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6 The Great Depression and the Regulating State: Federal Government Regulation of Agriculture, 1884–1970

Gary D. Libecap

Agriculture, noted Theodore Lowi, is "where the distinction between public and private has come closest to being completely eliminated" (1979, 68). Agriculture is among the most regulated sectors of the American economy. The production and sale of almost all its commodities are affected by some government policy through a complex mix of programs. Leading students of agricultural regulation have attributed this regulatory regime to New Deal legislation, such as the Agricultural Adjustment Acts of 1933 and 1938, and to related laws, such as the Agricultural Act of 1949 and the Soil Bank Act of 1956.[1] Yet, just how the New Deal changed the extent and nature of agricultural regulation in the United States remains to be demonstrated.

This paper examines agricultural regulatory laws enacted by Congress between 1884 and 1970 and the corresponding budget expenditures between 1905 and 1970 to determine how the path of regulation was altered by New

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1. Such students of agricultural regulation include Donald Blaisdell (1940, 39), Murray Benedict (1953, 469–520), Murray Benedict and Oscar Stine (1956, xv), D. Gale Johnson (1973, 1), Willard Cochrane and Mary Ryan (1976, 23, 132), Bruce Gardner (1981, 13; 1987b, 20), and B. Delworth Gardner (1995, 8). New Deal legislation includes the Agricultural Adjustment Act of 1933, P.L. 10; Agricultural Adjustment Act of 1938, P.L. 430; Soil Conservation and Domestic Allotment Act of 1937, P.L. 137; Sugar Control Act of 1937, P.L. 414; Commodity Credit Corporation, Executive Order 6359, 16 October 1933. Important post–New Deal legislation includes the Commodity Credit Corporation Charter Act of 1948, P.L. 806; the Agricultural Act of 1949, P.L. 439; the Agricultural Trade Development and Assistance Act of 1954, P.L. 480; the Soil Bank Act of 1956, P.L. 540; the School Milk Act of 1956, P.L. 465; and the Food Stamp Act of 1964, P.L. 525.

Deal programs. The start and end dates of the study are largely determined by the availability of data. The end date of 1970 was chosen because of two compilations of agricultural legislation assembled by Udell (1971, 1972), which contain entries for statutes enacted from 1884 through 1971. The nature of agricultural regulatory policy, however, is not sensitive to the end date chosen. Legislation enacted in the post–World War II period has continued policies prescribed by New Deal legislation, especially the Agricultural Adjustment Act of 1938 and the Agricultural Act of 1949, which itself extended New Deal regulations. This condition was true before 1970 and continued after that year.[2] For example, the Freedom to Farm Act passed in 1996 ended New Deal–based acreage restrictions and price supports for grains and other commodities. Guaranteed-loan programs through the Commodity Credit Corporation (CCC), however, remained, as did regulations for peanuts, sugar, and dairy products.[3]

I contend that the New Deal increased the amount and breadth of agricultural regulation in the economy and, of more significance, shifted it from providing public goods and transfers to controlling supplies and directing government purchases to raise prices. This type of economic regulation was unprecedented. Government purchases during World War I were intended to aid the war effort, not raise prices. Prior to 1933, there is no record of government-imposed output controls on the scale that characterized New Deal programs. More important, I show that the New Deal created the institutional structure needed to continue the new regulation, which I contend, was the most consequential aspect of the agricultural legislation enacted between 1933 and 1939.

Agricultural laws passed by Congress and the president from 1884 through 1970 are classified as to whether they provided public goods (controlled disease, fought insect pests, provided product quality standards), gave direct and indirect transfers (grants, subsidized loans and insurance, soil improvements), or engaged in economic regulation, where economic regulation includes demand enhancement through the government purchase of agricultural commodities and supply control through production and marketing limits.[4] Addition-

2. For discussion of farm policies since 1970, see Bruce Gardner (1981), Pasour (1990), and Delworth Gardner (1995).

3. Although championed as a fundamental break from New Deal policies, the Freedom to Farm Act of 1996 in many ways appears to be a continuation of past programs. For example, grain prices in 1996 were at record levels, so that New Deal–based deficiency payments (difference between the target price and the market price) for farmers would have been zero in most cases. The legislation, however, provided for guaranteed payments to farmers unlinked to market prices. Further, under the law, should Congress fail to enact more permanent farm legislation by 2002, then farm policies will revert to those called for by the Agricultural Adjustment Act of 1938 and the Agricultural Act of 1949. For discussion, see *Wall Street Journal,* 30 August 1995, 26 September 1995, 8 February 1996, and 1 April 1996. See also *New York Times,* 26 September 1995, 1 October 1995, and 29 February 1996. Articles on farm policy also appear in *Economist,* 7 October 1995 and 9 March 1996.

4. I recognize that distinctions between these categories are not always sharp. I categorized legislation based on the primary intent of the law as I interpreted it.

ally, laws enacted from 1940 through 1970 are classified as to whether they were linked to specific New Deal agricultural programs. The objective of this linkage is to see the degree to which post–New Deal regulation was directly tied to New Deal programs. The hypothesis is tested that absent the Great Depression and New Deal, the pattern of agricultural regulation with public goods and transfers that existed prior to 1933 would have continued through 1970. Additionally, budget appropriations for economic regulation of agricultural commodities are assembled and categorized as demand enhancement and supply control to analyze how the New Deal affected regulatory expenditures relative to what existed before 1933.

The impact of the New Deal on agricultural regulation is clear. In terms of legislative activity, Congress from 1884 through 1970 enacted over 650 laws for the regulation of agriculture. Only 10 percent of the legislation was passed prior to the New Deal, and almost 80 percent of those laws were for the provision of public goods or transfers to agriculture. Intervention to fix commodity prices through economic regulation statutes was uncommon. In the New Deal period of 1933–39, however, 130 new laws were enacted (almost twice as many as in the previous 50 years), with more than 60 percent aimed at controlling supplies or increasing commodity demand. This legislative pattern continued after the New Deal, with over 450 regulatory laws passed between 1940 and 1970, 60 percent of which were for economic regulation. Budget expenditures between 1905 and 1970 mirror the increase in regulation and the change in regulatory emphasis after 1932.[5]

Since 1933, commodity prices have been raised through demand enhancement and supply reduction. Supply control through the temporary or permanent removal of agricultural production from markets or through restrictions on the use of inputs, notably land, grew substantially during the New Deal compared with what previously existed. The most important demand enhancement policies were government purchases through the CCC and related agencies. These demand policies were implemented during the New Deal, and they, along with supply constraints, remain the post–New Deal centerpiece of federal agricultural regulation.

Two indications of the long-term impact of New Deal programs are provided. One measure examines the impact of New Deal regulatory mandates on the staffing and budget of the U.S. Department of Agriculture (USDA). New Deal programs sharply increased the involvement of the USDA in American agriculture through new mandates and new programs, and the bureaucracy was active in drafting legislation that extended the department's regulatory role. Indeed, the department became an important constituent in the development

5. See Johnson (1973, 22). The focus of New Deal agricultural regulation on price fixing to raise and stabilize farm incomes came after commodity and farm land prices had fallen sharply since 1929. Agriculture is particularly vulnerable to sharp cyclical swings due to low income elasticity and low price elasticity of demand for farm products. Under these conditions demand does not rise markedly with upswings in the business cycle, and price shifts often are sharp in response to supply changes.

and expansion of the institutional structure for agricultural regulation. To determine how the USDA fared, agency staffing (as a measure of agency size) relative to the total number of farms in the United States (as a measure of the magnitude of the principal clientele or political constituency) is presented from 1910 to 1970. The data reveal that while the number of farms declined, the number of USDA employees increased. This change also is largely a New Deal phenomenon. Throughout the 1920s the USDA had approximately 20,000 employees, but by 1934, the agency had nearly three times that number, and 86,000 employees in 1939. By the late 1960s, the USDA had over 120,000 employees.

To gauge the USDA's position relative to other federal agencies, annual USDA expenditures as a share of total civilian federal government expenditures, from 1921 to 1970, are presented.[6] During the 1920s, the department spent less than 6 percent of the federal civilian budget. But with new programs and regulatory mandates authorized by the New Deal, its share increased. By 1935, USDA expenditures were more than 18 percent of the federal civilian budget. Even after the depression subsided, the department's share of federal expenditures remained substantially above its pre–New Deal level.

Another measure of the impact of New Deal regulation involves examination of domestic wheat prices. Wheat was one of the most important American agricultural commodities and the focus of various regulatory programs, during and after the New Deal. A domestic wheat price series is assembled from 1900 to 1970, with the post-1932 prices constructed using reported prices received by farmers plus price support payments. The series is compared to world prices as reflected in Australian wheat prices. If successful, New Deal programs should have raised (supported) U.S. domestic wheat prices relative to world prices after 1932. The price data reveal that they did. Commodity programs were also aimed at reducing the volatility of wheat prices, and that is another hypothesis tested in the paper.

The role of the Great Depression in providing a crisis of sufficient magnitude to politically justify unprecedented new peacetime government intervention into agricultural markets conforms to the framework of Peacock and Wiseman (1961) and Higgs (1987), who argue that the growth of government obligations, regulations, and expenditures is discontinuous, with crises generating political support for government expansion. Agricultural regulation in other industrialized countries appears to have followed a path similar to that of the United States, generalizing the results of this study. In Australia, Canada, England, France, Germany, and Italy, the slump in commodity prices following World War I led to agricultural unrest and political agitation for government assistance. The general political response in the 1920s was to limit import competition through higher tariffs and quotas. But the Great Depression of the

6. The start date is 1921 because that is when the U.S. budget was first published as a single document and expenditure data can be obtained.

1930s brought much greater and more direct government intervention into commodity markets to fix prices. Two-tier price policies were established, with domestic prices fixed above world prices. Chronic surpluses were controlled through government purchases and stockpiling and through output and marketing controls. Debt relief, lower interest rates, income deficiency payments, moratoria on mortgage foreclosures, and other programs were added. As in the United States, the legacy of depression-era intervention was an expanded role for the state in agricultural markets long after commodity prices had increased in the late 1930s. Across countries, agricultural programs enacted to meet the crisis were retained and broadened during World War II and in the postwar period.[7]

6.1 Agricultural Regulation through 1970: An Overview

6.1.1 Pre–New Deal, 1884 to 1932

Compared to the period after 1933, the federal government played a limited role in regulating commodity markets through World War I. The reaction of Congress to late-nineteenth-century agrarian unrest was to provide indirect support—lower tariffs on manufactured products, railroad rate regulation, antitrust laws, food inspection to promote demand, restrictions against new competitors made possible by new technology (taxing oleomargarine in 1886 to make the product less competitive with butter, e.g.), increases in the money supply (through the coinage of silver), and promotion of marketing and buying cooperatives.[8] The demand for federal government assistance slackened after the turn of the century as commodity prices rose. By 1910, prices were so high and farm prosperity so great that the period 1910–14 has been described as "the golden age of agriculture" (Benedict 1953, 115), and this became the "parity period" of later regulation.

Rather than attempting to directly influence commodity prices between 1884 and 1917, Congress often addressed standard public goods problems, such as the investigation into and control of livestock and plant diseases and related measures for guaranteeing food quality through meat and drug inspection.[9] Increased settlement density and transportation improvements had pro-

7. The international comparison is discussed in more detail later in the text. Major sources include Corni (1990), Farquharson (1976), Hendricks (1991), Holt (1936), and Stuhler (1989) for Germany; Corni (1990) for Italy; Grigg (1989), Perren (1995), and Rooth (1993) for Britain; Moulin (1991) for France; Hefford (1985), Lloyd (1982), and Shaw (1982) for Australia; and Bothwell, Drummond, and English (1987) and Britnell and Fowke (1962) for Canada. A valuable cross-country comparison of agricultural policies in Western Europe is provided by Tracy (1964).

8. For discussion of restrictions on oleomargarine, see Wood (1986). For discussion of the farm protest movement, see Benedict (1953, 94–154) and Higgs (1987, 84–85). The peak of the farm protest movement was during the depression of 1893–96.

9. P.L. 41, 29 May 1884, created the Bureau of Animal Industry for the inspection and quarantine of diseases among animals. P.L. 161, 2 August 1886, and P.L. 110, 9 May 1902, defined butter and taxed oleomargarine. P.L. 247, 30 August 1890, was the first meat inspection law. See Libecap

moted the spread of diseases, such as hoof-and-mouth disease, Texas fever, and pleuropneumonia. Boll weevil and grasshopper infestations also threatened important export crops. Because these problems crossed state lines, the federal government was a natural focus of political demands for remedies. The response of Congress was to provide new mandates and appropriations to the USDA, which was given cabinet status in 1889. The Bureau of Animal Industry, the Bureau of Plant Industry, the Bureau of Chemistry, and the agricultural extension service, all within the USDA, carried out the new federal support of agriculture.[10]

The mobilization of the economy during World War I, however, brought greater federal intervention into commodity markets. The Lever Food Control Act of 10 August 1917 granted broad powers to the president for licensing the import, manufacturing, storing, and distribution of agricultural production, fuels, fertilizers, and equipment; regulating the prices of wheat, flour, meal, beans, and potatoes; and requisitioning food supplies for the war. The U.S. Food Administration, headed by Herbert Hoover, centralized the purchase and distribution of farm commodities.[11]

During the 1920s, additional regulatory legislation was enacted as a reaction to the sharp drop, in both real and nominal terms, in grain and other commodity prices in 1921. Farmers who had mortgaged their farms were unable to meet payments with current receipts, and a wave of bankruptcies and farm foreclosures ensued.[12] The experience with the Lever Food Control Act of 1917 and the operation of the U.S. Food Administration during World War I had demonstrated the influence that government could have on prices, and farmers turned to the federal government for relief. The agricultural crisis of the 1920s brought a rise in militancy among farm organizations, such as the Farmers' National Relief Conference, the Farmers' Union, the National Grange, and the American Farm Bureau Federation. These groups lobbied Congress and the president for government intervention to raise prices and farm incomes. The first Farm Block lobby meeting was held in April 1921 in Washington, D.C., attended by representatives of the National Grange, American Farm Bureau Federation, National Milk Producers Federation, and Farmers' Union, as well

(1992) for discussion. Other food inspection and livestock and plant disease laws included P.L. 49, 2 February 1902; P.L. 382, 30 June 1906; P.L. 384, 30 June 1906 (the Pure Food and Drug Act); P.L. 242, 4 March 1907; P.L. 275, 20 August 1912; P.L. 293, 4 March 1915; P.L. 390, 4 March 1917; and P.L. 40, 10 August 1917.

10. Benedict (1953, 111–18) provides discussion. See Young (1989) for discussion of the enactment of the Pure Food and Drug Act.

11. The agency remained active through January 1925 and later was revived as the Reconstruction Finance Corporation (Benedict 1953, 159–65). See Higgs (1987, 125–58) for discussion of federal government intervention into the economy during World War I through the Food Administration, the Fuel Administration, the Shipping Board, the Railroad Administration, and the War Industries Board.

12. The agricultural problem of the early 1920s is examined by James H. Shideler (1957). For additional discussion of the agricultural crisis of the 1920s, see Perkins (1969, 10–48) and Hoffman and Libecap (1991).

by Secretary of Agriculture Henry C. Wallace and Secretary of Commerce Herbert Hoover. These farm organizations became increasingly adept in lobbying Congress to initiate farm programs in the late 1920s and 1930s and to extend the programs in the post–World War II period.[13]

The early response of the federal government was to sanction and promote cooperative marketing associations to control market supplies to raise prices. This response was consistent with the dismantling of wartime programs because it relied on private organizations to address the problem of falling prices. The emphasis on cooperatives led to new congressional legislation to facilitate private cooperative efforts to control supplies and, thereby, raise prices.[14] For example, the 1926 Cooperative Marketing Act created the Division of Cooperative Marketing within the USDA to assist cooperatives in gathering and sharing data on output, prices, and demand. The 1929 Agricultural Marketing Act further promoted cooperatives and their joint efforts to control market supplies.[15] The law authorized the president to appoint a Federal Farm Board of eight members representing major agricultural commodities. Commodity advisory committees and price stabilization corporations, especially for wheat, cotton, wool, beans, corn, hogs, and cattle, were established to assist cooperatives in the enforcement of production and marketing rules and in promoting exports. The Federal Farm Board, drawing on a fund of $500 million, could make loans to cooperatives at subsidized interest rates to purchase and hold production temporarily off the market and to develop improved merchandising and distribution networks. Unpaid loans were to be absorbed by the Farm Board. Limited price insurance also was provided.[16] But Hoffman and Libecap (1991) point out, given the number of farmers and cooperatives for major commodities such as wheat, cooperative efforts to control supply were unlikely to be successful.

Because of problems of coordination among the many cooperatives and of

13. For discussion of early political activity, see Benedict (1953, 171–83, 277–80). For other discussions of the agricultural crisis of the 1920s and political lobbying by farm groups, see Perkins (1969, 10–48), Hoffman and Libecap (1991), and Saloutos (1982, 28–43).

14. Even before 1920, agricultural cooperatives had received strong political support from Congress. Section 6 of the Clayton Act of 1914 specifically exempted certain agricultural cooperatives from the antitrust provisions of the 1890 Sherman Act. New statutes included the Capper-Volstead Act in 1922, P.L. 146; the Cooperative Marketing Act of 1926, P.L. 450; and the Agricultural Marketing Act of 1929, P.L. 10. Hoffman and Libecap (1991) examine the cooperative movement and efforts to obtain federal government assistance in raising farm prices.

15. The law declared that it was the policy of Congress "to promote the effective merchandising of agricultural commodities in interstate and foreign commerce, so that the industry of agriculture will be placed on a basis of equality with other industries, and to that end to protect, control, and stabilize the currents of interstate and foreign commerce in the marketing of agricultural commodities and their food products."

16. The Farm Board had a short life; with falling farm prices after 1929, it paid more for the agricultural commodities it acquired than they could be sold for, and the board soon ran out of its appropriated capital. The effort was regarded largely as a failure because the various stabilization corporations could not purchase enough of commodities such as wheat and cotton to maintain prices. The Farm Board, however, set the precedent for later government programs to more directly influence prices. Further discussion is provided by Hamilton (1991).

policing compliance with marketing controls, there were efforts, especially among wheat growers, to obtain more direct federal intervention to raise prices. This lobby activity led to the McNary-Haugen bills considered by Congress between 1924 and 1928.[17]

The initial McNary-Haugen bill, drafted by Charles J. Brand, former chief of the Bureau of Markets in the USDA, was introduced in Congress in January 1924. Under the McNary-Haugen bills, domestic and international markets for certain agricultural commodities, including wheat, cotton, wool, cattle, sheep, and hogs, were to be separated by a flexible tariff. In the domestic market, supply would be held to a level that would meet demand at a real price comparable to the commodity's price during the period 1905–14. These prices were to be computed monthly by the Bureau of Labor Statistics. Production beyond that needed for domestic markets was to be purchased at the target price by an agricultural export corporation, composed of the secretary of agriculture and four presidential appointees. The corporation was to have a fund of $200 million to buy these "excess" supplies and sell them on the world market. The difference between the domestic price and the world price was to be absorbed by the corporation. In this way, the McNary-Haugen bill introduced domestic price supports for selected agricultural commodities nine years before the New Deal. But the legislation did not become law.[18]

Because of the unprecedented level of peacetime federal involvement required by the McNary-Haugen bills, they were controversial. Two versions were defeated in the House of Representatives in June 1924 and May 1926. Two other versions passed Congress in February 1927 and May 1928 but were vetoed by President Coolidge.

The mobilization of political support in Congress for the McNary-Haugen legislation between 1924 and 1928 set precedents for subsequent lobbying activity during and after the New Deal. Farm organizations formed coalitions through the American Council of Agriculture, the Corn Belt Committee, and the National Producers' Alliance. These groups in turn obtained the assistance of representatives of state agricultural colleges, USDA extension agents, producers of fertilizers and farm implements, millers, and meat packers. Further, because the legislation was seen as too wheat oriented, the coverage of the proposed statute was extended to include tobacco and rice, adding the political support of congressional representatives and senators from the South to those of the upper Midwest. Wheat prices had fallen earlier and more sharply than had other commodity prices, leading to initial advocacy by grain producers,

17. This legislation called for more direct federal intervention into agricultural markets, and it was most closely related to legislation later enacted during the New Deal. For discussion, see Benedict (1953, 207–15), Fite (1954), and Hoffman and Libecap (1991).

18. The McNary-Haugen approach appealed to many farmers for two reasons. First, it involved direct federal intervention to raise commodity prices, with taxpayers providing funds to control surpluses. Second, the legislation did not require them to reduce output.

but by the late 1920s cotton prices also had fallen so that cotton producers pushed for the McNary-Haugen bills as well.[19]

Although the McNary-Haugen bills were forerunners to subsequent New Deal legislation, there were two crucial differences: they were narrow in scope in comparison and had no supply controls. Limited supply controls, however, were introduced in the 1929 Agricultural Marketing Act, whereby the Federal Farm Board would purchase commodities from those farmers who complied with production targets.[20]

Despite the efforts of the Farm Board and its subsidiaries, commodity prices continued to fall in real terms between 1929 and 1932.[21] About half of the 1930 U.S. wheat supply was held by the Grain Stabilization Corporation, created by the Agricultural Marketing Act, but even these purchases were insufficient to offset declining exports and falling domestic demand. The Cotton Stabilization Corporation, also created by the Agricultural Marketing Act, faced similar conditions, and the two organizations soon ran out of funds to purchase surpluses. The Farm Board was disbanded May 1933, and its assets transferred to the Farm Credit Administration.

In addition to these actions designed to raise farm prices by promoting export demand and by limiting market supplies through organized cooperatives, Congress also expanded institutions that subsequently would be important for New Deal regulation. The Dairy Bureau was created within the USDA to provide marketing information support for dairy farmers. The Bureau of Agricultural Economics was set up within the USDA in 1922, combining the Office of Farm Management, the Bureau of Crop and Livestock Estimates, and the Bureau of Markets, to provide greater production and marketing cooperation with land grant colleges and to assemble market data. These data were essential for setting total production targets, assigning individual farm quotas, and directing government purchases of excess stocks that subsequently were part of the Agricultural Adjustment Administration (AAA) in 1933.

6.1.2 The New Deal, 1933–39

The federal government's efforts to stem the fall in agricultural prices after 1929 through the Agricultural Marketing Act were ineffective, and farm groups lobbied for more direct economic regulation to reduce supplies and expand demand.[22] Farm organizations, such as the Farmers' National Relief Conference, the Farmers' Union, the National Grange, and the American Farm Bu-

19. For discussion, see Benedict (1953, 207–30), Hoffman and Libecap (1991), and Fite (1954).
20. Discussion is given in Benedict (1953, 216–39) and Perkins (1969, 27–32).
21. For discussion, see Benedict (1953, 205, 262–67).
22. Agriculture was particularly hard hit by the Great Depression. The prices of many commodities had not recovered from their sharp fall in 1921, so that between 1919 and 1933, wholesale farm prices fell by 67 percent; whereas, over the same period nonagricultural wholesale prices fell by 45 percent. Moreover, the decline in agricultural prices was particularly severe after 1929. See U.S. Department of Commerce (1975, 199–200) and Perkins (1969, 11).

reau Federation lobbied Congress and the president for direct government intervention to control market supplies. Chronic overproduction was seen as the root of the problem, and federal government management of production was believed to be the only solution.[23] A policy of output control was strongly supported by the new secretary of agriculture in the Roosevelt administration, Henry A. Wallace.[24] The close ties between early New Deal agricultural and industrial policies were stressed by a leading historian of agricultural policy, Murray Benedict: "In both the NRA [National Recovery Administration] and the AAA emphasis was placed on the raising of prices through artificially-induced scarcity" (1953, 294). Indeed, 450 agricultural codes were transferred from the NRA to the AAA between June and December 1933 for implementation.[25]

The centerpiece of New Deal agricultural regulation, the Agricultural Adjustment Act of 1933 was the outcome of well-organized farm group lobbying, and the statute was drafted largely by Frederick P. Lee, legislative counsel for the American Farm Bureau Federation, once again showing the political influence of farm organizations.[26] The AAA was created within the USDA to implement the legislation.[27] The aim of the law was to raise agricultural prices to reestablish the relative purchasing power of farmers that had prevailed from 1909 to 1914. The statute called for farmers to enter into agreements with the secretary of agriculture to reduce their acreage in seven basic commodities—wheat, cotton, corn, rice, tobacco, hogs, and milk—in return for federal "benefit" payments to be derived from taxes levied at processing. These seven commodities later were augmented by beef, dairy cattle, peanuts, barley, flax, grain sorghum, sugar beets, sugar cane, and potatoes through legislation such as the Warren Potato Control Act of 1935 (P.L. 320).

Output was to be reduced for these basic crops through acreage controls.[28] Each year, based on expected demand, the secretary of agriculture was to deter-

23. Cochrane and Ryan (1976, 12) describe the farm problem of the 1920s and early 1930s as one of chronic, excess productive capacity.

24. Perkins (1969, 43, 81–86) discusses production control as the major tool for farm relief and describes Secretary Wallace's strong commitment to it. See, also, Nourse, Davis, and Black (1937, 20). The literature of the time is clear on production control as the solution to the farm problem. E.g., the American Institute of Cooperation, which published *American Cooperation,* formed a roundtable committee in 1932 on production control, and the journal published articles in the early 1930s on the legality and necessity of production control (Hulbert 1932; Ezekiel 1934). Once the costs to individual members of supply controls became apparent, the emphasis of these organizations shifted from supply controls to demand enhancement. Tellingly, by 1938, the American Institute of Cooperation was publishing articles on government purchases and the problems of too much reliance on cooperative solutions (Brandt 1938; Stedman 1938).

25. For more discussion, see Nourse (1935, 24–49).

26. The politics underlying the enactment of the Agricultural Adjustment Act are described by Murphy (1955, 160), Shover (1965), and Perkins (1969, 37–44).

27. For discussion of the early AAA, see Benedict (1953, 284), Irons (1982, 111–55), Schultz (1949, 41), Higgs (1987, 175–78), and Gardner (1987b, 55).

28. Breimeyer (1983, 343) discusses paid acreage reductions under the AAA. Those farmers who did not take part would be ineligible for benefit payments.

mine how much land should be removed from production for each commodity to raise prices to target levels. A base acreage was to be established for each grower, and production quotas were to be determined by percentage reductions in the base.[29] Each grower's base acreage, annual allotment, and compliance record were set and monitored by local, county commodity committees. These committees were made up of growers who coordinated with the relevant state allotment committee, a state crop and livestock statistician (at least partially paid by the USDA), USDA extension agents, and representatives of land grant colleges.[30] Farmers who complied with the acreage allotments were to receive rental payments for the land removed from production. Besides controlling supply, demand was to be promoted through nonrecourse loans (purchases) from the CCC.[31]

Financing for the AAA's regulatory policies was covered in Section 9(a) of the Agricultural Adjustment Act, which called for a tax to be levied on the first domestic processing of the commodity. The processing tax, which varied by commodity, was to be the difference between the market price and the commodity's "fair exchange value" or parity price.[32] The tax revenues were to cover payments to farmers for reducing productive acreage and to cover the costs of subsidizing exports. Additionally, the secretary of agriculture was to receive 30 percent of customs revenues for use in agricultural price support and surplus removal activities.

The same farm organizations that lobbied for the McNary-Haugen bills were active in the passage of the Agricultural Adjustment Act and in molding its provisions. Indeed, as noted above, the legislative counsel of the American Farm Bureau Federation helped to draft the legislation.[33] Two aspects of New Deal programs likely increased the political influence of farm groups in obtaining long-term regulatory policies in their behalf. One was the specialized, commodity nature of the legislation. In a practice that continues today, almost

29. Base acreage provisions are discussed by Benedict (1953, 303).

30. For details on the administrative structure of the AAA, see Nourse et al. (1937, 63–77).

31. For specialty crops, such as fruits and vegetables, the secretary of agriculture could issue a marketing agreement, if half of the shippers and two-thirds of the farmers in a region agreed to the provisions of the agreement. The marketing agreements authorized the secretary to limit interstate shipments through weekly allotments to shippers that were enforced through revokable shipping licenses and fines for violation. Marketing agreements also regulated shipments through flexible quality controls that could be tightened as production increased and shipping holidays that prohibited the movement of crops to market during specified periods. The original agreements for a variety of fruits, nuts, and vegetables were voluntary. In the face of noncompliance, they were supplemented with marketing orders issued by the secretary of agriculture as authorized by amendments to the Agricultural Adjustment Act (P.L. 340) on 24 August 1935. These marketing orders were binding on all growers and interstate shippers of the commodity covered by the agreement. Between 1933 and 1935, 61 marketing agreements were approved by the secretary of agriculture for milk, oranges, grapefruit, dates, pecans, walnuts, olives, raisins, and asparagus, among other commodities. For discussion of marketing orders, see Nourse (1935, 53) and Nourse et al. (1937, 231–34). For analysis of their provisions, see Hoffman and Libecap (1994).

32. See Blaisdell (1940, 45) for discussion of the tax.

33. For discussion of the political action of farm groups, see Blaisdell (1940, 41) and Nourse et al. (1937, 268–79).

every statute mandating or extending federal agricultural policies was partitioned into commodity segments, such as wheat, cotton, and tobacco, with provisions and benefits varying across commodities. The bundling of commodity programs into single statutes no doubt helped agricultural groups collectively advance farm bills, and the range of commodities covered was extended as need be to obtain greater political support for the legislation. For example, the original 7 basic commodities covered by the Agricultural Adjustment Act of 1933 was extended to 16 through a series of amendments in 1934 and 1935 at the behest of various producer groups and their congressional representatives.[34]

With the commodity focus of the legislation, each producer group could mobilize member support for regulation by focusing on the specific benefits directed to their commodity. Further, the commodity-specific benefits were clear to members of Congress, who could monitor and expand them for their constituents. Given the committee structure of the Congress, the seniority vested in members from agricultural regions, and the overrepresentation of rural states in the Senate, farm representatives were in a position to deliver to their constituents.[35]

A second aspect of New Deal agricultural policies that likely increased constituent influence over the long term in devising and maintaining those policies was the delegation of administration of commodity programs to local and state grower committees and to USDA and land grant college extension agents. These groups in turn worked closely with the USDA Bureau of Agricultural Economics, Division of Crop and Livestock Estimates, and other USDA offices. Hence, there was a coalition between the administering agency and the constituent growers that extended from the grass roots up through the agency. They could jointly modify programs or, as necessary, draft new legislation and have it introduced by the relevant congressional representatives.[36]

With the mandate of the Agricultural Adjustment Act of 1933, the federal government began to reduce supplies aggressively. In June 1933, between 25 and 50 percent of the sown cotton crop was plowed up, and wheat and tobacco acreage was reduced.[37] A severe drought between 1933 and 1936 also helped to decrease supplies of cotton, corn, and wheat. To more strictly enforce farm

34. Expansion of commodities covered helped in obtaining final congressional passage of the McNary-Haugen legislation and was used to broaden political support of the Agricultural Adjustment Act (see Nourse et al. 1937, 42–43). The commodity nature of agricultural programs is emphasized in the analysis by Gardner (1987b).

35. Increasingly, logrolling has been involved between representatives of agricultural and urban regions with programs such as food stamps that benefited both. For discussion of farm group influence, see McCune (1956), and for analysis, see Gardner (1987a).

36. The interaction between farm groups, the USDA, and Congress in drafting legislation is illustrated with the Agricultural Adjustment Act of 1938 in Blaisdell (1940, 55–60). Hoffman and Libecap (1994, 201–18) examine the negotiations between orange grower groups and the USDA in devising and modifying orange-marketing agreements.

37. Perkins (1969, 103, 124) discusses early reductions in supplies under the AAA.

quotas, Congress passed legislation to tax production that came from acreage beyond individual farmer quota allocations.[38]

Although the initial focus of New Deal farm policies was on supply controls as a means of raising prices, increasingly reliance was shifted to demand enhancement through the government purchase of surplus production.[39] As acreage and marketing limits were tightened in 1933 and 1934, farmer disenchantment with supply controls grew. Farmer participation in AAA programs declined after the first planting season, and farm groups lobbied the federal government to relax production quotas and to turn to alternative methods of raising agricultural prices.[40] Additionally, the dramatic actions taken by the AAA in 1933 to reduce supplies through the plow-down of cotton acreage and the "emergency" hog slaughter brought widespread criticism of the agency at a time when many Americans were having difficulty acquiring enough food.

Supply controls of various types were maintained as part of agricultural regulation, but they were supplemented by government commodity purchases, funded by general tax revenues. Major government acquisitions to augment private demand reduced the supply reductions necessary to raise prices. Government purchases were also politically attractive because they avoided the distributional problems of assigning, enforcing, and reducing farm quotas. The CCC was the primary agency for buying agricultural commodities.[41] Substantial government purchases of agricultural production to support target prices was a new attribute of New Deal regulation that had not been relied upon extensively before 1933.

In September 1933, the Federal Emergency Relief Administration announced that it would buy $75 million ($577 million in 1984 dollars) of surplus commodities. On October 1933, the Farm Credit Administration purchased 16 million bushels of wheat, and the CCC raised the loan rates (prices it paid) for

38. Bankhead Cotton Control Act of 1934, P.L. 169; the Kerr Tobacco Act of 1934, P.L. 483; and the Kerr-Smith Tobacco Act of 1936, P.L. 534.

39. Nourse et al. (1937, 37, 186–91) discuss the initial focus on supply control and the shift to greater reliance on government purchases to raise farm prices. Benedict (1953, 304, 311, 313) notes that as opposition mounted to production quotas, yields were increased on quota acreage through the substitution of capital and labor for land, and farmer participation in AAA programs declined. For additional discussion and analysis, see Perkins (1969, 103, 140) and Hoffman and Libecap (1995). As argued by Hoffman and Libecap, tighter cartel controls were not the primary response of Congress and the Roosevelt administration to the political reaction to cartelization, and the literature is uniform in concluding that the output and market controls of the AAA were unsuccessful in raising agricultural prices relative to other goods. Schultz (1949, 143) points out that although corn acreage fell by 8 percent between 1937 and 1939, output grew by 17 percent. For additional assessments, see Nourse et al. (1937, 289–320). Stricter production controls were achieved only in tobacco and peanuts (Gardner 1987b, 21).

40. The incentive to exceed quota limits is a standard cartel problem that was not fully appreciated in congressional debate over the Agricultural Adjustment Act. For discussion, see Hoffman and Libecap (1995).

41. For discussion of the CCC, see Perkins (1969, 168, 224).

hogs, wheat, and cotton. The Federal Emergency Relief Administration followed with a purchase of hogs for relief purposes. The October 1933 wheat purchases were about 3 percent of total U.S. wheat production that year. It was a small beginning that was to grow.[42]

Nonrecourse loans of the CCC to farmers became a principal mechanism for government purchases of agricultural production that continued well beyond the New Deal. Farmers obtained nonrecourse loans from the CCC at the policy-determined price (the loan rate) and placed the crops covered by the loan in CCC-certified storage on their farms or in commercial storage to be held as collateral. If the market price exceeded the loan rate, farmers sold their crops and paid off the loan from the CCC. If the loan rate exceeded the market price, farmers defaulted on their loans, and the CCC, in effect, purchased their output. Supplemental or deficiency payments to farmers were made if the loan price were below the target parity price for the crop.

With these price support purchases through the CCC, the federal government's demand for commodities was perfectly elastic at the support price, which effectively became the domestic market price floor.[43] By the end of 1934, 48 percent of U.S. cotton production that year was either purchased by the CCC or pledged to the agency as collateral for loans. Stocks held by the CCC declined as production fell during the drought years of 1935 and 1936, but in 1938 the agency once again held an equivalent of 38 percent of that year's cotton crop and in 1939 had an equivalent of 12 percent of corn production and 23 percent of wheat production.[44] The 1938 Agricultural Adjustment Act specifically directed the CCC to make price-supporting loans (purchases) whenever certain specified conditions arose. The agency, for example, was to make such loans for cotton and wheat if market price fell below 52 percent of the parity price or if production was expected to exceed domestic consumption and export demand (apparently at the parity price). These loans could be defaulted on if the market price remained below the loan rate.

Political pressure forced CCC loan rates (purchase prices) higher between 1934 and 1941, leading to the greater accumulation of wheat, cotton, and corn stocks.[45] The value of CCC loans to farmers, with crops held as collateral, rose

42. Perkins (1965, 221–28) describes purchases by the Federal Emergency Relief Administration, the Farm Credit Administration, and the CCC. CCC purchases are from the U.S. Department of Commerce (1975, 511).

43. As Gardner (1981, 22–23) points out, price support programs vary by commodity. He describes the actions of the Flue-Cured Tobacco Cooperative Stabilization Corporation to set price floors for different grades of tobacco and the actions of the federal government in setting dairy price supports for butter, various cheeses, and nonfat dry milk. In terms of quantities and expenditures, grains involve the most massive support programs.

44. CCC loans (inventories) as a percentage of annual production calculated from USDA, *Annual Report* (1941, 20) for CCC loans and purchases by commodity by year and USDA, *Agricultural Statistics* (1942, 65) for production data.

45. For discussion of political pressure to raise the CCC loan rate, see Benedict (1953, 333, 376–78).

from $260 million in 1934 ($1.9 billion in 1984 dollars) to $457 million in 1939 ($3.3 billion in 1984 dollars).[46] Revenues from CCC loans and other government benefit payments became an important part of total farm income. Nourse et al. (1937, 285) suggest that one-fourth of the increase in farm income in 1933 was due to government transfer payments, two-thirds in 1934, and one-half in 1935.[47] These figures are consistent with Schultz's (1949, 154) estimate that by 1939, loans and other benefit payments from the federal government provided as much as a quarter of total farm income. The CCC loan program became the center of the New Deal federal farm program, and Murray Benedict commented on the changing nature of its role: "The Commodity Credit Corporation's activities came to have a second purpose which was not compatible with its [price] stabilization function. This was the function of maintaining prices continuously above the free-market levels, rather than merely that of ironing out the effects of ups and downs of production and control" (1953, 389).

The accumulation of stocks through repeated purchases by the CCC was justified by the Ever-Normal Granary policy adopted by Secretary Wallace in June 1934. Stockpiles were distributed as relief through the Federal Emergency Relief Administration, the Surplus Commodities Corporation (later, the Federal Surplus Commodities Corporation), the Red Cross, and other agencies or sent overseas as subsidized exports.[48]

When the processing tax provision of the Agricultural Adjustment Act of 1933 was declared unconstitutional by the Supreme Court in January 1936 in *United States v. Butler* (297 U.S. 1), production restrictions were reinstated *within two months* by Congress under the Soil Conservation and Domestic Allotment Act. The new law tied benefit payments to farmers to acreage reductions for "soil conservation." Funds for benefit payments were provided by Congress from general tax revenues, rather than processing taxes. Crops were classified into soil depleting and soil conserving. Soil-depleting crops were basic cash crops—wheat, cotton, corn, tobacco, and sugar beets among others—whereas soil-conserving crops were forage crops that did not add to surpluses.

The shift in orientation from price supports under the Agricultural Adjustment Act to soil conservation under the Soil Conservation and Domestic Allotment Act was an expedient for continuing programs that reduced productive acreage in exchange for benefit payments to farmers. Politicians apparently believed that output reductions as part of soil conservation programs were more popular with voters than were output reductions explicitly designed to

46. The quantities pledged to or purchased by the CCC are from USDA, *Annual Report* (1941, 20) and CCC loan amounts are from U.S. Department of Commerce (1975, 488).

47. Income effects of farm programs are also discussed in Rucker and Alston (1987).

48. The Ever-Normal Granary policy and the distribution of government purchases are discussed in Breimeyer (1983, 346) and Cochrane and Ryan (1976, 132–64).

raise farm (food) prices.[49] Moreover, the emphasis on soil conservation and the maintenance of an Ever-Normal Granary reflected a shift in Congress from a short-term "emergency" farm program under the Agricultural Adjustment Act of 1933 to relieve agricultural distress to a long-term program of regulating commodity markets.[50]

Another major New Deal regulatory law was the Agricultural Adjustment Act passed in February 1938. The law expanded a number of previous regulatory and transfer policies. It provided for crop insurance, modified acreage restrictions and allotment features in the 1936 Soil Conservation and Domestic Allotment Act, outlined criteria for marketing quotas, redefined parity prices, defined parity income more clearly, and described policy regarding loans from the CCC. Parity prices were expanded to reflect interest payments on farm indebtedness, taxes, and freight rates. In terms of production quotas, if the current and prospective supply of a given commodity exceeded a "normal supply" the secretary of agriculture was directed to design quotas for the amount of the commodity that could be marketed during the year. The normal supply of basic commodities as corn, cotton, rice, and wheat was broadly defined in the law. The proposed quotas were to be voted on through secret ballot by those farmers who planned to participate in the program.[51] Once enacted, the quotas determined the amount of the commodity that farmers could sell. Amounts sold by farmers beyond their quotas were to be taxed.

By 1938, under New Deal regulatory programs, there were four ways of affecting commodity markets: (1) Soil Conservation and Domestic Allotment Act conservation payments to encourage farmers to shift from soil-depleting (cash) crops to soil-conserving (forage) crops and benefit payments for adhering to acreage allotments for production controls, (2) marketing orders and marketing agreements under the Marketing Agreement Act of 1937 to limit weekly shipments of specialty crops and to set minimum prices for milk, (3)

49. For discussion of the Soil Conservation and Domestic Allotment Act, see Benedict (1953, 339–51). The American Farm Bureau Federation assumed leadership in drafting and securing enactment of both the 1933 Agricultural Adjustment Act and the Soil Conservation and Domestic Allotment Act of 29 February 1936. The Supreme Court left standing the provisions of the Jones-Costigan Sugar Control Act of 9 May 1934, the marketing agreement provisions of the 1933 Agricultural Adjustment Act, and Section 32 of that law, which assigned 30 percent of customs revenue to the secretary of agriculture for administering agricultural programs.

50. Blaisdell (1940, 40–54) and Nourse et al. (1937, 21–31) discuss the shift from emergency legislation to deal with immediate problems to longer term economic planning through government programs. Although the marketing agreement provisions of the Agricultural Adjustment Act were not affected directly by the *Butler* decision, Congress provided clear legislative authorization for their marketing control provisions with enactment of the Agricultural Marketing Agreement Act of 3 June 1937. The law called for the issuing of state marketing quotas for specific specialty commodities and the assignment of individual shipper quotas within those statewide allotments. Penalties for shipper violation of quota provisions were authorized. Marketing agreements were upheld subsequently in *Edwards v. United States* (14 F. Supp. 384) in July 1937. By this time, the Supreme Court's ruling in the *NLRB v. Jones and Laughlin Steel Co.* (301 U.S. 1 [1937]) took a broader view of the power of the government in what could be regulated as interstate commerce.

51. If one-third of the growers of a crop voted against the quota for that year, it would not take effect; however, price support loans would be withheld from growers during that year.

production quotas under the Agricultural Adjustment Act of 1938 to control market supplies of basic crops, and (4) nonrecourse loans from the CCC to finance government purchases of commodities to support prices.

6.1.3 Agricultural Regulation, 1940–70

During World War II, the regulatory problem in agriculture shifted from one of limiting supply and increasing demand to one of promoting supply, limiting civilian demand, and constraining agricultural price increases to support the war effort. New Deal institutions were in place, and in the case of parity pricing, the vested interest of agriculture in continued price increases remained. Despite the efforts of the Office of Price Administration to control agricultural prices, the farm lobby succeeded in obtaining congressional legislation that set a high floor for commodity prices at 110 percent of parity or higher. With various exemptions to price controls, agricultural prices rose relative to other prices throughout the war period.[52]

Between the end of World War II and 1970, the development of modern agricultural regulation continued through extensions of New Deal legislation with new price supports; deficiency, parity, or benefit payments to farmers equal to some portion of the difference between the income from the target price and the market price; acreage allotments and set-asides; marketing quotas; subsidized loans to farmers; marketing orders; CCC nonrecourse loans; and other government purchases of excess stocks at policy-determined prices.[53] Additionally, export subsidies; tariffs and quotas on imports; and subsidies for inputs, such as irrigation water, electricity, and research and development were expanded. By 1970, commodities like cotton, wheat, rice, peanuts, tobacco, wool, mohair, honey, milk and other dairy products, corn, barley, oats, rye, sorghum, soybeans, and sugar, as well as specialty crops like fruits, nuts, and vegetables, were covered by separate programs that involved both supply controls and government purchases through the CCC.[54]

52. The political power of the farm lobby in gaining partial exemptions for agricultural commodities from wartime price controls is discussed by Benedict (1953, 403, 423–30), Rockoff (1984, 91–92), and Higgs (1987, 208–10). Higgs points out that price control exclusions were drafted by the American Farm Bureau Federation and other farm lobbies, the USDA, and the congressional farm block. With these exclusions farm prices could rise. By August 1942 food prices had risen by more than 1 percent a month. To obtain more effective control Congress passed the Economic Stabilization Act of 1942. Even so, agricultural prices still enjoyed a privileged position. Ceilings could not be set below either the parity level or the highest level that had prevailed during the period 1 January to 15 September 1942.

53. A variety of different income subsidies were adopted in the various laws passed over the period. Although they have different names—adjustment payments, benefit payments, conservation payments, parity payments, and so forth—they accomplish the same objective, paying farmers for some portion of the difference between the target price and the market price. A summary of agricultural regulation is provided by Gardner (1981, 21). Agricultural policy and some of the politics involved are discussed by Knutson, Penn, and Boehm (1983), Gardner (1987b, 1995), and Pasour (1990).

54. Gardner (1995, 148–205) argues that the various agricultural policies that emerged after 1933 came about through the lobby action of separate interest groups, responsive politicians and

Purchases of "excess" commodities by the CCC or other federal agencies led to the accumulation of stockpiles by the federal government that were kept off the market. Some of these stocks were distributed through the school lunch program, food for the poor and elderly through food stamps and related distributions, and foreign food aid.[55] Other stocks were stored and, occasionally, destroyed. Stockpiles were particularly large during the 1950s and 1960s, when support prices were well above prevailing market levels. For example, the support loan rate for wheat in 1954 reached $2.24 per bushel, when the average price received by farmers was $2.12.[56] The reliance of farmers on CCC purchases through nonrecourse loans and the buildup of "surplus" stockpiles in the late 1950s is revealed in table 6.1 by inventories held by the agency as a share of that year's production.

With the accumulation of politically embarrassing government-owned stocks, loan rates gradually were lowered in the 1960s. But as loan rates fell below parity prices, deficiency payments increased, and Congress turned to greater emphasis on supply controls that varied by crop and by year. Controls were strictest on tobacco production, with more limited constraints on market supplies of peanuts, certain fruits and vegetables, and dairy products.

From 1950 to 1970, the most important supply management involved acreage restrictions for grains and penalties for failure to comply (usually the denial of price support benefits). Generally, no cash crops were allowed on reserved acreage. To initiate supply controls each year, the secretary of agriculture set the allowable acreage for each crop and CCC loan rates based on expected prices, anticipated supply and demand conditions, and accumulated stocks. Production quotas as a share of base acreage for individual farmers were determined by the Agricultural Stabilization and Conservation Service (ASCS) through regional, state, and county offices.[57] In the 1960s, annual acreage reductions of 10–20 percent of base acreage were conditions for receiving federal price support benefits for farmers producing wheat, corn, barley, sorghum, and other crops.

Even so, supply controls had little chance for success as the primary tool of agricultural regulation to raise commodity prices. As allowable acreage was reduced, farmers had incentives to farm remaining land more intensively, and

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bureaucrats, the congressional committee structure, and a constitutional provision that gives undue representation to rural, agricultural states.

55. Indeed, Bruce Gardner argues that a motivation for enactment of food stamp and trade legislation was the desire to dispose of agricultural commodities in a politically acceptable way. In the case of the Agricultural Trade Development and Assistance Act of 1954, he comments: "The political push behind P.L. 480 arises from its role, not in fighting hunger, but in the demand for U.S. farm products" (1981, 21).

56. Loan rate from USDA *Agricultural Statistics* (1952, 680) for 1933–50 and USDA, *Wheat Yearbook* (1996, app. table 9) for 1951–70. Average price received by farmers from USDA, *Agricultural Statistics* (1967, 1–2).

57. Discussion of supply management programs is provided by Gardner (1981, 26–34) and Pasour (1990, 51, 81–117).

Table 6.1 **Inventories Held by the Commodity Credit Corporation (% of annual production)**

Year	Cotton	Corn	Wheat
1956	51	20	95
1957	46	24	86
1958	9	28	57
1959	7	25	103
1960	35	27	88

Sources: Inventory data are from USDA (1956, 3; 1957, 2, 3; 1958, 3, 4; 1959, 3, 4; 1960, 30). Annual production data are from U.S. Department of Commerce (1975, 510–11).

there were few penalties for doing so. If commodity prices fell, diversion (or conservation) payments for reserved acreage would be increased by the secretary of agriculture as additional land was set aside. Further, benefit payments for differences between market prices and parity prices would be raised, following policies initiated in the Agricultural Adjustment Acts. Additionally, there was long-standing political opposition among farmers to tight production controls, dating from the beginning of the New Deal, and neither Congress nor the USDA was willing to confront that opposition.[58] Finally, CCC loan rates were adjusted upward in the 1950s and 1970s, providing a rising price floor for farmers, and the provisions of the Agricultural Adjustment Act of 1938, which mandated CCC loans as market prices fell, provided farmers with guaranteed purchases.

Gale Johnson (1973, 22–31) concluded that through the early 1970s federal programs substantially increased the cost of regulated commodities to American consumers, and he argued that the programs achieved parity income targets for virtually every year since 1940.[59] Moreover, he determined that most of the success was through demand enhancement, rather than supply controls, which he concluded had not substantially reduced production.[60] The importance of government purchases is noted by Bruce Gardner: "The primary policy tool has been to have the government itself provide the demand that is necessary in order to achieve increases in farm prices. This approach in the past has

58. Benedict (1953, 304, 311, 313), Perkins (1969, 103, 140), and Hoffman and Libecap (1995) discuss early farmer opposition to tighter production rules under the AAA. Schultz (1949, 143) argues that although corn acreage fell in the late 1930s, output grew. Only in tobacco and peanuts were output controls successful according to Gardner (1987b, 21).

59. Johnson (1973, 26) observed that there had been little political pressure to see whether parity income targets had been met since 1940, although he was confident that they had. Clear documentation of success would have caused a political backlash or justified cuts in programs.

60. Johnson (1973, 3–4, 23–41) argued that the reduction in farm output that can be attributed to supply management did not exceed 2.0–2.6 percent of total farm output. Most of the 55 to 60 million acres set aside or otherwise diverted from production either was land that would not have been planted or was poor-quality land. Further, farmers adjusted by adding other inputs to remaining land to raise production. Land diversion contributed to increased use of new seeds, fertilizers, and capital to increase production.

caused prices to be high enough to bring forth costly surpluses of production" (1981, 21).

6.2 Categorization and Analysis of Agricultural Legislation: The Impact of the New Deal

Although the policy summary outlined above suggests a regime switch regarding agricultural regulation brought about by New Deal legislation, it is possible to address the issue more concretely. Following the industrial organization literature (Breyer 1982; Shepherd 1990; and others) it is possible to classify government regulatory policy in commodity markets as providing:

a. *Public goods:* Government provides consumer and producer information about products and production conditions, product quality assurance, industry standards, disease and insect control, and other actions that promote gains from trade.[61]
b. *Transfers:* Government provides grants, subsidized loans and insurance, research expenditures, infrastructure, labor and other input subsidies (soil improvement, windbreaks, watershed, irrigation), and marketing support.
c. *Economic regulation:* Government intervenes directly into specific commodity markets to raise commodity prices and incomes of farmers through:
   i. *Demand enhancement:* Government purchases agricultural commodities with the primary objective of increasing demand.
   ii. *Supply control:* Government limits total market production and supplies through input controls, marketing quotas, production allotments, entry limits (licensing, trade barriers), and regulation of shippers, handlers, and other middlemen.

These categories are used to classify 653 agricultural laws enacted by Congress between 1884 and 1970 to see more clearly the regime switch of the New Deal after 1932. Additionally, by classifying 586 laws passed between 1933 and 1970, it is possible to determine how major New Deal statutes or executive orders were linked to post–New Deal regulatory policies.[62] A finding of direct ties between legislation in both periods through amendments, modifications, and extended authorizations will more precisely reveal the influence of the New Deal on the pattern and scope of agricultural regulation in the United States.

Udell (1971, 1972) provides a compendium of laws relating to agricultural

61. Another category would be to address natural monopoly markets. In agriculture this might apply to railroad rate regulation through the Interstate Commerce Commission. Railroad rate regulation broadly affected many sectors of the economy and is not included in the agricultural laws analyzed in this paper.

62. New Deal legislation considered includes the Agricultural Adjustment Acts of 1933 and 1938, the Taylor Grazing Act of 1934, the CCC, the Bankhead Jones Acts of 1935 and 1937, the Soil Conservation and Domestic Allotment Act of 1936, the Agricultural Marketing Act of 1937, the Sugar Act of 1937, and the Federal Crop Insurance Act of 1938.

regulation between 1884 and 1972. Identification of the major objective of each law allows it to be placed into one of the three categories: public goods, transfers, and economic regulation. For example, P.L. 41, passed in May 1884, created the Bureau of Animal Industry "to prevent the exportation of diseased cattle, and to provide means for the suppression and extirpation of pleuropneumonia and other contagious diseases among domestic animals." The primary goal of the law is to provide the public good of livestock disease control.[63] For another example, P.L. 7, passed in January 1928, authorized $500,000 to fund actions by USDA county extension agents to rehabilitate certain farmlands damaged by floods. Because this law used government funds to improve private land, it is classified as providing an income transfer to farmers. Similarly, P.L. 10, enacted in May 1933, was the Agricultural Adjustment Act, and as a major piece of New Deal legislation, it had many complex provisions. Even so, the primary intent of the law was to control the supply of farm commodities through "the reduction in the acreage or reduction in the production for market, or both, of any basic agricultural commodity" (Pt. 2, Sec. 8), and hence it is classified as economic regulation of supply. Another example of economic regulation was P.L. 480, enacted in July 1954, to "increase the consumption of United States agricultural commodities in foreign countries," largely through the granting or subsidized sale of surplus agricultural commodities held by the CCC for export. As such, this law is classified as economic regulation to promote demand.

In addition to placing regulatory legislation enacted between 1884 and 1970 into one of three categories, those laws passed between 1940 and 1970 (the post–New Deal period) were classified as to whether they were directly linked to the major New Deal statutes listed above. In most cases the linkage is straightforward because much of the legislation enacted after 1939 makes explicit reference to the New Deal statutes being amended or extended. Table 6A.1 illustrates the linkage identified in the analysis by examining agricultural regulation legislation passed in 1962. In 1962, 25 laws were passed, and of those, 18 were directly related to the Soil Conservation and Domestic Allotment Act of 1936 or the Agricultural Adjustment Act of 1938 through adjustments in parity prices and acreage allotments for various commodities, setting new times for marketing quota referendums, extending other provisions to stabilize prices, and broadening soil conservation provisions.

The results of the classification of the agricultural regulation legislation into the three categories of public goods, transfers, and economic regulation and the linking of laws passed after 1939 to New Deal legislation are summarized in table 6.2. The table lists the number of laws by category for the entire period 1884–1970, the pre–New Deal years 1884–1932, the New Deal years 1933–39, and the post–New Deal years 1940–70. There were 653 regulatory laws enacted in the 87 years between 1884 and 1970. Approximately 10 percent were

63. The public good is due to the externalities associated with disease elimination.

Table 6.2 Agricultural Regulation by Category

Time Period	Total Laws Passed (1)	Public Goods Laws (2)	Economic Regulation: Demand Enhancement (3)	Economic Regulation: Supply Control (4)	Economic Regulation: Transfer Laws (5)	Economic Regulation: Other (6)	New Deal–Based Legislation[a] (7)
1884–1970	653	115	69	320	140	9	392
		(18%)	(11%)	(49%)	(21%)	(1%)	(60%)
1884–1932	67	25	1	15	26		
	(10%)	(37%)	(1%)	(22%)	(39%)		
1933–39	130	19	8	74	25	4	81
	(20%)	(15%)	(6%)	(57%)	(19%)	(3%)	(62%)
1940–70	456	71	60	231	89	5	311
	(70%)	(16%)	(13%)	(51%)	(20%)	(1%)	(68%)

Note: Percentages (in parentheses) in col. (1) are of the total number of laws for the entire 1884–1970 period. Percentages in cols. (2) to (7) are of the total number of laws for the applicable subperiod.

[a]Linked to major New Deal legislation as defined in the text and table 6A.1. The percentages in this column will not add to those to the left.

passed during the first 49 years through 1932. There were almost double that number enacted during the New Deal, and another 456 were passed after 1939.

Not only did the number of regulatory statutes jump after 1932, but the emphasis of regulatory policy shifted. In the early period most regulation focused on the provision of public goods, such as plant and animal disease control and quality standards, and such legislation accounted for 37 percent of the total statutes enacted. Only subsidized loans to cooperatives and farmers, disaster relief, and other transfers were more common, with 39 percent of the legislation passed during the period. Economic regulation was comparatively less important, comprising about 23 percent of the laws passed. With the advent of the New Deal farm program in 1933, the proportions changed and remained different from what existed previously. During the New Deal and after, the relative emphasis on public goods provision declined, with 15 and 16 percent of the laws passed aimed at public goods in the two periods. With the New Deal the number of laws aimed at providing economic regulation and transfers increased. But transfer legislation became a comparatively less important part of total legislation, with only 19 percent of the statutes passed during the New Deal and 20 percent of the total laws passed from 1940 through 1970. The major growth was in economic regulation through supply control and demand enhancement as part of significant new intervention into commodity markets to raise prices to parity levels as defined in the Agricultural Adjustment Act of 1933. During the New Deal, 63 percent of all laws passed were directed at economic regulation, and after 1939, 64 percent were for supply control and demand enhancement. The importance of key New Deal laws in agricultural policy after 1939 is shown in column (7), where 68 percent of all laws passed

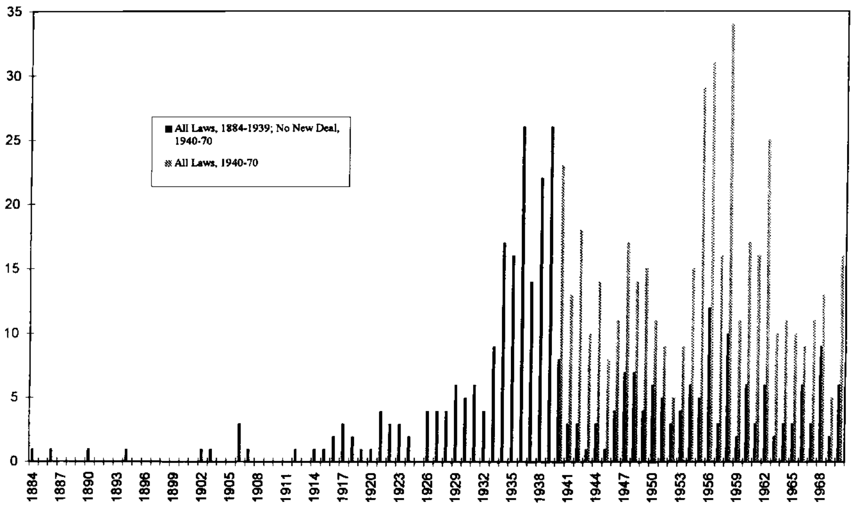

Fig. 6.1 Agricultural regulation legislation, 1884–1970
Sources: Udell (1971, 1972).

between 1940 and 1970 were directly linked to New Deal economic regulation and transfer legislation.

The impact of the New Deal can also be seen in figure 6.1, which shows annual legislation from 1884 and 1970. After 1939 the light-shaded bars show the total number of laws passed each year and the dark bars show annual legislation after removing New Deal–based statutes. Considering first the general pattern, the increase in legislative activity after 1932 is clearly demonstrated. The extraordinary legislative activity of the New Deal in establishing new regulatory policies, particularly in supply control and demand enhancement, is clear. Moreover, after 1939, the light-shaded bars show that the annual number of laws passed continued to be well above what existed prior to the New Deal. Robert Higgs argues that the growth of government occurs in stages, with crises leading to a flurry of new legislative activity that remains after the crisis ends (1987, 57). The legislative pattern described in the figure supports this observation.

The separation of the bars into light and dark divisions after 1939 shows the impact of the New Deal on subsequent regulatory policy. The dark bars from 1940 through 1970 show only public goods laws and non–New Deal transfers and economic regulation legislation.[64] Comparing the light and dark bars indicates the importance of the New Deal legacy for post–New Deal regulatory policy. Indeed, the period after 1940 without New Deal–based legislation appears quite similar to what existed from 1884 through 1932.

64. Examples include P.L. 645, the Potato Insect Control Act of 1948; P.L. 237, enacted 8 August 1953, authorizing the recruitment of Mexican labor; and P.L. 61, enacted 8 July 1963, to amend the Packers and Stockyard Act of 1921.

Table 6.3 Mean Percentage of Annual Laws Enacted by Category and Tests for Differences in the Means

	Mean Percentage of:			*t*-Tests of Differences in the Means between 1884–1932 and 1940–70 for:		
Time Period	Public Goods	Transfers	Economic Regulation	Public Goods	Transfers	Economic Regulation
1884–1932	46	31	23			
1933–39	14	21	63			
1940–70	16	20	62	3.52*	1.51	6.03*
1940–70 (no New Deal)	49	26	20	0.27	0.61	0.43

*Significant at the 99 percent level.

Table 6.3 provides a more explicit comparison of regulatory policy before and after the New Deal if New Deal–based legislation is subtracted. The table lists the mean annual percentage of statutes enacted providing public goods, economic regulation, and transfers for 1884–1932, 1933–39, and 1940–70, with and without New Deal–based legislation, as well as *t*-tests for the equivalence of the means.[65] As indicated in the table, the New Deal and post–New Deal periods are not different statistically from one another in terms of the aims of regulatory legislation. The periods 1933–39 and 1940–70 have comparable mean percentages of laws enacted annually for the provision of public goods, income transfers, and economic regulation, respectively. By contrast, however, the nature of agricultural regulation changed importantly after the New Deal from what had existed before 1933. As shown, the mean percentages of statutes providing public goods, income transfers, and economic regulation adopted annually during 1884–1932 are quite different from what was enacted either during the New Deal or after. Indeed, the difference in the mean percentages for the three types of laws between the pre–New Deal period, 1884–1932, and the post–New Deal period, 1940–1970, are statistically different at conventional levels, underscoring the shift in the regulatory regime.

Subtracting New Deal–based legislation from the regulatory laws passed annually after 1939, however, changes the mean percentages for each regulatory category and the overall regulatory picture sharply. Absent the New Deal, the regulatory focus of the pre–and post–New Deal periods is close to the same, with the annual mean percentages for the three categories of regulation similar and statistically not different from one another.

As a result, both the pattern shown in figure 6.1 and the statistical tests in table 6.3 support the hypothesis that had the Great Depression not occurred

65. The calculation of the means includes only those years in which legislation was enacted. Unequal variances across the periods is assumed.

and New Deal regulatory policies not been enacted, the pattern of regulation through 1932 would have continued in the period 1940–70.[66] These data underscore the importance of the New Deal in changing the nature of government regulation of agriculture in the United States.

6.3 Measures of the Impact of New Deal Agricultural Policies

6.3.1 The Impact on Regulatory Budget Expenditures

The data in tables 6.2 and 6.3 reveal that the major shift in regulation due to major New Deal legislation was in the growth of economic regulation through supply control and demand enhancement. It is possible to examine the impact of New Deal regulatory legislation on budget allocations for supply control and demand enhancement using data collected from U.S. Treasury Department, *Digest of Appropriations* (1905–21) and *U.S. Budget* (1922–70).[67] From 1905 through 1949 actual expenditures by legislative act, agency, and program can be identified.[68] For the 20 years, 1950–70, budget data are grouped more broadly by expenditure categories, such as the CCC (part of the USDA budget from 1948 through 1970) and Soil Bank programs (1956–58).[69] These expenditures can be classified by primary function and assigned to either demand

66. Another possibility for consideration is what would have happened to agricultural regulation after 1939 if no New Deal farm program had been enacted in response to the fall in farm incomes. The only way of addressing that scenario is to look at two earlier periods. Farm incomes fell sharply in the mid-1890s and in 1921 with the fall in commodity prices. But in the absence of major federal government intervention during both of those periods, no institutional structure was developed nor precedents established for the continuation of federal government regulation after the crisis passed on the scale that actually occurred after 1939. These outcomes suggest that the post-1939 period would have looked more like the regulatory pattern observed in the 1920s had there been no large-scale New Deal farm program.

67. Deering (1945) provides the organization of USDA and role of various agencies, branches, and bureaus within the department, as well as an appendix with budget appropriations by program for 1932–46. For budget data from the *Digest of Appropriations* and the *U.S. Budget,* actual appropriations are used through 1920, actual expenditures are reported for 1921 and 1923–44, estimated expenditures are reported for 1922, and actual appropriations are shown for 1945–70.

68. E.g., expenditures are listed for the U.S. Food Administration (1918); the Bureau of Markets (1918–20); the Bureau of Markets within the Bureau of Agricultural Economics (1921–37) and within the Agricultural Marketing Service (1938–41); the Agricultural Marketing Administration (1942); the Agricultural Marketing Service (1943–44); the Production and Marketing Service (1945–52), and the Agricultural Marketing Service (1952–70); the Filled Milk Act (1923); the Tobacco Inspection Act (1937–49); cotton regulation; wool regulation; the AAA (1933–44, and part of the Production and Marketing Administration for 1945–52); the Sugar Act of 1937; the Soil Conservation and Domestic Allotment Act; the Federal Farm Board (1929–33); and the CCC (not part of the USDA budget from 1934 through 1947).

69. Other budget categories include the ASCS (1961–70); Consumer and Marketing Services (after 1964); and the Production and Marketing Administration (1950–52), which includes all expenditures for acreage allotments and marketing quotas, the Sugar Act program, and AAA expenses. After 1952 the Production and Marketing Administration is divided into the Agricultural Marketing Service (which includes the school lunch program), the Agricultural Conservation Program Service (acreage reduction programs under the Soil Conservation and Domestic Allotment Act), and the Commodity Stabilization Service (AAA, Sugar Act programs).

enhancement or supply control. Table 6A.2 summarizes the programs included in each of the two categories.

Figure 6.2 reveals the pattern of economic regulation between 1905 and 1970 through budget expenditures for supply control and demand enhancement regulation from 1905 to 1970.[70] As indicated, there were virtually no expenditures for supply control until 1933, when they jumped with the advent of New Deal programs. Outlays remained high through the mid-1940s before declining for the next 10 years. But they did not return to their pre-1933 level. By the late 1950s, as stocks of wheat, corn, and cotton held by the CCC rose (table 6.1), expenses for supply control increased once again.

Demand enhancement expenditures also were comparatively small prior to the New Deal. The early increases reflected purchases by the U.S. Food Administration during World War I and by the Federal Farm Board in 1930 and 1931. Most of the expenditures after 1933 were through the CCC. There were periodic drops in CCC expenditures that occurred during years when the market price exceeded the loan price, causing farmers to pay off their CCC loans in order to sell their collateral commodities, and in some years, CCC receipts exceeded expenditures.

The budget expenditure pattern revealed in figure 6.2 corresponds with the legislative data shown in table 6.3 and figure 6.1. The statutes that implemented the economic regulation of agriculture came with the New Deal, and those same statutes provided the mandate for regulatory policies through 1970. Correspondingly, budget expenditures for economic regulation were not important until after 1933. The legacy of the New Deal in permanently inserting the federal government into commodity markets to reduce supplies and to increase demand is unmistakable.

Additionally, figure 6.2 shows that, over time, the federal government shifted the relative emphasis of budget expenditures from supply control to demand enhancement, although the two policies remained intricately intertwined. Part of the reason for the shift was farmer political opposition to acreage and marketing controls. Moreover, supply controls alone were ineffective as farmers evaded acreage restrictions by substituting capital and labor for land and by removing only the least productive land from production. As output grew across most farm commodities, Congress was faced with enacting legislation authorizing the USDA to set ever stricter acreage and production limits if target prices were to be achieved. Government purchases to supplement supply management were an attractive solution. Resorting to general tax revenues to pay for agricultural surpluses reduced the pressure on production quotas and acreage allotments. In addition, demand enhancement purchases by the CCC could be directed to politically popular programs such as foreign food aid,

70. The data are shown in real terms (constant 1967 dollars using the All Item Index in U.S. Department of Commerce 1975, 199).

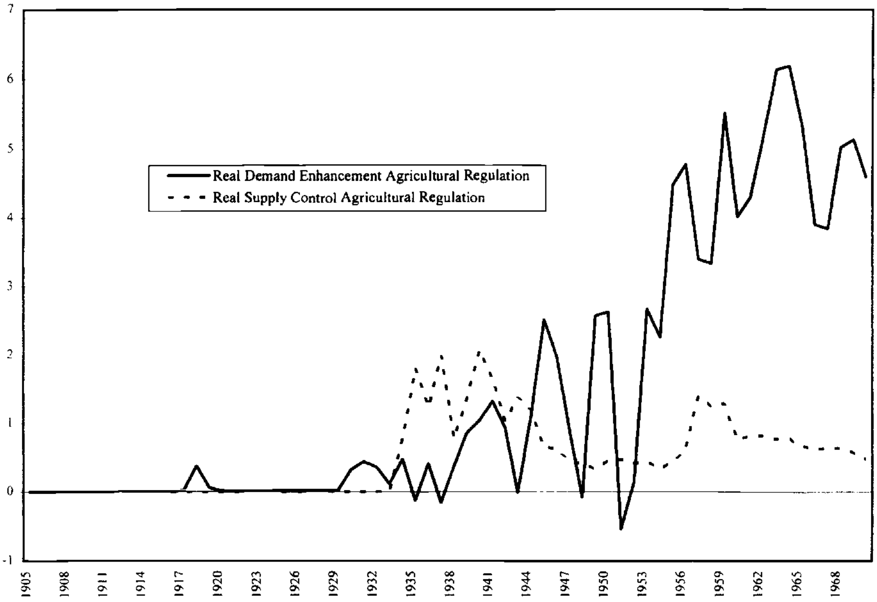

Fig. 6.2 Agricultural regulation as demand enhancement or supply control, 1905–70 (billions of dollars)

Sources: U.S. Department of the Treasury, *Digest of Appropriations* (various years) and *U.S. Budget* (various years).

trade promotion, disaster relief, school lunches, and food stamps. These programs in turn developed their own constituencies, who could be mobilized to join farm groups in promoting commodity purchases by the government. With agricultural surpluses directed to other worthy causes, the actions of the government could be seen less as efforts to raise farm prices and incomes. Moreover, the availability of CCC purchases as a last resort, together with various payments to farmers to cover the difference between parity or target prices and market prices, removed the incentive of farmers to be very concerned with adhering to supply management guidelines.[71]

71. The nature of the payment varied by agricultural statute. Parity payments were authorized by the Agricultural Adjustment Act of 1938 to compensate farmers for the difference between market prices and 75 percent of parity (the percentage also varied according to subsequent legislation). Deficiency payments to cover the difference between market prices and "target" prices were introduced in 1973, where the target price was to be more flexible than the earlier parity price. The incentives put in place by the existence of demand enhancement programs helps explain why D. Gale Johnson (1973, 3–4, 23–41) found so little effective supply management. As stockpiles grew in the 1950s and 1970s, the federal government attempted new supply controls with little success. For example, the Soil Bank law was enacted in 1956 and the payments-in-kind (PIK) program was implemented in 1983.

6.3.2 The Impact on U.S. Department of Agriculture Staffing and Budget

Another measure of the impact of the New Deal is its effect on the bureaucracy charged with implementing the expanded regulatory mandate. The USDA acquired new agencies, including among others the AAA, the CCC (after 1947), and the ASCS, as well as additional staffing and budget appropriations after 1932. Moreover, USDA personnel played an active role in drafting additional legislation to extend the department's regulatory functions. Two measures are provided of the impact on the USDA of New Deal agricultural programs.

One measure is agency staffing relative to the number of farms in the United States from 1910 to 1970.[72] Staffing is an indication of agency growth due to new mandates and programs, and the data are presented with respect to a measure of the size of the principal client group or department constituency, the number of farms in the United States.

Figure 6.3 reveals the ratio of staffing to farms over the period. The ratio was fairly flat, rising slowly from 0.002 in 1910 through 0.004 in 1932. The ratio grew rapidly after the advent of the New Deal and the expansion of agricultural programs under the Agricultural Adjustment Act of 1933, jumping from 0.005 in 1933 to 0.012 in 1935. Through the next 20 years, USDA staffing relative to the number of farms remained in the range of 0.012–0.016. Importantly, the ratio never returned to pre–New Deal levels, even after the depression ended.[73] Further, beginning in 1955 as the number of farms declined while staffing levels continued to grow, the ratio rose from 0.018 in 1955 to a peak of 0.045 in 1969.

Another measure of the impact of New Deal programs on the USDA relative other government agencies is the share of USDA expenditures (including the CCC) in total federal government civilian expenditures from 1921 through 1970.[74] The USDA share of the civilian federal budget is shown in figure 6.4.

Throughout the 1920s, the USDA accounted for approximately 5 percent of total federal civilian expenditures. During the New Deal period, USDA plus CCC expenditures grew as a share of federal civilian expenditures, reaching 18 percent in 1935 and 19 percent in 1942. The USDA share of civilian expen-

72. USDA staffing is from the *Statistical Abstract of the United States* (U.S. Department of Commerce and Labor 1908–1912; U.S. Department of Commerce 1913–71). Data on the number of farms are from U.S. Department of Commerce (1975, 457).

73. The number of farms peaked in 1935 at 6,812,000, whereas USDA staffing peaked in 1969 at 125,034.

74. Expenditures for total military functions are subtracted from total federal expenditures by year from 1921 to 1933. From 1934 to 1941, War Department, Panama Canal, Veterans Administration, and total national defense expenditures are subtracted. From 1942 to 1949, war activities, national defense, and veterans' services and benefits are subtracted. From 1950 to 1970, the budget categories subtracted from total expenditures or outlays include military service and Department of Defense. USDA and federal expenditure data are from U.S. Department of the Treasury, *Annual Report* (1921–70). CCC data prior to transfer to the USDA are from U.S. Department of the Treasury, *U.S. Budget* (1936–49; for actual CCC expenditures during 1934–47).

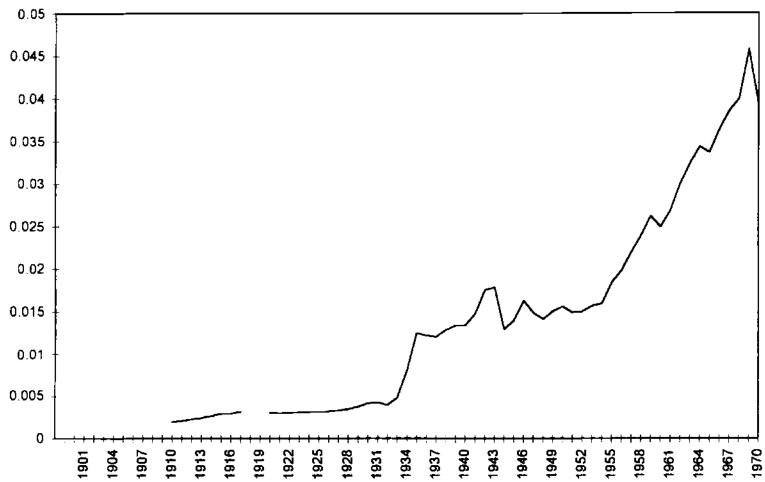

Fig. 6.3 Ratio of number of USDA employees to number of farms, 1910–70
Sources: Number of farms from U.S. Department of Commerce (1975, 457). Number of USDA employees from U.S. Department of Commerce and Labor (1880–1912) and U.S. Department of Commerce (1913–71).

ditures declined in the early post–World War II period when commodity prices rose and farmers paid off their loans. During the 1950s and 1960s, however, the USDA share rebounded, reaching 13 percent in 1955 and 1956. The department's portion of federal expenditures did not return to predepression levels through 1970, mirroring the agency growth suggested by the staffing data shown in figure 6.3.[75] The expansion of the USDA, its regulatory mission, and its constituent ties are part of the regime shift that occurred after 1933.

6.3.3 The Impact on Domestic Wheat Prices

Another way of gauging the effect of New Deal agricultural programs is to examine the impact on prices for a major commodity, wheat. Wheat was one of the most important U.S. agricultural commodities. In 1935, it ranked third, after corn and cotton, in terms of the value of production. In 1949, wheat was the most valuable U.S. crop. In that year, wheat producers received 29 percent of all CCC loans.[76] Moreover, wheat producers were numerous, well organized, and politically influential, with wheat farmers in most western and northern states. Accordingly, it is no surprise that wheat was one of the initial

75. A t-test of the difference in the mean USDA expenditure percentages for 1921–32 and 1933–70 shows the means to be significantly different with a t-statistic of 6.16. The USDA share of federal expenditures fluctuates after 1970, dropping to 4 percent in 1975 and then rising to 8 percent by 1983. The fall in the USDA share largely reflects the rapid growth in overall nondefense federal expenditures after 1970.

76. Production data are from USDA, *Agricultural Statistics* (1937, 378–79; 1949, 592–94). CCC loan data are from USDA, *Agricultural Statistics* (1950, 706–7).

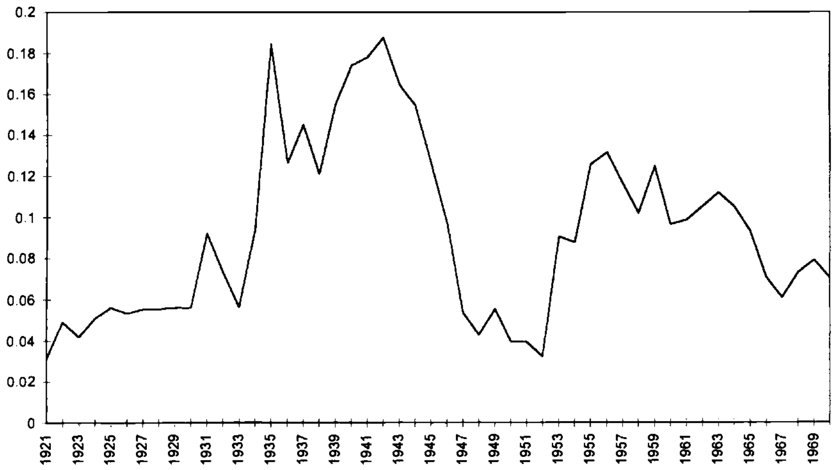

Fig. 6.4 USDA expenditures as a share of total federal civilian expenditures
Source: U.S. Department of Treasury, *Annual Report* (1921–70).
Note: USDA data include CCC expenditures.

basic commodities in the proposed McNary-Haugen legislation and the Agricultural Adjustment Act of 1933 and remained one of the key commodities targeted by New Deal farm programs. The objective of those farm programs was to raise commodity prices and farm incomes to parity with the levels of 1910–14. This section examines the success of those efforts with wheat by examining the path of domestic wheat prices relative to world prices between 1900 and 1970.

To make these comparisons, domestic and world wheat price series were constructed from 1900 to 1970 and are reported in table 6A.3. From 1900 to 1932, the domestic wheat price is the "average price received by farmers" as reported in USDA, *Agricultural Statistics* (1967, 1). It is an average because it involves more than one variety and covers the entire crop year. From 1933 to 1970, the domestic wheat price is more complex because it includes either the "average price received by farmers" or the CCC loan rate, whichever was higher, plus various price support payments.[77] These price supports vary with legislation across the years, and only payments that can be tied to a bushel of wheat are included.[78]

77. If the CCC loan rate exceeded the average price received, the former would dominate because farmers would default on their CCC loans. For discussion of wheat price support payments, see Evans (1984), Hadwiger (1970), Heid (1980), Rasmussen and Baker (1979), and USDA, Economic Research Service (1996).

78. Some payments were not included because of missing years or because of uncertainty as to the effect they had on production choices. An example is storage payments. Producers participating in CCC loans and storing their crops were paid per bushel storage payments while their wheat

For 1933 to 1935, the domestic wheat price series includes the average price received plus AAA price supports for those farmers who maintained their acreage within the authorized allotments.[79] These payments were disrupted by the Supreme Court's ruling in 1936 invalidating the Agricultural Adjustment Act of 1933. In 1936 and 1937, the average price received is used, but with the enactment of the Soil Conservation and Domestic Allotment Act and the Agricultural Adjustment Act of 1938, new per bushel price supports were available from 1938 through 1943 through parity and soil conservation payments.[80] With high wheat prices between 1943 and 1962, there were no parity payments, and the price used is the higher of the average price received by farmers or the CCC loan rate. In 1963, new price support payments were inaugurated and added to the average price for wheat (see Evans 1984, 19; Hadwiger 1970, 257; USDA, ASCS 1964, 1968). From 1964 through 1970, the wheat certificate program began whereby farmers received full price supports only for wheat covered by the certificates. These wheat-marketing certificates provided support payments, but they were not issued for all of the allotted acreage for wheat.[81] Along with Soil Bank payments, wheat certificates were an effort to reduce wheat production in the United States. The constructed domestic wheat price from 1964 through 1970 includes only wheat covered by certificates. Even so, the constructed domestic wheat price series likely is an understatement of the per bushel actual price received by farmers. Some subsidies were on a per acre basis or were lump-sum income payments with no obvious conversion to amounts per bushel of wheat. Moreover, there are so many subsidies, many of which were short lived, that some may have been missed.[82]

World wheat prices are represented by Australian wheat prices. Australia was a major wheat exporter, and the Australian wheat price series was constructed from three price series, for 1900–1931 from Shergold (1987, 223), for 1932–38 from the Commodity Research Bureau (1939), and for 1939–70 from the Australian Wheat Board (1990). As necessary, Australian prices were converted to U.S. dollars using the exchange rate provided in Pope (1987, 244–

was held off the market. These payments are not available for all of the years in the study. Other payments not included include per bushel payments under various disaster relief programs, crop diversion programs, and per bushel export subsidies (except for 1964 and 1965 when export marketing certificates were widely dispersed).

79. These payments were funded by the processing tax under the Agricultural Adjustment Act of 1933. See USDA, *Agricultural Statistics* (1936, 361), Davis (1935), and Hadwiger (1970).

80. The parity payment is the difference between the average price received and the parity price, which in turn is based on a percentage of the prices received between 1910 and 1914 (Davis 1935). Parity prices were adjusted by the Agricultural Adjustment Act of 1938 and later legislation. The formulation of the parity price is described in USDA, ASCS (1985). Conservation and parity payments are from Davis (1942, 366).

81. Wheat-marketing certificates covered approximately 40–45 percent of allotted acreage. For discussion, see USDA, ASCS (1964, 1968).

82. Green (1990) constructs a similar domestic wheat price series for 1961–90, and his series is comparable to the one presented in the appendix. See the notes to table 6A.3 for discussion of what price supports are included in constructing the domestic wheat price series.

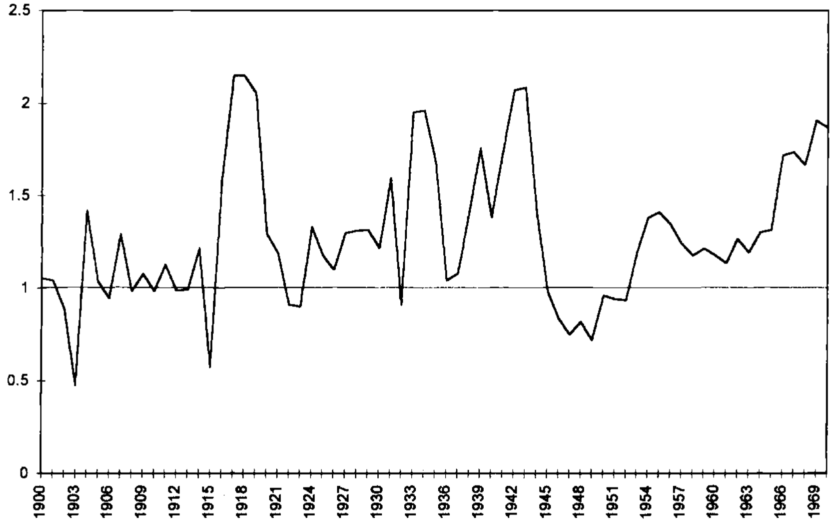

Fig. 6.5 Ratio of U.S. supported wheat price to world wheat price
Source: See text and appendix.
Note: World wheat price is the Australian export price.

45).[83] The unsupported (prior to 1933) and supported (after 1933) U.S. wheat price series is compared to the Australian wheat export price series. This comparison indicates the degree to which New Deal agricultural programs were successful in pushing domestic wheat prices above world prices.

Figure 6.5 plots the ratio of U.S. domestic (supported and unsupported) and Australian export wheat prices from 1900 to 1970. The figure reveals that during the pre–New Deal period, U.S. domestic wheat prices closely tracked world prices (except during World War I). From 1933 through 1970, other than the immediate post–World War II period when there was considerable world price volatility, the domestic price of wheat was held consistently above the world price.[84]

The mean difference between domestic and Australian wheat prices during 1900–1932 was $0.15 and during 1933–70 was $0.36; these are significantly

83. The series was converted from dollars per metric ton to dollars per bushel by multiplying by 0.0272. The constructed series was compared with selected Australian wheat export prices from other sources for verification: Commodity Research Bureau (1939, 114) and International Monetary Fund (1979, 76–77; 1995, 180–81). The Australian series tracks wheat prices for Canada, which is a similar wheat export country. Price series for the two countries were assembled for 1950–68.

84. Between 1949 and 1953 there was a concerted effort to gain compliance with the International Wheat Agreement of 1933 to set world wheat prices. After 1953, the United Kingdom withdrew from the agreement, returning in 1959, but the United States withdrew in 1967, and for practical purposes the wheat agreement expired. The effort to fix high export prices between 1949 and 1953 may partly explain the spike in world prices during the postwar period. For discussion, see Hadwiger (1970, 70–72).

different from one another, with a *t*-statistic of 1.92. Moreover, the variation in domestic wheat prices declined after 1932, while world wheat prices became more volatile. The coefficient of variation for domestic wheat prices was 0.43 for 1900–1932 and 0.32 for 1933–70; whereas, for world prices, the coefficient of variation was 0.33 for 1900–1932 and 0.44 for 1933–70. The data indicate that the wheat commodity programs put into place by New Deal agricultural regulation generally succeeded in holding wheat prices above the world price and in providing more stability to domestic wheat prices.[85]

6.4 The Legacy of the Great Depression for Agricultural Regulation

This paper has measured the direct contribution of the Great Depression and associated New Deal policy to the development of agricultural regulation in the United States. By analyzing the approximately 653 laws enacted by Congress between 1884 and 1970 regarding agriculture and by linking over two-thirds of the 456 laws enacted between 1940 and 1970 to specific New Deal legislation, I have demonstrated how the New Deal affected the growth and nature of current-day agricultural regulation. Since 1933, Congress has enacted laws to modify and extend New Deal–based regulations to virtually every commodity and every agricultural market, making agriculture one of the most regulated sectors of the American economy. This legislative pattern is reflected in budget expenditure data reported from 1905 through 1970. Budget expenditures classified as demand enhancement or supply control were minimal until 1933. After that year, however, expenditures grew in real terms through 1970, with the greatest early growth in supply control efforts and later with more funds for government purchases to enhance commodity demand.

In addition, the paper has examined the counterfactual of what agricultural regulation might have looked like had the Great Depression and the New Deal not occurred. Subtracting those laws passed after 1939 that were directly linked to key New Deal statutes leaves a pattern of regulation that is similar to what had existed prior to 1933—agricultural laws that primarily provided public goods and limited transfers to farmers. Prior to the New Deal, there was comparatively little emphasis on direct government intervention to fix prices and incomes through the economic regulation of supply and demand. This pattern of early regulation grew out of an apparent prevailing belief in small government and a corresponding lack of institutions and political constituents for the extensive regulation of commodity markets. Federal government intervention during World War I may have demonstrated its potential power to direct economic benefits to particular interest groups, but political resistance in Congress and from the president to the McNary-Haugen legislation of the 1920s indi-

85. After 1970 it becomes more difficult to compare U.S. domestic wheat prices with world prices because farm programs such as PIK, implemented in 1983, and other acreage-based or income payments are less easily converted to a per bushel figure.

cates that the time had not yet arrived for more substantial government involvement in agriculture. It took the crisis of the Great Depression to justify the creation of durable institutions for economic regulation.[86]

The Great Depression swept away much of the political opposition to direct federal government intervention in agricultural markets that had existed with the McNary-Haugen bills. With the Agricultural Adjustment Act of 1933, both the Congress *and* the president supported government regulation of agriculture that went beyond what had been proposed with McNary-Haugen, allowing the federal government "to relieve the existing national economic emergency by increasing agricultural purchasing power" (Preamble of the Agricultural Adjustment Act, 12 May 1933).

The paper has also presented data on staffing and budget for the USDA, which show that the department grew relative to the size of its constituency and to the size of federal domestic expenditures as its regulatory mission increased. These data reflect both the institutional regime shift after 1932 toward greater government intervention into agricultural markets and the results of that shift. That is, as the USDA was assigned a larger regulatory mandate and new administrative divisions were created, its role in the further expansion of regulation was enhanced. It collected the data on commodity demand and supply that were critical in administering (or justifying new) regulations. Further, it provided a broader array of services to farmers to promote constituent relations (extension, marketing, export promotion, and research and development). This relationship no doubt helped farm groups mobilize to protect and expand the benefits of agricultural regulation, even as the number of farmers fell.[87]

Finally, the paper has presented data on domestic wheat prices and compared them to world prices from 1900 to 1970. This comparison is more difficult than one might have expected because the many subsidy programs that have been put into place since 1933 have distorted domestic prices so that it is difficult to know just what a true domestic price is, let alone to calculate one that includes the various price supports. Similarly, World Wars I and II and the International Wheat Agreement inaugurated in 1933 have disrupted world wheat prices. Nevertheless, the data indicate that New Deal agricultural programs have succeeded generally in maintaining domestic prices above world prices and in making them more stable. Given how tenaciously farmers have worked to maintain and expand commodity programs it could hardly be otherwise.

The role of the Great Depression in expanding agricultural regulation was to provide a crisis of sufficient magnitude to politically justify the establish-

86. This argument is made by Robert Higgs (1987, 20–27, 192).

87. The political economy of agricultural regulation, including the roles of farm groups, politicians, and the USDA, requires thorough analysis. Parts of the farm program have been examined; e.g., see Gardner (1987a) for analysis of the characteristics of commodities receiving subsidies and Gardner (1995, 185–238) for discussion of special interest groups and PAC contributions in the late 1980s.

ment of regulatory policies on a scale that had not previously existed. The programs in agriculture were so extensive and the private benefits so great that they were not dismantled at the end of the depression. Rather, a coalition of farm groups, USDA officials, and congressional representatives from farm regions were able to expand farm programs and the benefits they provided through incremental adjustments and amendments to the original enabling legislation. This coalition was supported by logrolling with congressional representatives of urban areas, whose constituents benefited from food stamp, school lunch, and other agricultural programs.

The pattern of agricultural regulation in the United States in the twentieth century appears to be remarkably similar to that found in other Western industrialized countries, such as Australia, Britain, Canada, France, Italy, and Germany. Agriculture has always been subject to sharp cyclical swings in commodity prices and incomes due to low income elasticity and low price elasticity of demand for farm products. With these conditions, demand does not rise markedly with upswings in the business cycle and prices fall as supplies increase (the problem of "chronic surpluses").

Across countries, relatively limited government regulation of agricultural markets occurred following World War I. The deterioration in many commodity prices after 1921 brought agricultural unrest and political pressure for government assistance. In Australia, Canada, England, France, Germany, and Italy the general political response in the 1920s was to limit import competition through higher tariffs and quotas. Germany, for example, raised tariffs on certain commodities in 1925 (Hendricks 1991, 31), as did other European countries (Corni 1990, 275; Tracy 1964, 117–21).[88] In the United States government policy promoted private cooperative controls on market supplies, and new restrictive trade policies were part of the McNary-Haugen legislation considered by Congress in the 1920s.

But cooperatives in the United States and farmer syndicates in France, as well as higher tariffs and limited quotas on imports enacted in Western European countries, were insufficient to block the fall in prices in the 1930s. Much more aggressive policies were adopted for greater, direct government intervention into commodity markets to fix prices. Indeed, the plight of agriculture symbolized government response across the countries to the economic crisis of the 1930s. The focus on agriculture in the United States, for example, is indicated by the disproportionate share of federal government civilian expenditures made by the USDA, 18 percent in 1935, up from 6 percent or less in the 1920s.

As in the United States, the scope and scale of new government intervention were beyond anything that had been implemented before. As noted by Perren: "In the 1930s British government assistance to farming came to exceed any-

88. As described by Tracy (1964, 120–28, 150–204) the reliance on tariffs varied across European countries, with tariff increases in Italy greater than in Britain, e.g.

thing that had been offered before in peacetime, even in the early nineteenth century" (1995, 53). In Britain, government marketing boards were created for milk and bacon to manage the supplies placed on the market. Prices were fixed and production controls were installed for beef, pork, butter, cheese, wheat, barley, and oats. Deficiency income payments were added to cover the difference between the target price and the market price for grains (see Perren 1995, 7–60; Grigg 1989, 21–24; Tracy 1964, 122–25, 150–69). In 1933 in Germany, the State Food Corporation was created to set prices, control production, and coordinate the sale of all agricultural commodities (see Hendricks 1991, 27–33; Stuhler 1989, 4–8; Farquharson 1976, 25–77; Corni 1990, 43–95; Tracy 1964, 128–30). Similarly, in Italy, France, Australia, and Canada two-tier price policies were established, with domestic prices fixed above the world price (see Tracy 1964, 128, 170–84; Bothwell, Drummond, and English 1987, 254–59; Britnell and Fowke 1962; Shaw 1982, 14–16; Lloyd 1982, 359–61). Chronic surpluses were controlled through government purchases and stockpiling and through output and marketing controls. In Canada and Australia, wheat boards were created in the 1930s to purchase production and to manage the supplies placed on international markets. Other policies adopted in varying degrees across the countries included income subsidies, debt relief, lower interest rates, and moratoria on mortgage foreclosures (see Moulin 1991, 146–52; Corni 1990, 159, 269–75; Farquharson 1976, 62–66; Hefford 1985, 64; Shaw 1982, 14–16; Lloyd 1982, 358–61; Tracy 1964, 122–31, 150–204; Bothwell et al. 1987, 254; Rooth 1993, 217–20). These programs typically were retained after commodity prices increased in the late 1930s and were expanded during World War II and in the postwar period.[89]

The crisis created by the Great Depression, the unprecedented, peacetime government intervention into agricultural markets it initiated, and the retention of those programs after it ended confirm the arguments made by Peacock and Wiseman (1961) and Higgs (1987), who argue that the growth of government obligations, regulations, and expenditures is discontinuous. Crises are necessary to change popular perceptions about the role of government and acceptable tax levels. Crises facilitate interest group formation and lobby activity for government relief or support. Taking advantage of the new political environment, politicians respond to lobby demands and general unrest by devising transfers and regulatory policies to address the crisis. These policies in turn create constituents who maneuver in the political arena to maintain and extend government intervention after the initiating crisis has passed. In this way, the Great Depression was the defining moment in the regulation of agriculture in the United States and elsewhere in Western industrial countries.

89. E.g., see Hefford (1985, 140–41) for discussion of the continuation of Australian policies and Grigg (1989, 24) for discussion of the reaffirmation of guaranteed prices with the 1947 Agriculture Act in Britain. Other discussions of postdepression policies include Bothwell et al. (1989), Britnell and Fowke (1962, 365–400), Keeler (1987), Muth (1970), and Tracy (1964, 225–367).

Appendix

Table 6A.1 **Linkage between New Deal Legislation and 1962 Agricultural Regulation**

Public Law	Date	Link to New Deal Legislation
425	3/30/62	Ammended the Soil Conservation and Domestic Allotment Act and the Agricultural Act of 1949 regarding participation in the 1962 feed grain support program. The Agricultural Act of 1949 (P.L. 439), in turn, had modified the Agricultural Adjustment Act to define new parity prices, support levels, marketing quotas, and acreage allotments for tobacco, corn, wheat, rice, cotton, peanuts, wool, honey, potatoes, and other crops.
412	3/6/62	Amended Sec. 353 of the Agricultural Adjustment Act regarding rice acreage history and allotments.
450	5/15/62	Deferred proclamation under Sec. 332 of the Agricultural Adjustment Act of wheat-marketing quotas and acreage allotments for the 1963 crop.
446	4/27/62	Extended coverage of Sec. 344 of the Agricultural Adjustment Act regarding cotton through 1962.
451	5/15/62	Authorized planting of nonsurplus crops on diverted acreage as defined by Sec. 16(d)(1) of the Soil Conservation and Domestic Allotment Act.
485	6/16/52	Deferred proclamation of a national wheat acreage allotment under Sec. 332 of the Agricultural Adjustment Act.
488	6/19/62	Amended Sec. 204 of the Agricultural Act of 1956 (P.L. 540) regarding restrictions on foreign imports of cotton or cotton products as outlined in the Agricultural Adjustment Act of 1933.
494	6/25/62	Amended the Agricultural Marketing Act of 1937 to reduce the revolving fund.
530	7/10/62	Amended the Agricultural Adjustment Act of 1938 regarding tobacco acreage allotments.
535	7/13/62	Amended and extended the provisions of the Sugar Act of 1948 (P.L. 388), which continued the sugar support program as defined in Sec. 301 of the Agricultural Adjustment Act of 1938 and the Sugar Control Act of 1937 (P.L. 414).
539	7/19/62	Amended the Sugar Act of 1948 as authorized in the Agricultural Adjustment Acts and the Sugar Control Act of 1937.
540	7/19/62	Amended the Agricultural Adjustment Act of 1938 to extend the time for the referendum regarding the national marketing quota for wheat.
632	9/5/62	Extended the International Wheat Agreement Act of 1949 (P.L. 421) to stabilize wheat prices as described in the amended Agricultural Adjustment Act of 1933 (P.L. 320, 1935).
639	9/5/62	Extended water and soil conservation.
703	9/27/62	Food and Agricultural Act of 1962: amended extended provisions of Sec. 331–39 and others of the Agricultural Adjustment Act of 1938 and Sec. 7, 8, 16 of the Soil Conservation and Domestic Allotment Act.
732	10/2/62	Amended the Soil Conservation and Domestic Allotment Act

(continued)

Table 6A.1 (continued)

Public Law	Date	Link to New Deal Legislation
		regarding drainage of wetlands.
801	10/11/62	Modified the wheat program as described in Sec. 309 of the Food and Agricultural Act of 1962 and the Agricultural Adjustment Act of 1938, Part III.
824	10/15/62	Amended Sec. 316(a) of the Agricultural Adjustment Act of 1938 regarding tobacco acreage allotments.

Table 6A.2 **Demand Enhancement and Supply Control Programs as Listed in the *Digest of Appropriations* and *U.S. Budget***

Demand Enhancement	U.S. Food Administration, 1918–19; Federal Farm Board purchases via loans to cooperatives, 1929–33 (not part of USDA budget); CCC purchases, 1934–70; purchase of surplus sugar with AAA processing tax revenues, 1935–36; export and domestic consumption of surplus agricultural commodities, 1936–48, 1950–51; National School Lunch Act under the AAA, 1947–52; removal of surplus agricultural commodities 1940, 1949–52; surplus reserve for postwar price support via the AAA, 1946; foreign war relief via the AAA, 1942–47; foreign food programs via the AAA, 1946–47; Production and Marketing Administration (school lunch, removal of surplus agricultural commodities), 1950–52; Foreign Agricultural Service, 1953–70; and Agricultural Marketing Service, 1953–70
Supply Control	Milk Importation Act, 1928–41; Cooperative Marketing Act, 1927, 1930; Agricultural Adjustment Administration, 1934–49; Soil Conservation and Domestic Allotment Act, 1936–42; Filled Milk Act, 1937–41; Sugar Act, 1943, 1944; 1950–70: Production and Marketing Administration (administration of acreage allotments and marketing quotas of AAA, SCDA, and Sugar Act), 1950–52; Agricultural Conservation Program Service and Commodity Stabilization Service (AAA marketing quotas, acreage allotment, sugar quota program, Soil Conservation and Domestic Allotment Act), 1953–60; Soil Bank program, 1956–58); Agricultural Stabilization and Conservation Service (Agricultural Conservation Program Service merged with Commodity Stabilization Service), 1961–70

Table 6A.3 **U.S. Domestic Wheat and World (Australian) Wheat Prices**

Year	U.S. Base Price (larger of price received by farmers of CCC loan rate)	Price Supports[a]	Total U.S. Price (supported and unsupported)	Australian Export Price
1990	$0.621		$0.621	0.590
1901	0.631		0.631	0.606
1902	0.630		0.630	0.709
1903	0.693		0.693	1.464
1904	0.926		0.926	0.651
1905	0.747		0.747	0.719
1906	0.660		0.660	0.698
1907	0.866		0.866	0.670
1908	0.967		0.967	0.984
1909	0.991		0.991	0.920
1910	0.908		0.908	0.923
1911	0.869		0.869	0.770
1912	0.807		0.807	0.819
1913	0.794		0.794	0.798
1914	0.975		0.975	0.801
1915	0.961		0.961	1.679
1916	1.430		1.430	0.894
1917	2.050		2.050	0.953
1918	2.050		2.050	0.953
1919	2.160		2.160	1.051
1920	1.830		1.830	1.413
1921	1.030		1.030	0.866
1922	0.966		0.966	1.061
1923	0.926		0.926	1.029
1924	1.250		1.250	0.939
1925	1.440		1.440	1.222
1926	1.220		1.220	1.108
1927	1.190		1.190	0.916
1928	0.998		0.998	0.762
1929	1.040		1.040	0.789
1930	0.671		0.671	0.552
1931	0.391		0.391	0.245
1932	0.382		0.382	0.420
1933	0.744	0.290	1.034	0.530
1934	0.848	0.290	1.138	0.580
1935	0.831	0.330	1.161	0.690
1936	1.020		1.020	0.980
1937	0.962		0.962	0.890
1938	0.590[b]	0.120	0.710	0.500
1939	0.691	0.280	0.971	0.552
1940	0.682	0.181	0.863	0.624
1941	0.980[b]	0.180	1.160	0.666
1942	1.140[b]	0.234	1.374	0.663
1943	1.360	0.234	1.594	0.764
1944	1.410		1.410	0.995
1945	1.490		1.490	1.513
1946	1.900		1.900	2.268

(*continued*)

Table 6A.3 (continued)

Year	U.S. Base Price (larger of price received by farmers of CCC loan rate)	Price Supports[a]	Total U.S. Price (supported and unsupported)	Australian Export Price
1947	2.290		2.290	3.055
1948	2.000[b]		2.000	2.448
1949	1.950[b]		1.950	2.716
1950	2.000		2.000	2.082
1951	2.180[b]		2.180	2.313
1952	2.200[b]		2.200	2.355
1953	2.210[b]		2.210	1.857
1954	2.240[b]		2.240	1.622
1955	2.080[b]		2.080	1.473
1956	2.000[b]		2.000	1.484
1957	2.000[b]		2.000	1.613
1958	1.820[b]		1.820	1.548
1959	1.810[b]		1.810	1.491
1960	1.780[b]		1.780	1.509
1961	1.830		1.830	1.611
1962	2.040		2.040	1.610
1963	1.850	1.180	2.030	1.702
1964	1.370	0.700	2.070	1.589
1965	1.350	0.750	2.100	1.598
1966	1.630	1.320	2.950	1.717
1967	1.390	1.360	2.750	1.583
1968	1.250[b]	1.380	2.630	1.576
1969	1.250	1.520	2.770	1.454
1970	1.330	1.570	2.900	1.554

[a]Price supports for 1933–35 are benefit payments under the Agricultural Adjustment Act of 1933, for 1938–43 conservation payments under the Soil Conservation and Domestic Allotment Act, for 1963 Soil Bank payments, and for 1964–70 marketing certificate support payments.

[b]CCC market market rate.

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