodity Futures Trading Commission ("CFTC"). This

91. Id. § 499e(c). For the Packers and Stockyards provisions see id. §§ 288b, 228b-1.
92. Id. §§ 241-273.
94. Id.
Agency has the responsibility of regulating futures trading on the designated exchanges. The CFTC has major authority in regulating commodity trading by trading professionals, along with stock futures and options trading.

The CFTC is authorized to establish limits on individual trading positions in the futures market and to prevent market price manipulation and deceptive practices. The purpose of the CFTC authority is to protect customers and to assure a smoother operating market. The CFTC is given broad powers to regulate commodity trading, including powers relating to: the designation of commodity markets, supervision of enforcement of exchange rules, declaration of emergencies to prevent price manipulation, investigatory powers, and customer protection. One important function of the CFTC is the registration of trading professionals. Currently, the CFTC administers registration procedures for five classes of trading professionals: futures commission merchants ("FCMs") (brokers); associated persons, the sales people and supervisory personnel of the FCMs; floor brokers, who trade on the floor of the exchange and execute orders for the public and themselves; commodity trading advisors, who advise individuals on commodity trading; and, commodity pool operators, who manage commodity investment pools similar to mutual funds.

Because of congressional concern over the proliferation of state laws dealing with the regulation of commodity futures, Congress gave the CFTC "exclusive jurisdiction with respect to accounts, agreements, ... and transactions involving contracts of sale of a commodity for future delivery, traded or executed on a contract market." It is generally accepted that this section preempts state regulation of commodities trading. However, the grant of exclusive jurisdiction to the CFTC contains a clause providing that: "Nothing in this section shall supersede or limit the jurisdiction conferred on courts of the United States or any State." This provision probably preserves state court jurisdiction over suits involving commodity trading in which the claims are based on common law theories such as contracts or torts.

96. 7 U.S.C. § 2.
97. Id. §§ 1-26.
98. Id. § 6f.
99. Id. § 6k.
100. Id. § 6f.
101. Id. § 6l.
102. Id. § 2.
103. Id.
Congress created an express private right of action in the Futures Trading Act of 1982, which specifically allows private lawsuits in federal court growing out of violations of the Commodity Exchange Act ("CEA"). This Act permits those injured a statutory basis of direct action (analogous to Rule 10b-5 for securities). In addition to private rights of action, a significant feature of the 1974 Commodity Exchange Act was a new reparation procedure for the resolution of commodity customer claims against individuals registered under the Act. The reparation procedure is designed to provide customers a forum for a quick and inexpensive adjudication of their claims against commodity professionals registered under the Act. A significant feature of the reparation proceeding is that only actions based on violations of the Act or rules and regulations thereunder are allowable.

In addition to private rights of action and reparation, contract markets must provide an arbitration procedure for resolution of disputes. The CFTC rules set out the requirements for a "fair and equitable procedure for arbitration." While arbitration has not been widely accepted in all areas of the law, it may offer a relatively swift and effective method for resolving commodity trading disputes.

The specific requirements for the arbitration procedure provide that claims procedure must be objective and impartial. The procedure must allow for counterclaims, and the customer must be allowed legal counsel at any point in the procedure. The most significant aspect of the rules concerns the use of predispute arbitration agreements. Under the rules, a customer cannot be forced to sign a predispute arbitration clause as a condition of doing business, and the customer must be advised in writing of the right to seek reparations by an election within forty-five days after an intent to arbitrate is filed. Further, the arbitration agreement must contain specific cautionary language designed to protect the customer, and both the agreement and the cautionary language must be separately endorsed by the customer.

One of the most common allegations under the CEA is for fraudulent activity. The Act provides the basis for many types of actions, both by the commission in regulating trading professionals and by private individ-

104. Id. § 25.
107. Id. § 18(a).
108. Id. § 7a(11).
110. Id. at § 180.2.
111. Id.
112. Id. § 180.3.
113. Id. § 180.3(b)(2).
uals who feel that their trade representatives' actions fit within the pro-
scribed language of the Act.\footnote{114}

The types of activity that might violate the antifraud provisions in-
clude: churning, unauthorized trading, margin rule violations, misuse of
customer funds and other causes of actions such as material misrepre-
sentation, improper order execution, or inaccurate determination of customer
suitability to trade.

Because many farmers participate in future market transactions, most
often as "hedgers," the regulation of these transactions has a direct bene-
fit to them as market participants. However, the greater effect of future
market regulation on agriculture is indirect. Many of the commodities
traded in the future market are agricultural. Thus, it is particularly im-
portant to the agricultural sector that these markets be operated
smoothly and that price manipulation be prevented.

B. Regulation Protecting Consumers of Farm Products

Consumer protection regarding agricultural products is achieved in two
ways. First, the USDA operates inspection programs that include an em-
phasis on food safety.\footnote{115} Second, the Food and Drug Administration
(“FDA”) operates an extensive program for approval of food products
that focuses not only on safety but on consumer information through la-
beling requirements.\footnote{116}

The federal government is involved in a number of grading and inspec-
tion programs for food and farm products. Voluntary grading services are
available for most food and farm products, often in cooperation with state
agencies. Beef, fruits and vegetables, shell eggs, butter, frozen fruits and
vegetables, poultry products, and canned fruits and vegetables may be
graded. Meat and poultry sold in interstate and foreign commerce, or in
states without inspection programs, are subject to federal inspections.\footnote{117}
The purpose of these inspections is to insure a wholesome, unadulterated
and properly labeled consumer food supply. These inspection programs

\footnote{114. 7 U.S.C. § 6b.}
spection of the majority of the meat and meat food products in the United States; the Pou-
76 Stat. 110 (June 25, 1962) and the Wholesome Poultry Products Act, 82 Stat. 791-808
inspection, labeling, and packaging; and the Egg Products Inspection Act, 21 U.S.C. §§
products.}
\footnote{116. 21 U.S.C. § 607.}
Act, 21 U.S.C. §§ 601-695.}
include checks on quality standards and labeling requirements. Checks also are made for additives used in meat and poultry products.118 Inspection is mandatory for all plants processing egg products.119

Under the Food, Drug, and Cosmetic Act of 1938,120 the FDA has been delegated the responsibility for regulatory programs involving food, drugs, cosmetics, and medical devices. With regard to agricultural products, the Act focuses on the adulteration or misbranding of food and provides for enforcement action when the composition, production or labeling falls below the required standards. The FDA's authority extends to establishing tolerances for pesticides on agricultural commodities121 and for premarket approval of food additives.122

C. Regulation to Protect Economic Interests of Producers

Much of the regulatory activity in agriculture centers around the so-called "farm support programs"—that is, the federal price and income support programs designed to address problems of price instability and chronic overproduction and, at the same time, to offer some basic economic protection to farm producers. Because these programs are voluntary, the regulation is indirect; but because the majority of producers participate the restrictions on program compliance affect farm level production directly.

Price and Income Support Programs. The major concepts involved in current price and income support programs (including those of the most recent farm bill adopted by Congress) are not new. In a significant sense, the basic price and income support structure is an outgrowth of the economic depression of the 1930s. As currently (and historically) structured, federal price and income support programs have two basic objectives: to raise farm incomes while insuring the availability of food and fiber at a reasonable cost to consumers; and to stabilize the agricultural sector of the economy by preventing severe volatility in farm prices.123

119. Id. § 1034 (1988).
122. Id. § 348.
123. The declaration of policy statement in the 1938 Agricultural Adjustment Act, carried forward with subsequent legislation, recognizes the need to protect consumers, the need for orderly marketing, the need for resource conservation and preservation and specifically, "assisting farmers to obtain, insofar as practicable, parity prices for such commodities and parity of income . . . ." Id. § 1282.
At the inception of the federal programs, government intervention was directed toward market price supports for individual commodities to

The approach in the United States is not that unusual. Many other countries have offered support programs for the farm sector. For example, the Treaty of Rome, which established the European Economic Community, included provisions for a Common Agricultural Policy [CAP]. Under this policy the basic goal of ensuring a fair standard of living for those in agricultural production was recognized along with the necessity to ensure that supplies would reach consumers at reasonable prices. The objectives of the CAP were later enlarged to take into account the fact that production costs were higher in the Community than in other major agricultural countries and to allow for common prices that would often be above world market prices in order to provide adequate income to the producers. The CAP now includes a market organization for almost all agricultural products that establishes a minimum price in the internal market at which intervention occurs, that is, the government authority will purchase the commodity or take other action to support the price. If the commodity is one that moves on the international market additional governmental action is involved. When the product is sold on the world market, presumably at a lower price than the intervention price, a refund is available from the Community budget. On the other hand, if the same product is brought into the Community a levy is imposed on the difference between the world price and the intervention price plus adjustments for unloading and transportation costs.

This policy has successfully raised production of many commodities in the Community and producers have obtained a level of security. The budgetary costs to the Community have been substantial. See D. Gale Johnson, et al., Agricultural Policy and Trade 99-111 (1985) [hereinafter Johnson].

As a result of the overproduction encouraged by CAP and the subsequent costs, the Community has more recently embarked on a “set-aside” program patterned after those in use in the United States, which would call for producers to idle some portion of their acreage. The primary difference in these programs and those in the United States is that they require additional payments to farmers to entice them to participate as opposed to the United States schemes that often require participation as a condition of receiving income support payments. Michael Tracy, Government and Agriculture in Western Europe 1880-1988 325 (1989).

Canadian farm policy has a different focus than that of the United States or the European Community. The focus is on protecting the incomes of producers from price instability rather than to support incomes regarded as inadequate. It is the general perception that farm incomes in Canada are not inadequate in either the absolute sense or on a parity basis. Government policy is built around this perception. At the same time it is recognized that the general adequacy of income for Canadian farmers has been achieved by major income transfers through specific guaranteed returns from most major commodities. Both federal and provincial governments have been involved in programs to support prices and income for producers. The programs include floor prices, direct payments, credit subsidies, transport subsidies, and complex trading arrangements through the state-trading agencies such as the Canadian Wheat Board and the Canadian Dairy Commission. Provincial governments have added support programs for particular commodities. See Johnson, supra, at 80-98.

Japan, unlike the United States and Canada, is a net importer of agricultural commodities. Thus, the internal measures for price and income support for Japanese producers are tied directly to governmental intervention at the border in trade restrictions for some products. The general policy objective of the government has been to achieve producer prices comparable to those of Western Europe and at the same time achieve food security for the consumer. As a result, support levels have increased steadily for the last several years as the
achieve increased income for farmers. Since price supports could serve as an incentive for production, methods of controlling production were introduced along with price supports to counteract excess supplies of commodities. Current versions of production control programs provide government subsidies to encourage producers to remove a portion of their farmland acreage from crop production. The purpose of the programs is to control overall crop yield in the specific commodities. The programs also help to conserve soil and to protect marginal lands. Although participation in price and income support programs was made voluntary, the availability of government payments has given producers an incentive to participate in acreage control programs. However, under the federal program structure, those who choose to face the risks associated with market price fluctuations by not participating in the price support programs are under no obligation to participate in acreage control programs.

During the 1970s, a target price/deficiency payment system was implemented. Target prices are established and adjusted by law. The target government has attempted to keep prices to consumers from rising too rapidly. Deficiency payments to farmers have been used for many commodities and for rice, the major crop, the "government purchase prices" have been higher than the "government selling prices." There have been some efforts to shift the costs from taxpayers to consumers in recent years as the focus of the policy has shifted from food security to productivity. See Johnson, supra, at 112-26.

A December 1989 USDA study indicates that government assistance to producers is highest in Japan followed by the other Western European Countries, the European Community, Canada, and the United States. Of the industrial market economies Australia and New Zealand provide the lowest levels of government assistance to agricultural producers. Vernon O. Roningen & Praveen M. Dixit, How Level is the Playing Field? An Economic Analysis of Agricultural Policy Reforms in Industrial Market Economies (USDA, Economic Research Service, Foreign Agricultural Economic Report No. 239, December 1989).

124. The Agricultural Adjustment Act of 1938, Pub. L. No. 75-430, ch. 30, 52 Stat. 31 (codified as amended in scattered sections of 7 U.S.C.) included provisions for price support loans, "parity payments," and for acreage allotments and marketing quotas for some crops (e.g., wheat, cotton, rice, and tobacco). Except for tobacco and peanuts, acreage allotments and marketing quotas have been replaced by other means to encourage farmers to remove land from production. However, current versions of the law require compliance with "acreage allotments, production goals and marketing practices (including marketing quotas when authorized by law), prescribed by the Secretary . . . " as a condition of eligibility for price support. 7 U.S.C. § 1421(c) (1988). The 1938 Act remains as a legal authority for commodity price and production control programs. Agricultural Act of 1949, Pub. L. No. 81-439, ch. 792, 63 Stat. 1051 (current version provides the additional foundation for current programs).

125. 7 U.S.C. § 1421(c).

126. The Agricultural Act of 1949 established new versions of the price support programs and provided for mandatory price support through loans, purchases, and other efforts. 7 U.S.C. §§ 1421-1449 (1988 & Supp. III 1991). In 1954 the basic support level was increased and a commodity set-aside instituted with inventories of government stocks to remove these commodities from around marketing channels. Agricultural Act of 1964, 68 Stat. 897 (codified as amended in scattered sections of 7 U.S.C.). In 1956 the Soil Bank
price programs for wheat, feed grains, cotton, and rice allow government support payments to fluctuate in accordance with market prices. At present, soybeans, rye, flax, fruits, nuts, and vegetables are not included in the deficiency payment program. For the commodities that are included, if market prices drop below a certain level, producers receive some protection in the form of a price guarantee at the target price level. In contrast, if prices rise above the target price level, some stabilization in supply can occur through the return of reserves to the market. The exact terms and provisions of these price support programs change periodically. However, the programs consistently adhere to the basic concept of a price corridor within which prices move as market conditions change.

The availability of price and income support programs has an effect on the marketing decisions that farmers make. For example, the farmer's decision about how much of a particular crop to grow will be influenced by whether a particular crop is eligible for price support. The farmer may decide to expand production of a particular crop if the minimum price in the government program is favorable in relation to the production costs for that crop. If a farmer refrains from participating in target price programs, he or she is not constrained by government acreage restrictions, such as the land set-aside provisions. However, the farmer would then be ineligible to receive deficiency payments in the event of low market prices at harvest time. Therefore, the farmer who elects not to participate takes a calculated risk that market prices at harvest will not be adequate to cover production costs and to allow a profit.

The Food Security Act of 1985 ("1985 Act") established price and income supports for the 1986-1990 crop years. The loan program covered

Program was established to take farmland out of production. Agricultural Act of 1956, 70 Stat. 188 (codified as amended in scattered sections of 7 U.S.C. and 16 U.S.C.). Programs in the 1960s were based on annual reenactments of various support programs for specific commodities with the same underlying premise to support prices but with little attention to production levels. The Agricultural Act of 1970, 84 Stat. 1358 (codified as amended in scattered sections of 7 U.S.C., 16 U.S.C., and 42 U.S.C.), permitted the Secretary of Agriculture more flexibility and discretion to vary programs from year to year and, for the first time, imposed limits on payments to individual producers. Loan and purchase programs were continued. The Agriculture and Consumer Protection Act of 1973, 87 Stat. 221 (current version at 7 U.S.C. § 612(c)) was designed to protect against potentially dramatic drops in market prices and production cost increases. The target price/deficiency payment system was introduced under which farmers would be guaranteed some minimum level of support even if market prices exceeded the basic loan rate. This recognized a specific "income" support aspect in addition to the "price" support traditionally provided by loan and purchase programs. The basic concept has continued in subsequent programs with other refinements added in the Food Security Act of 1985, Pub. L. No. 99-198, 99 Stat. 1354 (codified as amended in scattered sections of 7 U.S.C., 15 U.S.C., 16 U.S.C., and 21 U.S.C.).

the commodities of wheat, feed grains, upland and extra long staple cotton, rice, soybeans, and sugar. The Act also provided deficiency payments for wheat, feed grains, upland and extra long staple cotton, and rice. The already-existing price supports for milk, wool, and mohair were continued through 1990. A peanut program, which operates through two-tiered marketing quotas, was continued with minor changes. Honey was also supported by a loan program.128

The most recent legislation, the Food, Agriculture, Conservation and Trade Act of 1990,129 adds some flexibility through the so called “triple base” option. This provision allows farmers the freedom to plant either nonprogram or program crops on up to twenty-five percent of the base acreage130 but, in turn, to give up deficiency payments on this acreage.131 This acreage is eligible for crop and marketing loans. The 1990 bill freezes target prices at the 1990 level but farmers will receive payments on at least fifteen percent less acreage than under the 1985 program.132

Statutory guidelines of the 1985 Act determine the commodity amounts and the terms and conditions of price and income support programs. With certain commodities the Secretary has the discretion to implement programs above a minimum level.133 The factors that must be considered by the Secretary in deciding whether to implement discretionary support programs include:

1. the relationship of supply and demand for the commodity;
2. the price levels at which other commodities are being supported, and, in the case of feed grains, the feed values of those grains in relation to corn;
3. the availability of funds;
4. the perishability of the commodity;
5. the importance of the commodity to agriculture and the national economy;
6. the ability to dispose of stocks acquired through price-support operations;
7. the need to offset temporary losses of export markets;
8. the ability and willingness of producers to keep supplies in line with demand; and
9. in the case of upland cotton, changes in the cost of producing the cotton.134

131. Id. § 1445j (amending 7 U.S.C. § 1445b-2 (1988)).
132. Id.
133. Id. § 1421a.
134. Id. § 1421(b) (1988).
The Secretary must also determine the level at which support should be undertaken. When support is mandatory these factors also guide the determination of support levels in excess of the statutory minimum.

Price support is achieved through government loan and purchase programs. As noted earlier, there is a clearly discernible production control element in these programs since part of the objective is to keep levels of production such that prices may stay within a controlled range.

The primary price support mechanism is the post-production loan. These types of loans are typically “non-recourse” in nature. This means that producers are not obligated to bear the loss resulting from any decline in the market price below an established national loan rate. For example, if at the end of the regular nine-month loan period, the national market price for the commodity has not reached the national loan rate, the commodity may be forfeited to the CCC. The CCC takes title to the commodity as full payment of the loan and interest charges, and the loan obligation is discharged in full. The CCC has no recourse against the debtor beyond the proceeds of the forfeited commodity itself. In this way the price of the commodity is supported at a specified level and the farmer is protected if market prices fall below this level.

In some cases, the CCC may directly purchase commodities. For example, milk processors sell excess supplies of manufactured milk products to the CCC. The agency is legally obligated to purchase commodities to keep excess supplies from causing prices to drop.

Income support is provided by direct payments, deficiency payments, marketing loans, and loan deficiency payments. Sometimes income support is achieved through direct payments to individual producers. These include indemnity payments to producers for losses from specified causes, disaster payments, and production incentive payments in the case of wool and mohair.

Indemnity payments have been used in the past to compensate dairy producers whose milk is removed from the market due to the detection of

135. Id. § 1421(d).
136. See supra note 120.
139. Id. § 1445j.
140. Id. § 1446i.
pesticide residues. Honey producers have also received indemnity payments for similar circumstances.\footnote{142}{Id. §§ 450j-450l.}

Disaster payments are provided in situations when Congress authorizes assistance due to special circumstances. For example, the Disaster Assistance Act of 1988\footnote{143}{Disaster Assistance Act of 1988, Pub. L. No. 100-387, 102 Stat. 924 (1988) (codified as amended in scattered sections of 7 U.S.C., 12 U.S.C., 16 U.S.C., 29 U.S.C., and 43 U.S.C.).} was designed to provide relief to farmers following drought. Moreover, emergency livestock feed programs for disaster-related losses of feed sources are available in most years when these problems arise.

For wheat, feed grains, upland and extra long staple cotton, and rice, the primary means of income support is through the target price/deficiency payment program mentioned earlier.\footnote{144}{7 U.S.C. § 1421.} Under this program a target price is set either by Congress or by the USDA through its administrative authority. If the market price falls below the target price, the farmer receives a payment (the "deficiency" payment) from the government for the difference between the target price and the market price or the loan rate, whichever difference is less.\footnote{145}{Id.}

A special provision may allow a producer to receive partial deficiency payments where acreage planted is less than that permitted under program guidelines. For example, the so-called "50/92" provisions allow partial payments to a producer who reduces plantings on up to fifty percent of rice or cotton acreage. The partial payment is available if the underplanted acreage is devoted to a "conserving use," that is, one that protects the land from weeds and from wind and water erosion.\footnote{146}{Id. § 1441-2(c)(1)(D) (Supp. III 1991).}

In those situations in which the farmer has obtained a CCC nonrecourse loan and the market price is actually below the loan rate, the farmer has the option of forfeiting the grain as repayment of the loan. This forfeiture could lead to an accumulation of a surplus of government-owned commodities and has effectively set a "floor" under the world market price. To avoid these problems the 1985 legislation introduced the concept of the marketing loan.\footnote{147}{Id. § 1444f(a)(4).} Under this concept the producer must still repay the CCC loan but may do so by selling the commodities at the world market price and pay off the loan at a "marketing loan repayment rate" rather than at the original announced loan rate. In addition, if the marketing loan repayment rate is above the world price the producer will...
receive compensation for the difference in the form of a subsidy. This keeps the crops from being uncompetitive in world markets.

Various methods are used under current law to restrict production and to control the levels of CCC inventories of various commodities. The most common of these programs is the cropland set-aside, which was initiated in the Agricultural Act of 1970. The set-aside program requires producers of feed and food grains and of cotton to withhold a specified percentage of acres from production as a condition of receiving government payments. In addition, the farmer may be required to plant an approved cover vegetation or use conservation practices on the idled acres.

A more recent supply management program is the acreage reduction program ("ARP"), which was first authorized by the Agriculture and Food Act of 1981. Under this program, acreage is taken from the acreage base for individual farms based on the actual plantings of the previous year. This acreage, like set-aside, is to be devoted to conservation uses. Participation may be required as a condition of eligibility for support.

The Secretary of Agriculture has the authority to initiate additional land diversion programs for certain commodities. Through the diversion program, farmers are induced to take acreage out of designated crop production in exchange for a specified payment. Unlike the set-aside and ARP programs, diversion is not necessarily a condition of eligibility for other government program benefits.

Farmers may also participate in a unique soil conservation program known as the Conservation Reserve Program ("CRP") authorized in the 1985 legislation. Under the CRP, the Secretary of Agriculture is authorized to enter into contracts with eligible owners and operators of

148. Id.

149. This program is authorized for wheat, feed grains, soybeans, and honey and is required for rice and upland cotton if the world market price is below announced loan levels. For some crops (wheat, feed grains, rice, and upland cotton) a separate subsidy may be available for farmers who refrain from participating in the purchase and loan programs. This payment, sometimes called a "loan deficiency payment" is based on the quantity the producer is eligible to place under loan and is determined by the difference in the announced loan rate and the "marketing loan repayment rate." See id. §§ 1445b-3a, 1444f, 1446f, 1446h, 1441-2, 1444-2 respectively.


151. 7 U.S.C. § 1444f(e).


154. Id. §§ 3412-3461.

155. Id. § 3831.
highly erodible cropland to assist them in conserving and improving the soil and water resources on their farms and ranches. This is achieved by converting the participating land to permanent vegetative cover in accordance with an approved conservation plan. Participating farmers are required to place highly erodible cropland under designated conservation practices for the term of the contract. In exchange, the farmer receives annual rental payments. The farmer also receives a payment to partially cover the cost of planting the necessary vegetative cover.\textsuperscript{156}

**Domestic Farm Policy and the Question of Distribution of Benefits: A Change in Focus.** Two issues dominate discussions of domestic farm policy: annual cost of the programs and the distribution of benefits under the programs. Over the past fifty years the framework for the programs has become stable and entrenched. The influence of powerful political groups means resistance to change. Reform is difficult. Yet, the nature of the programs leads to the conclusion that the programs are both costly and distortionary. Costs exceeded twenty billion dollars annually in 1986 and 1987 and continue to exceed ten billion dollars per year.\textsuperscript{157} And, because program payments are tied to production the programs are especially costly during periods of surplus production.\textsuperscript{158} Three programs, nonrecourse loans, direct purchases, and deficiency payments, account for eighty percent of the total outlays. Four commodities, corn, wheat, dairy products, and upland cotton, account for seventy-two percent of total outlays.\textsuperscript{159}

One of the most debated issues surrounding the programs is the question of “decoupling,” that is, moving away from a system in which program payments to each producer are related directly to the quantities produced each year. The coupling of payments and production is criticized as resulting in the concentration of payments to an increasingly narrow group as indicated by the fact that the majority of the outlays go to producers of only four commodities and as the number of producers in each group is becoming smaller.\textsuperscript{160} The distortionary aspect of coupling payments to production results from the economic incentives available and from the effect that outside economic forces can have on level of production.

\textsuperscript{156} Id. §§ 3831-3834.


\textsuperscript{158} Id. at 423-24.

\textsuperscript{159} "Farm Programs," An Overview of Price and Income Support, and Storage Programs," General Accounting Office/RCED-88-84BR (Feb. 1988).

\textsuperscript{160} Rausser & Neilson, *supra* note 157, at 420.
Any changes in policy to decouple payments from production levels would be resisted by commodity-specific interest groups and to the degree that the programs have as an objective control over production decisions, the tying of the two together can be defended. To curtail excess production it is necessary that all farmers participate in the government programs so long as production control is to remain voluntary. To induce the larger producers to control production the coupling of payments to production has been necessary. Yet, those who often voice the strongest support of continuation of the coupled programs also call for less restrictive supply controls and more flexible planting provisions for farmers.

To adopt a decoupling scheme could mean less total outlays for price and income support and would likely involve a shift of expenditures to income or “needs based” support rather than to support prices. In fact, the 1985 legislation tended to move toward a more market-oriented approach with reduced support levels designed to reflect market prices and to retain competitiveness on the world market. To continue this path is to suggest continued short term income support. The concept of decoupling goes one additional step and makes that support oriented toward income rather than prices.

The second, and more controversial, issue relates to the question of how government benefits are distributed. A frequent criticism of the historical price and income support programs is that the majority of the benefits flow to those who need them least, that is, the larger producers. Of course, with the coupling of payments and production this result is likely to follow. While it is true that the largest percentage of payments went to those in the larger sales classes, it is also true that these classes represent by far the greatest amount of production. For example, the sales class of $100,000 to $249,999 represented twenty-six percent of all farms in 1985-1988. This same group received thirty-seven percent of all payments during this period. The larger sales classes naturally represent smaller percentages of all farms but disproportionately greater receipts of benefits because the payments are based on production.161

A related matter in this controversy is the question of the equity of benefits flowing primarily to those with the highest net worth. Large highly capitalized farms are those with the greatest production and they therefore receive the greatest benefits. As it happens these are the farmers with the highest net worth and about forty percent of the benefits go to the wealthiest 60,000 producers. The average subsidy payment per farm is $14,257. However, it is not until net worth reaches $250,000 that this average figure is reached using 1988 as a typical year. At the upper

end thirteen percent of all farm households had a net worth of over $500,000 and this group received thirty percent of all direct payments. The average payment for this group was $28,000 per recipient. These perceived inequities in the system have led to calls for “means testing” that would prohibit the farmers with the largest incomes or largest net worth to be restricted in the receipt of payments. These proposals would target the benefits to certain groups based on either an income or a net worth test.

The payment limitation system was established in an effort to restrict the total amount of government support that could flow to any one individual. While it has prevented the most flagrant abuse that characterized the system at times past it does not remove the perceived inequities. In fact, because the limitation on payments is relatively high ($50,000 per person for deficiency payments and $250,000 overall) it may have little effect. It seldom has served to prevent participation in programs. Because the limitations legislation contains restrictions that allow payments only to those that are “actively engaged in farming” it does operate to exclude benefits from flowing to those who are only passive participants and it does make the distribution of benefits more equitable. Individuals who are not dependent on farming for a livelihood will not gain protection intended to be available to those who are.

Debates over the cost of the programs and the distribution of the benefits overshadow a more basic issue that is critical: could all subsidies be removed from agriculture? The Reagan-Bush administrations took the position that a more market-oriented farm policy should evolve. The 1985 farm bill took a step in this direction in taking supply and demand into account in determining support prices for major commodities. More recently, the position of the United States in the General Agreement on Tariffs and Trade (“GATT”) round has been that all countries should, in the long term, reduce agricultural support and protection to prevent restrictions and distortions in the world markets. The suggestion is that forms of support tied to production would be phased out over a ten-year period. Some income support policies not linked to production or marketing would continue under this proposal.

If the GATT agreement should adopt proposals that mandate phase out of certain types of support, this could affect domestic farm policy and result in the revamping of current programs along the lines suggested by some of the critics of these programs. Special legislation would be neces-

sary to reduce price support and to bring domestic policy in line with the GATT agreement.

D. Regulation Aimed at Affecting the Structure of Agriculture

"Family Farming." A continuing debate is underway concerning the "structure" of American agriculture. The issue is one related to the degree of decisionmaking control that is to be retained by those engaged in family farming. Concerns over continuation of present trends are that (1) farm size will continue to increase, and farm numbers will continue to decline; (2) nonfarmer landownership may continue to expand; (3) more complex business organizations and business arrangements will evolve, accompanied by an erosion of competitive markets; and (4) rural America will continue to change as agriculture's influence on rural communities decreases.

As a result much attention is focused during each debate over farm legislation and its effect on "family farming." Congress has, from time to time, recognized family farming as important to the economic well-being of agriculture and has specified that new programs funded by USDA must give appropriate attention to the effects they may have on the structure of family farm orientated agriculture. For example, a statement appears in the legislation authorizing agricultural research, extension and teaching that it is a finding of Congress that new federal initiatives are needed in the areas of "more intensive agricultural research and extension programs oriented to the needs of small farmers and their families and the family farm system, which is a vital component of the agricultural production capacity of this country."\[166\] In addition, strong statements appear in legislation authorizing the Farmers Home Administration programs to assist lower resource farmers. The Secretary is authorized to make and insure loans under the Consolidated Farm and Rural Development Act\[167\] to farmers and ranchers and to farm cooperatives and to private domestic corporations, partnerships, and joint ventures controlled by farmers and ranchers and engaged "primarily and directly" in farming and ranching.\[168\] The legislation restricts eligibility to those that are or will become "owner-operators of not larger than family farms."\[169\]

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168. Id. § 1922(a).
169. Id. Similar language appears in the sections related to operating loans. Id. § 1941(a) (1988).
The original Reclamation Act of 1902,\textsuperscript{170} which was designed to provide a means of funding the massive irrigation projects necessary to supply water to the arid west, contained acreage restrictions on those who would receive subsidized water from these projects.\textsuperscript{171} That legislation, subsequently amended by the Reclamation Reform Act of 1982,\textsuperscript{172} which increased the acreage limitation from 160 acres to 960 acres, is illustrative of the focus on "family farms."\textsuperscript{173}

The farm program legislation also contains restrictions on payments that are designed to restrict the amount of benefits that flow to any one individual. These restrictions do provide an example of congressional concern with policies designed to benefit larger operations. The payment limitation provisions restrict payments to those actively engaged in farming and restrict the number of entities and persons who may receive benefits.\textsuperscript{174}

While these programs have been criticized as "public hypocrisy" and "empty victory for the family farm,"\textsuperscript{175} they have played a role in the structure of agriculture. Critics suggest that the role has been a negative one viewed from the standpoint of family oriented agriculture and that these and other policies have contributed to the expansion of larger operations and have encouraged specialization.

The basic issue is one of, first, deciding on the importance to be attached to maintaining a family-farm agriculture and, second, determining to what extent government intervention will be necessary to accomplish the objective. If a decision is made to maintain a family-farm type agri-

\textsuperscript{171} Id.
\textsuperscript{174} 7 U.S.C. § 1308(2), (5).
\textsuperscript{175} MARTY STRANGE, FAMILY FARMING: A NEW ECONOMIC VISION 128-31 (1988). The importance of "family farming" is often tied to the concept of "farming as a way of life," which is perceived as a value to society and the economy as a whole. This concept has been described as of "moral virtue" and as a "symbol" of independence and self-reliance, and is deeply rooted in traditions of the Protestant work ethic. Farming has also been credited with assuring the legitimacy of American political institutions and a part of an important populist tradition. See Paul B. Thompson, The Philosophical Rationale for U.S. Agricultural Policy, in U.S. AGRICULTURE IN A GLOBAL SETTING: AN AGENDA FOR THE FUTURE 34-35 (M. Ann Tutwiler ed., 1988) [hereinafter Tutwiler]. Whatever the philosophical basis for agrarianism, the role of the concept of family farming as a basic rural structure must be recognized as an important determinant in public policy. And, in spite of the criticism of the ineffectiveness of some policies, it is likely that the decline of family based agriculture would have been more rapid in the absence of the programs of the 1930s and subsequent years designed to support this structure.
culture, a number of issues arise concerning the extent to which government policies should contribute to this objective. Government policies on taxes, ownership and land use, water use, environment regulations, energy, and transportation, as well as price and income support programs for agriculture, all have some potential effect on the structure of agriculture. 176

Structure of Agriculture and Family Farming: A Change in Focus. The debate over the structure of agriculture and the role of family farming will continue as agriculture changes. The changes foreseen will affect those engaged in farming and other segments of society as well. A change in the structure of agriculture may affect the supply of products and availability to consumers at reasonable prices. The effect may be even greater on present suppliers of inputs and on marketing firms. If agriculture becomes more concentrated, a growing share is likely to be absorbed by very few large firms, which control the resources and set up their own supply and marketing subsidiaries. The structure of agriculture has an impact on the character of rural communities; the local economy is

176. Structural issues are important in other countries as well. For example, farm size and structure is a particular concern in the European Community where small farms predominate but the Common Agricultural Policy has operated to encourage large farmers to overproduce. The Common Agricultural Policy does contain provisions to encourage the amalgamation of farms to increase the average size and to reduce the number of small farms that provide only minimal family income. Member states are left to determine the important questions of ownership of resources, rate of decline of rural and farm populations, and the financing of the transition to fewer but larger farms. See I.R. BOWLER, AGRICULTURE UNDER THE COMMON AGRICULTURAL POLICY 191-221 (1985).

The recent policy of the European Community has focused not only on the farmer and the farm but has also considered the off-farm structural questions related to marketing and processing of agricultural products and regional discrepancies. Comprehensive and regional development programs in member states have been promoted and supported. JOHNSON, supra note 123, at 103.

In Canada most farm businesses are family owned and operated. Structural change has continued with farm size increasing and farm numbers decreasing in patterns similar to those in the United States. For example, one half of the farms at the smaller end of the scale produce only 7% of the output. At the upper end 1% of the farms produced 19% of the output. JOHNSON, supra note 123, at 80-98. While public policy statements in Canada often speak of ensuring farm income and preserving family farms, farm policy is more descriptively "food policy" and has been characterized as "a development-oriented, productivity-enhancing and competitiveness-promoting, sector-specific industrial strategy." JOHNSON, supra note 123, at 84.

In Japan improvement in the basic structure of the agricultural sector is very much an element in public policy affecting agriculture. A specific goal has been to reduce the number of farms and to encourage "responsible" farms, that is, those with at least one male worker under 60 years of age working 150 days or more on the farm annually. The target is to have 700,000 "responsible" farms in 1990 and to reduce the number to 400,000 by the year 2000. JOHNSON, supra note 123, at 112-26.
affected, the social patterns and political institutions are altered, and rural culture changes.

This raises a more critical question. To what extent should policies designed to accomplish other purposes, such as tax policies, be modified or altered to contribute toward the objective of preserving the structure of agriculture? Tax policies at the federal level have no doubt had an impact on the structure of agriculture. They have encouraged growth and expansion and made farm investments attractive alternatives for nonfarm capital. For example, under the 1976 changes in federal estate tax provisions, farmland may receive preferential valuation in the estate of the owner under some circumstances. This policy may lower estate taxes and, thus, encourage the continuation of the farm business. While specifically designed to encourage the continuation of family farming, this tax reduction has been questioned. Some suggest its availability may, in fact, make farmland a more attractive investment to nonfarmers. This situation could have an effect on the long-term price of land.

Ownership and land-use policies have a special role in the structure issue because of the crucial role farmland plays in agricultural production. With the ownership pattern changing to more part-owners (those who own some land and rent additional property), public policies may have to be altered. Land-use policy has been primarily a state and local issue, although some federal involvement has a direct effect on land-use decisions. The Agricultural Foreign Investment Disclosure Act of 1978 is an example of a federal legislative attempt to affect the structure of farming. Designed to provide information concerning foreign investment in United States agriculture, this Act requires registration of land transactions involving foreign individuals and businesses.

Water-use and allocation policy has, for the most part, been left to the states. But, water availability influences agricultural structure, and this has been recognized at the federal level. For example, the federal reclamation program was designed to encourage settlement of the arid West. However, before a private landowner could use water from a federal reclamation project, both an acreage limitation and a residency requirement had to be met. The feasibility of these requirements has received congressional attention and has been the subject of litigation. Obviously, the structure of agriculture in some areas can be greatly affected by the type of limitations in effect and the extent to which they are enforced.

Farm price and income support policies are designed to relieve some of the fluctuation in farm income and to reduce risk. These policies, while

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179. Id. § 3501(a).
encouraging the continuation in farming by some producers, may also benefit large operators more than small farms in the absence of payment limitations. The appropriate level for farm price and income support, and the distribution of the benefits, will both continue as structure issues.

E. Regulation for Broad Social Goals Which Affect Conduct in Agriculture

One category of regulatory activity that has a direct effect on agriculture is that which aids in achieving some broad societal goals by affecting the conduct of those in the agricultural sector. Two major examples are environmental regulation and labor regulation. In neither case is the regulatory activity directed specifically at agriculture and, in fact, agriculture may be granted special recognition within the legislative programs. Yet, the broad sweep of the programs affects agriculture directly.

Environmental Regulation. Much of the environmental law affecting agriculture is legislation applicable to all businesses. However, the particular provisions governing pesticides, water pollution, and soil erosion apply only to agriculture and directly affect the way farmers farm. Provisions on pesticide regulation, water pollution control, and soil erosion have special application in agriculture.

The basic authority for the regulation of pesticide is the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") as amended by the Federal Environmental Pesticide Control Act of 1972 and the Federal Pesticide Act of 1978. The focus of the Act is control over the use, shipment, distribution, and sale of all pesticides. All pesticides must be registered with the Environmental Protection Agency. The burden of proof required to substantiate claims in support of a chemical’s registration is with the applicant. As part of the registration procedure, pesticides must be classified for general use or restricted use. Restricted-use pesticides can be used only under the direct supervision of a certified applicator. States may operate programs for applicator certification involving training, testing, and certification of applicators. Regulations also have

183. 7 U.S.C. § 136a(c).
184. Id.
185. Id. § 136a(c)(1)(F).
186. Id. § 136a(d)(1)(C)(i).
187. Id. § 136i.
been promulgated that relate to the protection of workers performing hand labor operations in a field after pesticides have been applied. Some states have imposed additional regulations on pesticide use, and, in some cases, these are more strict than the federal requirements. Because agriculture is a major user of pesticides, this program directly affects the conduct of farmers who rely on these chemicals.

An important aspect of the agricultural pollution problem is water pollution resulting from animal waste, erosion and sediment, and runoff from fertilizers and other chemicals. These problems are addressed, in part, by the Federal Water Pollution Control Act Amendments of 1972.188 Congress also made significant changes in the Clean Water Act of 1977189 and in the Water Quality Act of 1987.190

The 1972 legislation required that all point sources of water pollution meet certain discharge limitations.191 The legislation prohibits discharge from point sources of pollution, except as authorized by a discharge permit.192 Point sources of pollution specifically include concentrated animal feeding operations.193 Since 1972 several regulations have been issued and litigation has ensued in an attempt to clarify the definition of concentrated animal feeding operations. Current EPA regulations focus on the question of "discharge" and require that the operation be permitted if pollutants are discharged into waters or if waters pass through the confined area. However, the regulations also strictly prohibit the discharge of waste or waste water into waters of the United States so the effect is to severely limit the type of waste disposal facilities that may be used in confined feeding operations.194

After the enactment of the original amendments to the Water Pollution Control Act, concern relating to irrigation water reuse systems arose. The Clean Water Act of 1977 specifically exempted irrigation water reuse systems from permit requirements.195 In addition, all nonpoint sources of pollution were excluded from the permit requirements.196 However, the 1987 Water Quality Act focused new attention on these problems.197

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196. Id.
legislation requires states to designate the areas still affected by nonpoint pollution and to design programs for control of water pollution from these sources.\textsuperscript{198}

Considerable controversy arose following the 1972 amendments because the new legislation was held to "waters of the United States," which included waters beyond the navigable waters that were traditionally within the jurisdiction of the Corps of Engineers ("COE").\textsuperscript{199} The COEs "dredge and fill" regulations would have had an impact on a substantial number of agricultural operations if the agency's jurisdictions extended beyond the traditionally navigable waterways.\textsuperscript{200} The Clean Water Act of 1977 exempted normal farming, ranching, horticultural and silvicultural activities, such as plowing, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products; and upland soil and water conservation practices from the dredge and fill permit requirements.\textsuperscript{201} This legislation also resulted in the transfer of some of the authority of the COE to regulate dredge and fill activities in the nation's waters and adjacent wetlands back to the states but the program guidelines remain those of the COE.

Sediments from soil erosion are the greatest contributors to nonpoint pollution in surface waters, with cropland accounting for over half of the sediments deposited in lakes and streams. Both state and federal programs have been authorized to assist landowners in controlling this and other sources of nonpoint agricultural pollution.

Voluntary programs, including cost-sharing and technical-assistance programs through the Soil Conservation Service and local soil conservation districts, continue as a primary focus of the federal programs.\textsuperscript{202} The 1985 Food Security Act\textsuperscript{203} implemented new approaches designed to induce voluntary action to control soil erosion. These programs prohibit farmers from receiving government support if they violate restrictions on the use of highly erodible cropland or on certain wetlands under the so

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198. Id. § 1329.
200. Id. at 686.
202. Many of these programs have been in place since the original legislation of the 1930s. The Soil Conservation Act of 1935, Pub. L. No. 74-46, 49 Stat. 163 and the Soil Conservation and Domestic Allotment Act of 1936, Pub. L. No. 74-461, 49 Stat. 1148, established the soil conservation agencies and erosion control programs.
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The requirements of these programs are such that noncompliance affects benefits under price and income support programs as well as the right to participate in other government programs, and, in this way, induce compliance. Additional incentives for soil conservation were included in the Conservation Reserve Program ("CRP"), which was designed to induce farmers to take land out of production and convert it to conserving uses. The designation of "endangered earth" as "Planet of the Year" by *Time* in 1988 (instead of the usual "Man of the Year") illustrates the return of an environmental consciousness that many felt had all but disappeared, at least in comparison to that evidenced by the move toward environmental legislation in the late 1960s and early 1970s.

Now agriculture is being identified as a part of the problem, a major source of water pollution. In the early water and air pollution control legislation (except for a few major livestock confinement feeding operations required to obtain NPDES permits or for "dredge and fill," section 404 permits required by the COE), individual agricultural producers were generally not greatly affected by regulation directed toward point sources of pollution. Agriculture is now facing the possibility of a series of new regulatory programs designed to reduce agricultural source pollution. More are likely to follow.

One major area of concern is water quality. New programs affecting soil erosion, chemical nonpoint pollution sources, and groundwater contamination all have a direct bearing on the way farmers will farm in the future. Individual producers will be affected and may see more direct regulation.

Soil erosion control programs in the past have focused on the on-site results of a lack of conservation and have employed voluntary methods of controlling erosion from farmland. The programs are voluntary with an emphasis on technical assistance and cost sharing. The Federal Water Pollution legislation focuses on effluent limitations (not water quality itself) and has been almost entirely directed toward point sources of water pollution.

Recent studies seem to indicate that both approaches have achieved some major successes but that significant water quality problems remain—particularly those resulting from nonpoint source pollution and

204. 16 U.S.C. §§ 3811-3813.
205. *Id.* §§ 3831-3036.
groundwater contamination. A major source is runoff and leaching from agricultural land. Most of the sediment, nitrogen, phosphorous, and nutrients creating biological oxygen demand entering United States surface waters are from agricultural land. This is to say nothing of pesticides, bacteria, and dissolved solids. These same lands are a major cause of groundwater contamination from pesticides, fertilizers, and other pollutants.

The 1985 Food Security Act contained a number of specific provisions directed toward conservation of soil and adding incentives for the implementation of soil and water conservation measures. The Act contained a particular provision to restrict the conversion of wetlands to crop production. Any wetlands converted after December 23, 1985 are ineligible for price and income support payments and other USDA program payments unless the land falls under a number of specific exemptions from the requirements.

Similar provisions apply to highly erodible land. Producers are ineligible for program payments for commodities produced on highly erodible land except in compliance with a conservation plan. The restrictions do not apply to land that was in production between 1981 and 1985 or was under set-aside during that time. However, this land is required to have a conservation plan approved by 1990 or two years after an ASCS soil survey of the farm, whichever is later. A second exemption is allowed if production is under a conservation plan that is in accordance with ASCS technical standards.

Probably the most far-reaching provision dealing with soil conservation in the 1985 Food Security Act is the so-called compliance provision. The compliance provision requires all farmers to apply soil conservation plans to highly erodible crop land or stand the potential loss of all program payments.

The Conservation Reserve Program ("CRP") of the 1985 legislation has the potential of being one of the greatest soil conservation measures yet enacted. CRP will have the benefit of affecting off-site pollution from soil erosion and presumably an overall improvement in water quality. This program is designed to take highly erodible land out of production and have the land converted to permanent vegetative cover in accordance with approved conservation plans. To put highly erodible land in the

208. Id.
210. Id. § 3821.
211. Id. § 3811.
212. Id.
213. Id. § 3831-3836.
214. Id. § 3831.
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CRP, the owner-operator must agree to apply the conservation plan, establish vegetative cover, and not use the land for agricultural purposes. In return, the owner receives technical assistance, cost sharing for conservation measures, and annual rental payments to compensate for the removal of the land from production. Contracts are generally for ten years. The program is structured to work on a bid basis.\(^{218}\)

The 1990 farm bill continued these programs and subsequent farm legislation will likely expand them. They provide an example of new approaches that will become more prevalent in the future as enumerated goals are tied to farm policy.

Since nonpoint pollution has been determined to be a major environmental problem in the United States, the goals of the Clean Water Act\(^{218}\) can only be met if nonpoint pollution problems are addressed. The Water Quality Act of 1987 adds a specific policy statement: "[I]t is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this Act to be met through the control of both point and nonpoint sources of pollution."\(^{217}\)

The Act required the states to submit a report to identify those waters in the state that cannot reasonably be expected to attain or maintain applicable water quality standards without additional action to control nonpoint sources of pollution. Each state must submit a management program that has to identify the best management practices, including measures that will be undertaken to reduce pollution from nonpoint sources, developed to the greatest extent practicable on a watershed basis.\(^{218}\) The added language making it a "national policy that programs for the control of nonpoint sources of pollution be developed and implemented" probably means that regulatory programs will be necessary at some point in time for some lands.\(^{219}\)

The policy is to identify the best management practices that will control each category of pollution to achieve water quality goals. If those goals cannot be achieved by voluntary programs, some states may move to mandatory requirements. Some states already have implemented enforcement mechanisms and penalties for failure to comply with conservation measures.

While much of the legislation at the state and federal level in the past has been directed toward water quality and surface water, most of the

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215. Id. § 3832-3835.
216. See supra note 188.
219. Id. § 1251(a)(7).
water use has been from groundwater supplies. Groundwater is used extensively not only for irrigation but over half the population relies on ground water for drinking and household needs. (In some rural areas the number reaches ninety-seven percent).\textsuperscript{220}

Groundwater pollution has been reported in every state and the frequency appears to be increasing. Although only a small amount of the existing supplies are currently contaminated, the potential is so great that control of ground water contaminants has become an important issue for the future.

It is difficult to develop legislation to cover groundwater pollution because the causal connections between sources of contamination and groundwater pollution are difficult to establish. Some existing legislation at the federal level may have application to the problem but modifications may be expected in the future.

While federal efforts have been spread over a number of statutory programs, many states have developed their own legal frameworks to address groundwater contamination, particularly from agricultural sources. Some states have emphasized classification based on existing uses or vulnerability to pollution and then use this as a basis for establishing different protection strategies.\textsuperscript{221} In some states, classification is used in conjunction with water quality standards using the Federal Safe Drinking Act\textsuperscript{222} as a starting point.

For these activities to actually provide protection and to prevent contamination of groundwater they are sometimes coupled with either land use practices or restrictions on farming practices. For example, some states have regulations applying to the "chemigation" process, the application of agricultural chemicals through an irrigation system.\textsuperscript{223}

It is clear that the past programs have not dealt with the most pervasive pollution problem. Agriculture has now been identified as a major source of groundwater and surface water pollution, and a special agricultural water pollution effort may become necessary to address these problems in the future. The efforts of the 1987 Water Quality Act\textsuperscript{224} for nonpoint source control may be only the beginning. Since it is clear that improved land management is the best technique for controlling most


\textsuperscript{221} Id. at 48-51. See also Debbie Sivas, Ground Water Pollution from Agricultural Activities: Policies for Protection, 7 Stan. Envtl. L.J. 117, 157 (1987-88).


\textsuperscript{224} 33 U.S.C. § 1251.
sources of water pollution, an increase in regulation of agricultural production techniques may be the next step.

There is strong evidence that public sentiment favors the protection of environmental quality. Even in strong farm states, limits on the use of fertilizers, herbicides, and insecticides are favored by the public to protect water supplies. As a result, it is likely that major legislative amendments will continue to be made, tightening the existing nonpoint source pollution and groundwater contamination restrictions. Some of this activity will occur at the state level where the public is highly dependent on groundwater for drinking water.

It is clear that these continued problems call for increased emphasis on alternatives to chemical agriculture. Farmers themselves are interested in systems of farming that would allow for reduced chemical usage, less energy, and reduced soil erosion. A number of states have now started programs of research into alternative agricultural practices. As these practices develop they may be tied with regulatory programs to encourage "sustainability" of American agriculture.  

Labor Regulation. A second area of regulation designed to achieve broad social goals is labor legislation, which has a direct effect on agriculture. Agricultural workers often receive special treatment in federal and state statutes. Although this special status often exempts the employee from the coverage of some programs, in other cases the legislation imposes specific duties on the employer. It is the latter type that represents a change in focus in labor regulation affecting agriculture.

The Fair Labor Standards Act of 1938 ("FLSA") sets minimum wage standards for employment subject to its provisions. The minimum wage provisions are now the same for all employees covered. There is no difference in the minimum wage level for agriculture and other industries. Other differences do exist for agricultural employees. Farmers are not required to pay higher rates for overtime, whereas nonagricultural employees are to receive a minimum of one and one-half times the minimum hourly rate for hours in excess of forty per week. Excluded from the minimum wage requirement are workers in the employer's immediate family; local workers who commute daily from their permanent residences, are employed less than thirteen weeks per year, and are traditionally paid on a price-rate basis; and workers who care for livestock and who must be available at all hours, such as range cowboys and shepherds.

227. Id. § 206.
228. Id. § 207.
Also excluded are youths under the age of seventeen, employed with their parents in harvesting crops and traditionally paid on a price-rate basis, although such youths must be paid on the same price rate as the adults with whom they are working.²²⁹

The Federal Fair Labor Standards Act and similar legislation at the state level regulate the employment of minors in agricultural occupations.²³⁰ Under the FLSA, minors sixteen years of age or older may be employed in any agricultural occupation, even though they would be prohibited from certain hazardous nonagricultural employment until they reach the age of eighteen. Under the federal law, persons under sixteen are excluded from employment (except by parents) in activities that are considered hazardous. Exemptions from portions of the regulations are available for students fourteen years or older enrolled in vocational training programs and 4-H members in approved farm training and education programs.²³¹

Minors under the age of sixteen may work at any time and at any agricultural job for their own parents on the home farm.²³² A minor under sixteen may work outside school hours in farm jobs not included in the list of hazardous activities but cannot be employed during normal school hours. Written parental consent is required for minors under fourteen unless they work on the same farm where their parent or guardian is also employed. Minors under the age of twelve cannot be employed on a farm that employs five hundred man-days or more of hired labor per calendar quarter—in other words, on a farm subject to the minimum wage provisions of the federal law.²³³

State labor laws relating to the employment of minors may be more restrictive than the FLSA.²³⁴ Many states prohibit employment of minors below certain age levels unless they have work certificates.²³⁵

Agricultural employees are subject to standard provisions applicable to other workers such as the Federal Unemployment Tax²³⁶ and Social Se-

²²⁹. Id. §§ 207, 213(a)(b)(c)(i), (ii), (iii).
²³⁰. Id. §§ 212-213.
²³¹. Id. § 214.
²³². Id. § 213(6)(B).
²³³. Id. §§ 213(a)(6)(A), 214(b).
²³⁶. Federal Unemployment Tax Act ("FUTA"), 68A Stat. 439 (1954) (codified as amended in scattered sections of 26 U.S.C.). Agricultural employees are covered by this Act if: (1) $20,000 or more in cash wages were paid in any calendar quarter of the current or preceding year, or (2) Ten or more individual employees were employed on at least one day during each of 20 different weeks of the current or preceding year. 26 U.S.C. § 3306(a)(2) (1988 & Supp. II 1990). If the employer is covered by FUTA, a tax is required to be paid.
Guidelines are provided for both taxes that include some special provisions for agricultural employees. And, many agricultural employers are now required to withhold income tax from wages of employees.\textsuperscript{238}

As indicated above, the traditional regulatory programs for labor contained significant exemptions for agricultural operations. That idea has undergone significant change in recent years starting with the Occupational Safety and Health Act\textsuperscript{239} and illustrated more concretely by regulation of migrant labor and in immigration legislation. These programs have a much more direct effect on farm level production than previous labor legislation.

OSHA was designed to reduce work-related injuries to employees. The purpose of the act is “to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources.”\textsuperscript{240}

Under OSHA specific standards have been developed for slow-moving farm machines, rollover protective structures for agricultural tractors, safety shields for farm equipment handling, storage of anhydrous ammonia, pulpwood logging, and sanitation in temporary labor camps. Each employer has the general duty to furnish his employees with employment that is free from recognized hazards causing, or likely to cause, death or serious physical harm. Specifically, the employer has the duty to comply with the safety and health standards under OSHA. Each employee has the duty to comply with these safety and health standards and with all rules, regulations, and orders of the Act that apply to actions and conduct.\textsuperscript{241}

Thus far, enforcement activity has been directed toward certain “target” industries on a “worst-first” basis. Agriculture has received less attention. In fact, an agricultural inspection exemption was introduced in 1976 that temporarily exempted from enforcement all farming operations.

The tax is used to establish an insurance system to provide benefits for workers who are unemployed.

\textsuperscript{237} 26 U.S.C. §§ 3101-3128. The Social Security Tax (Federal Insurance Contributions Act or “FICA”) applies if an employer pays an employee cash wages of at least $150 during the calendar year for agricultural work or if $2500 or more is paid by the employer for agricultural labor. An employer must make reports and pay taxes on employees if either of the two wage tests in the year are met. Id. § 3121(a)(8)(B)(i).

\textsuperscript{238} Under previous I.R.C. § 3401(a)(2) (1988) withholding was not required for agricultural employees. Under current provisions, if an employee’s wages are subject to FICA withholding then the wages are also subject to income tax withholding.


\textsuperscript{240} 29 U.S.C. § 651(b).

\textsuperscript{241} Id. §§ 653-659.
This exemption has the effect of excluding most farm employers from the provisions of the Act. Since the exemption is temporary in nature, the broad coverage of OSHA may apply to more agricultural employers in the future.

The Environmental Protection Agency has promulgated a number of standards relating to pesticide application that apply to employees working with or around pesticides. Both commercial and private applicators of certain restricted-use pesticides must be certified or be supervised by certified applicators. To be certified, an applicator must complete a study program and testing. If application of a pesticide is by noncertified applicators, a certified applicator must provide direct supervision and appropriate instructions for safe application.

Re-entry standards are designed to protect agricultural field workers. These standards require protective clothing for workers and prohibit the presence of unprotected persons in fields being treated. In addition, immediately following application of certain pesticides, re-entry into treated fields is prohibited for specific time periods. Other protective standards apply to all pesticides and relate to directions for use, warnings, restrictions to prevent food contamination, residue tolerances, and several additional items.

The Migrant and Seasonal Agricultural Worker Protection Act substantially amended the Federal Farm Labor Contractor Registration Act and requires that any person who, for a fee, recruits, solicits, hires, furnishes, or transports migrant workers (except family members) for agricultural employment must register with the Department of Labor. Although exclusions exist for those who employ labor solely for their own operations, there may be times when the employer or an agent of the employer (such as a farm manager) will fall within the purview of the Act. Some states also regulate farm labor contractors, so both federal and state provisions become applicable. The employer should always ascertain whether labor contractors have valid registration cards.

244. Id. § 171.
245. Id. § 170.3(b)(1)-(3).
246. These standards were revised and expanded in scope effective October 20, 1992. See 40 C.F.R. §§ 156-170 (1992).
The OSHA standards for sanitation in temporary labor camps are only one of several sets of regulations potentially applicable to migrant employee housing. Many states have additional sanitary regulations and labor law regulations that apply to labor camps. In some, licenses are required to operate camps and are only granted after inspections for compliance with applicable regulations.

The Immigration Reform and Control Act of 1986 ("IRCA") imposes sanctions on employers who hire illegal aliens and requires employment verifications of identity and authorization to work. It has also accelerated legalization for certain classes of aliens. Under this legislation, employers can be subject to civil, and in some cases criminal, penalties for knowingly hiring, recruiting, referring for a fee, or continuing to employ unauthorized aliens. Knowingly using a contractor to hire an unauthorized alien is also a violation. Employers have the responsibility of establishing the identity and authorization to work of new employees. Employees must provide documents verifying identity and employment authorization. Documents that may be used to establish both identity and authorization to work include a U.S. passport, a certificate of U.S. citizenship or naturalization, or an unexpired foreign passport with endorsement authorizing employment (work permit). Social Security cards or U.S. birth certificates are sufficient for work authorization, and a state driver's license with photograph is sufficient for identification.

One item of special interest to agricultural employers in the legislation is that consent, or a properly executed warrant, is required for an officer to enter the premises of a farm or other outdoor agricultural operation for the purpose of interrogating a person believed to be an alien (except that within a "reasonable distance" of the border the Immigration Service retains the right to "enter private lands" to patrol or prevent illegal entry).

VII. Changing Regulatory Controversies: The Future of Government Regulation of Agriculture

United States agriculture underwent dramatic changes from the 1950s to the 1990s. Political power of the agricultural sector diminished as population shifts into urban areas occurred, farm numbers declined signifi-

254. 8 U.S.C. §§ 1160, 1324a(a)-(f).
cantly, and average farm size increased dramatically. Agriculture’s role in both the domestic and international economy was recognized, and agriculture’s role in foreign policy became more evident.

Among areas of continued concern are questions of tying food policy to foreign policy. Overall U.S. trade policy, including the role of agriculture and the use of domestic surpluses for food and of development programs, export trade policy in the GATT discussions, and continuing disputes with European Community (“EC”), clearly involves agriculture.

The application of new scientific techniques, most notably biotechnology and genetic engineering, and the related questions concerning patentability of life, free release of newly developed or modified organisms, health, and socio-economic and ethical issues, all give rise to the potential for new regulatory programs to deal with these concerns.

Agriculture is also facing new challenges related to concerns over intensive methods of livestock production. Animal rights and animal welfare concerns may lead to new programs directly affecting farming practices.

A. International Agricultural Trade Regulation

An example of government intervention that affects agriculture but is designed for other societal goals is in the area of foreign policy and trade. The Food Security Act of 1985\textsuperscript{256} contained provisions aimed at making U.S. export commodities more competitive in world markets. While the effect was to stimulate a turnaround in agricultural exports, the cost to the federal budget was substantial. Clearly, domestic agricultural policy is important in efforts to address the interdependence in the international economic sphere. Attempts to reduce mutual subsidy costs are a major issue in world trade negotiations.

In the 1985 legislation price supports were lowered for the major commodities traded internationally.\textsuperscript{257} The effort is, of course, to move U.S. domestic prices closer to the world price and make U.S. commodities more competitive. The goal has been to make domestic programs more market oriented but, at the same time, maintain adequate producer income. The latter has been a primary goal of U.S. agricultural policy since the 1930s. The former is a goal of recent years. The cost of trying to achieve both goals simultaneously has been high. But, the message to the rest of the world seems to be that the U.S. intends to move U.S. commodities in world markets and is willing to provide short-term domestic subsidies to maintain farm income while enhancing the position of U.S. agric-
culture in international trade. Thus, agriculture will gain increasing importance in overall U.S. trade policy.

Related to trade policy is the continuing use of agricultural commodities in various foreign assistance programs designed both to fulfill foreign policy objectives and to build future markets for U.S. products. The most prominent is the "Food for Peace" programs that have been in existence since the mid-1950s. These programs allow major donations of agricultural commodities on a humanitarian basis, concessionary sales, and favorable financing of the sales of various agricultural commodities. While these programs contribute to the overall objectives of domestic agricultural policy in assisting in the movement of supplies and to aid in price support, the broader goal is one related not to agriculture at all but to foreign policy objectives. Food becomes the means by which these objectives can be partially achieved.

The international market has become increasingly important to U.S. Agriculture. In 1981 the total of agricultural exports reached a record high $44 billion. Imports of agricultural commodities and agricultural supplies are significant as well. World economic growth slowed into the 1980s and the effect was felt throughout the agricultural sector and declines in farm exports occurred. Agriculture has remained particularly vulnerable to fluctuations in the international economy. For example, the fluctuating value of the U.S. dollar affects world grain prices. High world prices dampen demand for U.S. agricultural products. In addition, foreign agricultural subsidies and import restrictions, debt problems of developing countries, growing competition, and trade mercantilism all affect the share of world markets available to U.S. producers. As these factors become increasingly important, flexibility in domestic agricultural policy to

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258. The Agricultural Trade Development and Assistance Act of 1954, Pub. L. No. 480, 68 Stat. 454. Amendments to the original legislation provide for an export credit sales program that offers short-term and immediate term credit to enhance exports. Export credit guarantees, deferred payment sales, and "blended" credit export sales are also available. Donation programs for humanitarian purposes, concessional credit terms, and special programs to encourage internal economic development are a part of the overall statutory programs. The 1985 Food Security Act added so-called "Food for Progress" provisions designed to further assist in the development, maintenance, and expansion of international markets. The original act and subsequent amendments are codified at 7 U.S.C. §§ 1691-1736bb (1988 & Supp. III 1991).

259. Another aspect of the indirect effect on agriculture arises in the context of the use of food "as a weapon," a strategic resource, to achieve foreign policy objectives unrelated to agriculture. For a review of the debate surrounding this issue, see Sandra S. Batie & Robert G. Healy, The Future of American Agriculture as a Strategic Resource (1980).

permit adjustment to changing world market conditions becomes necessary.

The mid-1980s changes in U.S. domestic agricultural policy reflected the Reagan administration's free trade philosophy. In 1987 this led to United States' proposals to the GATT that called for the rapid elimination of subsidies affecting agricultural production and trade and major movements toward free trade over a ten-year period.

In the Uruguay Round of the multilateral trade negotiations among the GATT nations, agriculture took a front seat. The importance of agricultural trade to both the United States and the EC brought agriculture to the forefront in the GATT discussions. Agriculture had not been given much attention in past negotiations. In fact, the United States had asked for and received a waiver in the GATT in 1955 to allow it to impose import quotas on certain commodities, notably dairy, sugar, cotton, tobacco, and peanuts. This waiver was necessary because the GATT allows quotas only when the country's domestic policies include production control provisions. Since production controls have been resisted as a part of United States agricultural policy, the waiver was necessary.2

Consistent with the recent efforts to reduce government intervention in agriculture, the United States submitted proposals to the GATT negotiators for broad reform of agricultural trade policy. The United States proposal sought reform in four areas: import access, export competition, internal measures of support, and sanitary and phytosanitary measures. The U.S. measure suggested agricultural import access would be improved by converting nontariff import barriers to tariffs and then reducing all tariffs over a specified period. With regard to export competition, the United States sought the phase out of export subsidies over a five year period and new rules to allow for food aid. Differential export taxes would be progressively reduced and eventually eliminated. Under the proposal, fundamental changes would be necessary in domestic support policies. Most national policies that have a trade distorting effect would be phased out over ten years. Other policies under which support is not linked to production, such as environmental and conservation programs, disaster assistance, market information and service, inspection and grading, and some food reserve programs could continue. New GATT policies would be developed to deal with subsidies that have minimal trade distorting effect to prevent these policies from being used in ways to injure other countries. The proposal sought to harmonize standards related to sanitary and phytosanitary regulations and to establish a process for settling trade disputes involving food safety and animal and plant health questions. Since some of these proposals pose difficulties for developing

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261. Tutwiler, supra note 175, at 88-89.
countries, special and differential treatment might be necessary on a temporary basis if a nation could demonstrate a need for exceptional treatment. 262

Following the release of the initial U.S. proposal, the EC issued their response. The EC based their response on the premise that the EC would preserve its two-price system and Community preference. The EC merely called for an assessment of major trading problems and short term efforts to stabilize international markets. The position of the EC was that the total elimination of export subsidies and the conversion of all nontariff barriers to tariffs was unacceptable. The EC would find acceptable a long term reduction in government support for farmers, given their desire to take pressure off budget costs for agricultural support. The EC would focus on specific products rather than trade liberalization for all agricultural and fisheries products and other selected items. 263

Other countries also tabled proposals. The Cairns Group, consisting of fourteen “fair trading” nations, suggested a three stage negotiation process. 264 First, a freeze on market access restrictions, subsidies, and sanitary and phytosanitary measures would be immediately adopted along with commitments that release of stocks would not be used to disrupt markets. Second, during a phase-in period countries would eliminate trade distorting practices. Third, the long term agreement would move to total trade liberalization as proposed by the United States. 265

Various other countries submitted proposals as well. Japan wishes to reduce or eliminate export subsidies but would retain certain types of domestic support for those commodities that “play an essential role in meeting the multiple needs of agricultural policy, such as land preservation and environmental conservation, and sustenance of regional community.” 266 South Korea, Brazil, and Columbia, a “Nordic” Group, and a “Food Importing” Group also tabled suggestions relating to particular aspects of the issues. 267 Of special concern to the lesser developed countries (“LDC”) is food aid policies that foster internal development of agricultural infrastructure. While limited agreement appears possible on some issues, such as those outlined in the U.S. proposal that are not trade distorting, major differences remain with regard to other internal supports, border measures, export competition, and in reforms in sanitary and phytosanitary measures that can be used as trade barriers. The EC insists

263. Tutwiler, supra note 175, at 97-98.
264. Id. at 98.
265. See id. at 97-98.
266. GATT TALKS: NO OUTCOME YET, AGRICULTURE OUTLOOK, APR. 1990, at 35-39.
267. Id. at 36.
that a country should be allowed to restrict entry of products on the basis of concerns with production methods and environmental or consumer preferences. The United States and many other countries object to such restrictions. In fact, disputes over these issues are at the root of the conflict between the U.S. and the EC. Until many of these issues can be compromised, long term agreement on agricultural trade seems difficult if not impossible.

In October 1990 the United States submitted a revised proposal calling for a ninety percent reduction in export subsidy levels with a seventy-five percent reduction in domestic support levels over a ten year period from a base period of 1986-1988. The EC countered with a proposal for reductions of up to thirty percent over a ten year period starting with the 1986 base. No proposal was made related to import tariffs. Japan recommended the thirty percent reduction from the 1986 base but wished to exclude rice, beef, and pork. The Cairns group generally favored the U.S. proposal. Canada, ostensibly a member of the Cairns group, also offered a proposal that called for a fifty percent reduction in internal supports over a ten year period but with a complete elimination of export subsidies.

The wide gulf between the various proposals could not be bridged and the talks were suspended. Thus, agriculture became the key to success of the Uruguay Round because the U.S. and Cairns group would apparently not accept the overall agreement absent large reductions in agricultural support. The EC faced political resistance, particularly in France, to any proposal for major reductions in farm support.

However, the EC, under intense pressure from nonagricultural sectors and its trading partners, in early 1991 began to consider reform of the Common Agricultural Policy. These reforms would result in sharp cuts in subsidies and shift to direct assistance for small family farmers. If successfully implemented, the EC reforms could remove obstacles to agreement among the GATT nations.

The trade talks were resumed in March 1991. Little progress was made until a proposal by Arthur Dunkel, General Director of the GATT, was formulated in December 1991. The Dunkel proposal called for a reduction of twenty percent in domestic support programs and a thirty-six percent reduction in export subsidies from 1993 to 1999. This proposal was met with strong EC objections, and Dunkel refused to reopen the proposal for

additional negotiation. A compromise acceptable to all parties seemed unlikely.\textsuperscript{271}

In May of 1992, the EC agricultural ministers adopted CAP reform measures designed to substitute direct payments to producers for price intervention. These measures, in a sense, correspond to the U.S. system in function and increased the chances for a compromise in the GATT negotiations.\textsuperscript{272} The major stumbling block has been the oilseeds regime of the EC. This policy was the subject of direct U.S.-EC discussions in the fall of 1992. These talks collapsed without agreement and on November 4 the United States unsuccessfully requested GATT council permission to retaliate against the EC in the lingering dispute over oilseeds policy. The United States then announced unilateral retaliatory measures to take effect December 5 that would especially affect French white wines. This move was viewed as pressure on the French to break the deadlock in the negotiations.\textsuperscript{273} This strategy appeared to work. The EC and the United States reached an apparent agreement on the oilseeds controversy in late 1992, and the effort to reach a final agreement in the GATT negotiations continued.\textsuperscript{274} While the Bush administration had hoped to reach a final agreement prior to leaving office, this was not to be. The matter was among those left for the new Clinton administration to resolve.

B. Agricultural Research and the Application of New Technologies

Agricultural research is credited with improving both U.S. agricultural production and agricultural productivity primarily through the development of new technologies. The beneficiaries of research efforts are not only the farmers who adopt the new technologies but consumers who benefit from lower costs and improved quality as well as increased choices. For example, the typical supermarket now has available between 11,000 and 39,000 food items compared to only 1500 items less than fifty years ago.\textsuperscript{275}

\textsuperscript{271} Dodwell, GATT Wobbles on the Brink: The Failure of the Deadlocked Uruguay Round is Almost Unthinkable, but it is Looming Dangerously Near, FIN-Post., Apr. 3, 1992, at 39.


\textsuperscript{273} Three Week Marathon Aims to Unblock GATT, FEEDSTUFFS, Nov. 16, 1992.


And, the dramatic changes in technology of the past may well pale by comparison with what is to come from "science power" in the future.\textsuperscript{276} Along with other advances, significant increases in agricultural productivity are projected from the application of biotechnology. In the livestock and meat sector alone, genetic technologies, when combined with developments in animal health and nutrition and processing and marketing improvements, will likely result in major increases in production of milk and meat products.\textsuperscript{277}

In approximately ten years, meat production per cow and per sow is projected to increase by twenty-five percent; milk production per cow by forty percent; production per sheep or goat by thirty-five percent; broiler production efficiency by thirty percent; and, catfish weight efficiency by twenty percent. By 2030 these increases may be as high as sixty percent per cow and sow; seventy percent per sheep and goat and two hundred percent for catfish.\textsuperscript{277}

The future of agricultural research, and particularly that related to biotechnology, raises important political, social, economic, ethical, and legal questions not only for the agricultural sector but for society generally. The successful history of agricultural research since World War II, and the rapid changes brought about in recent years by the application of biotechnology to agriculture, make projections for future production increases appear somewhat frightening.\textsuperscript{278} Increased production of agricultural products, unless accompanied by increased demand, must be viewed in light of the trends already evident in U.S. agriculture—what might be called food-system consolidation. Further economic consolidation, fewer farmers, fewer suppliers, and fewer processors, may well continue, driven in part by the application of the new technologies.\textsuperscript{279} Consequences for the environment, such as pesticide and chemical effects, soil and water consumption, and safety concerns from biotechnology, raise similar concerns.\textsuperscript{280}

These potential changes in agriculture and the application of biotechnology raise suggestions that the regulation of the scientific pursuit of


\textsuperscript{279} Patrick Madden & Paul B. Thompson, Ethical Perspectives on Changing Agricultural Technology in the United States, 3 Notre Dame J.L. Ethics & Pub. Pol'y 85, 91-93 (1987).

\textsuperscript{280} Id. at 101.

\textsuperscript{281} Id. at 107.
knowledge might become necessary or desirable. If scientific inquiry is to be regulated, then certain other questions immediately arise. Who will regulate? What issues will be addressed in any such regulation? What criteria will be used to assess the safety and health concerns? Is there an argument that scientific pursuit of knowledge should not be regulated? These questions have not been fully addressed, but they have been raised in recent years as agricultural science researchers have found themselves embroiled in political and legal challenges to their research efforts.

For example, tomato harvester research is at the center of a major lawsuit filed against the University of California challenging its entire agricultural research effort. Plaintiffs were identified as a public interest organization and nineteen individually named agricultural workers who alleged that each was directly threatened economically by the commercial mechanization research projects conducted by the University. Plaintiffs contended that the University had as a basic policy goal the development of machines and other technology to reduce the use of labor as a means of agricultural production. Plaintiffs alleged this policy was implemented by the undertaking of the development of preharvest and postharvest production practices, the use of genetically modified varieties of crops, experimentation with growth and maturation control chemicals for cultivation, and methods of handling, transporting, and processing crops for machine harvest.

The lower court found that the Hatch Act funding amounted to only three percent of the total budget for the California Agricultural Experiment Station, but that the University had no process designed to ensure consideration of the legislatively expressed interests, primarily those of the small family farmer. The court found that the legislative history of the Act and its subsequent amendments and the cognate terms and legislative history of the Morrill Act of 1862 and the Smith-Lever Act require the experiment station, when approving of and allocating Hatch funds, to “consider the extent to which the interests of all of the Congressionally intended beneficiaries will be favorably or unfavorably served by its agricultural research projects, and require that in that process, pri-

283. 210 Cal. App. 3d at 1248.
284. Id. at 1249.
286. Id. §§ 341-349.
mary consideration shall be given to the interests of the small family farmer.”

The court found that the University was administering the funds in violation of the Hatch Act because it had no process designed to ensure consideration of each legislatively expressed interest (“promoting a sound and prosperous agriculture and rural life,” the “improvement of rural life,” and to “contribute to maximizing the welfare of the consumer”).

The court applied the same conclusions to state funding as well because these funds were to be expended in pursuit of or in compliance with the federal law.

The University, along with supporters among various agricultural groups, answered the appeal in a vigorous denial of the assertions, both factual and legal, of the plaintiffs. They likened plaintiffs’ efforts to those of the Luddites, who in England in the early years of the nineteenth century were involved in machine-breaking activities as protests against mechanization, automation, and the adoption of labor saving devices. Even agriculture was not immune because the notorious “Captain Swing” was credited with the breaking of threshing machines in southern England in 1830.

While the University ultimately prevailed on appeal, this litigation provides an example of the serious questions that are being raised about the outcomes of agricultural research. And, it is not just those willing to litigate who are beginning to question research outcomes. A report from the congressional Office of Technology Assessment (“OTA”) suggests that new technologies could profoundly affect the future of farming, perhaps more than chemicals did in the past. The developments in biotechnology have caused farmers themselves to question the wisdom of research that could have a detrimental effect on their own futures.

Existing law compels no ethics review before research is initiated. Some of the genetic engineering experimentation may result in major alterations in plant and animal life and may even result in new species being created. If new species are created this may be irreversible and may result

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288. Id. at 6-7.

289. Id. at 7.


in genetic change that may have an effect on human health and safety to say nothing of the environment. It has been suggested that regulation is needed to control such experimentation when human genetics is involved. Cross species experimentation is an area of particular concern. Legal challenges to USDA animal productivity research have already been made with arguments reflecting an underlying concern for the nature of the research itself.

Critics who challenge the desirability of research relate the advances in biotechnology to the major productivity revolutions in American agricultural history.294 "These technological developments in agriculture create complex and troubling issues involving environmental risk, social and economic dislocation in farm communities, and the ethical limits of our power to manipulate the genetic traits of the biotic community."295 They see the central problem as risk posed to human health and the general environment and they are particularly concerned about the release of genetically engineered organisms into the existing environment.296

These critics also challenge the research because of socio-economic dislocation. The example they use is the research and development of Bovine Growth Hormone ("BGH") that, according to reports, can increase milk production by at least thirty percent per dairy cow. This raises questions of a threat to the economic well being of dairy farmers and speculation that the number of dairy farms may have to be reduced considerably to restore market balance.297

And, critics object to some of the research on ethical grounds. For example, USDA sponsored research programs include genetic engineering experimentation and the possibility of introduction of human growth hormone into livestock. They raise the question of violation of "biological integrity" of the species by the alteration. They pose the questions in this way:

What is wrong with the cow the size of an elephant, or a sheep the size of a horse, or "glowing" tobacco plants? Is there any meaning in the morphology of animals or plants, both internally and externally? Should we alter and mutate, perhaps permanently, the forms and shapes of the biotic community so they better conform to our agricultural or industrial needs? Do plants and animals have any right to be treated as sufficient "ends" in themselves and not merely as "means" in a system of production? What are the ethical implications of the likely proposal to engineer plant or animal genetic materials into humans? Finally, who is to decide

295. Id. at 118.
296. Id. at 119.
297. Id. at 124-25.

A second major focus on the desirability of the research itself has been directed toward the questions surrounding patent laws. Naturally, those who invest in research desire to protect that investment. The general patent law, the Plant Variety Protection Act and the Plant Patent Act offer this protection. Since the 1980 Supreme Court decision in Diamond v. Chakrabarty, patent protection has been extended to biotechnological inventions. Immediately the question arose as to what extent this protection could be extended to higher life forms developed or altered through biotechnology. One of the first questions presented was the patentability, under the general law, of tissue, cells, seeds, and whole plants developed by biotechnology. Initially, the patent examiner rejected a patent application, but this decision was overturned by the Patent Office Board of Appeals and Interferences. More recently, the patent office has faced the issue directly by determining patentability of a genetically altered oyster and by granting a patent to Harvard Medical School for a genetically altered mouse.

Interestingly, the first case to deal specifically with patentability of animals was a patent application for the process of producing dwarf hens through traditional selective breeding practices. In this 1975 case, In re Merat, the patent was rejected on technical grounds related to the failure to distinctly claim the invention and its obviousness in light of prior art.

While patentability of specific organisms has gained considerable attention, the more basic question for agriculture has received less attention. That is, the granting of legal control over the substances of food production.

While legal challenges to research have attempted to use existing environmental legislation to halt biotechnological experimentation, the concern is only partially based on possible environmental effects. The real issue is the ethical concern for the species and the moral questions involv-

298. Id. at 126.
306. Id. at 1396.
ing man's right to tamper with nature. This raises issues beyond the short-term safety of the experimentation or economic exploitation through patentability of organisms, but rather focuses on the long term societal effects. The recombinant DNA research allows the prospect of controlling or changing genetic information inherited by an organism. This, of course, may be used for the good of society but also poses significant questions of the long term effects, particularly if human genetics is involved.308

C. Intensive Production Methods and Animal Rights

Concern for animal welfare and animal rights is focused on three aspects affecting agriculture: first, the treatment of livestock and poultry in commercial enterprise and, of course, the research efforts related to “factory farming”; second, the concern with the use of animals for experimental purposes especially in laboratory experiments involving surgical, biomedical or other techniques; and, third, the use of animals for the benefit of humans—e.g., the question of moral and legal animal rights.

Some insist that consumers have a right to know the conditions under which meat products are grown. For example, in Animal Legal Defense Fund, Inc. v. Provimi Veal Corp.9 plaintiffs argued, unsuccessfully, that it was consumer fraud (an unfair and deceptive practice) not to inform consumers that “veal comes from cruelly mistreated calves.”310 They argued that consumers are told that meat products are from “the pasture and barnyard,” meat eating is associated with material success, and that the federal programs sanction “factory farming.”311 Proposals for package labeling and inserts patterned after the Federal Meat Inspection Act requirement followed.

The “heaping of scorn” by agricultural interests upon urban dwellers who criticize production methods they may not understand is addressed by Steven M. Wise as follows: “However, the factory-farmers’ livelihood may be predicated on the ignorance they deride, for if enough city dwellers learn what is really happening on the farm, the industry could be shaken.”312

Calls for regulation of “factory farming” have been more successful in Europe than in the United States. Some European countries set detailed

310. Id. at 278-79.
311. Id. at 279.
standards for confined animal operations and similar proposals have been made in Congress.\textsuperscript{313}

Generally, concerns for animal welfare reflect people's concern with the well being of animals—that they be treated humanely. Animal rights, by contrast, reflects a concern that animals not only be free from torture and abuse but that they not be eaten, ridden, or domesticated.

Both concerns have led to federal legislation relating to laboratory use of animals (as well as state anti-cruelty statutes). The Animal Welfare Act ("AWA")\textsuperscript{314} administered by USDA (amended most recently in the 1985 farm bill) provides for licensing/registration, standards for handling laboratory animals and enforcement. The AWA requires licensing of animal dealers and exhibitors and registration of research facilities. The AWA requires standards related to housing, feeding, watering, sanitation, ventilation, shelter, etc., and adequate veterinary care. Separation by species is called for if it is necessary for humane handling, care and treatment.\textsuperscript{315} The 1985 Amendments require consideration of alternatives to any procedures likely to cause pain or distress to an experimental animal, and that veterinary care be provided with appropriate use of "anesthetic, analgesic, tranquilizing drugs, or euthanasia."\textsuperscript{316} This will contribute to reduced suffering. The Act also calls for institutional committees to inspect and review practices relating to animal experiments.\textsuperscript{317} It requires attempts to prevent duplication of animal experimentation and encourages alternatives to the use of animals.\textsuperscript{318}

One problem in challenges to animal experimentation under AWA is that USDA has defined "animal" to include dogs, cats, monkeys, guinea pigs, hamsters, rabbits, or other warm blooded animals (excluding birds, rats, and mice).\textsuperscript{319} Under the Act, farm animals such as livestock and poultry are excluded from the statutory definition of "animals."\textsuperscript{320} The 1985 Amendments to the AWA have been criticized by animal protection groups as merely sanctioning "abuse and destruction" of animals used in laboratory experiments.\textsuperscript{321} The most ardent opponents of the use of ani-
mals in experimentation regard all species as equally deserving of protection. Interestingly, a protest against drug addiction experimentation at Cornell Medical College was directed toward the use of cats in the study. A similar study using rats created no such protest. Clearly, in order to build public support the focus has been upon the more “lovable” of the species. Steve Siegel, organizer of the protest, however, argues for the purist position. “I’ve heard people say that rodents are horrible, that they care about dogs and cats but hate rats. But we all start from that position . . . . In one sense, I feel just as bad about it; it makes no difference whether she uses cats or rats.”

The animal protection groups have questioned USDA’s enforcement interest—a question that was raised over the debate related to hot iron face branding requirements under the Dairy Termination Program. The Humane Society sued USDA claiming USDA should not require branding. The court required USDA to amend its regulations to allow the choice of using freeze branding, a less painful alternative.

The only other federal legislation, apart from the AWA, relevant to animal welfare includes: (1) The Horse Protection Act Amendments of 1976, which deal with “soring” of horses; (2) “The Twenty-Eight Hour Law” (Live Stock Transportation Act), which limits the period of transport to twenty-eight hours and requires rest, water, and feeding; and (3) The Humane Slaughter Act (“HSA”), which requires slaughterhouses to use humane methods to prevent needless suffering. HSA requires a rapid and effective rendering of the animal “insensible” by a single blow or gunshot or by “electrical . . . or other means.”

The third area of concern of animal rights advocates is from those who believe that animals should have certain moral and legal rights and, therefore, should not be subject to experimentation (or even use) by man—especially not by genetic engineering. The animal rights argument disputes ancient notions of man’s “godlike, absolute dominion” over nonhuman animals and suggests regulation: “The factory-farming and genetic engineering of farm animals, based as it is upon their unregulated institutionalized exploitation in a manner that inherently and unnecessarily in-

323. Id.
325. Id. at 486-87.
329. Id. § 1902(a).
fringes their basic needs and concerns, is unjust. Because it is unjust it should be abolished."\footnote{330}

According to this view of moral justice, animals have certain moral rights, particularly the right to life, and these rights should be recognized regardless of a utilitarian concept to the contrary. Researchers would generally argue for utilitarianism—"the moral rightness or wrongness of any action is determined solely by the value of the consequences of that action."\footnote{331} So long as experimentation (or other use) creates the greatest good for the greatest number, the use of animals could be justified under this concept. Animal rights advocates dispute this view because it violates an individual's moral rights to ignore even the "rights of the rat."\footnote{332}

\section*{VIII. Conclusion}

This changing nature of agriculture has resulted in a shift in the concerns in agriculture and assures the evolution of new regulatory programs in the future. Of continuing concern will be regulatory programs growing out of farm programs and a host of policy issues related to the structure of agriculture and the future of so-called "family farming." Rapid segmentation of the production sector is a matter of continued concern. Whether on-farm regulatory programs will be directed to these concerns will be a part of the debate into the new century.

Issues certain to result in more on-farm regulation are those related to soil conservation, farmland preservation, water quality, food safety, and other related environmental concerns. In the past, agriculture was largely ignored or exempted from many of the regulatory programs directed toward environmental protection. Agriculture is now identified as a major source of both surface and ground water pollution, and the likelihood of limitations on farming practices (e.g., chemical and pesticide applications, soil erosion control) is great. A new focus on the concept of sustainability in agriculture may mean a review of a variety of programs related to production. Production methods designed to reduce the strain on the environment caused by intensive farming and to reduce reliance on chemicals and pesticides may call for new controls on farming practices. Food safety concerns (also related to farming practices) are also likely to affect the way farmers will farm in the future. Pesticide residues and drug contamination of food products may call for new regulatory programs.

\footnote{330}{See supra note 306, at 227.}
\footnote{332}{Id.}
These changes, coupled with new issues arising from the "internationalization" of agriculture, from the application of new technologies to agricultural production, and from intensive production methods and, in particular, animal welfare and animal rights concerns, will lead to additional regulatory programs in agriculture.

It is clear that in the future many issues in agricultural regulation will focus more directly on farm level activities. The regulatory programs relating primarily to inputs and marketing are likely to continue, but the growth in agricultural regulation will, no doubt, be focused on the actual operating practices of farmers and will change the way farmers farm in the future.