Food & Agriculture Policy Issues for the 1980s

The Texas A&M University System

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Daniel C. Pfannstiel, Director, College Station

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FOREWORD

As the Nation enters the decade of the 1980's, food and agricultural policy issues have taken on a new significance. New problems face all participants in the food and fiber system, including farmers, consumers, foreign customers, and those involved in processing and marketing of agriculture products. The broad focus of food and agricultural policy includes: farm price and income policies; food prices, supplies and stability; farm structure issues; international trade; crop production protection policies; nutrition, food quality and assistance; and natural resources, energy and environmental issues.

The role of public policy in the entire food and agricultural system—from input supply, through farm production, to product processing, transportation, distribution, consumption, and trade—is crucial. The Food and Agriculture Act of 1977, which embodies most of current national policy for food and fiber, expires in 1981. As successor legislation is developed, programs and policies will be formulated and tested, which will guide the nation's food and agriculture system for the next several years. A well-informed citizenry is the best assurance that new legislation will reflect the vital interests of the various interest groups concerned about food and agriculture.

The articles in this publication—prepared by economists from Land Grant Universities and from the U.S. Department of Agriculture—present the issues that are relevant as new food and agriculture legislation is being considered. The articles do not advocate particular policies or courses of action. The purpose of the publication is to provide information about existing programs, alternative policies and expected consequences of each.

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J.B. Wyckoff, Extension Economist, Oregon State University

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AGRICULTURAL AND FOOD SITUATION, POLICIES, AND ISSUES

R.G.F. Spitze* and Norbert A. Dorow*

ABSTRACT

Citizens and their organizations have the opportunity to participate and influence major public decisions about future agricultural and food policies likely to be made during 1980-81 in developing replacement legislation for the expiring 1977 Act. New policies may affect food prices and quality, farmer well-being, agricultural trade, food aid, use of natural resources, and agricultural research and education. This paper summarizes present policies, presents economic trends, and identifies problems for policy discussion. It serves as an introduction to seven issue areas discussed in subsequent parts of this publication.

INTRODUCTION

Public Decisions to be Made

Major public decisions in the United States will be required in developing a policy to succeed the Food and Agriculture Act of 1977 after it expires at the end of 1981. Those decisions will set the future course for this nation's new grain reserve programs, price and income assistance to farmers, food stamp program, foreign food assistance, agricultural trade, public research and education.

Policymakers will commence work on these policy questions as early as 1980 with final decisions being made during 1981. The outcome of the next Presidential and Congressional elections will be a factor in this policy process. Thus, citizens and organizations that desire to influence that future policy must initiate action prior to these critical dates. The broad policy choices are:

1. Continue the 1977 Act with minor changes.
2. Substantially alter existing policy with new purposes and provisions.
3. By taking no action, revert to existing basic legislation that dates back to the 1930's.

Purposes of Publication

This publication is designed to provide current information for citizens, public leaders, and public policymakers to use in formulating agricultural and food policy. Education is the exclusive purpose of this publication, rather than to promote or propose policy. It presents objective information about the problems, existing programs, and consequences of alternative policies the public could choose.

*Spitze is Professor, Department of Agricultural Economics, University of Illinois. Dorow is Extension Economist in Public Policy, North Dakota State University.

Future Policy Problems and Sections of this Publication

Public Policy development in 1980 and 1981 will be shaped by the perceived performance of the 1977 Act plus the currently unfolding economic situation. The seven problem areas believed to be of major importance for this period, plus this introductory section and a final section on the process of policy development, are listed below as the nine sections of this publication.

1. **Agricultural and Food Situation, Policies and Issues** (this section).

2. **Farm Price and Income Policies.** Price support levels; land set-aside provisions for production control; target price levels; incentive payments for production expansion; and use of cost-of-production escalators in setting price levels.

3. **Food Prices, Supplies and Stability.** The impacts of agricultural policies, such as price and income supports for farmers, and of grain reserves on food supplies and costs; non-agricultural policies and factors outside of policy that influence food prices and availability.

4. **Family Farm Survival: Farm Structure Issues and Policies.** Future status of the family farm; effects of public policies on this structure; ownership and control of farm production assets by nonfarm and foreign investors.

5. **International Trade Issues.** Trade flows of agricultural products as affected by import restrictions, export embargoes, export credit assistance, international commodity agreements, state trading, and foreign food assistance.

6. **Crop Production Protection Policy.** Vulnerability of farming to natural disaster and the public's interest in providing protection to the operator through private and public insurance protection.

7. **Nutrition Policy, Food Quality and Assistance.** Responsibility of private and public policy for food quality and safety; the extent and type of food assistance to low income target groups.

8. **Natural Resources: Implications for Agricultural, Environmental, and Energy Policies.** Public interest in the use of natural resources on farms and rural areas; their effect on the security of future production, quality of stream flow, energy production and consumption, and water supplies.

9. **How Agricultural and Food Policies are Developed.** Changing policymaking forces; executive-legislative-judicial roles; reconciling conflicts of various interest groups; citizen role in policy development.

Role of the Agricultural Sector

Food and fiber are indispensable to the survival of society and the economy. That sector includes farm production of raw food and fiber products, farm supply industries, processing and distribution industries, and an expanding system to facilitate foreign trade. It is, however, but one of many sectors of the economy, such as health care, shelter, education, transportation, and communication, necessary for the level of living accepted by this nation. But just how big is this agricultural and food sector?

The farm population comprises less than 4 percent of the total population. This proportion has declined as the nation developed history, and now is among the lowest of the world. Farm people leave the farms, or work off the farm part-time, in pursuit of higher incomes, facilitated by the increasing use of labor-savings and output-increasing production inputs on the farms. However, twenty-six percent (26%) of the total population are considered rural, including small towns in agricultural communities. Rural people identify with many issues directly and indirectly connected with food and agricultural policy including community development, credit, education, land use, communications, water, environment, and transportation.

The combined economic contribution from both farm families and their farm input suppliers through their farm production is equal to 5 percent of the total production of all goods and services in the nation. Net farm family income equals about 4 percent of the total personal income of the economy. As one measure of the economic contribution made to the economy by farm families, this income arises approximately half from their farm production and half from off their farms.

The economic value of the food and fiber represented by total consumer food and clothing expenditures and net exports equals 18 percent of the nation's production. Over 80 percent of the economic activities of this nation is unrelated to the agricultural and food sector.

Agricultural exports contribute to reducing our balance of payments deficits in fiscal 1979 by more than $16 billion, the value which agricultural exports exceed imports. Agricultural exports annually account for over 20 percent of all U.S. exports, which is four times greater than the U.S. farms proportionate 5 percent share of total domestic production.

Public Policy for Many Interests

Farmers, their organizations and agribusinesses have an interest in policies affecting their production, prices, and income. But public agricultural and food policy is not their exclusive domain. It probably never was, but the community of interest is expanding.

The active interest of many citizen groups in food and farm policy can be traced to events associated with the Russian wheat purchases in 1972-73, with the food crises leading up to the World Food Conference in 1974, the use of chemicals in food and in farm production, collective bargaining of hired farm workers, effects of sediment run-off on river water quality, the farm strike tractorcades of 1978 and 1979, emergence of gasohol, and the attention on problems of small farmers.

ECONOMIC SETTING FOR POLICYMAKING

The 1970's demonstrate that the world food supply and market demand are in a sensitive balance between shortage and abundance. During most of the 1950's, the 1960's and the early 1970's, U.S. agriculture was periodically faced with burdensome government stocks, depressed prices, and acreage diversion programs. Weather caused serious shortfalls in world grain production in 1972 and again in 1974, which resulted in a serious drawdown of grain stocks and a doubling of grain prices in world trade. Above average world grain output in 1976 and 1977 again led to a buildup of grain reserves. U.S. grain prices dropped to price support levels. The initiation of the farmer-owned grain reserve, use of set-aside, and growing export demand all contributed to renewed price strength. The poor 1979 grain crop in the USSR even in the face of record U.S. crops resulted in continued price strength up to the time of suspension of exports to the Soviet Union.

U.S. agriculture has become the shock absorber for fluctuations in world grain production. The potential seriousness of this problem can be seen by recognizing that the USSR, People's Republic of China and India account for one-half of the world's population. If these countries had poor weather for crop production during the same year, it could create a crisis in world food supplies and trade.

World population growth, although slowing, continues at nearly two percent annually, with the most rapid growth in less developed countries. World food production is increasing slightly faster, on the average, at over two percent annually, permitting nations with rising incomes to obtain more food. However, the added production is occurring in developed countries rather than those with the large populations and acute food needs. Trade expansion will be necessary if the gains in production are to be realized by all nations.

Inflation and its impact on farm commodity prices and income adds to the uncertainty of the future. Inflation increases costs of farm inputs. However, farm commodity prices are determined by different supply and demand forces and by agricultural policies.

Food and agricultural policies for the 1980's need to be flexible and responsive to fluctuating world grain supplies, to changes in market demand, and to the problems associated with inflation. Such policies would help stabilize food supplies and prices for consumers, and commodity supplies and prices for farmers.

THE FOOD AND AGRICULTURE ACT OF 1977

Shaped by Evolution of Policy

The Food and Agriculture Act of 1977 which serves as the primary launching pad for future policy is the latest installment in a century and a half evolution of public policy for agriculture and food. In successive eras from the early nineteenth century, policy has focused on the transfer of the public domain into private farm ownership, establishment of institutions of public agricultural research and education, farm credit agencies, conservation assistance, marketing services, farm prices and incomes, production control, food aid to needy people at home and abroad, food quality and price, grain reserves, the rural community, environmental quality, energy use, and the future of the family farm.

The specific evolutionary policy and program roots of the 1977 Act began with a series of public price and income policies inaugurated by the short-lived Federal Farm Board of 1929, followed by compulsory acreage controls and high price supports of the 1930's, soil bank and surplus product disposal launched in the 1950's voluntary land retirement coupled with lowered price supports and deficiency payments initiated in the 1960's, food stamp program of 1964, and the explicit recognition of separate price and income support mechanisms introduced in the comprehensive Agricultural and Consumer Protection Act of 1973.

Primary Provisions of the 1977 Act.

1. **Price and Income Supports:** The 1977 Act includes price-support loans, target prices and deficiency payments, production control provisions, export embargo provisions, farm storage, grazing and hay programs, and disaster payments. Commodities affected are wheat, corn, and other feed grains, soybeans, cotton, rice, peanuts, dairy products, and wool and mohair. Only tobacco and sugar remain with other policy. New features introduced in the 1977 Act included substituting a current planting basis for the historical wheat, feed grain and cotton allotments and bases and using cost of production to set and then adjust target price levels.

2. **Grain Reserve.** For the first time, public policy mandated, when supplies are abundant, a minimum national farmer-held reserve of 300-700 million bushels of wheat. Grain reserves for feed grains were left optional. By 1979, the reserve had grown to over 400 million bushels of wheat and nearly a billion bushels of feed grains. The reserve offers increased food supply and export supply security, more price stability, but less chance for shortage induced windfall gains to grain owners.

3. **Food Assistance.** Both domestic and foreign food aid programs are encompassed. The Food Stamp Program, first tried in 1939, reinstated in 1961, and now reaching 8 percent of our citizens, was continued with increased benefits relatively to the lowest income recipients and a major change to eliminate any cash purchase requirement. Supplemental Food for Women, Infants and Children (WIC), rapidly expanding since its initiation in 1974, was continued.

The P.L. 480 program, a foreign food aid program launched in 1954, was continued. The program offers food donations to countries experiencing disaster, sales on easy credit terms, and local currency payments for designated self-help efforts. Much less quantity is being distributed currently to the roughly eighty recipient countries than earlier years.

Human nutrition is identified as a basic responsibility of the U.S. Government with priority given to research and education.

4. **Research and Extension.** Major agricultural research, Extension and teaching programs were brought under the umbrella of the 1977 Act. USDA is identified more prominently as the lead agency for channeling federal support to the food and agricultural sciences, with competitive grant funding and priority areas mandated.

5. **Additional Items.** Other commodities and programs were addressed in the 1977 Act, a partial list including the beekeeper and dairy cattle indemnity program, filbert marketing, aquaculture, emergency feed program, certain Farmers Home Administration functions, and phases of rural development, environmental enhancement, conservation, and funding for grain inspection.

FARM PRODUCTION AND INCOME SITUATION

Farm Output and Productivity

Public attitudes and legislative policies are affected by the record of accomplishment of any economic sector. Aggregate physical output and productivity from U.S. farms have exhibited steady increases. There has been variation due to natural occurrences, economic market forces, and past public policies (Table 1). In this decade, thus far, farm output has increased at an average annual rate of 2.5 percent.

In comparisons of output per worker hour, the record of the accomplishment by the farms is higher than the average for all nonfarm businesses. Will this achievement continue? What future policies are desired to affect that productivity?

Farm Product and Food Prices

Farm product prices for the past two decades reveal greater variability than wholesale prices. Consumer food prices reveal slightly more variability than all consumer prices (CPI). Both farm product and consumer food prices have been increasingly sensitive to the gyrations of world markets for agricultural products. These markets absorb a fourth of U.S. farm production.

Table 1. Changes in U.S. Farm Output and Productivity with Comparisons*

Periods	Changes in Output		Changes in Output per Worker Hour		Changes in Farm Productivity
	Farm Output	Private Nonfarm Business	Farm	Private Nonfarm Business	Output per Unit of Input
	Percent				
1950-55	12.2	21.2	32.4	11.8	9.6
1955-60	9.6	11.9	44.4	9.7	15.0
1960-65	7.7	28.2	36.9	19.2	10.9
1965-70	3.1	16.0	25.8	7.8	-1.0
1970-75	12.9	9.9	25.9	6.0	11.9

*Total change during the five-year interval indicated from previous year. This procedure has the implicit possible problem created by a unique year; however, another computation using cumulative change on a five-year moving output index base revealed a very similar trend, although a smoother one.

Sources: USDA. *Changes in Farm Production and Efficiency.* ERS Statistical Bulletin No. 561. September, 1976; US GPO. *Economic Report of the President.* January, 1977.

Future farm price and farm income levels will be substantially determined by demand and supply forces. If farm output continues at an average annual increase of 2.5 percent, then quantities demanded must increase simply to maintain steady price levels. Our nation's population growth provides about 0.7 percent more demand per year, increased income about 0.3 percent more, so net exports would have to absorb an additional 1.5 percent a year, a volume achieved in only a few years in history. Will there be adequate demand to balance future supply? Are policies needed to alter either farm or food prices?

Farm Income Levels and Comparisons

Farm family incomes are highly variable and are fairly closely correlated with product price levels. Considerable variation exists among sizes, farm types by commodity, and geographic areas. Three income trends are informative.

Total income per farm family has been rising, particularly on the intermediate size farms, while those with the highest incomes have barely kept pace with inflation. Off-farm income earned by farm families is rising, is substantial for all farms, and now comprises over 80 percent of the average total income for all classes of farms with sales below $20,000.

Net income per person living on farms from all sources in 1978 averaged 91 percent of that per person not living on farms. There has been a general upward trend since 1960, but with a pronounced bulge in 1973 and 1974 when farmer incomes rose to a level equal or greater than nonfarm.

Changes in wealth position of owners of farmland, both farmer and nonfarmer, have been substantial in recent years. Capital appreciation of farmland computed from average market value has recently greatly exceeded net farm income. Farmers purchasing land prior to 1972 are less likely to experience economic cash flow strain as are farmers who recently purchased land, particularly beginning farmers.

Does this variability and level of farm family income warrant continued public income policy? What are the policy implications of the escalation of farmland values and the continued increases in prices of other inputs?

Policy Measures of Economic Well-Being

Income comparisons across occupations, geographic areas, and age/education characteristics often figure in agricultural policy discussions.

Parity price, a measure of purchasing power of a unit of product, first appeared in the 1930's, and remains a widely discussed goal. Yet it has faded since the 1960's in policy application due to difficulties of identifying acceptable base years.

Parity income, emerged in the 1950's as a possible alternative to parity price, but it has had little application in policy due to difficulty of measuring comparable returns to management, capital, and labor devoted to agriculture.

Rates of return to various factors of production used in farm production, particularly capital, have been computed and compared with other industries, but little application has appeared in policy.

Cost of production experienced a recent revival in both discussion and policy application after abortive earlier attempts. Cost of production was used as a guideline for setting target prices in the 1977 legislation and was also specified for use in adjusting target prices.

FARM STRUCTURE—A GROWING ISSUE

American agriculture is a diverse and changing industry. Looking ahead, agricultural organizations and various other rural and urban groups are expressing concern about the changing structure of agriculture. In particular they are concerned about the future of the "family farm."

"Structure of agriculture" is a comprehensive *term. It involves more than just type and size of farm.* The dimension may include: number and size of farms, type of farm organization and proprietorship, market arrangements, ownership and control of resources, sources of capital and who makes the management decisions.

Present Structure and Trends

The traditional structure of American agriculture is dominated by the family farm. Our current structure has evolved as a result of economic and technological forces and of past and present policies. For example, the Homestead Act of 1862 was a major determinant in the development of the family farm type of agriculture. With mechanization, technology and competitive forces, farms have become larger and fewer in number, but most are still considered to be family farms.

Family farms, as commonly defined, are those farms that annually use less than 1.5 man-years of hired labor and are not operated by a hired manager. They account for over 90 percent of all farms and about 55 percent of total cash receipts from farming. A large majority of these are "small farms" operated by part-time farmers and/or low income farmers. In 1978, 1.8 million small farms, or 66 percent of the 2.7 million farms, had gross sales of less than $20,000. These smaller farms accounted for only 9 percent of total receipts from farming.

The concern is about the trend toward the larger and industrial type farms. This 7-8 percent of total farm numbers accounts for about 45 percent of total cash receipts from farming. The current trend appears to be toward more "larger-than-family farms," a decline in commercial or full-time "family farms," and a more slowly declining number of "small farms."

Policy Implications

Over the years, Congress has supported various farm commodity programs, credit policies and tax provisions with one of the major expressed purposes being to help the family farmer. However, programs to support prices, reduce risk, provide easily available credit, and provide tax advantages, have permitted or even encouraged economically aggressive and more efficient farmers to enlarge their farm operations.

Why might the public be concerned about the future structure of agriculture? Family farmers are concerned about their economic survival or that of succeeding generations on the farm. Rural communities are concerned about the loss of farms and families as bases for economic and social support. The general public has an interest in the structure of agriculture as it may affect the cost of production, adequate and stable food supplies, the prices of food and fiber, and the distribution of land ownership and wealth.

The public by acting through Congress can influence the structure of agriculture in the future.

WORLD TRADE AND AID POLICY ISSUES

World Food Situation

The world food situation is part of the environment-influencing U.S. agricultural and food policy.

For the world as a whole, food production is increasing at a pace exceeding population growth which permits increasing food consumption per capita as shown in Table 2. However, the developing countries are showing little gain in food production per capita because of high population growth rates. The aggregate data cover the vast differences among countries around the world. Agricultural trade allows for food supply adjustments among countries.

Table 2. World Food Production

	Annual Change	
	1970-1978	1977-1978
	percent	percent
World Production		
Total	+2.5	+2.8
Per capita	+1.4	+1.7
Developing countries production		
Total	+2.9	+2.6
Per capita	+ .3	0
Developed countries production		
Total	+2.4	+2.9
Per capita	+1.5	+2.5

Source: USDA. *World Agriculture Situation.* December, 1978, p. 4

U.S. and World Agricultural Trade

With a fourth of the U.S. farm production finding its way into world markets, many with highly restrictive trade policies, it is clear that U.S. agriculture enjoys a competitive advantage, particularly in grains and soybean products. It is less clear for dairy products, beef products, and some fibers. Current value and quantity of exports have risen generally in the 1970's with the largest jump occurring in 1973-74. Even though agricultural imports have also increased, the net trade surplus has increased substantially. On the other hand, the U.S. share of world agricultural trade, both exports and imports, has shrunk since World War II as other major exporters have expanded more than the U.S.

Trade is also shaped by government policies such as U.S. domestic price supports and import restrictions, and the EEC variable import levy. Such policies are more pronounced abroad where nations are striving for self-sufficiency, protecting new thrusts of production or sheltering powerful internal producer groups. These conflicts of national policies and world trade patterns highlight the importance of efforts toward trade liberalization, such as the cycles of GATT negotiations and the recent Tokyo Round. What effect do U.S. policies have upon its agricultural trade?

Foreign Food Aid Policy

Since the post World War I relief efforts, the U.S. has been involved in sharing some of its agricultural products with needy nations, a policy formalized in 1954 with the Agricultural Trade Development and Assistance Act (PL 480). Some $32 billion worth of agricultural products have been shared with most nations of the world. Currently, most P.L. 480 shipments are distributed under long-term credit concessional sales. In recent years the total amount has averaged about $1.5 billion per year, with much less quantity than in earlier years.

CROP DISASTER PROTECTION

Farmers continue to face the natural hazards of hail, drought, flood, insects and diseases. Agriculture is unique among major industries in the degree it is subjected to the vagaries of nature. Since food and fiber production is a basic need, the public has been confronted through the years with the question of whether its special assistance to farmers to help deal with these natural hazards is a cost that society should help bear.

The federal government has a number of programs aimed at crop disaster protection for farmers. Among them are the Federal Crop Insurance Program, the ASCS Disaster Payment program and the Farmers Home Administration Emergency Loan program. These federal programs supplement the private insurance industry which offers protection against hail and fire but not against multiple hazards.

What are the Issues?

With several crop disaster protection programs available to farmers, what are the issues? Some observers have claimed that present programs overlap, are too costly, and are inequitable among farmers. The U.S. Department of Agriculture has proposed a comprehensive all risk insurance program subsidized by the federal government that would replace all or parts of several programs previously cited. Current legislation being considered by Congress modifies the comprehensive insurance program and phases out the disaster payment program.

Disaster protection for a wide variety of crops over the nation with many different hazards is a complex issue. It raises many difficult questions. Can one comprehensive program provide the needed protection? Should the protection be in the form of insurance, emergency relief, or a combination of these? What kinds and levels of coverage are needed? How much subsidy from the public is justified? What role should the private insurance industry have?

Other issues are the possible impact on economic production and the structure of agriculture. Will subsidized protection encourage uneconomic production in marginal or high risk areas? Will it affect the competitive position of the family farm or the large farm?

There is insufficient experience with comprehensive all-risk crop insurance to answer all these questions. The issue will be decided through the political process; therefore it is important that farmers and other interest groups be informed and express their views.

FOOD AND THE CONSUMER

Discussion of farm policy includes food policy. Consumers' concerns about food, in addition to supply and prices, include nutrition, quality, safety and food assistance for the needy. Over the years, numerous Federal programs and regulations have been developed in response to consumers' concerns. However, critics have said that the U.S. has no comprehensive food policy to alleviate the food problems.

Human Nutrition

One general food policy objective could be to have enough good nutritious food so that all Americans can be well nourished. Inadequate nutrition may be related to factors such as deficient supplies of proper foods, high food prices, low income, lack of information, misinformation, cultural eating habits and other related factors. Good nutrition is especially important to children, pregnant women and the elderly.

Political debate continues on public responsibility for human nutrition. Some questions raised include: What level of responsibility does the public through government have toward the goal of well nourished people? Do consumers receive adequate information on nutrition? Should food labeling provide more nutrition information? What should government's role be toward improving the level of nutrition nationally?

Food Safety and Quality

Our nation often takes for granted an ample food supply; but as Americans become more consumer conscious, more interest has developed in food safety and quality. This interest is further heightened by the increasing use of chemicals in agricultural production and the use of food additives in food processing. In response, the Government has established increasingly rigorous restrictions on food producers and processors.

The increasing interest in food quality has brought these issues into focus: Should additives, pesticides, or other production aids be banned or should there be minimum tolerance levels? Do we need more quality standards? How much information should be required in food labeling?

Food Assistance

Food aid for low income families and for school lunch programs continues to receive public support. In 1978, federal cost of USDA food programs was about $8.0 billion. The major cost is for the food stamp program and the second largest expenditure

is for the school lunch program. In 1978, about 17 million people participated in the food stamp program and about 26 million children participated in the National School Lunch Program.

Although there is public support for the concept of food aid, some questions debated are: Who should qualify for food stamps? Should there be a cash purchase requirement? Is the use of food stamps the best method of providing food aid to low income persons? Should the food aid program be integrated with other welfare programs?

NATURAL RESOURCES: LAND, ENVIRONMENT AND ENERGY

Our society is placing increasing demands on land, water, energy and the environment. Agricultural and food policy cannot be developed without considering the implications for land, energy and environmental policies. With relative resource scarcity, the development of policies must include consideration of the trade-offs among society's goals for food and all the other uses of our limited resources.

Land and Agriculture

The public is interested not only in current agricultural production from its land and water resources, but also in the preservation of these resources for future generations. Soil erosion has long been recognized as a serious problem. National policies have addressed this problem since the 1930's. The Soil Conservation Service has provided technical service and the Agricultural Stabilization and Conservation Service has encouraged soil conservation practices with cost sharing payments. However, other public policies, such as commodity price enhancing programs and disaster payment programs have encouraged more intensive use of land.

There are many questions raised by these concerns of the public about the long term conservation of its land and water resources. Should the educational and technical assistance programs for soil conservation be expanded? Should the federal government encourage farmer adoption of conservation practices through special incentives such as, cost sharing, tax breaks on conservation investments and low cost loans for conservation costs? Should farmers be required to follow prescribed conservation practices to qualify for price and income program benefits? Should the federal and/or state governments enact laws involving conservation regulations and penalties for excess soil loss?

Land Retention, Environment and Agriculture

The public is becoming increasingly concerned about the continued conversion of agricultural land to urban development, highways and other nonfarm uses. This conversion of 2.5 to 3.0 million acres annually is reducing this basic resource for food production and may also have environmental effects in local areas.

Policy questions raised by the land conversion issue include: Should federal, state and local government policies be developed to preserve agricultural land for food and fiber production? If so, what type of policies are needed?

Energy and Agriculture

American agriculture production and food processing and distribution are highly dependent on oil and natural gas. Supplies of natural gas and particularly oil are limited and becoming more costly. Domestic use of energy will shift away from oil and gas to other sources including coal, shale oil, solar energy, biomass and perhaps nuclear energy.

Some of the policy issues might include: What impact will the energy shortage have on agriculture? Should mandatory liquid fuel allocation be imposed to prevent shortages during critical farm production periods? To what extent should the government promote and subsidize the use of biomass including high energy crops for a synthetic fuel industry?

COMMENTS

Food and agriculture policies evolve from the political process. They reflect to varying degrees the interests of the general public, farmers, rural communities, consumers, taxpayers and also our foreign customers.

The papers in this publication deal with policy issues affecting the various interest groups. It is important to recognize the inter-relationships among policies. Farm price policies may affect consumers, taxpayers, farm structure, export markets and use of natural resources. Food policies affect consumers, farmers, taxpayers, food processors and others. Energy policies affect nearly everyone. Any policy may have impacts beyond the initial objectives.

The political process for development of food and agriculture policies will be more effective if the interest groups are well informed on effects of alternative policies and if they recognize how to express their positions in the political arenas.

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FARM PRICE AND INCOME POLICIES

A. L. (Roy) Frederick and Milton H. Ericksen*

ABSTRACT

Price and income policies will be a significant part in future legislative debate relating to production agriculture. There is concern about farm family income relative to the nonfarm sector, about rising farm costs with inflation, instability of farm income and the wide variability in size and income among farmers. Maintaining a viable agriculture to meet expanding domestic and foreign food needs is an issue. Six farm price and income policy alternatives are discussed. Consequences of these alternatives are evaluated in terms of their possible impacts on farmers, consumers, taxpayers and foreign markets.

THE PROBLEM AND CURRENT SITUATION

The heart of public debate on farm price and income policies focuses on the question: Are farmers and their families being treated fairly with respect to income? There is no categorical answer to this question even though income data indicate that farm families on the average have had lower income than their urban counterparts. Important objectives of agricultural policy have been to improve farm family income and to provide adequate income for farms to continue to be economically viable for food and fiber production. In developing new policies, policymakers will look at net farm income as well as other measures of farmers' well-being. These policies must also be adaptable to the demands of the export market which now accounts for about one-fourth of the total U.S. agriculture market. This paper deals primarily with the situation and policies for commercial agriculture. It does not deal with the problems of low resource, low income farm families who may need social programs aimed at job training, off-farm employment, health, or other human needs.

The Nature of Farm Income Problems

The financial condition of American farmers may be evaluated several different ways. Alternative measures of financial well-being can affect both policymakers' perceptions of the problem and ultimately the development of programs which address the problem.

Comparison of Farm and Nonfarm Money Incomes: The farm population, on the average, has consistently lagged behind the nonfarm population in disposable income per capita. The only exception occurred in 1973. In the 1930's farm family income was generally less than 40 percent of nonfarm income, it reached 50 percent in the 1950's and reached 70 percent by 1966. Since 1973, when the high of 110 percent was reached, the ration of disposable incomes for the farm relative to nonfarm population has been at 80 percent or more, and it was 91 percent in 1978.

For most years in the 1970's, more than one-half of the disposable family income received by the farm population has come from off-farm sources. In 1978, for example, off-farm income totaled $34.3 billion, compared to net farm income of $27.9 billion. Off-farm income is especially important for those living on smaller farms (fig. 1).

Off-farm employment is an economic necessity for some farmers in the smaller farm sales classes. But, in other cases, a small farm is merely a sideline business for a person who does not intend to be a full-fledged commercial producer.

In 1976, only 15 percent of all farm families were in the Government's official poverty category, down from 46 percent in 1960. This compares to 12 percent of the nonfarm people in the poverty category in 1976 (16 percent in 1960).

Policies promoting equity in money incomes between the farm and nonfarm population should consider both farm and off-farm income sources. Income distribution among farm families is a second consideration in addition to average income. Price and income policies that raised average incomes of farm people would not eliminate farm poverty.

Wealth Factors as Opposed to Cash Flows: Capital gains, while not realized until assets are sold, contribute to the overall wealth of farm people. Most of these gains (about 87 percent of the total since 1960) have been accounted for by the increased value of farm real estate. Capital gains have exceeded total net farm income each year since 1970 (fig. 2).

Capital gains do not represent a source of cash for meeting farm expenses and family living costs in the same sense that current income does. As inflation continues to push up the price of many farm inputs (including land), many farmers feel a squeeze on current profits even though their net worth continues to advance. However, rapidly increasing appreciation of capital assets provides security for obtaining credit, increase leverage to purchase more land or to build a nest egg for retirement.

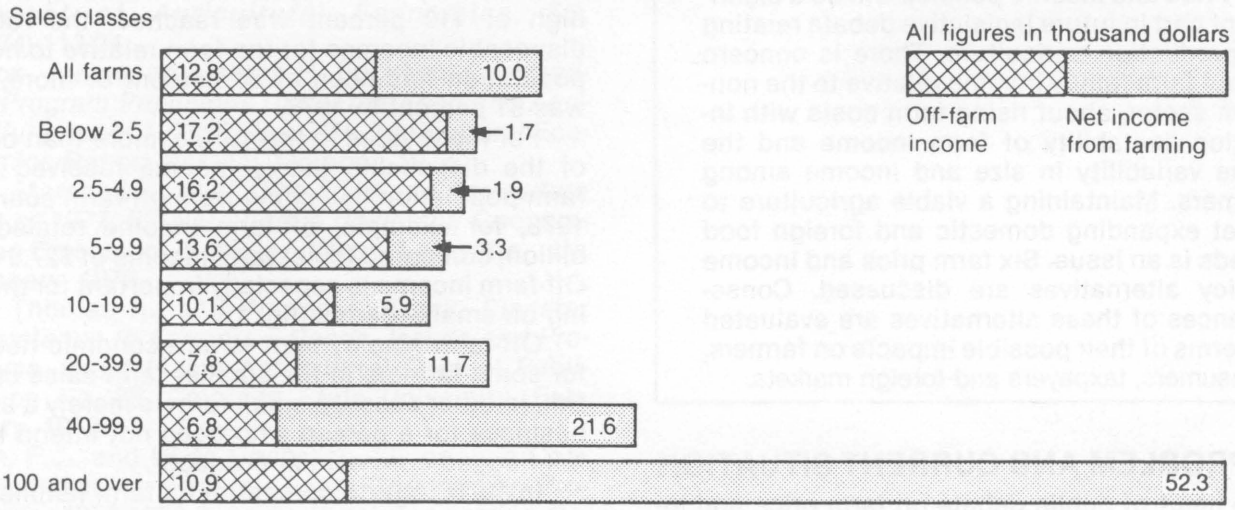
Returns to Resources: Since 1960, current earnings on farm equity capital have averaged about 4 percent per year. But increased net worth is also part of the financial story for farmers. The overall rate of return on capital jumps to 12 percent per year when net income and capital gains are combined. This total return on farm equity (current earnings and unrealized capital gains) has been double the rate of return on common stocks, including div-

*Frederick is Extension Economist in Agricultural Policy, Kansas State University. Ericksen is an Agricultural Economist, Grain and Feeds Research Section, Crop Branch, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture.

idends and capital gains since 1960, and is considerably higher than investors could have earned from investments in U.S. Government securities or high-grade corporate bonds.

FIGURE 1

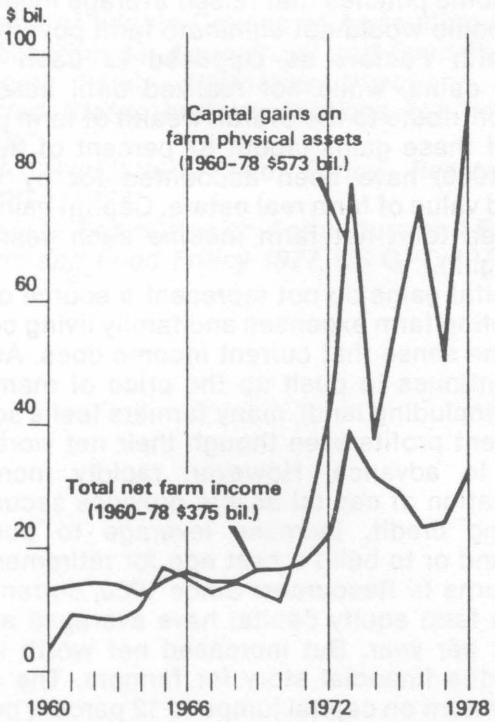
Farm and Off-farm Income per Farm Operator Family — By Gross Sales Classes



NOTE: 1978 data. Farm income is net farm income before adjustment for inventory change.
SOURCE: 1979 Handbook of Agricultural Charts, USDA.

FIGURE 2

Farm Income and Capital Gains



SOURCE: *Agricultural Outlook,* ESCS, USDA, August 1979.

Higher average returns to farm resources might be justified because the earnings are erratic earnings over time. Closer examination shows, however, that common stock investments have resulted in not only a lower average, but a more variable return than farm investments. The primary reason is the capital gains have been consistently positive for farming, whereas the stock market has experienced capital losses in about one-third of the years since 1960. However, current earnings (dividends) from common stock have been less variable than earnings from farm equity, especially during the decade of the 70's.

The consideration of wealth and returns to resources greatly complicates the income picture. A large proportion of the increase in asset values is attributable to land but farmers do not own all the farmland. Farm operators own 56 percent of total farmland. Twelve percent of farm operators are full tenants owning no land.

Moreover, some farmers, particularly recent entrants, have cash flow problems. Their operations may not generate enough cash to meet operating, debt service, and family living expenses. Only if they can survive the debt repayment years can they benefit from asset value appreciation. Programs that would increase commodity returns tend to increase values of assets committed to the production of those commodities. This would increase the wealth of established asset owners. Policymakers face the problem of providing support that will raise the cash income of farmers that are recent entrants, own no land, or are producing commodities with little short-run price protection. But how is this to be accom-

plished without adding to the wealth of existing asset owners which, in turn, makes new entry increasingly difficult?

Failure Rates: Each year some farms fail. Others hang on for years with little hope for achieving adequate family income. Limited evidence indicates that the foreclosure rate for farmers is about the same as for other businesses—less than 0.5 percent annually. However, there are many farm operations making minimal profits, even though foreclosure never takes place. Resource (land, labor and capital) continue to remain in production agriculture because there are few good opportunities for these particular resources elsewhere.

Policies designed as a final defense against foreclosure, such as stepped-up credit programs, could reduce those foreclosures but may do little to assure adequate incomes or resource returns. This would be a case of treating a symptom rather than the disease.

Other Income Factors

Other factors, such as income stability, debt servicing ability, and inflation, also affect the financial conditions of U.S. farmers.

Instability of Incomes: Between 1973 and 1978, national net farm income ranged from $18.8 billion to $33.3 billion. Income declined for three straight years after the record high in 1973 then jumped $8 billion to near $28 billion in 1978.

The events of 1972-74 also portrayed dramatically the income variability among different sectors of agriculture. In 1972, crop receipts amounted to 42 percent of total farm receipts. Two years later, crop income was 55 percent of the total. Livestock receipts dropped from 58 to 45 percent of all farm receipts in the same period. Cattlemen incurred substantial losses through a combination of high feed costs, large numbers of cattle to be marketed, and depressed prices during the same period that crop farmers enjoyed unprecedented high prices and income.

By 1976-77, hog and cattle producers and dairymen were doing much better because of increased livestock product prices and lower feed costs. Crop producers in contrast were caught in a severe cost-price squeeze brought on by the inflated cost of inputs, falling grain prices, rising land costs, and sometimes low yields caused by bad weather. The index of cash receipts from crops fell from 273 to 254 (1968 = 100) between 1974 and 1977.

Each individual producer faces a new challenge each season. He has to be concerned about the weather, pests, and other production factors. Later, he must worry about the market. Prices of products may be up but because Mother Nature failed to cooperate, he has little to sell. Or he may have plenty to sell but at a low price.

Ability to Service Debt: The ability to service debt is crucial to the future production of food. This is a concern to individual farmers as well as to the entire society. This ability is the essence of being able to stay in business for many farmers and it is the chief hurdle for young farmers seeking to enter farming.

Total U.S. farm debt stood at $138 billion on January 1, 1979, up from $50 billion 10 years earlier. Assets increased much more than debt. Total assets were $820 billion in January 1979, up $517 billion from the $303 billion 10 years earlier. The agricultural industry as a whole continues to have a highly favorable debt-to-asset ratio of about 17 percent compared to 62 percent for U.S. non-financial corporation. However, this average hides the wide divergence among farms.

Many expanding or beginning farmers have a high debt-to-asset rate. Where debt is high, interest costs become a significant part of production expenses. In such situations, cash net farm income may fall short of being able to cover living expenses, debt principal repayment, and net new investment. The relationship between net farm income and debt commitments was one of the danger signals of the 1970's.

Inflation Effects: During periods of inflation, money tends to flow toward fixed, tangible assets. Productive agricultural land is a prime example. For established landowners, inflation-generated boosts in land prices may be quite desirable. But for those just beginning to farm it is a much different story, as they face huge land investment.

Also, the structure of industries supplying inputs to production agriculture is imperfectly competitive; input suppliers are better able to keep their prices in step with inflation. The farm sector has a competitive structure of many individual units. Farm prices are determined on the basis of supply and demand in the short run without regard to current inflationary trends.

During inflationary periods, then, farmers can find themselves in a cost-price squeeze, but at the same time entry costs continue to increase. A long-standing but ever-increasing problem for beginning farmers is to survive the liquidity crisis in their early years of farming. Part-time farming, partnership arrangements with relatives, renting and leasing, and off-farm employment are being used by entry-level farmers to moderate their otherwise tight cash financial situation.

Classification of Farm Income Problems

An overview of farm income problems may miss certain producers with particular problems. There is a tendency for farmers' income problems to vary by commodity mix, geographic region, size of business, tenure and operator age. Within those categories identified as most likely to have problems, not all farmers will be affected.

Commodity Mix: The commodity mix is a key factor affecting farmers' incomes. Some commodities such as broilers and fruits and vegetables are grown with production contracts which guarantee a certain price to producers. This arrangement effectively restricts windfall profits, but it generally guarantees that a return will be paid to the operator for his contribution to production. He may have contributed

some, but not all, of the land, labor, management, and capital needed for production.

Some commodities are also protected by Government price supports. Manufacturing grade milk, for example, is currently supported at 80 percent of parity. There have also been Government price supports of one form or another for food and feed grains, tobacco, and peanuts for many years. Cattle and swine producers have not had supports but they have benefitted from more stable feed supplies and prices generated by feed grain programs.

Regional Variation: Incomes vary by geographic area because of differences in commodity produced, farm size, soils, rainfall, and other weather patterns. In 1978, per farm net income ranged from a high of $56,706 in Arizona, dominated by relatively few large irrigated farmers, to a low of only $811 in West Virginia, characterized by many relatively small, part-time farming operations. Each region produces those commodities for which it has the comparative economic advantage. Therefore, regions which produce primarily commodities supported by Government programs receive more benefit from these public programs.

Size: Large farms may be viable without farm price and income support programs. They have advantages in buying inputs for volume discounts, in selling under contract or hedging in futures market, and in using income tax benefits. On the other hand, they may use more direct cash inputs, particularly labor, and thus may operate on a thinner profit margin.

Small farms do not benefit much from program benefits tied to volume of commodities produced. They can cushion lower farm income by relying heavily on off-farm earnings.

Some would argue that medium size farms have the greatest need for price and income support programs. They lack the economic advantage of the large farm; the operator is fully employed so does not have opportunity for off-farm earnings that many small farmers have.

Tenure: The number of farms operated by tenants has been dropping steadily since the mid-1930's, both in absolute numbers and relative importance.

Tenant farms comprised 42 percent of all farms in 1935, but accounted for only 11 percent by 1974. During this same period, the percentage of farms operated by full owners rose from 47 to 63 percent, and by part owners, from 10 to 26 percent. Part owners (who both own and rent land), although much fewer in number than full owners, control the most land and rank highest in value of products sold.

Operator Age: Young farmers tend to have a higher debt-asset ratio than older, more established farmers. Thus, the younger group may have more cash flow problems. A common paradox in commercial agriculture and other owner-operated businesses as well is that those nearing retirement are most able financially to expand their operations; *those who are relatively young and desire to expand* are least able to do so. As long as there are capital gains on assets in agriculture, the divergence in financial capabilities of those starting in farming and those already established is expected to remain a major problem.

ALTERNATIVES FOR 1981

Congress will have many different alternatives to consider when deliberations on future farm price and income legislation begin. Several farm price and income policy alternatives are presented in this section: (1) continue the present program, (2) fine-tune the present program, (3) revert to previous legislation, (4) establish a free market, (5) encourage farmer group actions, and (6) target programs to certain groups. Consequences of these alternatives are evaluated in terms of their possible impact on farmers, consumers, taxpayers and foreign markets.

Alternative 1: Continue the Present Program

The Food and Agriculture Act of 1977 contains a nonrecourse loan and target price mechanism for supporting the prices and income of wheat, feed grains, cotton and rice. The current program allows the Secretary of Agriculture considerable flexibility to set nonrecourse loans at levels to serve as protective floor prices, usually below market clearing levels. Target prices, in contrast, are established primarily on the basis of production costs, although determination of the latter can be highly controversial. Deficiency payments (income supports) are made directly to producers from the Federal treasury whenever market prices measured for the first five months of the marketing year are less than the target price. The concept of using loans and target prices in combination also appeared in the Agriculture and Consumer Protection Act of 1973.

The farmer-owned grain reserve is intended to be used in conjunction with nonrecourse loans to provide price stability for commodities subject to large fluctuations in production and utilization. The farmer-owned reserve is a major departure from the CCC inventory operations carried out under the traditional nonrecourse loan program in that farmers retain ownership of the commodity while it is in the reserve. However, the specifically designated release and call prices still give the Government some influence over market supplies and give grain users a range of probable prices.

The disaster payment program protects grain and cotton farmers against production risks due to weather, insects or other natural causes. Under proposed legislation now being considered by Congress, this program would be phased out under a comprehensive Government subsidized crop insurance program.

The 1977 Act continued per farm payment limitations for major crops. In 1980 and 1981, the annual payment limit for wheat, feed grains, upland cotton, and rice combined is set at $50,000. Payments for *disaster loss, CCC purchases, commodity loans, or*

payments for public access for recreation are excluded from this limitation. Payment limitations at this level affect only a relatively few farms. Program participation and Government cost savings are only minimally affected by current payment limits.

Finally, under the current program, the Secretary of Agriculture is authorized to adjust crop production through either a set-aside program or a diversion program whenever it is determined that supplies are likely to be excessive. Program compliance is voluntary for individual farmers but necessary for them to receive program benefits.

Consequences of Continuing Present Program: Price and income provisions of the 1977 Act are commodity oriented. Continuation of these commodity provisions including the farmer-owned reserve would give policymakers the tools needed to provide reasonable price and income stability in agriculture.

Since support benefits are distributed on the basis of production, price and income supports will not provide all farmers with needed income support. Some farmers, however, will be receiving adequate return to all resources and may receive unnecessary support. Some of these benefits will be capitalized into higher land values. Other groups of farmers will see price and income support levels as inadequate. They can be expected to press for increased supports in the interest of equity or to survive a cash flow crisis.

Continuation of the 1977 Act could result in the possibility of some very large direct government costs for deficiency payments in years of depressed prices. However, appropriate use of the reserve program by the Secretary of Agriculture should offset the potential of increasing deficiency payments.

The 1977 Act appears to have ample authority for building of and administering reserves as well as authority for effective production control. Since participation is voluntary, production control can be costly to the Government because participants have to be assured that their net return will be at least as large when participating in the production control program as it would be if they were nonparticipants. Consumers and foreign customers have reasonable assurance that their needs will be met in a stable market environment. The vagaries of weather, pests, or disease can always cause real shortages but the reserve can generally be managed to minimize the probability of such an event.

As long as the economy suffers from inflation, the cost of entering farming will increase. Price and income provisions in the 1977 Act are not designed to counteract this continuing trend.

Alternative 2: Fine-Tune the Present Program

There are many ways the present commodity oriented program of price and income support could be fine-tuned in 1981. Consider nonrecourse loans and target prices. The method by which each is determined could be altered or the level of each could be changed within the framework of current operating provisions. It has been suggested that nonrecourse loan levels should be substantially increased. Loans could be legislatively set on the basis of production costs as target prices are. Or the Secretary of Agriculture could be directed to set them within a narrow price range at a prescribed level.

Target prices could be increased so as to reflect full land charges. Alternatively, land could be disregarded entirely in the determination of the target price. Another suggestion is to regionalize target prices in order to account for differences in production costs and market prices. Since the deficiency payment rate under the current target price scheme is the same for all producers, those with the lowest production costs or those closest to major markets benefit most from a single payment rate. Regional variation in target price would attempt to equalize net benefits of the deficiency payment. However, regional differences in crop costs and prices are supposedly reflected in land values and costs.

Questions continue about reserves. Discussion centers on three distinct types of reserves: farmer-owned, Government-owned, and internationally coordinated. For each of these, there are questions of how large the reserve should be, when and how it should be accumulated and distributed, accumulation and distribution prices, and management responsibilities. Each of these issues can have important price implications.

Another issue that might be considered relates to payment limitations. Public interest groups and some private citizens have suggested that the limit on payments to individual farmers should be lower to reduce Government costs and to avoid subsidizing the very large farmers.

Consequences of Fine-Tuning the Present Program: Any upward shift in the nonrecourse loan rate has to be evaluated relative to the impact such a shift would have on the quantity demanded of the product. Increasingly, as larger quantities of U.S. agricultural products move into world markets, this evaluation must be made on the effect of high loan rates on commodity exports. The greater the possibility of substitute supplies for U.S. farm commodities, the less attractive an increase in the loan rate becomes. In contrast, the higher the loan rate can be set, the higher the market price floor will be for all producers.

Adjusting target price levels does not directly disrupt market prices. In general, however, the higher the target price, the less the income risk for individual producers. Over time, producers will respond to high target prices by increasing production.

Full coverage of land costs and a target price "guaranteed" on the basis of production costs would be capitalized into higher land prices. Higher land prices would, in turn, cause production costs to increase. The rising price cycle would continue as target prices were adjusted upward in response to higher production costs.

Target price levels may also be considered on the basis of cost to the Government. A one cent increase in the target price can amount to several

million additional dollars in deficiency payments.

Regionalized target prices might help to keep some marginal production areas in production, at the cost of a reduction in overall production efficiency. Regional targeting will also provide subsidized competition to areas with a comparative advantage in production. Overall farm income may be higher, but the cost would be reflected back to the Government, both in the form of higher direct payments and increased administrative costs.

Farmer-held reserves are more favorably accepted by farmers than Government-held reserves. Farmers feel they have more opportunity to benefit from rising prices if they control the reserves. Consumers and foreign buyers tend to favor Government-held reserves because commodities are automatically marketed at release price levels, thus prices may be more stable and predictable.

Payment limitations could be reduced to a level where program participation might be so low as to have little effect on production. Farmers and consumers would then encounter more variability in overall production and prices. Taxpayers could benefit, as would smaller producers. The latter would have one bargaining chip not available to larger producers.

There may now be reluctance to have a large set-aside or other production adjustment program. In the event of poor weather, the total crop could be reduced considerably. With worldwide population continuing to grow, both moral and price issues could be raised if substantial acreage was kept out of production.

Alternative 3: Revert to Previous Legislation

Another possibility—although not a high probability for 1981—is that no new legislation would be enacted. In that event, a number of individual commodity programs would revert to existing permanent legislation dating back to the Agricultural Adjustment Act of 1938 and the Agricultural Act of 1949.

Reverting to permanent legislation would generally mean that grain producers would no longer have the option of voluntary production controls or be eligible for deficiency and disaster payments. Nor would there be provision for a farmer-held reserve.

Instead, for some commodities such as wheat and cotton, there would be a choice of highly structured program of allotments, marketing quotas and certificates, land-use penalties and high price supports or, alternatively, minimum level price supports for farmers planting within their historical allotments. Farmers would choose in a referendum.

Consequences of Reverting to Previous Legislation: Allotments and quotas would be a double form of control over production. Farmers would tend to produce in relation to Government controls, not market forces, when commodity surpluses existed. The longstanding questions of equity and production efficiency would be raised as allotments and quotas were allocated to individual farmers.

Farm income from some commodities, such as wheat, could be raised in the short run. But land which carried an allotment with it would increase in price, thereby reducing the current return to land as a resource over a longer period of time.

Domestic consumers and foreign purchasers may pay higher prices as the result of higher price supports, particularly for wheat. Some of the rigid provisions for wheat and cotton would interfere with the growing export market.

The Government would assume the cost of taking title to commodities where the price support was too high to clear the market. In addition, there would be more administrative costs for the Government with highly structured programs such as those for wheat and cotton.

Alternative 4: Establish a Free Market

Some farm spokesmen have at times advocated a "free market." This usually means freedom from Government intervention. Those calling for it are often the most vocal when the government sells its inventories or there are restrictions on freedom to plant. In the 1970s, a free market also represented the chief rallying cry against Government-imposed price controls and export embargoes. There typically are far fewer calls for a free market when supplies are plentiful and prices low. More often than not, the rallying cry in those periods is for higher prices, income supports, and production controls.

Specific congressional action would be necessary to establish a free market, since permanent statutory authority already provides for price supports once the current act expires. A basic consideration is the degree to which the Government would withdraw or abolish programs.

Consequences of Establishing a Free Market: A free market would result in considerable price and income instability. It would bring a survival of the fittest situation to much of production agriculture now protected by basic commodity programs. In the short run, farm income would go down unless an expanding foreign demand absorbed reserve stocks. Farms with cash flow problems would be particularly hard hit. The current land price spiral may be dampened by the absence of price and income support programs. A free market may encourage enterprise diversification, particularly in feed grain production areas.

Consumers would face considerably more price instability for food products. As taxpayers, they would benefit from reduced Government costs as farm programs expire.

World trading prices for our major export crops would fluctuate more. Without a reserve program, the U.S. would be a less dependable supplier for foreign buyers.

Alternative 5: Encourage Farmer Group Actions

For many years, farmers have tried to help themselves through group action. Establishment of marketing and bargaining cooperatives and producer-initiated Federal and State marketing orders are

noteworthy examples. Farmers have also formed general farm organizations and commodity groups to enhance their economic position.

Farmer group action has often been hindered by their large numbers and by geographic and commodity divergence. General agreement on the most desirable path to higher farm income has been beyond reach. Moreover, with the exception of those farmers producing commodities under marketing orders, alliances among farmers have been voluntary, not mandatory.

The trend toward larger and fewer farms enhances opportunities for group action. Farmers may also have more success where several groups join together in pursuit of a common goal or where nonfarm groups join with farmers in exchange for farmer support of nonfarm goals.

Legislation may be needed to give sanction to increased group action, particularly in such areas as collective bargaining and marketing orders. The most feasible manner in which to implement group action by farmers would likely continue to be on a commodity-by-commodity basis.

Consequences of Farmer Group Actions: The range of potential consequences of farmers working together as a group is wide. Much depends on *how* they are working together and, perhaps even more important, *how many* are working together. For example, farmers have worked together in cooperatives for more than fifty years. But with the exception of some bargaining cooperatives, most have focused on improved marketing efficiency rather than forcing prices higher. Other farm groups have concentrated on education and information, including formal lobbying efforts in Congress and other units of government.

Some groups have attempted to push prices higher by withholding products from market or striking. But such groups have not represented all farmers, or for that matter, even a majority of farmers.

If farm groups were able to attain sufficient power legally and operationally to control farm production and prices, there would be several likely consequences.

Farm income would increase in the short run but continued effective production controls would be necessary to assure higher prices over a longer period. Without production control, prices would almost surely fall as producers responded to high prices by increasing production.

If farmer group action focused on keeping prices high, production capacity would exceed needs. Farmers themselves would have to decide who produces and how much each will produce. Overall, resources committed to agricultural production would be more under-utilized than at present.

Large and efficient producers would likely bid away production rights of smaller farmers in an effort to spread the cost of fixed resources over a larger number of production units.

Food costs would be higher with effective group action but there would be no direct Government costs.

If allotments or "production rights" were used to determine where production would be, these allotments would be capitalized into higher land prices. But where there were no allotments, land would be worth much less. In short, the diversity between those "who have" and those "who do not have" would tend to increase. Small farms may have difficulty finding markets.

Farmer group action would not contribute to stability of production and prices unless farmers had both effective production control (which would require the cooperation of a majority of farmers) and a reserve for use when production was low.

Foreign buyers and agri-businessmen would be hurt by higher prices and reduced overall production, respectively.

The chief appeal of this alternative for some farmers is the feeling that it would give them more control over decisions now made by government policymakers.

Alternative 6: Target Programs to Certain Groups

Targeting government benefits to certain groups in production agriculture is sometimes proposed. For example, to bring farm incomes up to the level of the nonfarm population, the Federal Government could provide direct payments to farm families with lowest income.

For those farmers who are not chronically poor but have temporary financial problems, special credit programs—perhaps operating loans at low-interest costs or individualized pay-back schemes—could be instituted.

Another suggestion has been to make Government benefits available only up to a certain level of production. This limit could be set on either a volume (e.g., bushels) or a production unit (e.g., acres) basis and could apply to both price and income supports.

Taking into account off-farm income when establishing Government benefits for farming is a possibility. Those with high off-farm income would be eligible for proportionately less in benefits.

Finally, benefits could be directed only to beginning farmers or those with high debt-asset ratios. Perhaps benefits could be also limited to a certain number of years for each farmer.

Impact of Targeted Programs: Programs to subsidize the income of low-income farmers could affect production in two ways. For some farmers, direct payments may take away the incentive to even attempt to produce. But for others, such programs can serve as a buffer to take increased production risks.

Such a program could contribute to production inefficiency to the extent social welfare programs would encourage small farmers to remain in production agriculture. Since social welfare programs would help only the poorest families the question concerning the kind of programs that might be directed toward other farmers would have to be resolved. Particular consideration would have to be given to price and production stability since pre-

sumably the problem of low family income would be lessened.

Applying a limitation to Government benefits on the basis of production would have many of the same potential problems as payment limitations. Production restrictions on the basis of volume might also encourage some farmers not to use optimum production methods in order to both cut costs and remain eligible for Government benefits.

Many with low farm incomes would be affected adversely if off-farm income was taken into account when Government subsidies are distributed. Because off-farm income is relatively much higher for the low farm income groups, such a policy would tend to target benefits to the commercial farmers. Capitalization of benefits into land values would continue as commercial farmers sought to reduce their dependence on off-farm income by expanding their farming operations. This would be especially true for those middle-size and larger farmers who presently have substantial off-farm income. It would tend to increase long run production capacity and production efficiency.

In general, government subsidies applied selectively to those in production agriculture have the advantage of targeting benefits to those most in need. The problem, however, is to determine exactly who should be included in the selected group for benefits. Morever, programs which direct payments to certain groups may benefit the most inefficient farmers with no protection at all for efficient farmers.

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Because of the complexity of farm price and income problems, there is perhaps no single policy that will address all concerns. Policymakers must take into account not only the needs of farmers, but also those of consumers, taxpayers and foreign customers in the development of new programs.

Many alternatives are available to Congress when current farm price and income support provisions expire. There is a strong likelihood, however, that new legislation will be developed with a broader understanding of those in production agriculture than ever before.

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FOOD PRICES, SUPPLIES AND STABILITY

Dennis R. Henderson and Wallace Barr*

ABSTRACT

The relationships between U.S. agricultural policies and domestic food prices and supplies are often poorly understood. This paper examines those relationships and analyzes the expected impacts of alternative agricultural policies on food. Agricultural policies primarily affect farm prices and incomes. Farm products account for less than 27 percent of domestic food expenditures. Only about half of this is directly affected by farm policy. Farm price stabilization programs have a significant moderating effect on food prices while a 100 percent parity farm price support policy would raise food prices and consumer outlays appreciably. Nonfarm policies influencing inflation and marketing costs have a greater potential to affect food prices than do farm policies.

INTRODUCTION

U.S. agricultural policy has focused primarily upon farm income. Both the level and stability of farm incomes have been influenced through price supports, income payments, set aside programs, and expansion of the demand for farm products through such efforts as the food stamp and school lunch programs.

For the most part, agricultural policy has not directly dealt with the level and stability of food prices and food supplies. These are, nonetheless, affected indirectly by agricultural policy. Because the impacts are indirect, the relationships between agricultural policy and food prices and availability are often poorly understood.

This paper focuses upon the relationships between: 1) food prices and farm prices, marketing costs, and pricing practices; 2) food supplies and agricultural policy; and 3) the impacts upon food prices of current U.S. agricultural policies and those which might be considered subsequently.

FOOD PRICES

Food prices have risen at an average annual rate in excess of 11 percent from 1967 to 1979 (table 1). Over this same period, the general rate of inflation as measured by the Consumer Price Index (CPI), to which food price increases contribute, rose at about 9 percent per year.

Food prices increased more slowly between 1967 and 1972 than did prices for all goods and services. But, since 1973 food price increases have exceeded the general inflation rate for all goods and services. Higher prices for farm commodities and imported foods and increases in food marketing costs have all contributed to the rise in food prices since 1967. Farm commodity prices exhibit large year to year fluctuations. In contrast, food marketing costs, which are the differences between farm product prices and retail food prices, have increased steadily during this period. For example, the variance[1] in annual farm price changes during the 1967-1979 period (266.5) was more than twice as large as the variance in annual food price changes (123.1).

Price Variations

Three of the 10 major food categories have had price increases above the average for all food items during the past 12 years (table 1). Fish and sugar prices have increased 27 and 18 percent more than the all food index, respectively. An increase slightly above average has occurred for meat, at 2.9 percent. Of these three food categories, only sugar has agricultural policy programs that directly affect retail price levels. Meat prices are indirectly affected through feed grain policies in the longer run.

Price increases in the 12-year period for poultry meat, eggs, dairy products, fats and oils, processed fruits and vegetables and cereal and bakery products have been smaller than the increase in the all food price index (table 1). Of these, prices for dairy products and cereal and bakery products are directly affected by agricultural policy while prices for poultry and eggs are indirectly influenced through feed grain policies. Thus, agricultural policy *per se* does not explain the relative size of retail price changes for the various categories of food items. Rather, much of the explanation of retail food price behavior lies elsewhere.

Long run variations in retail food prices reflect mainly: 1) changes in consumer preferences and their ability to pay for those products they desire, and 2) long run supply conditions influenced largely by improving technology and physical production limitations. Short run variations stem from weather conditions in the U.S. and around the world and the biological nature of food production. However, there are policy actions that help reduce the likelihood that weather, pestilence, and world food supply levels will be primary forces causing large short-term variations in food prices.

A dramatic contrast in food price variations over the longer term is provided by fish and seafood prices. Fish paced the increase in all food prices since 1967 (table 1). The 1977 U.S. fish harvest, at 5.2 billion pounds, was 28 percent above that of 1967 (table 2). Rising prices provided an incentive to increase the fish harvest. As a result of a policy

*Henderson and Barr are Agricultural Economists, Ohio State University.

[1]Variance is a statistical measure of deviations from the average.

Table 1. Food Price Index For All Urban Consumers and Relative Price Changes, 1967 to 1979

Food Item	Food price index (1967 = 100)	Percent change from all food price index
All Food	234.7	0
Meat	241.4	+2.9
Poultry	179.5	-23.5
Fish	298.4	+27.1
Eggs	172.6	-26.5
Dairy products	207.6	-11.6
Fats & oil	226.6	-3.5
Fruits & vegetables		
Fresh	233.3	-0.6
Processed	224.7	-4.3
Cereal & bakery products	220.8	-5.9
Sugar & sweets	277.0	+18.0

Source: Consumer Price Index, Bureau of Labor Statistics, U.S. Department of Labor, January 1980.

change, U.S. fishing boundaries were extended to 200 miles offshore, thus reducing foreign fishing competition in U.S. waters. During this 12 year period, the net value, after deducting for expanding exports, of domestically harvested and processed fish increased 142 percent.

A growing consumer preference for seafood was accompanied by improving incomes and is reflected in a 25 percent increase in consumption during this period. To provide the additional fish required a threefold increase in the value of fish imports. The increase in our domestic fish harvest and more imports at the higher prices indicates a strong shift in demand. The physical capacity of our fishing fleet and the limitations of the seas to supply seafood contributed to the price increases. These products are not influenced by agricultural policy although there are certain regulations governing the size of catch to maintain the fish stock.

Near the other extreme, price increases for poultry meat products have trailed the all-food price index by 23.5 percent while the use of poultry meat per person increased 36 percent in the 12 year period after 1967. Poultry production and marketing have experienced technological developments that have reduced costs and helped minimize retail poultry meat price increases. Like fish, poultry meat has no agricultural policy programs that directly influence price levels. However, agricultural policies which directly impact upon the price level, price stability, and availability of corn and other feed grains do indirectly affect poultry prices by influencing production costs. These agricultural policy-food price relationships are further analyzed later in this paper.

Farm Prices

Prices for farm products in the short term change rapidly in response to variations in production. Unpredictability or uncertainty in the production of specific crops is quickly translated into price uncertainty for raw agricultural commodities. For example, an actual or anticipated shortfall in corn production due to adverse growing conditions like corn blight or drouth is very quickly reflected in upward price movements for corn. A bountiful harvest, perhaps due to ideal growing conditions, is rapidly reflected in downward price pressure. However, these price movements affect substitute crops less quickly. The net result is considerable price instability for individual agricultural products and an uncertain relationship between the prices for various farm products.

Supply and price changes for crops typically carry forward into supply and price instability for

Table 2.Domestic Fish Harvest, Value of Domestic and Processed Fish, Exports, Net Domestic Value and Value of Fish Imports, 1967, 1972, and 1977

Year	Domestic catch	Value of harvested & processed fish				Net Domestic	Fish Imports
		Fresh & frozen	Canned	Total value	Minus exports		
	Bil. lbs.	Million Dollars					
1967	4.055	64.336	525.563	589.899	67.524	522.375	538.301
1972	4.806	91.939	998.701	1,109.640	134.188	975.452	1,233.292
1977	5.198	180.404	1,557.598	1,738.002	473.375	1,264.627	2,078.492
Percentage Increase							
1977/1967	128.2%	xx	xx	2,194.6%	701.0%	242.1%	386.1%
1977/1972	108.2%	xx	xx	156.6%	352.8%	129.6%	168.5%

Source: Agricultural Statistics, U.S. Department of Agriculture

livestock products as animal production is trimmed back or expanded in response to crop price changes and their influence on profitability in livestock enterprises. What emerges is a mosaic of farm price changes on a product-by-product basis. Some increase sharply. Some decrease rapidly. Still others reflect modest or little change while the average price for raw agricultural products demonstrates greater stability. For example, between 1974 and 1976, the weighted average of all farm product prices decreased by 3 percent. However, prices for food grains declined 33 percent, milk prices increased 16 percent, vegetable prices rose 13 percent, feed grain prices declined 10 percent, and meat animal prices rose 3 percent. These short-term price changes reflect the impacts of variable weather and biological conditions affecting supplies either favorably or adversely, plus nominal changes in demand at home and rather abrupt changes in export demand due to changes in worldwide growing conditions.

In the longer run, the rate of inflation influencing costs of purchased inputs (like machinery, fertilizer, chemicals, and fuel), higher farm wages, and rising taxes and interest rates are major factors influencing the prices of farm products. Technological developments help offset inflation-induced costs increases, but occur more slowly and with less regularity.

Food Pricing Practices

Unstable prices for individual agricultural commodities indirectly influence food prices through the pricing policies and practices of food retailers. Retailers generally feel that frequent retail food price increases result in consumer resentment and should be avoided as much as possible. This leads to a practice by many food retailers of permitting retail margins to widen when wholesale or farm-level prices decline. Food retailers tend to absorb some of the increased costs when farm prices rise. Thus, supermarket operators change retail food prices less frequently than farm level prices change.

When wholesale food costs increase appreciably due to increases in price for various agricultural commodities or other factors, retailers typically respond by raising food prices quickly enough to cover both actual and anticipated future cost increases. They thereby maintain or increase their marketing margins. This practice, combined with the tendency to widen retail margins as costs fall, makes retail food prices more responsive to farm price increases than decreases. This creates an upward stairstep or "ratchet effect" on retail food prices in response to farm price instability.

Production Costs

Price uncertainty for basic agricultural commodities, along with the supply variability which helps generate such uncertainty, also impacts upon food production, manufacturing and processing costs. Price and supply variability and uncertainty tend to generate excess capacity in livestock production, food manufacturing and processing.

For example, in periods of abundant feed grain production and relatively low grain prices, livestock producers expand their production. In periods of relatively low feed supplies and high prices, they cut back production, resulting in underutilization of facilities. When production of perishable farm products is large, it is necessary to have adequate processing and storage capacity to prevent spoilage and waste. In periods of normal or below normal production, capacity exceeds needs. Extra costs are associated with excess capacity. These costs are ultimately reflected in higher food prices.

Food Marketing Costs

Distribution of total U.S. food expenditures is shown in figure 1. This represents total expenditures of $239 billion in 1978, including food eaten at home and away from home. Of the total, only $66 billion, or 27 percent of the Nation's annual food bill, was received by farmers. This share has declined from around 40 percent in 1950. About 16 percent of total food expenditures are for seafood and imported foods, including the marketing charges for these items. Marketing costs for U.S. farm-produced foods amounted to about $135 billion in 1978 or about twice the amount received by U.S. farmers. Combined, the food marketing costs totaled $160 billion or nearly 67 percent of the Nation's 1978 food bill.

Retail food prices are affected by manufacturing and processing, transportation, and selling costs. The marketing bill increased 110 percent in the 12 years after 1967, due both to the cost of marketing a larger quantity of food and increases in the per unit costs of marketing.

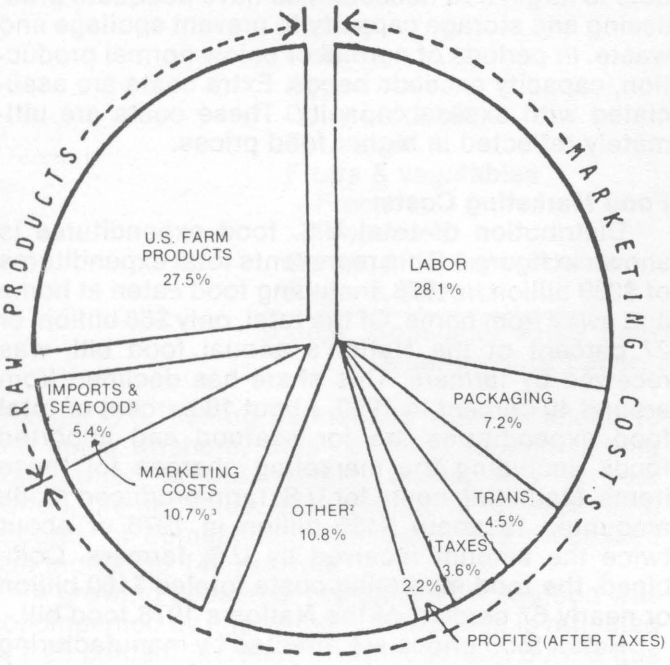
Direct labor costs have increased by more than 150 percent since 1967 and account for the largest share (about one-half) of the total increase in food marketing costs. Average hourly wage rates have doubled since 1967 in food processing, manufacturing, food stores, and eating establishments. Fringe benefits increased about 25 percent in just the last 5 years and now account for 30 percent of total labor costs. Labor productivity in the food marketing system has improved, but erratically. For example, productivity of the food retailing level has declined 6 percent in the last 5 years due to changing work rules, longer store hours, an increase in products requiring services (such as delicatessen items), and a slowdown of investment in labor saving technology.

Packaging and costs of transporting food products have more than doubled since 1967. Taxes, profits, advertising, fuel, interest, insurance, and other business costs have increased by substantial amounts, thus placing additional upward pressure on food prices.

Agricultural programs have little direct influence upon items which account for about three-fourths of what U.S. consumers now spend for food. National farm policies do not reach seafood, imported hams, coffee, bananas or tea. Labor in the food system, which now accounts for a greater portion of food costs than does the value of domestically produced

FIGURE 1

DISTRIBUTION OF U.S. FOOD EXPENDITURES, 1978
(Total Food Costs[1]: $239 Bil.)



[1]Excludes alcoholic beverages but includes home and away from home food expenditures.

[2]Includes rent, depreciation, interest, promotion, insurance and other business expenses.

[3]Total of 16.1 percent includes cost of imported food products, domestic seafood harvest and marketing costs of both imports and seafood.

Source: Recomputed from data in Food Prices in Perspective, AIB-427, Economics, Statistics and Cooperatives Service, USDA, July, 1979; National Food Situation, NFR-7, Economics, Statistics and Cooperatives Service, USDA, Summer, 1979; and Agricultural Statistics, U.S. Department of Agriculture.

farm products, is completely outside the arena of agricultural policy, as are most other factors influencing food marketing costs.

While raw farm product prices are influenced by inflation, they fluctuate primarily because of variability in domestic production and world demand. Marketing costs, on the other hand, tend to follow closely the general pattern of inflation. To control food price inflation arising in the marketing sector requires an entirely different set of public policies than those embodied in agricultural policy. The rate of inflation is influenced by monetary and fiscal policies, budget deficits, investment and productivity, regulatory, and environmental policies that raise costs and other factors. Public policies dealing with these issues are beyond the scope of this analysis of the interrelationships between food and agricultural policy. Nonetheless, agricultural policies can have some important indirect impacts on marketing costs and food prices. These are examined later in this analysis.

FOOD SUPPLIES

The risk of absolute food shortages in the United States is extremely small. This does not mean, however, that everyone always has access to as much of some foods as preferred. Relative shortages of some products occur frequently. This causes prices to rise to the point where people cannot afford all they desire, and dietary substitutions are made.

Over 90 percent of the calories now consumed in the U.S. come from grains and oilseeds either directly in the form of breads, pastries, pastas and similar products, or indirectly in the form of livestock products. The absolute level of U.S. grain and oilseed production now exceeds 2,500 pounds per person. About 15 percent is used directly for food in the U.S. About half is fed to livestock and about one-third is exported for feed and food uses in other countries. Total U.S. crop production is consistently large enough that adverse crop conditions or an increase in food demand by importing countries does not appreciably affect the availability of food to U.S. consumers, even though price may be affected by changes in supplies.

Food Supply Insurance

We have insurance against food supply shortages in the form of both livestock production and under-utilized cropland. Over three-fourths of all grains and oilseeds used in the United States are fed to livestock. Yet, livestock products account for only slightly more than 40 percent of our total domestic food consumption. This means food supply "slippage" in livestock production. This can be roughly translated into a two-unit crop food increase for each one-unit decrease in livestock-based food production. Dietary variety would be reduced by such a change to consuming cereal and oilseed based foods as substitutes for meat but total food availability could be nearly doubled. In addition, the supply of red meat made possible by liquidating livestock is an important insurance against short-run food shortages.

There are more than 100 million acres of U.S. land currently underutilized or left idle which potentially could be used for grain or oilseed production to expand crop-based food supplies. Such a change would increase total crop acreage by more than 25 percent. However, its effect on total crop production would be less than a 25 percent increase as land that is currently idle and underutilized is typically of lower quality with below average yield potential. To expand production on marginal land requires higher crop prices to attract the needed capital for land improvement. This means higher food prices, at least in the short run, until productivity enhancing technology is expanded.

Such changes in food production and use of our agricultural land occur with regularity. Between 1972-73 and 1974-75, when worldwide food supplies tightened and U.S. exports expanded rapidly, there was a 40 percent reduction in the amount of grain used for feeding livestock in the United States and a 17 percent increase in the number of acres planted to wheat and feed grains. The immediate effect was much higher grain and grain product prices, livestock liquidation that increased meat supplies, and lower consumer meat costs. The net longer run effects of these massive changes were higher meat prices and a relatively small supply of grain-fed beef in the supermarket. But there were no shortages of calories or protein for U.S. consumers.

Even though farm production does vary from year to year, unfavorable growing conditions affect different crops disproportionately. For example, a drought in the Great Plains has an appreciable impact upon the wheat supply but has little effect on corn and soybean production. A corn blight outbreak reduces corn supplies, but has no impact on the output of soybeans, wheat, or other crops. Thus, diversity in farm production, much of which is associated with regional differences in growing conditions, helps mitigate the impact of natural disasters on total food availability in the U.S. This contrasts with other countries such as the USSR where growing conditions are less diverse and thus yearly variations in grain output sometimes run as large as 25 percent. These natural forces do, nonetheless, change the relative availability of different food sources, causing U.S. consumers to alter what they eat.

IMPACTS OF FARM POLICY ON FOOD SUPPLIES AND PRICES

U.S. farm policy affects food prices and supplies by influencing the price of farm commodities through various programs. Such programs affecting farm prices include: 1) price supports that place a floor under prices, 2) acreage controls that influence product supply, 3) grain reserves that influence stability in farm supplies, and 4) disaster and deficiency payments that influence the costs of producing agricultural commodities. Impacts of such policies on food supplies and food prices are examined in this section.

Farm Price Supports

Direct impacts of farm price supports upon food prices are considerably smaller than the effects of inflation and other cost factors in the marketing channel. Only about 27 percent of total retail food expenditures is explained by farm prices. Thus, even if farm policy supported the price for all farm products, it would affect only a small portion of total food costs. Price supports actually apply only to the basic commodities—food grains, feed grains, some oilseeds, and milk—as defined in agricultural policy legislation. Most livestock, poultry, fruits, and vegetables are not directly affected. These commodities constitute about one-half of the domestic food supply. Thus, farm price support programs directly influence less than 15 percent of the factors constituting retail food prices.

If the prices of basic commodities were supported at a level 10 percent above market prices, this policy would directly add less than 1.5 percent to retail food prices (although the indirect impact on livestock costs and pricing practices in the marketing channel would probably amplify this impact). In recent years, farm price supports have generally been lower than market prices by appreciable margins.

Acreage Limitations

Farm policies affecting the level of farm production directly influence total supply and indirectly affect farm and food prices. When acreage restrictions are in place for feed and food grains, somewhat lower quantities of these products are generally produced. This has some upward effect on the prices for these products. However, acreage controls are used mainly when large inventories of crops have been accumulated from previous years, as a means of reducing burdensome and costly surplus storage. Thus, their main impacts are to reduce Government storage costs and to reduce longer run market supplies resulting in moderate price increase. Production controls apply mainly to food and feed grains which directly influence only a small fraction of retail food prices.

Underwriting Costs of Production

Several farm policies influence costs of production. Disaster payments reduce risks faced by farmers from natural hazards. Deficiency payments tied to target price levels reduce income risks to farmers from sharply depressed market prices. Risk reduction helps lower farm production costs. This has an indirect impact upon food costs by tempering upward pressure on farm level prices. But, just as the upward effects of price supports on food prices are relatively small, the net impact of these cost mitigating policies is tempered by the small share of retail food costs attributable to farm product prices.

Stabilizing Farm Supplies

The most significant potential impacts of farm policy on food prices and supplies rest with stabilization programs. The farmer-held grain reserve program and Government purchases and subsequent resale of agricultural commodities affect the variability of supplies of agricultural commodities coming to market. Purchases into and sales from publicly held stocks and the farmer-held grain reserves reduce the magnitude of price variations for farm products. Where prices would normally be depressed by burdensome supplies, purchases reduce downward pressure on prices. Subsequent sales from these reserves when production shortfalls occur temper upward price movements.

Increasing supply stability for raw agricultural commodities reduces uncertainty faced by livestock producers, food manufacturers, and processors. The results are reduced risks which helps lower operating costs and reduces the need for excess capacity. Reduced risks carry through to retail food prices indirectly by reducing inflationary pressures on wholesale food costs.

Reducing wholesale food price variability by farm supply and price stabilization activities moderates the impetus for upward ratchet increases in retail food prices. These supply and price stability programs, therefore, significantly affect components of the marketing margin, which is the largest single component of retail food prices.

The potential indirect impacts of farm price and production stabilization policies on food prices are appreciable. The magnitude of these impacts probably exceeds the (combined) direct impacts from farm price supports, production controls and costs of production related programs.

THE CURRENT SITUATION

The Food and Agriculture Act of 1977 has some features which affect food supplies and prices. The major programs in terms of the food market are: 1) price supports for feed grains, food grains, and oilseeds through the CCC nonrecourse crop loan program and purchases of dairy products; 2) farm income supports for producers of basic commodities through deficiency payments tied to target prices and disaster payments associated with natural calamities; 3) production controls for feed and food grains through acreage diversion and set-aside requirements; and 4) grain reserves through the farmer held grain reserve program and government held stocks accumulated through defaults on nonrecourse crop loans.

Price Supports

The general objective of farm commodity price supports is to provide a price floor to protect farmers against excessively low prices. Price supports, in the form of commodity loans, are set below normal market price levels so as not to interfere with domestic and export markets, and low enough to avoid stimulating excess production. Support prices have generally been below average market prices in recent years. Thus, market forces rather than price supports have been the main determinant of farm level prices.

Lowering price support levels for basic commodities would have no detectable impact upon retail food prices. At the same time lowering the support prices would remove an important protection for farmers against an unexpected and precipitous decline in world market prices. This might cause a greater reduction in farm output than desired. On the other hand, higher price supports could move farm level prices above market clearing levels. Such an increase could have perceptible but relatively small impact on overall retail food prices.

Income Supports

Income support programs provide protection to farmers against high risk situations, such as depressed prices or low crop yields due to weather. If risks are reduced, production resources are used more efficiently, which lessens upward pressure on production costs and farm commodity prices.

However, income payments to meet target prices at levels above those necessary to help keep farmers in business could set off a land price spiral. Rising land prices would increase production costs. Currently target prices for corn are low enough to make income payments unlikely. Target prices for wheat are substantially above price support levels and exceeded market prices in 1978, thus triggering fairly sizable deficiency payments to producers that year. This has some upward impact on land prices, but the overall impact on production costs was nominal.

Currently, land costs are not considered when making annual adjustments in target price levels. If land costs were included, it could result in a land price spiral with rising land costs and eventually higher food prices.

On balance, present income support payment programs do not appear to cause higher food prices and may, in the longer term, moderate prices by reducing farmers' risks.

Production Limitations

Acreage restrictions for feed and food grains are designed to minimize production of crop surpluses and keep taxpayer costs for price and income support programs under control. Participation is voluntary. With expanding world markets, acreage restrictions have been relatively small in comparison to the mandatory programs of prior legislation. Given their voluntary nature and relatively low participation by feed grain producers, there appears to be little direct impact on retail food prices.

Grain Reserves

Current storage programs are designed to accumulate reserves of basic commodities during periods of relatively abundant supplies and low prices and to release inventories during periods of relative shortages and high prices. This means a higher degree of supply and price stability. The grain reserve program has important indirect implications for food prices by encouraging efficient use of facilities throughout the food system and reducing the incidence of price ratcheting by food retailers.

The range between accumulation and release prices and the maximum size of grain reserves are key factors in the impacts on food prices. If the range between accumulation and release prices is widened and the maximum size of the reserve reduced, both price instability and supply uncertainty would increase. Conversely, by narrowing the price range and increasing the maximum size of the reserves, price and supply conditions would be further

stabilized. Thus, the potential to reduce inflationary pressures on marketing margins is directly related to the size of grain reserve holdings and the range between acquisition and release prices.

ALTERNATIVES FOR 1981 LEGISLATION

Basic agricultural policy as set forth in the Food and Agriculture Act of 1977 expires with the 1981 crop. The effect of subsequent agricultural policy on food availability and prices depends on the type of policies adopted in succeeding legislation. These future policies are likely to be adjustments of present policies but they could take different directions. Several policy alternatives are described and analyzed regarding their likely impact on food supplies and prices.

No Legislation

One policy alternative, however unlikely, is reversion to provisions of permanent farm legislation enacted in 1938 and 1949. This would result if no legislation is enacted to replace the expiring 1977 law.

Major changes in agricultural policy would result by reverting to basic legislation. Most pronounced effects would be 1) the elimination of the farmer-held grain reserve and income supports tied to target prices and natural disasters; 2) mandatory price supports for feed grains at a minimum of 50 percent of parity; 3) elimination of feed grain production controls; and 4) the substitution of a complex quota referendum for price supports and production controls on wheat in place of the current voluntary system. Thus the major effects of the change would be on wheat and feed grain producers.

For feed grains, the loss of production control provisions could result in expanded production and depressed prices. This would be particularly true if acreage quotas were accepted for wheat which would free acres for feed grain production. Ample feed supplies would probably mean expanded livestock production.

If wheat producers elected quotas and higher support prices, this could mean some upward pressure on food prices. With quotas, there would not likely be surplus stock accumulation. Thus the loss of the farmer-held grain reserve would probably have a greater destabilizing impact on wheat than on feed grains.

The overall impact of reversion to the old basic programs could mean some upward pressure on food prices due to greater instability in the food grain sector, somewhat mitigated by increased production in the feed grain and livestock sectors.

Cost of Production Price Supports

Under current conditions of unpredictable prices and rising costs, some farm groups have advocated that price supports be based on production costs. Thus, farmers could depend more on market prices and be less dependent on target prices and deficiency payments.

One complexity of cost-based price supports is specifying actual production costs. Costs vary among individual farmers based upon size of farm, skill of management, resource endowment and so on, and from region to region based upon climatic and other natural differences. Furthermore, selecting an appropriate land charge is quite difficult. Production costs are considerably higher when land is charged at current market value. If current values were used, a land price spiral would result. On the other hand, if land is charged at average acquisition value, price supports are generally insufficient to assure farmers of returns on their investment equal to alternative opportunities.

With land charged at acquisition cost, current production costs for most agricultural products approximate current market prices. Thus, price supports tied to an acquisition cost of production base would have little appreciable direct price impact on food. With land charges based upon current market values, farm production costs appear to exceed average market prices by 10 to 15 percent for most products.

Overall, tying price supports to production costs would have a neutral to a modest direct upward impact upon food prices. Actual impacts depend upon the way land costs are treated.

Grain Reserves

With the establishment of the farmer-held grain reserve in the 1977 Food and Agriculture Act, the philosophy of U.S. policy toward domestic food reserves changed from one of tight administrative control to one of flexible economic incentives for private storage by farmers. This means that enough price flexibility has to be designed into the storage rules to create the opportunity for private profit from storage activities. Flexibility is allowed regarding the range between prices at which participants put grain into storage and remove it, so that price changes can exceed storage costs.

A government held reserve program could narrow these price ranges substantially. With a narrow price range and large normal stocks, price variability for agricultural products would be virtually eliminated and market concerns about potential supply shortfalls would be minimized. The minimum acquisition price would have to be sufficient to cover farmers production costs in order to assure a continued long term supply. However, upward pressure on food prices due to uncertainty over the supply of agricultural commodities, inefficiencies in livestock production, food manufacturing and processing brought on by excess capacity and ratchet price increases by food retailers due to farm commodity price variability could be largely neutralized.

Payment Limitations

Under the present program or other programs which include provisions for direct payments to farmers, there is concern about taxpayer costs, particularly if large payments are made to large farmers. Current law establishes a maximum payment to any farmer of $50,000 per year in 1980 and

1981. This is up from a $20,000 limit imposed by the 1973 Agriculture and Consumer Production Act.

Payment limitations have only indirect and relatively marginal impacts on food costs. Higher payment limits provide more income protection to larger farmers which could be capitalized into higher land values. Lowering the limits means more risk to the larger operators. This could result in somewhat higher production costs.

Parity Farm Income Supports

An alternative to price supports for maintaining farm income is an income support program. The basic philosophy of this alternative is to provide farmers with direct income payments sufficient to provide an adequate and equitable level of farm earnings. A parity farm income support program would be aimed at assuring farmers of a net income that is comparable to incomes earned by others, that is, to establish a parity of farm income with income of nonfarmers.

Because a farm income support program does not work through the market for agricultural products, there is no direct impact on either the level of agricultural product prices or food prices. There are, however, important indirect impacts. A parity farm income policy would essentially eliminate farmers' risk of income loss associated with natural or economic hazards. This would allow farmers to plan for optimum long term utilization of production resources. This would tend to encourage more stability or production. However, while this type of program would reduce economic uncertainty for farmers, it would not eliminate food supply and price instability caused by weather and other noneconomic variables unless it was accompanied by a grain reserve program.

A parity income support policy would have a substantially smaller upward impact upon food prices than parity price support program. Of course, taxpayer costs to finance direct income payments could be considerable, essentially shifting the burden of farm income protection from food purchases to taxpayers.

100 Percent Parity Price Supports

Some within the agricultural community advocate a policy based upon price supports at 100 percent of parity. Parity of this level for farm products means prices high enough that each bushel, pound or other unit of production would have the same purchasing power in terms of non-farm products as they had in 1910-14. The parity concept of price supports has been criticized as obsolete because it uses an outdated base for making parity calculations and because changing technology has invalidated historical relationships between the costs for producing various agricultural products. Parity, as a measure of equity, has been dropped for most commodities under the 1977 Act. Milk is the major exception.

Support prices equal to 100 percent of parity would be substantially higher than those included in the 1977 farm legislation and well above 1979 market price levels. At the end of 1979, the 100 percent parity price for wheat was about $6.15 and $4.30 for corn. This would result in an increase of more than 50 percent in the grain prices which would add significantly to retail prices, particularly when higher feed grain prices were reflected in higher prices for livestock and livestock products.

Price supports of this magnitude would stimulate farmers to increase production but would make exports less competitive. This would mean surplus stocks and the need for production controls. American consumers would have abundant but higher priced supplies of food.

Self-Help Programs

Some argue that the most effective farm policy is one which provides farmers with the tools necessary to increase their economic well being without direct government involvement. Marketing orders and collective bargaining are two frequently discussed tools.

Marketing orders allow farmers, in cooperation with the government, to collectively regulate price procedures and to influence the flow of products to the marketplace. The basic intent is to raise returns to farmers by matching more closely the flow of products with the needs and demands of the marketplace. Federal marketing orders are currently authorized only for milk, fresh and dried fruits and vegetables, and tree nuts. Coverage could be extended appreciably.

Collective bargaining could be facilitated by public policy which would allow farmers, through majority vote, to form bargaining units which would negotiate prices with buyers. These bargaining units would have the power to bind all producers to the terms agreed upon. This would allow farmers to collectively exercise market power similar to labor unions and other large economic organizations.

Both the marketing order and collective bargaining policies allow farmers to address their economic problems through the market in which they sell. Generally, this can be equated with attempts to achieve higher prices for their products, and often is associated with some restrictions in supply availability. These programs depend relatively little upon active government involvement. But they do create the possibility for impacting directly upon food prices through higher farm product prices and indirectly by increasing supply and price uncertainty for food manufacturers, processors, and retailers.

NON-AGRICULTURAL POLICIES

The major thrust of this analysis has been to explore the interrelationships between Federal farm policy and food prices and supplies in the United States. Several alternative approaches to U.S. farm policy have also been discussed. However, since farm products, and their prices account for only about 27 percent of total consumer expenditures for food—the balance accruing to seafood, imported

foods and, in the main, marketing costs—it is clear that agricultural policy is not the major policy arena affecting retail food costs.

A comprehensive discussion of policy alternatives *to address the issue of food price inflation* must take another focus. While not comprehensive, a list of primary policy issues (beyond those such as fiscal and monetary policies which deal with inflation) in general include:

1. The structure of the food manufacturing, processing, distribution and retailing industries.
   * Are the size and market concentration of firms impeding effective price competition?
   * To what extent is nonprice competition a factor?
   * Is technological adaption being unduly restricted?
2. The role of labor unions and work rules in the food system.
   * Are wage patterns unusually inflationary?
   * Are work rules restricting expansion of labor-efficient technology?
   * Are non-wage labor costs unusually high?
3. Product proliferation.
   * Is the large number and variety of food products and packaging creating excessive marketing costs?
   * *Does the scramble to create new products* reduce efficiency gains?
   * Are consumers provided with too much choice?
4. Export and import policy.
   * Do long term agreements on agricultural exports improve or exaggerate domestic food price stability and supply availability?
   * Do temporary embargoes on agricultural exports disrupt farm prices more than they moderate food price increases?
   * Do international commodity agreements cause more domestic uncertainty while generating international stability? And
5. Wage, price and marketing margin guidelines.
   * Are these workable in the food system?
   * At the farm level?
   * Can they be applied in an equitable manner that does not disrupt the supply of food?

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FAMILY FARM SURVIVAL: *FARM STRUCTURE ISSUES AND POLICIES*

Ronald D. Knutson, Peter M. Emerson, and W.E. Black*

ABSTRACT

The future of the family farm in the changing structure of agriculture is currently receiving public attention. This paper highlights the economic and social aspects of the current trends in the structure of agriculture. It examines the present farm structure and the trends toward more large farms and a decreasing number of family type farms. The reasons for these trends are outlined. Alternative policies that may strengthen the position of family farms are described and their possible impacts are analyzed.

INTRODUCTION

Much of U.S. agriculture has traditionally been dominated by family owned and operated farms. But, important changes are taking place in farming. There is a pronounced trend toward fewer and larger farms, greater specialization in production, and more dependence on the nonfarm sector. More attention and concern is now being given to the consequences of the changing structure of agriculture.

In the early 1970's, the report *Who Will Control U.S. Agriculture?* concluded that considering only present forces in motion, the dispersed open market family farm system is in jeopardy. Many agriculturalists believe that the 1980's may be a decade of key decisions on the family farm survival issue. This paper describes and analyzes alternative policies that have been suggested as means of helping family farms to remain a viable part of U.S. agriculture. Preceding the discussion of policy alternatives is an analysis of the trends in the structure of U.S. agriculture.

STRUCTURE AND ITS IMPORTANCE

Farm structure as used here, refers to number and size of farms; ownership and control of resources; and the managerial, technological, and capital requirements of farming. Structure also involves the question of who controls production and marketing decision at the farm level.

Concerns about the structure of agriculture have both economic and social aspects. Although there are wide differences of opinion on the importance of changes in the structure of agriculture, three issues appear to have become the focal point of concerns: efficiency, control, and social values.

*Knutson and Black are Extension Economists, Department of Agricultural Economics, Texas A&M University. Emerson is Principal Analyst, Congressional Budget Office, U.S. Congress, Washington, D.C.

Efficiency

Efficiency gains, associated with larger and more highly integrated farm operations, vary widely from commodity to commodity. In crop production, it is generally believed that a single family farmer employing no more than one or two hired laborers is as efficient as larger scale operations. It is, however, recognized that advantages may exist for larger farms in purchasing inputs and in marketing. Such advantages, plus the larger absolute net income associated with a larger volume of sales, have resulted in a continuous trend toward larger farms. In livestock production, there are increasing indications of efficiency gains associated with larger scale integrated production marketing systems. Such gains have been particularly apparent in the poultry industry and apparently exist in cattle feeding and hog production as well.

Control

Offsetting efficiency gains associated with large scale farming are potential adverse effects of increased concentration of land ownership and control of production and marketing decisions. As competitors in an industry become fewer in number, economic theory suggests that they acquire market power to raise prices.

In addition, added costs may, over time, be built into these farming operations through nonprice forms of competition, complacency, and the lack of strong competitive pressures. Such increased costs potentially exist if and where agricultural production becomes highly unionized.

Concentration in agricultural production does not yet appear to have reached the stage of implying increased costs. For example, broilers' prices in 1978 were the same as in 1970, despite the fact that feed prices have nearly doubled. However, considerable controversy has arisen over the reduced volume of commodities moving over open markets and the representativeness of traditional price quotations, such as the Urner-Berry egg quotes, Wisconsin Cheese Exchange prices, or Yellow Sheet Wholesale beef quotes.

Social Values and Concerns

Social concerns in the farm structure debate revolve around the merits of the family farm as a cultural institution, the importance of land ownership as a part of the family farm, and the impact of reduced farm numbers and increased size on rural communities. This perspective tends to view dispersed land ownership—which has characterized our system of family farming—as essential to social unity and democracy. The pattern of land ownership and the opportunity to farm is said to affect com-

munities, and the personal and social values by which people live. A California study showed that communities dominated by highly industrialized, integrated agriculture and concentrated land ownership are characterized by a lower level of economic activity, fewer community services, less participation in political activities, and less participation in social and religious institutions. The level of living was generally concluded to be higher in the more traditional family farm communities. The weight placed on consideration of social values could have an important impact on decisions made with regard to the future structure of agriculture.

FARM STRUCTURE TODAY

Between 1950 and 1978, the number of farms declined from 5.4 million to 2.7 million. Today 63,000 "large farms" with annual gross sales of $200,000 or more—about two percent of all farms—account for 40 percent of total cash receipts from farming (table 1). Yet the farm sector remains extremely heterogeneous with respect to sizes and types of farms, production practices, and level, source, and stability of family income.

Although there is considerable debate over how they ought to be classified, modern farms may be roughly divided into three mutually exclusive types—family farms, larger-than-family farms, and industrialized farms (table 2).

Family Farms

A family farm is often defined as any farm that annually uses less than 1.5 man-years of hired labor and is not operated by a hired manager. Based on that definition, family farms currently account for at least 90 percent of all farms and 60 percent of total cash receipts. They play a leading role in food and feed grain production, dairying, most livestock enterprises, tobacco, and much of diversified farming.

Family farms, in turn, are sometimes divided into three overlapping sub-groups: Small farms, part-time farms, and commercial farms. Small farms have been defined as farms with annual gross sales of less than $20,000 because these farm families are very dependent on off-farm income. On an average, they earn more income from off-farm jobs than from farming (table 1). So defined, small farms account for more than 60 percent of all farms, but only 9 percent of total cash receipts. Approximately 70 percent of the small farm population is found in the Southeast and North Central States. And, some small farm families suffer from a chronic low income problem. U.S. Department of Agriculture (USDA) analysts have estimated that 15 to 20 percent of the families living on small farms in 1976 fell below the poverty line.

Many family farms are part-time farms. If we define a part-time farm as one on which the operator is employed off-farm 200 days or more annually, the 1974 Census of Agriculture shows that part-time farms account for 28 percent of all farms and 20 percent of total cash receipts. Not surprisingly, many small farms are operated by part-time farmers who are highly dependent on off-farm earnings. But, many part-time farms have annual gross sales far exceeding $20,000. USDA data show that the share of income from off-farm sources for all farms has been rising over time and now exceeds half (56 percent). Part-time farming, which was once viewed as a temporary condition (primarily, a means of accumulating enough capital to enter full-time farming), may have become an end in itself.

Commercial family farms, defined as any family farm with annual gross sales exceeding $20,000 that is not operated by a part-time farmer, account for perhaps 25 percent of all farms and 50 percent of total cash receipts. Commercial family farmers depend on farming for a majority of their income. Their economic well-being, as measured by current income, is highly dependent upon commodity prices and weather conditions, and may vary substantially over time. Commercial farmers often believe that off-farm earnings make part-time farmers tough competitors. But, perhaps, the main competition for commercial family farms of the future will come from larger-than-family farms and industrialized farms.

Larger-Than-Family Farms

Larger-than-family farms, which differ from traditional family farms in that they require more than 1.5 man-years of hired labor, constitute 4 to 8 percent of all farms and contribute 20 to 25 percent of total cash receipts (table 2). These farms produce many kinds of agricultural commodities, and they are most prevalent in the West and South. Modern machines, sophisticated managerial skills, and the desire of farm operators to earn higher income, tend to encourage the growth of larger than average farms.

Industrial Farms

Industrialized farms that use assembly line production techniques and generally separate the functions of capital ownership, management, and labor, account for only 2 percent or less of all farms, but from 14 to 20 percent of total cash receipts (table 2). These farms most often produce broilers, sugar cane, citrus fruit, seed production, some processing fruits and vegetables, and fed cattle. Industrialized farms are most likely to succeed where highly specialized equipment and management are needed and where operations are repetitive and standardized. Industrialized farming frequently uses contractual arrangements under which growers of agricultural products agree to produce to the specifications of the agribusiness firm initiating the contract. Often inputs are supplied by the same firm, or by a subsidiary.

MAJOR TRENDS

Within the basic structure summarized in Tables 1 and 2, three trends emerge. First, a large and grow-

Table 1. Distribution of Farms, Total Cash Receipts, and Income by Value of Agricultural Products Sold, 1978.

Value of Agricultural Products Sold	Number of farms[a]	Percent of all farms	Percent of total cash receipts	Average net farm income	Average off-farm income	*Percent* of average income from farming
Dollars	Number	Percent		Dollars		Percent
Less than 2,500	916,000	34.3	0.9	1,738	17,205	9
2,500 - 9,999	560,000	21.0	3.3	2,596	14,857	15
10,000 - 19,999	296,000	11.0	4.6	5,917	10,068	37
20,000 - 39,000	323,000	12.1	9.9	11,745	7,802	60
40,000 - 99,000	390,000	14.6	25.0	21,636	6,846	76
100,000 - 199,000	124,000	4.6	17.0	39,161	10,850[b]	78
200,000 and over	63,000	2.4	39.3	78,286	NA	NA
Total	2,672,000	100.0	100.0	10,037	12,829	44

NA = Not Available

[a] A farm is any place that sells (or normally would sell) $250 or more in agricultural products, or any place of 10 acres or more that sells $50 or more.

[b] Calculated for farms with annual sales of $100,000 and over.

Source: USDA, *Farm Income Statistics,* October, 1979.

Table 2. Estimated Current Share of Number of All Farms and of Total Cash Receipts, by Major Farm Types.[a]

Type of farm	Percent of all farms	Percent of total cash receipts from farming
Family Farms	90% or more	60% or more
Larger-than-family farms	4 to 8%	20 to 25%
Industrialized farms	2% or less	15 to 20%

[a] These estimates are extrapolated from several sources and have limitations with respect to both the data and the definitions. Revisions can, therefore, be expected, as new data become available and special tabulations are computed. All farms can be classified, though somewhat arbitrarily, as either family, industrialized, or larger-than-family farms. Family farms are farms that use less than 1.5 man-years of hired labor and are not operated by a hired manager; industrialized farms use assembly-line production techniques, and their capital ownership, management, and labor are highly differentiated; larger-than-family farms are non-industrialized farms that use more than 1.5 man-years of hired labor.

ing proportion of farmers earn a majority of their income from off-farm jobs. This trend likely results from a combination of both choice and necessity. The choice to live on a farm results from a preference for country life and, in certain instances, lower costs of living. The need to work off the farm results when either sufficient income cannot be generated from the farm operation or insufficient capital exists to attain a larger scale of operation. The growth in off-farm employment has been fostered by increased availability of nonfarm jobs in rural areas and participation of farm wives in the labor force.

A second trend is the shift from family farms to larger-than-family farms and to industrialized farms. The trend to larger-than-family farms appears to be occurring from within agriculture as expansion-oriented farmers continue to buy out smaller family farmers. Well-established relatively large farmers are frequently in the best competitive position to pay the highest price for land. This process has been referred to as "economic cannibalism within agriculture."

The trend to industrial farms is more pronounced in some commodities than in others. For example, most of the poultry and processed fruit and vegetable industries have already moved to industrial farming. Steps in the same direction are currently under way in hog and beef feeding. Crop production agriculture, including grains and cotton, remains a stronghold of the family farm. Even here, we must raise the question: If much of agriculture is composed of larger-than-family and industrial farms, can family farms survive in crop agriculture?

Third, while one of the characteristics of American agriculture has been that of ownership of one's farming operation, an increasing proportion of the farmers own only a portion of the land they farm. In

1974, only 35 percent of the farms were fully owned; while in 1910, 59 percent were fully owned.

A significant proportion of the land that is partly owned by the operator is held by individuals who have retired from farming. However, increasing nonfarm ownership is evident.

Reasons for Trends

Some of the important reasons for these changes in the structure and the status of the family farm include:

- Continuous infusion of large-scale, modern farming technology makes it possible to manage large scale farm operations with reduced labor input.
- Large operations can utilize farm investment to minimize income tax liability, and write off farm tax losses against nonfarm income while realizing substantial capital gains that are taxed at a lower rate than current income.
- Increasing land prices tend to attract outside capital for speculation purposes. Since 1972, agricultural land prices have increased at the average rate of 14 percent per year, twice the 7 percent average rate of inflation since then.
- Persistently increasing land prices combined with high inflation rates make it increasingly difficult for young farmers to enter agriculture. Those who are able to put together the equity capital required to enter have frequently found interest payments so large that a severe cash flow problem results.
- Large farms can acquire inputs at lower cost and market products more efficiently and at higher prices.
- Industrial farms can develop and implement contract and/or ownership integrated production-marketing systems that yield cost, quantity, and quality control benefits. And they can spread the risk over more than one level of the production-marketing system.
- The allocation of farm program benefits on the basis of volume of production, results in less risk for all producers. While such a policy might be argued to be neutral, larger absolute payments to large volume producers give them increased resources with which to compete for land ownership and to purchase larger scale equipment.

ALTERNATIVES AND CONSEQUENCES

While most legislation affecting family farmers was enacted in the interest of family farmers, it has often had just the opposite effect. This irony was a result of basic American values favoring equal treatment, a lack of restrictions on who would receive program benefits, and a lack of agreement about what constitutes a family farmer as a matter of public policy. A number of alternative strategies exist for reversing the declining role for family farms in U.S. agriculture. They are discussed below in the context of seven general policy alternatives which may be used either alone or in combination.

Free Market

Could the family farm compete in a free market economy without Government farm price, income, and production control programs? A free market agricultural economy would result in lower and more variable farm prices and incomes. Lower and more variable incomes would reduce incentives for increasing land values.

A free market economy would give greater incentives to reduce and spread the risks of farming. Part-time farmers have done this through off-farm employment. Commercial family farmers' greatest opportunities for spreading risk likely lie in increased diversification of farm enterprises, forward contracting, and advanced forms of cooperative marketing with pooling of receipts. Increased diversification on smaller farms, however, fails to take full advantage of specialization and larger scale technology.

Despite the opportunities for commercial family farmers to offset the increased risk associated with the free market, larger-than-family farms and industrial farms can likely best withstand free market forces. This results from greater opportunities to spread both risk over additional production and marketing functions and to hedge against higher levels of risk. Large farms would continue to enjoy the advantages of large-scale technology, lower costs inputs, greater sophistication in marketing, and vertical integration. The family farm's main hedge against risk is its lower proportion of direct costs and willingness to accept a lower return to management, capital, and family labor.

In analyzing the impact of the free market on the structure of agriculture, it is noteworthy that the high levels of industrialization are found in poultry, cattle feeding, and processing fruits and vegetables, where risks have traditionally been high and government involvement has been low.

Directing Farm Program Benefits

Deficiency payments, under the current target price program, are made on the basis of the number of bushels of grain or pounds of cotton produced by farmers. While farm programs have changed over time, the feature of allocating program benefits on the basis of volume of production has always existed.

One policy option is to direct a larger proportion of program benefits to family farmers. Such a policy option could be pursued on the basis that larger-than-family farms or industrial farms already have advantages and options in both production and marketing that do not exist for family farmers. Farm program benefits could then be looked upon as a means of equalizing the overall economic position of different sizes and types of farms. Three alternatives exist for accomplishing this:

1. Establish a strict limit, such as $5,000 per year, on the amount of payments a farmer can receive from the Government. Payment limitations for major crops were first established in the Agricultural Act of 1970 at $55,000 per crop per person. They

were subsequently lowered to $20,000 in the Agriculture and Consumer Protection Act of 1973. In 1977, the payment limit was raised to $50,000. Assuming an average deficiency payment of 50¢ per bushel of wheat with an average yield of 30 bushels per acre, it would take a farm with over 3,000 acres of wheat to reach the current $50,000 payment limit.

A number of loopholes in the current payment limitation provision cause serious questions as to its effectiveness. These loopholes arise from the ability of large landholders to produce more than one crop on which deficiency payments are made and also to subdivide their farm operations among corporations, family members, or tenants. Without closing these loopholes, a lowering of current payment limits would likely be ineffective.

2. Payments could be limited to family farmers to the exclusion of others involved in agriculture. Such a limitation would not be easy to devise and administer. A legally defensible definition of a family farm would be needed. Such a definition would need to place emphasis on the concepts of family ownership and control of management decisions. It might also consider prominence of family labor used in production and management of the farm operation.

The status of a farm family as a tenant would, however, present problems. These problems would result from the fact that if a tenant family farmer was eligible for farm program benefits, the non-family farmer landlord could obtain those benefits through a higher cash rent or other changes in the rental agreement.

3. The concept of payments could be changed from a per unit of production basis to an income maintenance program. The size of the payment could be constant regardless of farm size. It would be related to net farm or total family income level (with higher payments for lower incomes up to some maximum), or it could be inversely related to the amount of hired labor used in the farm operation (with lower payments for farms employing more hired labor).

The main consequence of directing a larger share of farm programs toward smaller farms and family farms would be to provide such operations with a higher net income relative to their larger farm counterparts. Those who receive program benefits would then be in a better position to compete and bid for available land resources.

The long run effects on consumers of pursuing this alternative depend on the relative efficiencies of those receiving program benefits. To the extent that there are efficiency gains associated with large-scale farming, such gains would not be as readily realized by consumers if farm program benefits were directed away from large farmers. Thus, compared with either the present policy or the free market, this alternative has the potential for attracting too many resources into small scale farming, preventing resource adjustments from occurring, and thus, providing incentives for inefficiency in the family farm sector.

Producers of rice, cotton, and wheat, commodities produced mainly by large farmers, would be most adversely affected by directing a larger share of program benefits to small farmers.

Taxation

Federal tax laws have historically extended special treatment to individuals engaged in agricultural production. For example, farmers are allowed to use the cash method as opposed to the accrual method of accounting, and farm outlays for certain land improvements are deductible as current expenses. The net result of these provisions has been to convert ordinary income into capital gains taxable at a lower rate.

Tax preferences associated with farming create an incentive for nonfarm capital to enter agriculture. Individuals with nonfarm income use farm tax preferences to reduce their effective tax rate and postpone payment of taxes. The result is a rising demand for agricultural land and increased nonfarm investments in areas such as cattle feeding.

Incentives are not, however, limited to the nonfarm investor. An individual with high farm income can realize substantial tax savings by incorporating and expanding through retained earnings. Investment tax credits and accelerated depreciation encourage mechanization and possible overinvestment in equipment. These provisions generate much greater tax benefits to high income farmers than to low income farmers and result in incentives for farmers to continuously expand. Similarly, increased estate tax shelters, provided by the 1976 Tax Reform Act, will likely serve as an incentive for movement of capital into land and away from non-land assets, benefiting the large farmer more than the small.

The following changes in tax laws illustrate actions that could reduce growth of large farms and reduce nonfarm investment incentives provided by current tax laws:

- Require farmers to use the accrual method of accounting. In contrast with current cash methods of accounting, the accrual method would require that costs be written off only as inputs are used in the production process. The ability to shift income from one year to the next would be reduced.
- Eliminate provisions allowing writing off farm losses against nonfarm income. Such a change would require that all farms "stand on their own bottom" as the traditional family farm has been required to do. In theory, all farms having outside income would be adversely affected by such a change, but the greatest disincentive would be for the nonfarm investor.
- Eliminate the investment tax credit in farming to reduce incentives for investment in farm equipment and expansion of farm operations. It would, however, place farmers at a disadvantage relative to other businesses in attracting capital.
- Establish a progressive property tax to reduce incentives for expansion of farm size. This is a

matter of state rather than Federal government jurisdiction.

- Reduce the amount of tax-free inheritance in transfers of property from one generation to the next. This would tend to periodically break up larger land holdings and prevent the formation of a hereditary landed class.
- Tax capital gains at the same rate as ordinary income to reduce incentives for investment in land as a means of lowering one's effective tax rate.

Each of these tax policy changes would reduce the attractiveness of investments in agricultural land, buildings, or livestock. As such, they would reduce the availability of investment capital to agriculture. The effects would be felt by all sizes and types of farmers. However, the greatest impact would be upon high income individuals engaged in farming; many of whom invest in agriculture primarily as tax shelters. However, smaller part-time farmers and even family farmers could also be as adversely affected.

Decreased availability of investment capital in agriculture would reduce the rate of increase in land prices. Capital intensive agricultural enterprises, such as cattle ranching, beef feeding, and fruit and nut farming, would likely experience the greatest impacts.

Antitrust and Open Market Maintenance

The greatest threat to the family farmers' traditional dominance and independence in agriculture may be the trend toward closer coordination of the input, production, and marketing functions. Such coordination or integration may be accomplished either by contracts specifying production, inputs, marketing, and pricing arrangements or by direct ownership of production and marketing operations. Much of the 15 to 20 percent of the agricultural production by industrial farms involves the application of integrated production-marketing arrangements such as in the broiler industry. Present trends toward integration in livestock and poultry indicate that most of animal production agriculture, except possibly cattle ranching, could be involved in integrative arrangements by the late 1900's.

If society views integration as a significant threat to family farm survival, the following remedies could reverse these trends.

- Antitrust policy with respect to vertical integration in agriculture could be clarified and strengthened. Currently few restrictions exist on vertical integration in agriculture, or for that matter in any sector of the American economy. At the extreme, this alternative could mean outright prohibition of both contract and ownership forms of vertical integration in agriculture. Less stringent policies might involve curbs on integration where the effect is to substantially foreclose alternative nonintegrated market outlets to producers.
- Industrial farms could be prohibited from becoming members of cooperatives. Industrial farms can now be members of cooperatives as long as they are directly involved in farm production. This alternative would prevent the cooperative and proprietary system from becoming highly interdependent. It would preserve the cooperative system for independent farm operations, even though the grower for an integrated cooperative system may not have significantly greater management discretion than the grower for a corporate integrated system.
- Cooperative and proprietary firms could be prohibited from combining forces in production and marketing joint ventures. As a lesser step, such ventures could be allowed only where the cooperative is found to be a legitimate family farm cooperative, as opposed to a cooperative of convenience formed by and for industrial farm interests.
- To maintain an open market for independent agricultural producers, integrated firms could be required to maintain an open market outlet for their product. Alternatively, Government could set up an open market mechanism, or require that firms purchase a certain percent of their products in the open market. To maintain an open market, newly developing electronic marketing concepts might be applied to either agricultural integrated contract markets or traditional agricultural product markets. In the case of electronic contract markets, competitive bidding among both contracting firms and producers could instill an open competitive market in the contract situation.

The basic thrust of each of these antitrust and open market maintenance remedies is that of maintaining a decentralized open market structure in agriculture. Such a structure would rely on the open market—as opposed to contract or ownership integration—as means of coordinating production with market needs. In the process, the decision making prerogatives of independent farm operations would be maintained.

Such remedies might require that consumers forego many of the benefits derived from vertically coordinated systems. These include the potential for efficiency gains, such as those experienced in broilers, and the increased uniformity of product quality associated with integrated agriculture. Foregoing such benefits would place American agriculture in a less favorable competitive position internationally in commodities where export potential exists.

The greatest impacts of such policy changes would be upon those industries that are, or have the potential for being, the most highly integrated. Such industries include broilers, eggs, turkeys, fruits and vegetables for processing, cattle feeding, and hog production.

Control of Entry

Some of the antitrust policies discussed above, border on allowing only certain types of firms to become involved in agricultural production. More explicit alternatives for controlling entry include:

- Prohibit foreign ownership of farmland, a step already taken by several States. While foreign ownership represents less than 1 percent of total

U.S. farmland, about 4 percent of all land transactions are currently purchased by foreign interests.

- Prohibit corporate investment in farmland, an established policy in several States. With investment in farmland becoming increasingly important, measures to directly restrict such investments may become increasingly prevalent.
- Apply zoning concepts to agriculture. Some Northeast States have already established agricultural districts designed to protect prime agricultural land from urban and industrial development. An extension of this concept might involve the zoning of land for use in family size farms only.

Limiting investment in agricultural land by nonfamily farm enterprises would remove this source of competition for farmland. The rate of increase in farmland prices would decline as sources of outside investment demand decrease. However, as long as farmland remains a good hedge against inflation, investors have a strong incentive to find loopholes that will allow them to acquire land.

Family Farm Services

Many Government services are provided in the interest of family farmers. Credit, research, Extension education, colleges of agriculture, land development, conservation, irrigation, and public grassland leasing are examples. Such services have, however, been provided on a first come, first serve basis, excluding neither industrial farms nor larger-than-family farms. In addition, in instances where limits exist on services, such as credit limits, they are frequently established above family farm size requirements. Certain Government services could be provided only to those who qualify as family farmers. Examples of such limits include:

- Limit Farmers Home Administration and Farm Credit Administration new lending authority to family farm operators. Initial steps in this direction might include substantially increased credit availability on more favorable terms to young family farmers.
- Direct an increasing proportion of research, Extension education, and teaching in colleges of agriculture to the problems and technologies associated with family farmers.
- Limit benefits from public land development, irrigation, and grassland leasing programs to family farmers.

Consequences of limiting government services to certain sizes and types of farmers are easy to underestimate. Large farmers are generally in the best position to take advantage of services offered by Government. This does not happen by design; it results largely from the realization on the part of large farmers of the existence and importance of Government services to the success of their operations.

Directing Government services exclusively to small farmers would likely reduce the rate of technological advance in agriculture. The result would be a long-term sacrifice in efficiency. The tendency would, thus, be to undermine our competitive position internationally and raise food costs to consumers.

Competing Cooperative Systems

Except for the free market alternative, each of the policy initiatives discussed involves placing substantial restrictions on the development of large-scale agriculture. This final alternative is designed to place a minimum of restrictions on large-scale agriculture by encouraging the formation of cooperative systems of family farmers that could potentially compete with large-scale agriculture. Such cooperatives would likely be considerably more highly coordinated and sophisticated in marketing than is typical of today's agricultural cooperatives. Cooperative advances would be particularly important in beef, hogs, and grain marketing.

Government initiatives to facilitate the development of cooperative integrated systems that can compete in future agricultural structures might include:

- Increase research and technical assistance to cooperatives on problems they have encountered in developing effective competitive systems.
- Increase orientation of Government programs, such as P.L. 480 and U.S. food procurement programs, toward cooperatives as a means of penetrating new markets.
- Increase credit and tax benefits for family farmers making investments in the development of cooperative integrated systems.

Such systems would be designed to serve the family farm system and foster increased competition with the corporate sectors. To accomplish this objective, it may be necessary to place restrictions on industrial farm membership in cooperatives and to restrict joint ventures between industrial farms and cooperatives. Without such restrictions, combinations between the cooperative and corporate sector could result with little benefit to the family farm system.

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Basic technological and economic forces in U.S. agriculture have led to fewer but larger farms. It is not known what precise combination of the above policies would be required to reverse this trend, if it is the public's desire to do so. It seems unlikely that any one of the above alternatives, such as limiting Government services to family farmers, would be sufficient. In any event, the costs to larger-than-family farms and industrialized farms could be substantial.

The major structural impacts and potential costs of alternatives, such as severely restricting vertical integration, make it likely that initial policy initiatives will concentrate on issues, such as foreign investment in farmland, increased credit to young farmers, closing tax loopholes, and increased limitations on Government payments to farmers.

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INTERNATIONAL TRADE ISSUES

Bob F. Jones and Bernard F. Stanton*

ABSTRACT

Agricultural trade benefits consumers and farmers. About one-fourth of total U.S. farm production is sold into foreign markets. Since 1970, volume of farm exports has doubled and the value has quadrupled. Policy issues deal with trade restrictions, international agreements, and effects of new agricultural legislation on trade. Policy choices relate to U.S. stance on freer trade, means of improving access to foreign markets, programs to help stabilize world grain markets, structure of the export market and approaches to maintaining world food security. Policies which raise U.S. farm product prices above world trading prices would likely deter agricultural exports.

IMPORTANCE OF EXPORTS AND IMPORTS

Agricultural trade, involving both exports and imports, is a major determinant of farmer and consumer welfare in the United States. Farmers as a group derive a significant share of their net income from sales in the export market. Twenty-seven cents of every dollar of farm marketings in 1978 came from sales abroad. The total impact is even larger as export sales expand the market beyond domestic needs and enhance farm prices accordingly.

Agricultural producers also depend on foreign sources to augment our supplies of production inputs such as liquid fuels, potash and phosphate, agricultural chemicals and specialty machines. Without these imports farmers' production costs would be higher and production efficiency would be reduced here and abroad.

Consumers benefit from having our markets open to agricultural imports. Imports bring us products which are either not available in the U.S. or are available from foreign sources at lower cost. Imports increase the range of choice of products available to consumers and keep domestic producers competitive.

Since 1974 agricultural exports have exceeded the value of agricultural imports by over $10 billion per year (figure 1). The positive balance of trade in the agricultural trade account helps finance the importation of nonagricultural products, such as oil, automobiles, electronic products, copper, iron, and many other minerals. Without these imports our level of living would be significantly lower.

*Jones is an agricultural economist at Purdue University, Stanton is an agricultural economist at Cornell University.

Growth and Composition of Trade

Agricultural exports have increased dramatically since 1970 following slow growth in the previous two decades. Total agricultural exports were more than $29 billion in 1978 compared to a little over $7 billion in 1970 (table 1). Half of the increase in value was due to higher prices. The physical volume of exports doubled.

Wheat, feed grains, and oil seeds accounted for two-thirds of the value of all agricultural exports in 1978, up from 62 percent in 1970. Large increases in value have occurred for nearly all categories of exports. Sunflower seed is a newcomer. Substantial gains are shown for peanuts, poultry products and nuts. Tobacco, fruits, vegetables, and some animal products declined in relative importance.

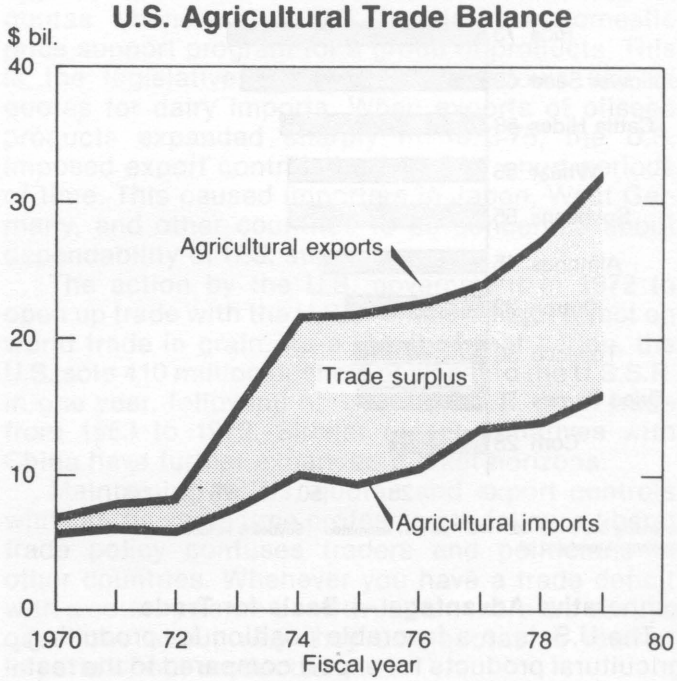
Export markets have a major impact on the agricultural economy in this country. Over half the annual production of wheat, rice, soybeans and products, cattle hides, and sunflower seed is exported (figure 2). Over one-fourth of all feed grains and nearly 40 percent of all cotton are sold overseas.

In 1970, exported crops accounted for the output from 72 million acres out of 283 million cropland acres harvested in the U.S. while 57 million acres were idled under Government programs. By 1978, exported crops accounted for use of 110 million acres out of 325 million cropland acres harvested and only 17 million acres were idled under Government programs.

The ability to produce large quantities of agricultural products at low costs relative to other regions and the availability of world markets enables some

FIGURE 1

U.S. Agricultural Trade Balance



regions to specialize in export crops. Notable examples are wheat production in the Great Plains and Northwest; corn in the North Central States; soybeans in the Midwest and Delta States; rice in California, Texas and Delta States; fruits, nuts, and vegetable crops in California and Florida; cotton in the Delta and irrigated West; and tobacco in the Carolinas and Kentucky.

Table 1. Growth in U.S. Agricultural Exports Values by Commodity Groups, 1970 and 1978.

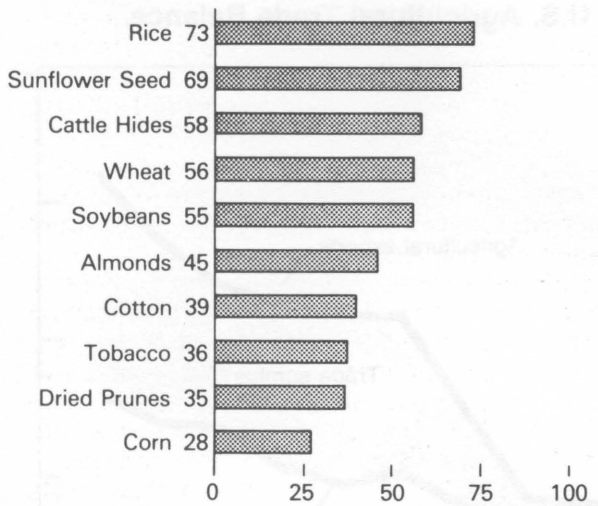
Commodity Group	1970	1978	Percentage Distribution 1970	1978
	Billion dollars		Percent	
Grains	2.60	11.53	36	39
Feed grains	1.07	5.85		
Wheat and flour	1.11	4.53		
Rice	.31	.88		
Other	.11	.27		
Oilseeds and products	1.92	8.36	26	28
Soybeans	1.23	5.21		
Sunflower seed	—	.34		
All other	.69	2.81		
Animals and animal products	.85	2.98	12	10
Cotton	.37	1.74	5	6
Tobacco	.52	1.36	7	5
Fruits	.33	1.01	5	4
Vegetables	.21	.68	3	2
Nuts	.07	.32	1	1
All other	.39	1.42	5	5
Total	7.26	29.40	100	100

Source: *Foreign Agricultural Trade of the United States,* February, 1979, Economics, Statistics, and Cooperatives Service, USDA.

FIGURE 2

PERCENT OF U.S. FARM PRODUCTION EXPORTED

COMMODITIES



Year ending September 30, 1978. partially estimated. Soybeans include bean equivalent of meal and oil.

Comparative Advantage — Basis for Trade

The U.S. is in a favorable position for producing agricultural products for export compared to the rest of the world. Its comparative advantage in producing many agricultural products is a result of an abundant supply of naturally fertile land, a favorable climate, economic sized production units, abundant capital in agriculture, and modern entrepreneurial talent. On the marketing side, there is a highly developed transportation and grain marketing system which has been geared for storing and handling large volumes of grain, oilseeds and other agricultural products at relatively low cost.

Only a few countries are able to compete effectively with the U.S. in international markets for wheat, feed grains and soybeans. Australia, Canada, and Argentina also have low production costs for wheat and compete for the same markets as does the U.S. The U.S. has a more dominant position in the world corn market. Other principal exporters of corn are Argentina, South Africa, France, Thailand, Brazil, and Hungary, listed in order of importance. Only Brazil now competes in the soybean export market on a large scale, but Argentina is an expanding producer.

Exports of grain and oilseeds from most other countries are much smaller in volume and tend to be the result of intermittent favorable weather or government policies which subsidize exports in years of surplus domestic production. These exports are usually not based on efficient, low production costs,

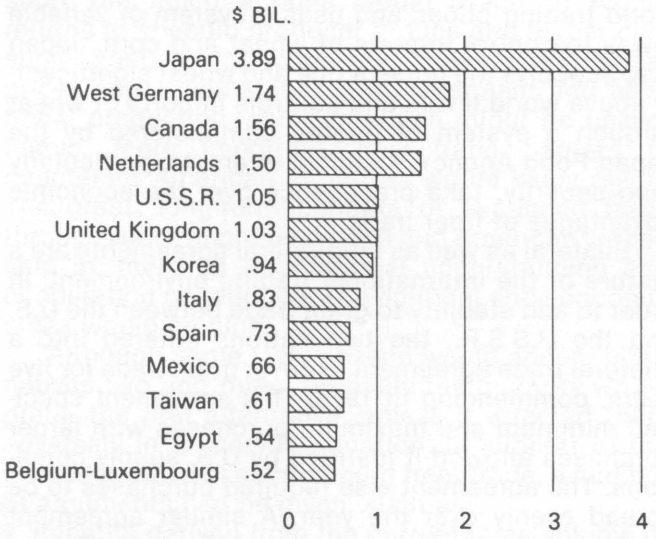
but are a result of high domestic prices which stimulate production within the country and sophisticated barriers to imports. For example, when supplies of soft wheat in Western Europe exceed domestic needs at high supported prices, export subsidies are used to sell the surplus on the world market.

Principal Buyers of U.S. Agricultural Products

Developed market economies are the principal buyers of U.S. agricultural products. Japan has been the leading U.S. buyer for several years (figure 3). Six of the nine EC countries are included in the top 14 countries to which the U.S. sells its exports. In any one year, the position of the U.S.S.R. on the list of buyers varies from number two to number five or lower, depending on its production conditions in a given year. Of all countries included in figure 3, the U.S.S.R. position on the list is most variable. Rapidly developing countries on the list of leading buyers include Korea, Mexico, and Taiwan. The 14 countries shown in figure 3 account for over two-thirds of all U.S. agricultural exports. The remaining one-third is shipped to over 150 different countries.

FIGURE 3

WHERE WE SHIP OUR AGRICULTURAL EXPORTS



1977 data. Adjusted for transshipments through Canada and Western Europe.

Free Trade Position vs. Protectionism

Although the U.S. is the leading world exporter of agricultural products (value and volume), not all U.S. agricultural producers favor a free trade position as basic U.S. policy. On the one hand, American cattlemen are opposed to imports of frozen, boneless beef and have lobbied successfully for meat import quotas. On the other hand, they want the Government to follow a hands-off policy toward exports and are opposed to export controls for cattle hides. Dairymen are opposed to imports of butter, cheeses and other dairy products. Many soybean producers who depend so heavily on export markets to use more than one-half of their annual production are opposed to imports of palm oil because it competes with soybean oil.

These positions indicate American farmers as a whole have no unified policy stance in favor of either free trade or protectionism. This is not surprising when one considers the range of products and diversity of attitudes held by producers toward the extent of Government involvement in agricultural markets.

NATIONAL DECISIONS AFFECTING AGRICULTURAL TRADE

Although U.S. trade in agricultural products is carried out by private firms and individuals, actions by the Federal Government have a major impact on both the volume and the terms of trade. Government affects the general economic and political environment in which international trade is fostered and developed. The trading environment is affected more directly by use of tariffs, quotas, trading arrangements, the extension of credit, concessionary sales and market development work.

Tariffs, Quotas, and Restrictions

Compared to other developed nations, the U.S. has relatively low import tariffs on both agricultural and nonagricultural products. Many products enter this country duty free. Tariffs have been progressively lowered or eliminated. As tariffs have been progressively lowered, quotas and other nontariff barriers have been instituted by both the U.S. and most of its trading partners. These nontariff barriers, such as narrowly defined grades and standards, sanitary and health requirements, and certification of points of origin tend to limit import competition.

Section 22 of the Agricultural Adjustment Act of 1933 as amended has authorized use of import quotas whenever the U.S. legislates a domestic price support program for a group of products. This is the legislative authority which allows use of quotas for dairy imports. When exports of oilseed products expanded sharply in 1973-75, the U.S. imposed export controls on sales for short periods of time. This caused importers in Japan, West Germany, and other countries to be concerned about dependability of U.S. supply.

The action by the U.S. government in 1972 to open up trade with the U.S.S.R. had a major effect on world trade in grain. As a result of that action, the U.S. sold 410 million bushels of wheat to the U.S.S.R. in one year, following no U.S. - U.S.S.R. grain trade from 1963 to 1972. Similar recent initiatives with China have further expanded market horizons.

Maintaining tariffs, quotas and export controls while at the same time professing to follow a liberal trade policy confuses traders and politicians in other countries. Whenever you have a trade deficit with a country as we do with Japan, there are always questions about why they use quotas to restrict imports of our products.

Use of Credit

The Federal Government facilitates trade directly by extending credit through the Commodity Credit Corporation (CCC) for the purchase of agricultural products. Credit is extended for six to 36 months. Since the program was initiated in 1956, the CCC has extended $8.6 billion of credit. Although this amount is small relative to total sales during the period, it has facilitated the movement into the export market of significant quantities of agricultural products which might not have otherwise been exported, particularly in countries where hard currencies and trading experience is limited.

Export Market Development

Since 1954 the Federal Government has participated with private commodity groups in joint efforts to develop and expand foreign markets for U.S. agricultural products. Commodity groups have collected funds from farmers to be used in market development activities. The Federal Government has allotted funds and allowed use of facilities of the Foreign Agricultural Service (FAS) to support market development activities in key overseas markets. Programs have been conducted in both developed and developing countries. Activities have included acquainting prospective buyers with products which may be new to them, providing technical services in the use of products, and conducting educational programs to train local personnel to use the imported products. Market development activities have had a positive impact especially in some of the most important markets like Western Europe, Japan, South Korea, Taiwan, and some OPEC countries.

Concessionary Sales

In the mid-1950's, large quantities of grain were acquired by the Commodity Credit Corporation as a result of price support operations. As these stocks continued to accumulate, means were sought for disposal of stocks in foreign markets in developing countries. Public Law 480 in 1954, authorized donation of commodities as food aid, sale of commodities for foreign currency, and barter of commodities for nonperishable commodities. During the late 1950's and early 1960's, as much as 40 percent of all agricultural exports were in some way subsidized under P.L. 480 or under the Mutual Security Program.

In subsequent renewals of the Act, more emphasis was given to self-help and improved technology in the development of agriculture in recipient countries. Long-term credit sales on liberal terms were substituted for sales in which nonconvertible currency was accepted in payment for commodities.

International Agreements

The U.S. is a participant in the General Agreement on Tariffs and Trade (GATT). This multilateral agreement provides a code of conduct by which participating countries carry out trade and establishes procedures to hold conferences or rounds of negotiations to liberalize trade. Seven rounds of negotiations have been carried out since inception of the GATT, the most recent one being the Tokyo Round, initiated in 1973 and completed in early 1979.

Negotiations in the Tokyo Round provided for reduction of tariff rates, relaxed quotas on imports, bound duties in selected products, and provided codes for future conduct of trade. The U.S. eliminated those tariffs of 5 percent or less on the value of the item. We increased the import quota for certain cheeses, while bringing others under the quota. Japan allowed an increase in its quotas on high quality beef, other livestock products, citrus, and fruits and vegetables. The European Community changed its system on beef imports from use of quotas to a special *ad valorem* duty. This will probably be less restrictive than the recent quota system.

Although the overall objective of the negotiations is to liberalize and expand international trade, each round has treated agricultural products differently than industrial products. Greater success has been achieved in lowering tariffs and other trade barriers for industrial than for agricultural products. Negotiations for agricultural products have had to take into account domestic price and income support programs within each of the different countries.

Price support programs for agricultural producers in the European Community and Japan, our two largest trading partners, have been particularly troublesome. The European Community supports its grain prices between 50 and 100 percent above world trading prices and uses a system of variable levies to control imports of wheat and corn. Japan also supports the price of rice and wheat significantly above world levels and controls imports of wheat through a system of quotas administered by the Japan Food Agency. National interests, particularly food security, take precedence over the economic advantages of freer trade.

Bilateral as well as multilateral agreements are a feature of the international trading environment. In order to add stability to grain trade between the U.S. and the U.S.S.R., the two nations entered into a bilateral trade agreement to cover grain trade for five years, commencing in 1976. This agreement specified minimum and maximum purchases with larger purchases allowed if justified by U.S. supply conditions. The agreement also required purchases to be spread evenly over the year. A similar agreement was negotiated between the U.S. and Poland because of that nation's close trade ties with the U.S.S.R. East Germany has a less formal agreement to purchase U.S. grain.

Importance of New Farm Policies

Because trade is so important to U.S. agriculture and because domestic policies both in this country and abroad have a major impact on trade, new farm legislation will be carefully watched by many people both at home and abroad. The impact of domestic programs on international trade is so important that it should be recognized directly as one of the key components in final decisions on food and agricultural legislation.

POLICY CHOICES AND CONSEQUENCES

Some trend toward protectionism with respect to food and agricultural policies exists in the world today. Trade policies are designed to accommodate domestic interests and maintain political support and stability within each country. Given this trend, the U.S. faces three general policy alternatives with respect to food and agriculture:

(1) Encourage freer trade using all means possible
(2) Accept protectionist trends using bilateral arrangements and/or multilateral arrangements to facilitate trade wherever possible
(3) Become more protectionist in response to producer, consumer, labor, and maritime initiatives.

A shift toward protectionism would reflect producer and consumer concerns to strengthen segments of the economy and improve American balance of payments. It is easy to point to existing protectionism and trade barriers against American exports established in such rich countries as Japan, West Germany, and France. Our perennial trading deficit with Japan might lead to a populist and emotional response to create our own quotas on their cars and electronic equipment entering American markets. More restrictive tariffs or quotas on imports of sugar, dairy products, beef, and fresh vegetables might follow in rapid succession. In the short run, such actions would result in higher returns to specific producer groups and higher consumer costs. In the longer run, the resulting higher prices might well signal new investment and additional production, some of which might be uneconomic. More important, new trade barriers to counteract American initiatives would likely result. The great, long-term benefits of expanded trade through GATT might be eroded and American leadership in improved international understanding and cooperation be reduced. The political and economic costs would be high.

Although some U.S. citizens would accept alternatives two and three, probably the majority would prefer the first alternative, unless it affected them adversely in a specific situation. In support of the first alternative of encouraging freer trade, a number of arguments can be given, such as:

- Benefits derived from the current large volume of U.S. agricultural exports.
- The comparative advantage which the U.S. possesses in the production of many agricultural products, particularly grain and soybeans.
- The desire to use resources most efficiently.
- The need to export in order to pay for oil, minerals, and other strategic products.
- A preference for farm income generated in markets rather than from government payments.

If encouraging freer trade is the chosen alternative, the question then becomes one of how it can most effectively be accomplished. Policy choices available can be grouped in four major categories:

- Maintaining access to markets.
- Stabilizing world grain markets.
- Improving market organizations for the conduct of trade.
- Maintaining world food security and improving relations with less developed countries.

Not all these choices are likely to be considered specifically as parts of a new farm bill, but will be a part of the debate that accompanies policy formulation. In the following discussion, emphasis will be on those alternatives that might be considered as a part of new legislation, along with other issues that will likely be debated concurrently.

Access to Markets

Governments maintain control over access to markets by determining what comes into and out of a country. Access to markets, or being able to sell products in import markets under terms and conditions acceptable to both sellers and buyers is a fundamental consideration in determining the volume and direction of trade. The rules and codes of conduct under which international trade are conducted are subjects of GATT negotiation.

Trade Negotiations. The most recent round of multilateral trade negotations was completed in early 1979. Legislation required to implement the agreement in the U.S. was passed in mid-1979. These actions specify the code of conduct for trade until a new round of negotiations is considered necessary. If history is a guide, the next round will likely not be undertaken for five or six years, therefore implementation and administration of the existing agreements will likely be the principal activities. Policy choices will need to be made, however, in deciding how vigorously to pursue violations of the agreements with respect to dumping of products, use of export subsidies by our competitors in those markets where we also sell, and imposition of countervailing duties. Imports of dairy products from the EC will be a political indicator of producer attitudes and willingness to pursue the spirit of the Tokyo Round Agreements.

Most Favored Nation Treatment. All participants in GATT enjoy most favored nation (MFN) status. This qualifies them to export products to the U.S. at lower duties than applies to countries without this status. MFN status is generally required before CCC credit can be extended for financing export sales. Major Communist countries are not participants in the GATT and therefore do not have MFN status. In early 1980, MFN status was extended to the People's Republic of China. The U.S. could grant this status to other Communist countries at little economic cost. However, the U.S. may choose to deny MFN status in order to attain political or humanitarian objectives.

Liberalized Credit. One policy alternative for consideration is authorization for CCC to extend larger amounts of credit under comparatively liberal terms to assist selected countries to finance commercial import purchases. The repayment period could be extended for a period longer than the current 6 to 36 month period now in effect. Such action could be a relatively costless way of enabling exporters to com-

pete with other countries which tend to offer more liberal credit terms, especially for industrial products, than does the U.S. The present requirement that one-half of CCC-financed exports be shipped in U.S. vessels might be reconsidered.

Concessionary shipments under P.L. 480 are made under very liberal terms of credit and repayment. Authority for most funds could be sought using present terms. Providing more liberal terms might in the long run prove counterproductive. One reason for extending long-term credit is to move recipients out of the soft currency, or donation category, toward a commercial market position where they can pay for what they buy with goods or services.

Market Development. Another alternative often proposed is for the U.S. to take a more aggressive approach in fostering market development. Generally positive experience has been obtained with joint FAS-cooperator activities for products in hard currency markets. Other countries which compete for import markets tend to spend a greater amount per unit of sales than does the U.S. on promotional activities.

An example of market development which may hold promise is in livestock products. In most cases the current practice in richer importing countries is to buy grains and protein meal which are then fed to domestic livestock. As transportation costs increase relative to other production costs, the form in which the product is shipped (meat vs. grain) may take on more significance.

Access to U.S. Markets. As American producers seek to gain access to markets in other countries, these countries want greater access to our markets. Negotiation for freer markets is made more difficult when American protection can be cited as a problem to further trade. Three product categories illustrate the nature of these continuing discussions.

Dairy product imports into the United States are restricted by use of quotas. Recent MTN negotiations provided for larger quotas for some dairy products while bringing others under quota that had not previously been restricted. When domestic dairy prices are supported at 80 percent of parity, the U.S. becomes an attractive market for subsidized European exports. EC dairy production is supported at high levels because EC dairy farmers have to pay high prices for feed grains (about double world prices). Under these conditions a competitive freer market has little chance to function.

U.S. cattlemen lobbied for controls on beef imports and were granted assistance by passage of the Beef Import Act of 1964. This act establishes a quota for imports and allows for the quota to grow over time. The Act is in part a defense against quotas and import controls imposed by other rich importing countries. Exports originate mainly from Australia, New Zealand, and Ireland, the first two of which are able to produce lean beef efficiently and at low cost. One policy option for U.S. cattlemen is to continue to negotiate for reduced barriers to beef imports in other countries so that the U.S. is not the residual market.

Winter vegetable producers in the United States seek to limit imports by controlling quality standards and other nontariff barriers. Mexico is the principal supplier which is affected by these limitations. Restricting competition with producers from a neighboring country is particularly difficult, especially if they offer a perishable, high quality product at low cost. In developing policy for imports of labor intensive products from Mexico, it should be recognized that access to our markets reduces the pressure for migration of people to the U.S. in order to find better employment opportunities.

Stabilization of World Grain Markets

Sources of Instability. Variable weather is probably the major cause of unstable world grain supplies and prices. Another important factor is the absence of market forces working in many major grain-producing areas. Over half of all grain in the world is produced and consumed in markets where prices are controlled by governments. Moreover, government agencies are involved on one side or the other of over 90 percent of all transactions in wheat trade. The EC, U.S.S.R., and China are examples of countries which control trade in wheat and other grains. The capacity to set prices and manage stocks tends to cause greater instability in the rest of the world than would otherwise be the case and provides justification of government involvement in stocks policy in the U.S. as in other exporting countries.

Grain Reserves. The farmer-held grain reserve program, authorized as part of the Food and Agricultural Act of 1977, was designed primarily to help stabilize internal grain prices and to insure orderly flows of grain in response to market forces. Although the reserve is designed to reduce variability in prices, it also serves a role in expanding trade. It provides greater stability to the quantity of grain available for export markets and thus the U.S. is a more reliable source for foreign buyers. If greater stocks or reserves are deemed necessary for holding or developing markets, the size of the reserve could be increased.

Bilateral Agreements. Bilateral agreements represent another approach for dealing with instability with countries where prices and stocks are government controlled, especially where imports are controlled by a central government agency. Variability in annual grain production in the U.S.S.R. due to changing weather conditions and the Soviet decision to maintain livestock herds in times of short grain supplies have been major sources of instability in world grain markets since 1972. The five-year agreement for the years of 1976-1981 between the U.S. and U.S.S.R. is designed to reduce variation in annual U.S. exports to that nation. The agreement calls for a minimum of six million metric tons of grain and a maximum of eight million metric tons per year without further consultation. Additional sales are possible and have been negotiated in 1979.

The agreement provides that the U.S.S.R. spread their sales over the marketing year in contrast to their purchasing patterns in 1972.

Any bilateral agreement could be negotiated with minimum purchase levels set high enough so that the buyer has greater participation in stockholding. Historically, exporting nations have held the reserves that were carried over from one year to the next. Often these were located in commercial storage, country elevators, or on farms. Costs of storage were borne by farmers and governments in exporting countries. In periods of short supply, those who bore the costs of storage also received the benefits of increased prices. Encouraging regular buyers of grain to hold stocks reduces storage costs for exporters and can reduce price fluctuations in world markets.

Export Controls. Export controls have been used on occasion by the U.S. to insure that domestic consumers would have supplies and to hold down domestic prices. This approach tends to stabilize supplies in one country at the expense of greater instability in other countries. Export controls tend to damage credibility of an export supplier, thereby encouraging greater emphasis on self-sufficiency programs and development of alternative sources of supply. Export controls appear to be a last ditch approach to assuring domestic supplies and their potential impact on both producers and consumers in the United States should be recognized. Larger reserves and limited use of bilateral agreements should reduce the pressure for imposing export controls.

Commodity Agreements. Commodity agreements represent another approach to stabilizing world grain trade. Most have lacked capacity to control either supplies or prices. Agreements for agricultural products have generally been designed to maintain prices between some kind of price floor and ceiling. The International Wheat Agreement, as it evolved over time, appears to have had little success in stabilizing prices or supplies because the domestic interests of individual countries superseded international long-run welfare. It has, however, improved information about world wheat production, consumption, and stocks.

Market Organizations for Trade

Private Firms in a Mixed System. U.S. grain trade is carried out by private firms operating in a mixed world system. Four large grain companies operating in the U.S. and internationally conduct the bulk of world trade in grains. They operate in a world system including grain marketing boards and state purchasing agencies. Some observers believe U.S. farmers are at a disadvantage when large private firms buy their grain in this kind of market environment. There are two issues involved. Would competition be enhanced if co-ops had a greater role in world grain trade? Can private and cooperative firms compete in a world market against government sanctioned trading units?

Role for Co-ops. Responding to the first question, competition is usually enhanced when a larger number of firms are active in a market. Cooperatives might well seek to carry out this function in the same way that they have competed with large feed companies or petroleum distributors. Given the complexity of world grain marketing, a long-run program would be required for co-ops to develop the expertise to increase their share of world markets. They have one advantage at present in that they are first handlers of a large share of grain direct from farms. Growth of co-ops in the export market would require increased marketing expertise, some changes in government regulations of co-ops, and changes in farmers' attitudes toward practices followed by co-ops, including a willingness to provide the capital to carry out these market functions.

Marketing Board for the U.S. At various times, a U.S. grain marketing board has been proposed under the assumption that it could improve the terms of trade for U.S. farmers. This could be a producer oriented board like the Canadian Wheat Board (CWB), or the CCC could be authorized to take on different functions and act as an agent for producers, with or without a producer-public interest board to set basic policy. Evidence is mixed as to whether the CWB has been able to secure greater returns for Canadian farmers than the U.S. system has generated for U.S. farmers. It is also difficult to know the impact on world markets of one agent acting in behalf of all U.S. sales. The CCC could take over the negotiation of sales in the export market in some manner. Any expanded role for a Government agency in marketing would generate substantial debate both at home and abroad. The forces necessary to build in controls over the exercise of power would be very important.

Grain Marketing Cartel. Experience of oil exporters in improving their terms of trade through formation of an oil cartel, the Organization of Petroleum Exporters, has caused some producers and their spokesmen to propose a grain marketing cartel made up of three or four major grain marketing countries. Distinct dissimilarities exist between trade in oil and grain, however. Oil for export is produced by a small number of producers which have a stock of oil which they can control. Major importers depend upon imported oil for 45 to 90 percent of their crude oil supplies. Grain is produced every year in every country of the world and importers depend on imports for a relatively small (but important) part of their total supplies. Furthermore, if a cartel were formed and was able to raise prices significantly, many smaller countries would likely expand their grain production. Perhaps most important, the political pressure against a few rich exporters forming a cartel involving food grains would be tremendous and probably could not be sold to the people of those countries as a result.

World Food Security

Public Law 480 has provided the basic legislative mandate for foreign food aid and development

assistance to less developed countries for the past 25 years. Since the 1974 World Food Conference, the United States has played an active role in efforts to achieve greater world food security. The U.S. has pledged 4.47 million tons of cereal grains as our minimum annual commitment to food aid through P.L. 480 while negotiations for a new Food Aid Convention are in progress. While this is a unilateral commitment on the part of the United States, it is intended to encourage other donor countries to implement pledges they have also made.

It is much easier to agree on the goal of world food security than to agree on how this worthy end can be accomplished or what the responsibility of individual countries and groups must be. Who will control food reserves, how they will be distributed in relation to export sales, and what kind of complex machinery will be required to regulate the system remain as difficult questions. One reason for developing national, unilateral programs is the need to continue to meet needs while international discussions continue. The form of development assistance and food aid continues as a subject for concern. A developing nation which uses its food aid to keep urban food prices low at the expense of domestic farm production and incentives to greater local output will draw quick criticism. Finding effective ways to encourage higher rates of local food production with our development assistance remains a challenge. The nature and size of U.S. contributions to worldwide efforts through international agencies versus our own unilateral programs deserves careful and continuing concern by producers, government officials and consumers.

CONCLUDING COMMENTS

Farm programs have been concerned with price supports, production controls and surplus disposal programs with minimal attention given to their effects on trade in agricultural products. U.S. farm exports have expanded rapidly since the early 1970's with declining value of the dollar, increasing national incomes, growing populations, and changing import policies around the world. In the present economic and political environment, it is crucial that current and proposed farm programs be considered in terms of their effects on our balance of payments and our capacity to trade. If internal prices are set too high, trade will be restricted and export subsidies and/or production controls will be required. Surplus disposal programs on a large scale will be costly and will have largely negative effects on economic development here, and especially in the poorer, less developed countries.

Any form of market organization which significantly raised U.S. export prices for agricultural products relative to the world trading prices for grain would likely be detrimental to export growth and thus result in lower rather than higher export earnings in the long run.

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CROP PRODUCTION PROTECTION POLICY

Thomas A. Miller and Warren L. Trock*

ABSTRACT

Previous Federal policies have provided for some protection to farmers for crop losses due to natural disasters in the forms of insurance, disaster payments and low cost loans. Proposed legislation includes provisions for a federally subsidized comprehensive crop insurance program to replace or supplement present programs. This paper reviews present programs, the Administration's proposal and the bill being considered by Congress. Alternative program directions and possible consequences are discussed. The objective of policy changes is to make the protection programs more equitable among farmers and to provide more coverage per dollar invested by the Government and by producers.

INTRODUCTION

Since the extended drought period in the 1930's, Congress has been periodically involved in legislation to ease the burdens of natural disasters and reduce the risks of losses in agriculture. In 1938, an all-risk Federal Crop Insurance program was enacted. A Disaster Payments Program was initiated in 1974 and continued under the 1977 Act. This program requires no premium payment and directly reimburses farmers suffering crop losses. In addition, a number of direct indemnity and emergency loan programs provide disaster assistance to farmers under special circumstances.

These insurance and direct assistance programs have supported a viable agricultural industry and provided assurance to consumers that this basic industry will continue to provide adequate food supplies. At the same time, the programs have proven costly to the taxpayer and inequitable to farmers, providing some with duplicate coverages while leaving others unprotected.

With this background, Congress is currently considering legislation to establish a new Federal Crop Insurance program.[1] This legislation would correct some weaknesses of the earlier Federal Crop Insurance program and assure that virtually all farmers will be eligible to purchase crop insurance. However, the pending legislation does little to reduce Federal costs of disaster assistance programs and it would not completely eliminate the duplication of coverage. As the Disaster Payments Program under the 1977 Act expired with the 1979 crop year, the second session of the 96th Congress extended the program for the 1980 crop year.

Many of these issues will be debated as part of the 1981 farm bill. The general options for further disaster assistance legislation in 1980 and 1981 are described below, along with a brief review of the history leading up to the current situation.

HISTORY AND THE CURRENT SITUATION

History of Farm Disaster Assistance Programs

The current set of disaster assistance programs was developed over a period of years in an ad hoc and largely uncoordinated manner. One of the earliest was the Emergency Loan Program of the Farmers Home Administration, which was created in 1918. It was significantly expanded during the drought and depression of the 1930's and has been an important program of assistance to this date. It is available to producers who suffer losses from large scale or isolated natural disasters. Designation of disaster areas by the President, the Secretary of Agriculture, or a State FmHA director is necessary to be eligible for this assistance.

The Federal Crop Insurance Corporation was established in 1938 to provide insurance against low crop yields caused by natural phenomena. Though drought was the principal concern of farmers and legislators at that time, other natural risks are also included in the coverage. Unfortunately, the potential of crop insurance has never been realized. One-half the counties in the United States and numerous crops are excluded from the program, and despite Federal funding of administrative costs, premium rates have tended to be high—unaffordable for many producers. In 1978 only eleven percent of all eligible acreage was insured.

In 1974, the Disaster Payments Program of the Agricultural Stabilization and Conservation Service was initiated. This program provides payments to farmers who are prevented from planting any of six crops or who suffer low yields due to natural conditions. It has proven to be the most costly of the present disaster programs—payments of $575, $436, and $486 million have been made under this program for the 1977, 1978 and 1979 crop years. Without further action by Congress, this program will expire after the 1979 crop year.

The Emergency Loan Program of the Small Business Administration was expanded to include agriculture in 1976. Like the program of the Farmers Home Administration, this action was taken as a response to distress created by a natural disaster—a severe though short-term drought. Insured

*Miller is Agricultural Economist, Economics, Statistics and Cooperatives Service, U.S. Department of Agriculture. Trock is Extension Economist, Colorado State University.

[1]S.1125, The Federal Crop Insurance Act of 1979, was passed by the Senate on September 10, 1979. The House passed its version, H.R. 4119, in early 1980. At the time of this printing the two bills were in Conference committee.

and guaranteed loans are made to farmers with damaged assets and/or economic injury from natural disasters. Eligibility for loans is restricted to disaster areas declared by the President or the Administrator of the SBA.

Other programs of legislative origin include (a) indemnity programs for dairy farmers and beekeepers who suffer losses from contamination of products and destruction of livestock, (b) the indemnity program of the Animal and Plant Health Inspection Service, which provides for payments to livestock producers in severe disease situations, (c) the Emergency Feed Program, for assistance to livestock producers in feed scarce areas, and (d) other emergency conservation programs, such as flood assistance and watershed protection.

These programs of insurance and disaster assistance have certainly contributed to a strong agricultural industry in the United States. They have assured the survival of many farming operations during periods of distress and have increased the security of others by the assumption of a portion of the risks of farming. But in recent years those programs have come under increasing scrutiny. Budget outlays have increased tremendously, and it has become obvious that areas of inadequacy exist. Critics have charged that the programs are costly, duplicative, inequitable and unresponsive to need.

Yet the appropriate solution to such problems is far from clear. The role of the Federal Government in providing disaster assistance to farmers under well-known rules has been difficult to identify. Debate has centered around such questions as: Should there be one or several programs? Should disaster assistance take the form of insurance or emergency relief? What level of participation and subsidy is required for crop insurance? What is the best role for the private insurance industry? Should insurance programs be mandatory? What is an adequate level of protection?

The Administration's Proposal — 1978

In May of 1978, Secretary of Agriculture, Bob Bergland, submitted a proposal to Congress for a comprehensive crop insurance program, The Farm Production Protection Act. This program was designed to protect against loss of production investment costs, assuring producers sufficient money to continue producing farm products when losses are sustained due to weather or other hazards beyond their control. The proposed program was to replace (a) the existing Federal Crop Insurance program, (b) the ASCS Disaster Payments Program, (c) the FmHA Emergency Loan Program, and (d) the SBA Emergency Loan Program.

The proposed crop insurance program provided for (a) purchase by farmers of varying amounts of protection against crop losses, (b) coverage for all major crops, and (c) subsidization of premiums by up to fifty percent of actual cost. By replacing four existing programs, the Administration hoped that duplications of coverage would be eliminated and that inequities in benefits would be greatly reduced. The fifty percent subsidy was expected to promote a 68 percent participation level—a level that would allow replacement of existing programs.

This subsidized insurance program, with farmers paying a portion of the cost, was estimated to cost the Government $630 million by its third year of operation. While this cost is roughly equal to the cost of the four current disaster assistance programs that would have been replaced, the new crop insurance program would have provided substantially greater protection for each dollar spent.

The Bill Passed by the Senate

The Congress debated the proposal during two sessions and a number of related bills were introduced. In 1979, two separate bills, H.R. 4119 and S. 1125, finally emerged. Both bills were similar to the Administration's proposal, but they also differed in important aspects. They provided a lower level of premium subsidy and did not replace the disaster payment and emergency loan programs.

S. 1125, the Federal Crop Insurance Act of 1979, was passed by the Senate on September 10, 1979. The Act basically would improve and expand the existing crop insurance program, leaving administration of the program with the Federal Crop Insurance Corporation. It would also extend the Disaster Payments Program for 1980 and 1981. Essential features of the Act are:

1. The all-risk crop insurance program would be made available to producers of all crops grown commercially in the United States.

2. Protection would be provided for 75 percent of the average yield of each commodity. Lower protection levels, 50 or 65 percent of average yields, could be chosen by producers. Premiums would be correspondingly lower. Payments for losses below these yield levels would be made at a per unit price that is the *higher* of (a) the target price, (b) the loan rate, or (c) the projected market price for that commodity. But producers could also choose a lower price per unit coverage.

3. Premiums would reflect the yield and price coverages selected by producers, and provide a reasonable reserve for the Federal Crop Insurance Corporation against unforeseen losses. Premiums would not include administrative costs of the program. The so-called "true-risk" premiums would then be reduced 20 to 40 percent through a subsidy paid directly by the Corporation. The final level of the subsidy would be determined by the Corporation and would apply uniformly among all producers in the program.

4. The Senate bill would extend the ASCS Disaster Payments Program to the 1980 and 1981 crops of wheat, feed grains, cotton and rice. For 1981, producers who enroll in the subsidized crop insurance program would not be eligible for disaster payments on that crop. However, producers could maintain eligibility for disaster payments by either (a) not participating in the Federal Crop Insurance Program or (b) by purchasing Federal Crop Insurance at the total, unsubsidized premium cost. Each producer would

be notified of this option two months prior to the beginning of the crop year, including the premiums, subsidies and coverages for which he is eligible. This provision would prevent any producer from being eligible for both subsidized crop insurance and disaster payments on the same crop.

5. Emergency loan programs operated by FmHA and SBA would not be affected. Any changes in these programs would require additional legislation or administrative action.

6. The Federal Crop Insurance Corporation would be allowed to contract with private insurance companies and agents to help administer the Federal program. These contracts could cover such items as agents' commissions and the direct cost of loss adjustments. The Corporation would also be authorized to provide Federal reinsurance to the private insurance industry, which would aid them in operating a similar private all-risk crop insurance program. A comparable Federal premium subsidy would also be provided under this private insurance program.

In summary, the Senate bill would authorize the Federal Crop Insurance Corporation to insure all crops in all areas and at coverage levels reflecting current production costs and market prices. It would thus correct some of the difficulties encountered in the previous FCIC program—lack of availability in many counties and for some crops, and coverage levels that did not keep up with increasing production costs and crop values. These features generally follow the administration's proposals for a comprehensive crop insurance program operated by the Federal Government, with a degree of involvement by the private sector. On the other hand, the 20 to 40 percent premium subsidy provided by the Senate bill contrasts with the 50 percent originally proposed by the Administration and would likely be insufficient to reach the original 70 percent participation target.

ALTERNATIVE PROGRAMS AND CONSEQUENCES FOR 1980 AND 1981

At this time, Congress has not shown concerted support for either a universal crop insurance program or for continuation of the Disaster Payments Program. The bill passed by the Senate would improve the existing Federal Crop Insurance program and extend the Disaster Payments Program through 1981. The House passed similar legislation in early 1980. A Conference Committee report will be considered by both houses.

Whatever the actions of Congress in 1980, they will surely evaluate the total package of insurance and disaster assistance programs in 1981, when the general farm/food legislation is again considered. Legislators will decide whether it is better to renew all programs, continue some and drop others, exchange the package for something quite different, or drop all programs of disaster assistance. The choice will be significant to farmers and ranchers, as well as consumers. The alternatives should receive careful consideration.

Legislative Action in 1980

The House passed H.R. 4119, a proposal for comprehensive crop insurance similar to that one passed by the Senate. If Congress enacts a Senate-House compromise, the stage would be set for legislation to expand the existing crop insurance program and extend the disaster assistance programs. Such action would provide a continuation of assistance which has been available to farmers; it would produce a limited opportunity for observation of response of farmers to expanded insurance coverage; and it would provide some additional time for Congressional consideration of questions suggested earlier, such as insurance or emergency relief, participation subsidy, voluntary or mandatory programs.

Neither H.R. 4119 nor S. 1125 would, however, achieve the goals of the Administration's proposal, which kicked off the debate about what our disaster assistance program should be. Important differences are the level of subsidy of crop insurance and the relationship of the Federal Crop Insurance Corporation to the private insurance industry.

The 50 percent premium subsidy level proposed by the Administration was intended to assure a high level of participation in the insurance program—in the neighborhood of 70 percent of eligible producers. This high level of participation would have provided an adequate actuarial basis for the insurance program. More importantly, a 70 percent participation level would have allowed eventual termination of the Disaster Payments Program and the emergency loan programs of FmHA and SBA.

With respect to the relationship between Government disaster assistance and the private insurance industry, the Administration's proposal offered opportunities for industry participation in sales of crop insurance and for support of private crop insurance programs via reinsurance with FCIC. An obstacle to comprehensive crop insurance has developed, however, in the competition which comprehensive coverage will give to private hail insurance. Hail and fire insurance have long been extended to most farmers by private companies, who are reluctant to admit the Federal Crop Insurance into their "domain." Proposals for excluding hail coverage from the expanded crop insurance and for premium reductions to encourage purchases of hail insurance as a supplement to crop insurance have been advanced in the Congressional committees. The issue will be decided via the action which is finally taken in the Congress.

Continuation of Three Disaster Assistance Approaches

Passage of a Federal Crop Insurance Act in 1980 will not relieve the Congress of additional decisions in 1981 relative to farm disaster assistance. The basic question is whether to emphasize one approach—Federal Crop Insurance—or whether to extend the mix of insurance, disaster payment, and emergency loan programs. The choice will depend on the cost of the programs, the strength of their

separate political constituencies, and upon the preliminary response and expected participation in the expanded crop insurance program. Even with the provision to limit overlapping coverage, the operation of both the subsidized Federal Crop Insurance program and the Disaster Payments Program may prove more costly to the Government than the previous programs.

A key issue will be the level of farmer participation in the new expanded Federal Crop Insurance program. Participation must be improved significantly, or the program will not be actuarily sound and will be expensive to administer per dollar coverage. If it appears that the availability of the Disaster Payments Program is deterring crop insurance participation, it may be necessary to significantly increase the Federal subsidy of the insurance premiums. This action would raise the public cost of the program, perhaps causing resistance in a Congress that is increasingly sensitive to increased expenditures.

The emergency loan programs of the FmHA and the SBA appear to be less competitive with the crop insurance program. These programs provide for long-term and/or low interest loans, where economic injury is sustained by farmers as a consequence of natural disasters. But they are, in fact, loans which must be repaid. They are therefore not as competitive with insurance as are the disaster payments. Loans may be, in fact, complementary to crop insurance programs. Where disastrous events cause damage to farm improvements as well as to crops, loans may be needed for repair and renovation. Crop insurance will not be sufficient to compensate farmers for crop losses and other damages too.

Even in view of the possible increased expenditures, there will be strong proponents for continuation of all three disaster assistance approaches. Wheat, feed grain and cotton producers will likely favor continuation of the Disaster Payments Program. And the emergency loan programs may not directly overlap with other disaster assistance programs.

Allow the Disaster Payments Program to Expire

Those members of Congress who favor a subsidized crop insurance program as a primary means of providing disaster assistance to farmers will surely favor expiration of the Disaster Payments Program as soon as insurance coverage is universally available. The argument that farmers should pay at least a portion of the costs of assistance is appealing at this time of public opposition to large Government expenditures. Additionally, those who are involved in sales and administration of Federal Crop Insurance will favor expiration of the competitive Disaster Payments Program.

There may, however, be reluctance to allow the Disaster Payments Program to expire unless there is nearly universal acceptance of the new crop insurance program by producers. The lower subsidy of the current Senate and House bills may reduce participation in the new insurance program and leave so many producers uninsured that termination of the Disaster Payments Program would be politically unacceptable.

Reduction of Public Support of All Disaster Assistance Programs

Public resistance to increasing Governmental expenditures, evident in many recent elections, may lead the Congress to reduce public support of all disaster assistance programs. One possible reaction would be to eliminate all programs except for *nonsubsidized* crop insurance and emergency loans. Farmer participants would be expected to pay the actual costs of the insurance, with the Federal Government paying administrative costs. This option would likely be supported by the private insurance industry, which views the government programs as unfair competition.

Such a limited disaster assistance plan would probably not be acceptable to farmers. Without a Disaster Payments Program, a comprehensive but nonsubsidized crop insurance might be purchased by more farmers. But the expectation of most informed people is that participation would be only slightly improved over that of the past Federal Crop Insurance Program. Thus most farmers would be left uncovered under this alternative.

STRUCTURAL IMPACTS OF DISASTER ASSISTANCE PROGRAMS

Other authors in this series have described the increasing concern about the impact of farm policy on the structure of agriculture and the "survival" of the family farm compared to larger farming operations. Questions about the structural impact of disaster protection programs are central to this concern. Many feel that such programs are of greatest help to large, single-crop, credit-financed operations. Additionally, such programs may subsidize production in high risk areas.

The proposed Federal Crop Insurance Act is intended to have a neutral effect on farm size, location of production, and the mix of commodities. All premium rates would be reduced by a uniform percent of the full true-risk premium rate. However, this premium subsidy method does not guarantee that participation rates would be equal among all groups of farmers. Participation in such a program is voluntary and depends upon each farmer's premium, his perceived expected benefits, and his degree of risk aversion. These factors affect an individual farmer's view of the subsidized insurance as a good investment. As a result, actual participation rates may vary greatly by size of farm, geographic area, low risk and high risk areas, major commodities, and type of tenure.

The ability of different farm businesses to bear risks is not equal. The benefits of disaster assistance tend to be higher for producers who are least able to assume risk on their own. On one hand, young farmers who are dependent on borrowed

capital are among those who benefit from such protection. However, many established farmers with the ability and desire to manage large units will also be more able to obtain credit, increase their financial leverage, and absorb smaller family units.

This possibility highlights the concern that subsidized crop insurance and disaster payment programs tend to lessen the competitive advantage of family farms and encourage larger, specialized operations financed from outside agriculture. As experience is gained in operating an expanded insurance program, it may become necessary to change the incidence of the subsidy to lessen such geographic or structural impacts. Subsidies could be shifted (a) to lessen the advantages provided by the program to large farms in comparison to smaller family farms, or (b) to prevent a disproportionate amount of a subsidy from going to riskier and marginal farming areas.

Additional legislation may be required to shift subsidies in this manner. The Federal Crop Insurance Corporation could be authorized to pay an additional or graduated premium subsidy to further reduce the premium paid by operators of small farms. This authority would allow "tilting" the subsidy towards smaller and family farms, as compared to larger units. Or, a "payment limit" on the premium subsidy could be used to limit subsidized insurance coverages on larger-than-family farms. Given the complexity of the question and the many possibilities, it may be appropriate to grant the Corporation broad authority to vary the subsidy by type and size of farm—and by low risk and high risk areas—to *neutralize certain structural impacts. Of course the public would have to better identify structural goals before this could be done.*

CONCLUSIONS

A number of important decisions about farm disaster assistance programs will come before Congress in the next two years. The current debate is concerned with a comprehensive crop insurance program for agriculture—the Federal Crop Insurance Act. Even with passage of this Act, a number of issues remain unresolved. These include: What participation rates and what subsidies are necessary for a viable insurance program? Should the Disaster Payments Program be continued? What should be done about emergency loan programs? What should be the long-run involvement of Government in disaster assistance to farmers?

The impact of disaster assistance programs on farmers individually and on the structure of agriculture is largely unknown at this time. Farmers' needs for such protection are not well articulated or understood. Input from both agricultural interests and the general public will be required if policymakers are to make rational decisions about these programs in the years ahead.

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NUTRITION POLICY, FOOD QUALITY, AND ASSISTANCE

W. Fred Woods, Thomas A. Stucker and W. Keith Scearce*

ABSTRACT

Nutrition and food quality are receiving more emphasis as food and agriculture policies are adapted to changing needs and demands. A formal nutrition policy would likely include essential elements of the existing composite set of policies. Areas of concern would be: determination of nutritional needs, food assistance, food safety and quality, and food production and costs. As nutrition concerns all the public, food policy will become an increasingly important part of national food and agriculture policy.

INTRODUCTION

The food industry, including production to consumption, affects the total U.S. population. About 18 percent of consumer expenditures are for this daily necessity, food. The American public is becoming more involved in food policy issues and is asking for *balanced programs to provide an adequate, high* quality, nutritionally balanced, and reasonably priced food supply. Farmers, as producers of food need adequate prices and returns to continue as an economically viable industry. A comprehensive food and agriculture policy needs to be oriented to producers and consumers.

This paper identifies the increasing public concern about nutrition, food aid and food quality. In particular it emphasizes the growing interest in a comprehensive food and nutrition policy that would include present programs but would be more formally structured toward achieving public food policy goals. It recognizes the importance of coordinated food policies and farm policies.

Expanding Food Aid

During the past ten years an increasing awareness of the nutritional problems of American citizens has moved policymakers to respond in several areas. Over a decade ago, a report entitled *Hunger U.S.A.,* several TV documentaries and a White House Conference on Food focused the Nation's attention on the severity of the food problem existing among low income people. Policymakers responded by greatly expanding the amount of money available for assistance for food purchases. For example, the Food Stamp Program grew from a $288 million program serving 2.8 million people in 1968 to a $7 billion program serving over 19 million persons in 1979. Adjusting for inflation, this was a twelve-fold increase in food distribution. One reason for this growth was the shift from commodity distribution to the Food Stamp Program. Reduced price school lunches were served to three million poor children in 1968. In fiscal year 1978, 12 million poor children received $1.2 billion in lunches. The School Breakfast Program, offering free breakfasts to needy children, has expanded from a budgeted $5.5 million program serving 300,000 children in 1968 to a $200 million program serving over 3 million children in 1979. The campaign to enlarge the Federal food programs has resulted in over 60 million people now receiving some benefit from one or more of these programs.

Federal food programs have received much attention from policymakers and much criticism from certain sectors of society. Despite these claims, research has indicated that many people benefit from the Federal food programs. Authors of the *Hunger U.S.A.* recently told the Senate Subcommittee on Nutrition about their experiences in visiting U.S. poverty areas in 1977. According to their report: "Our first and overwhelming impression is that there are fewer grossly malnourished people in this country today than there were ten years ago. Malnutrition has become a subtler problem."

Interest in National Food Policy

Along with success and growth of the food assistance programs has emerged a concern and interest for a national food and nutrition policy for the United States. The goal of such a policy would be to make available to all Americans an adequate supply of safe, nutritious food at reasonable prices while providing a fair return to farmers, processors, and retailers, and equitable wages to workers in the industry. Such a policy would continue to provide assistance to those who cannot afford the cost of a nutritious diet. Proponents of this policy goal are quick to point out that this is not a new policy but only a new emphasis of existing policies. The Federal Government has a long history in the areas of food assistance and regulation of food quality and food safety. Farmers and others in the agricultural sector have expressed concerns over potential adverse impacts of a nutrition policy on existing production techniques. These views are expressed because they perceive the Government regulators to be overzealous in the regulatory process. Many policymakers attribute these frustrations concerning various components of a nutrition, food safety, and food quality policy to the fact that there is not a formal written food policy. A composite of food policies has evolved, as evidenced by the numerous Federal programs in the area of human nutrition, food quality and food safety.

*Woods is a Public Policy Specialist, Science and Education Administration. Stucker is an Agricultural Economist, Economics, Statistics and Cooperatives Service, U.S. Department of Agriculture. Scearce is an Extension Public Policy Economist, Oklahoma State University.

Current Federal Government activities affecting human nutrition include grading and inspecting foods, ingredient and nutrient labeling, and protecting consumers from carcinogens and other harmful substances. Programs centering on the hungry or the poorly fed include food stamps, school lunches and breakfasts, special food programs for the elderly and other special programs designed for specific target groups. Other public research and Extension programs are designed to improve nutrition through improved quality, increased productivity and nutrition education.

A food and nutrition policy is not new from a conceptual perspective. In any new policy formulation, present programs would continue although possibly their form might be altered. The general farm programs would also continue, although their form might be changed somewhat as well.

What would be new is a shifting of the emphasis to nutrition. Throughout most of history the primary policy focus has been directed toward adequate supplies. This focus led to government policies directed toward increased food production, better food preservation and improved systems for the transportation and distribution of food. But the very success of these programs led to new problems of excess food production and depressed farm commodity prices. To help maintain a viable farm sector, farm price and income support programs have been a major part of public food and agriculture policies since the 1930's.

UPCOMING PROGRAM CONSIDERATIONS

In considering a food and nutrition policy for the 1980's, the most effective (and convenient) efforts may lie in current program thrusts which are already improving nutritional intake of the population. Two areas which have been considered in the past and will receive additional attention in the near future are food assistance and food quality. Programs in these two areas now focus on the problems as perceived over the past 15 years. But, as our perceptions of nutrition policy change, the program framework may be altered to reflect new concerns.

A brief review of present programs and of upcoming program decisions related to food policy goals sets the stage for implementation of several aspects of a broad nutrition policy.

Food Assistance

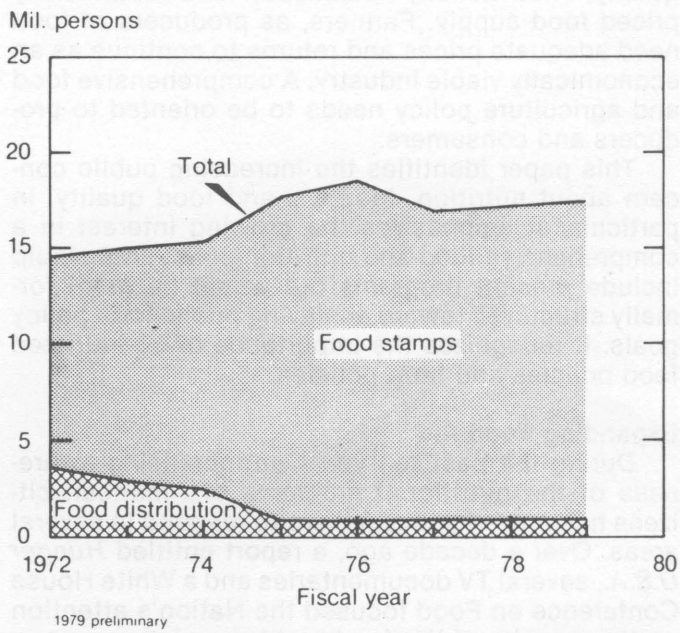
Food Stamps: The stated congressional intent of the Food Stamp Act of 1964 was "to safeguard the health and well-being of the nation's population and raise the levels of nutrition among low income families." Research has indicated that the Food Stamp Program has contributed toward improvement of the diet of participant families. Undergirded by an argument for improved nutrition and the elimination of hunger, the Food Stamp Program has moved toward greater flexibility for participant households.

The Food Stamp Act of 1964 granted States and localities discretionary authority to replace commodity distribution with food stamps. Eligibility standards were set by the individual states, and participation by states was voluntary. A 1971 amendment to the 1964 Food Stamp Act required uniform nationwide eligibility standards, food stamp allotments, and purchase prices. Free stamps were to be made available to the very poor and a participating household was to pay no more than 30 percent of its monthly income as the purchase price for stamps.

In 1973, amendments to the Food Stamp Act required that all areas in the Nation participate in the Food Stamp Program and that the food distribution program be phased out by June 30, 1974. Although the food stamp participation population had grown to over 17 million persons by the late 1970's (fig. 1), research indicated that only about 50 percent of the eligible population actually participated in the program. In order to improve the participation rate and make the program more attractive to very low income people, Section XIII of the Food and Agriculture Act of 1977 amended the 1964 Food Stamp Act so that participants do not need to purchase food stamps to qualify for the program.

FIGURE 1

Participants in the Family Food Assistance Programs



Under the 1977 Act, the Food Stamp Program continues to be administered by the States in accordance with Federal rules. The benefits are paid with Federal monies, and administrative costs are shared equally by the States and the Federal Government. Eligibility standards were modified by the 1977 Act in an attempt to reach more of the very poor while excluding the less needy. Program eligibility is based on the resources and income of the household. A household is defined as a person living alone or any group of people who buy and prepare

food together. Roomers and boarders may qualify as separate households. Full- and part-time students are eligible, but must meet a work registration requirement. There is no longer a requirement for a cooking facility in the household. This Act raised the limit on the value of assets that a household could possess and still qualify for food stamps.

The Food Stamp Program will be reconsidered in 1981, opening the possibility for debate on the form of food assistance. There is little debate as to whether or not food assistance should be offered. Rather, specific provisions and the form of assistance (for example, cash vs. stamps) is the point of contention. With current emphasis on a balanced budget, placing a limit on food stamp appropriations will also be an issue.

A key issue — control of recipient food purchases — was resolved with the elimination of the purchase requirement in 1977. This step was seen by many observers as a step toward a cash-out of food stamps. Since the elimination of the purchase requirement went into effect in January 1979, there will be only a limited time to test this rule before legislation is developed in 1981.

A further transition to cash aid instead of stamps was rejected with President Carter's proposed comprehensive welfare reform legislation in 1977. That proposal included elimination of the Food Stamp Program and its replacement with a cash transfer system. This alternative may again be considered, in the 1980/81 policy debate. However, strong resistance to a full cash-out was raised in 1977.

Food stamp recipients have wide latitude in the foods they purchase. This is an interesting aspect of the program, given the emphasis on nutrition education and knowledge of dietary change which could improve the nutritional intake of Americans.

The rationale for maintaining the flexibility with regard to use of the food assistance dollar is twofold. First, a strong human rights issue prevails which precludes telling people what they can eat. The independence of the individual is preserved by not restricting food aid to items of established nutritional quality.

The second rationale for leaving the purchase decision to the individual is that policymakers are reluctant to legislate demand for some food products and, conversely, reduce the demand for other food products. Perhaps this reflects not so much reluctance on the part of the legislators as the difficulty in getting legislation passed which would accomplish such a shift. Thus, despite our knowledge regarding human nutrition, and even though federally funded nutrition education is carried out under separate programs, the Food Stamp Program allows purchase of most foods (other than hot meals) for home consumption by food stamp recipients.

Elimination of the purchase requirement puts additional responsibility on nutrition education programs to guide purchase behavior of the poor in allocating sufficient funds, in addition to food stamp benefits, to achieve adequate nutritional levels. Recipients are no longer forced to commit income to food purchasing as a prerequisite to receiving assistance. According to recent research, some food stamp recipients, when not forced to commit cash to purchase a greater value of food stamps, spent their cash for other items and ran short of food by the end of the month after the stamps had been issued.

Elimination of the purchase requirement increased program participation by nearly 3.6 million persons. Future increases in participation will contribute to the uncertainty of how much to allocate to the Food Stamp Program budget. If all of those who have been estimated to be eligible actually take advantage of the new liberalized Food Stamp Program, then the budget appropriations may have to be increased substantially.

An issue which will be considered in 1981 is the relationship between food aid benefits and increases in food costs. Retail food prices rose at the rate of 1.4 percent per month in early 1978. Although this rate of increase was not sustained throughout the year, food assistance benefits did not keep pace with retail food costs. This created further problems for the poor. Food stamp benefits are currently determined as a function of the recipient's income and the cost of the USDA's Thrifty Food Plan (TFP). The TFP specifies the amount of food, in terms of 15 food groups, that household members might be expected to use. Amounts of food are specified separately for 14 sex-age categories to meet the Recommended Dietary Allowances (RDA's) established by the National Academy of Sciences. The cost of these specified quantities and types of food is then used to determine stamp issuance to households. Benefits are determined on the basis of the difference between the cost of the TFP and 30 percent of household's net monthly income. This figure is then adjusted to reflect appropriate deductions.

Problems arise due to several aspects of the biannual Food Stamp Program adjustments resulting from this process. First, adjustments always occur after retail prices have risen. Benefits are not increased until after a lag period in which retail prices continue to pull away from those on which benefits were based.

Secondly, the cost of the TFP is based on low-cost foods. Such a plan presumes the low-income shoppers will adjust food purchases and consumption in response to retail food price changes. That is, recipients are presumed to be quite flexible in dietary habits—a trait which may not have been developed due to lack of education or opportunities to try alternative foods.

School Lunches: The National School Lunch Program (NSLP) is a working example for nutrition education in schools. Nutritional requirements for lunches served are specified, and payments to participating schools are contingent upon meeting these requirements. The number of children participating has increased in recent years (fig. 2). A contributing factor in fiscal 1977 was a law bringing

Residential Child Care Institutions under the program. Increased public costs of the program are due to rising food prices and to an increasing share of the costs paid by government (fig. 3). The number of children receiving free and reduced price breakfasts has substantially increased since 1972 (fig. 4). These programs have effectively improved the nutrition of poor children, which also contributed to an educational improvement.

Criticism of the NSLP has included possible plate waste. Lunches served may have met nutritional requirements but may not have been eaten. In recent years, attempts have been made by school administrators to provide more variety and choice.

WIC: Participation in the Special Supplemental Food Program for Women, Infants and Children (WIC) has substantially increased since its inception in 1974 (fig. 5). This program is designed to assist low income pregnant women, their infants, and young children by providing supplementary food packets or vouchers redeemable at retail food stores for specified foods. These nutritional food packets help to correct deficiencies in the mother's diet, thereby lessening the chances of infant mortality, birth defects, and mental retardation.

FIGURE 2

Number of Children in National School Lunch Program

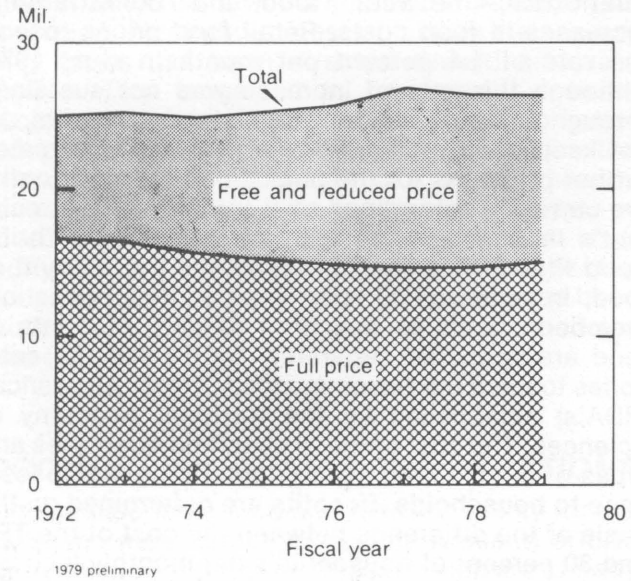


FIGURE 3

Who Pays for the School Lunches?

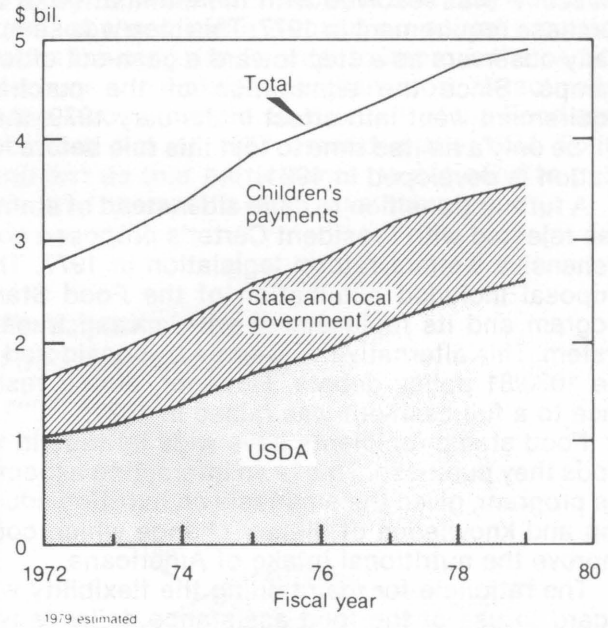


FIGURE 4

Number of Children in the School Breakfast Program

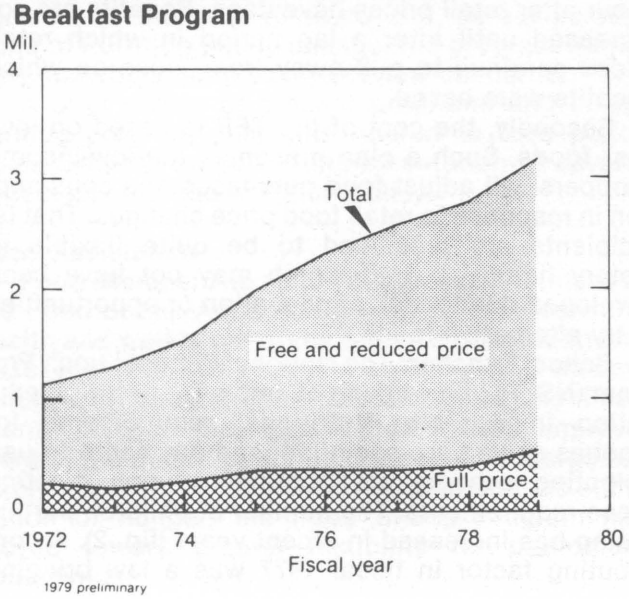
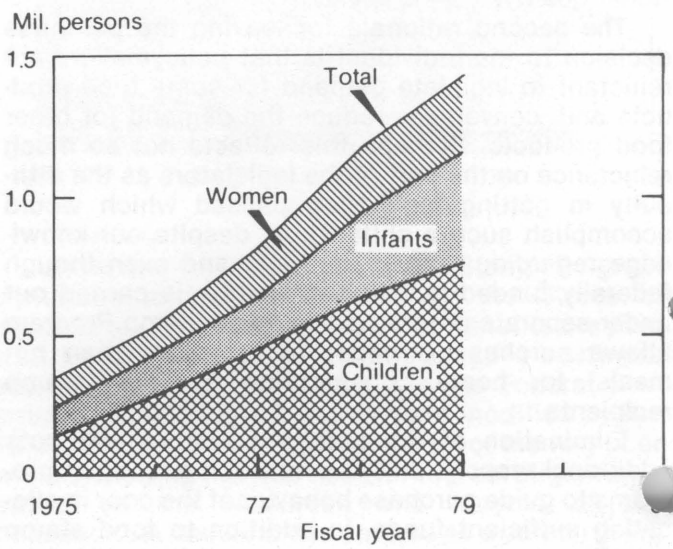


FIGURE 5

Participants in WIC Program



1979 preliminary. WIC is the special supplemental food program for Women, Infants, and Children.

General Comments: The policy instruments used for food assistance could also be changed to a more general comprehensive welfare cash grant program. Although it is recognized that food assistance is a goal of the present U.S. nutrition policy, the debate over the economic efficiency of the present programs compared to alternative proposals is likely to continue.

Present welfare and food assistance programs are duplicative in some areas, which is an inefficient allocation of government resources. Critics argue that a comprehensive welfare program could eliminate the unnecessary duplication and lower administrative costs while providing the necessary food assistance and welfare functions to low income families.

Proponents of the present programs argue that the food stamp and institutional feeding programs are directed at substantially improving the nutritional intake of participant families. Some nutritionists have questioned whether the cash grant approach would be as effective as the Food Stamp Program and other programs when compared to using a per dollar expenditure basis.

Food Safety and Quality

Once consumers are assured of the capability of obtaining food, their interest shifts to the quality and safety of the food available. In 1977, the Food Safety and Quality Service (FSQS) was established within USDA, combining several existing organizations to ensure that the public receives foods that are safe, wholesome, nutritious, and appropriately labelled. FSQS has regulatory responsibilities in the area of meat and poultry inspection, and voluntary grading and certification programs for various food.

The interest in food quality and safety has brought several specific issues to the forefront, but a few common themes can be seen in several of these. The debate often focuses on:

- Food additives
  - What limits should be placed on ingredients put into foods in production and/or processing?
  - What are the tolerable levels of risk with regard to food hazards, such as carcinogens?
  - How can we best present the nutritional aspects of food additives?
- Food labeling
  - What information should be required on the label, and how much information is too much?
  - Should special labelling requirements be made for products such as mechanically deboned meat?

These issues become increasingly important as consumers become more aware of the nutritional aspects of food, and as food processors and manufacturers become more imaginative with regard to food products. Without consumer awareness and interest, the labelling issue would never go beyond the educational role of food preparation. Consumers are now more informed and have become aware of issues involved in the processing and manufacture of foods. Quality of the food must be judged on more than just freshness and appearance.

Food safety and quality are issues which are being dealt with mainly by regulation. This means of implementing (and developing) policy is subject to several weaknesses, one of which is the multiplicity of policy goals and directions which can develop because a central focus is missing. Considerable interest has developed in the process by which rule changes in the food safety area are made, and a recent report of the Social and Economic Committee of the Food Safety Council concluded that the system now used:

- yields inconsistent decisions
- is unable to address some key issues
- suffers from limited participation and decisions based on incomplete analysis

Food regulations, like many applications of the regulatory process, are developed piecemeal and many times tested in the courts. This leads to many loosely related decisions, thus developing a policy from the ground up rather than starting with an overall policy directly applicable to all individual cases.

An example of a legislated constraint on food safety, as differentiated from the process described above, may be illustrative of difficulties encountered in achieving a safe and nutritious supply of food. The Delaney Clause of the Pure Food and Drug Act was designed to protect consumers by requiring premarket testing of all food additives.

The clause, added by a committee amendment to the original bill, states that "no additive shall be deemed safe if found to induce cancer when ingested by man or animal, or if it is found, after tests that are appropriate for the evaluation of the safety of food additives, to induce cancer in man or animal. . .". The phase "in man or animal" causes continual confusion and debate as laboratory tests on animals show a number of food additives to be carcinogenic when consumed at high intake levels. Human nutritional experimentation which would endanger the subjects cannot be carried out. However, we are left to rely on data from extremely high intake rates on nonhuman subjects: a test of questionable value on which to ban an otherwise valuable food additive.

Direction of Change: It is inevitable, if consumer incomes remain high relative to food costs, that concern with *what* we eat will supplement concern with whether we eat. Simultaneously, current inflationary pressures increase consumers' awareness that their food dollar may be spent on growing variety of foods in the market. Consumers can increase their understanding about the amount of information presented to them on product labels. They can demand that certain additives be banned or that certain processes be implemented to provide the type and quantity of product they want. However, a consistent policy formulation process would inform consumers about the benefits and costs of their demands. Decisions to ban a product or restrict it from the market would only be taken after careful consideration of

the potential benefits and costs. It would be necessary that policy research and education programs be presented to the public to better inform them about the potential benefits and costs of an action of the government.

PRESENT POLICIES OR A FORMAL FOOD POLICY?

The United States does not have a formalized food policy because policymakers either cannot come to full agreement that one is needed or cannot agree on the specific form that one should take. Yet, as generally adequate supplies have enabled us to broaden our food perspective and allow for explicit consideration of other policy goals, emphasis on nutrition and quality aspects has gradually become built-in over the years.

In developing a food policy for the 1980's there appear to be two major alternatives: (1) continue the present composite of food policies, or (2) develop a formal National food policy.

Continuation of Present Policy

One alternative is to continue the present largely unstructured, evolving food policies. Contemporary food policy stems from formal recognition that public responsibility goes beyond the administration of programs to assure the economic viability of the farm sector. Food safety and quality, adequate nutritional balance, the linkage between diet and health, and nutrition information and education are important programs.

Such programs impact on virtually all segments of the food sector. Consider the example of chemical additives: chemicals have long been used to increase food production, retard spoilage and preserve foods. Positive consequences, by and large, have resulted. Chemicals have contributed to adequate supplies of food, helped shape production, processing and distribution techniques, and generally led to the kind of food system we have today.

Now, many consumer organizations have expressed serious concerns about health-related effects of chemicals. There is a growing body of scientific evidence linking food and feed additives to human health conditions. As a result there are frequent proposals to ban or otherwise regulate these chemicals.

The debate over the use of nitrite to cure meat is one example. A total ban would imply severe adverse consequences for livestock producers and meat processors. Higher prices for consumers would also be implied. But what about the human health costs? What are the relative costs of health risks from botulism versus cancer? Can we afford to ban a known carcinogen even when the probability of causing cancer in humans is very small? We do not know how to measure these costs, but decisions have to be made.

A continuation of the present policy will, most likely, mean continuation of the trend of shifting concern toward nutritional issues. There will continue to be periodic challenges to accepted procedures, and regular, if not systematic, adjustments in the food sector to meet these challenges.

A Formal Structured Food Policy

A formal National food policy would officially recognize that the food system exists for the consumers of food and that resources devoted to food production must be utilized so that the resulting products contribute to the nutritional well-being of society in general.

Why have a formal policy if we have generally arrived at the same recognition even if through indirect means? Food policy advocates give several reasons:

- For many years, we have used chemicals in the food system, as discussed above. We now learn that some of these chemicals, apparently so beneficial to the food system, are harmful or potentially harmful to the human body when used excessively.
- Millions of Americans are still unable to obtain enough to eat without some form of public assistance. Millions of others have nutrition problems resulting from consumption of too much food. Nutrition education and research, and food safety and quality programs are needed by both groups. But, obviously, these alone are not enough for those who simply cannot afford an adequate diet.
- There have been dramatic changes in American lifestyles over the last two decades combined with similar dramatic increases in the number of food choices facing the American citizen. This combination of events has led educators and nutritionists alike to become increasingly concerned about the capability of consumers to make food choice decisions that provide nutritionally sound diets.

Government policies encourage certain kinds of production and marketing systems through price support, regulatory and research programs while discouraging other kinds of systems. Research has contributed little information about the linkage between these programs and the nutritional status of the American consumer. Little is known about how to persuade American consumers not to consume certain food items while encouraging the consumption of other foods which are more nutritious. If attempts were made to use the market price mechanism to discourage the consumption of certain food items, this would negatively affect producers of those commodities. A set-aside program which restricts supplies of selected crop commodities may cause some higher prices to be paid in the domestic market. Could the set-aside programs be used to price commodities such that consumers will not desire as much of a specific commodity? For example, if it is determined that excessive consumption of beef is a major cause of heart trouble or other health problems, will the Government be able to restrict imports, or take other policy measures to increase the price of beef in order to encourage con-

sumers to reduce consumption? These are relevant policy questions that involve the linkage of traditional agricultural programs with formal nutrition policy. They are of general concern to farmers and the producer organizations. A formal structured nutrition policy would have to address what type of linkage would exist between the nutrition policy and the traditional agricultural programs. The policy options (such as banning the products, using the price mechanism, educational programs, etc.) would have to be discussed given alternative situations and impacts of the programs on human health.

A formal, structured nutrition policy might have six components:

1. Determining nutritional needs
2. Insuring safe and high quality food
3. Stimulating desired production patterns
4. Assuring reasonable food costs
5. Providing domestic food assistance
6. Determining U.S. role in feeding the world

Determining Nutritional Needs: Food and farm policy would be based on a detailed assessment of nutritional needs of the people. We would then have to develop the ability to translate nutritional needs into production terms. For example, research is needed on the nature of adverse effects of high animal fat diets on humans. If it should be found that certain types of fat have deleterious effects, what adjustments in farm and food production practices and programs would be required to reduce the amounts of these kinds of fat produced and/or consumed? Economic disincentives have served to reduce amounts of milk and pork fat produced. To fully implement this phase of policy, substantial increases in our nutrition base would be needed.

Insuring Safe and High Quality Food: Present programs may not be sufficient. Government action to promote food safety and quality may need to enter new areas. When limits are placed on previously approved products and processes, policy should address the transitional problems. This might include mechanisms for easing the financial impacts on smaller firms.

Stimulating Desired Production Patterns: This does not necessarily represent a major departure from traditional programs of this type. But a new policy might assess what *specific* areas of agriculture to support, based on nutrition and trade needs. Such a policy might involve a reorientation of production plans.

Assuring Reasonable Food Costs: In the past, the stress has been almost solely on production programs to assure reasonable food costs. Yet, what happens to food after it leaves the farm is one of the most important food price determinants. Government policy should discourage unnecessary food costs from being built into the food system between the time food leaves the farmer and the time it reaches the consumer.

Providing Domestic Food Assistance: Current policy addresses the problem of people who cannot afford an adequate diet in various ways: food stamps, institutional feeding programs, and nutrition education. These programs would be upgraded and become more focused. Alternatively, a cash-grant program may be reconsidered to replace the present food assistance program.

Determining U.S. Role In Feeding The World: Many factors are involved here. The government must determine the appropriate role, consistent with other domestic and foreign policies. It must then determine how much will be accomplished through trade, how much through assistance, and how much additional production is necessary to meet these needs.

Consequences Of A Formal Nutrition Policy: In the short run, many consequences will be substantially the same, whether we continue the present, evolving system or adopt a specific formal policy.

The substantial nutrition research needs would require dramatic increases in public research funds. However, defensive research needs will likely also mount, to provide evidence to bear on challenges to chemicals and other issues.

We are already witnessing an increase in research and education on the diet/health relationship. Such information has important ramifications throughout the entire food system. Research findings—and education based on these findings—are essential for proper evaluation of both current and proposed policies and programs. Additional evidence on the diet/health linkage may well affect food safety and quality programs as well as food assistance programs. A comprehensive nutrition policy would need to recognize these linkages and utilize them in achieving policy goals.

A food and farm policy based on nutritional needs might, or might not, indicate substantial changes from current production patterns. If, for example, research generated nutritional requirements led to a shift away from consumption of grain fed livestock, substantial disruption would occur in both livestock and grain subsectors. However, there is no real reason to believe that such a change, even if mandated, would be required in a short period of time. Any such finding would be opposed by the traditional agricultural producer groups. But, there is no reason to believe that such a change would be more likely to be required as a result of implementing a Federal food policy than under our present evolving system.

Many if not most consequences might well be the same as under present policies. The major difference, according to advocates for the formal policy, would be that formal structured policy would lead to more orderly, less potentially disruptive adjustment than the present system.

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It is important to understand that the question is not *whether* the United States will have a food policy. We have *always* had a food policy, one based on assuring that there would continue to be an adequate, safe, palatable and nutritionally balanced food supply available to all Americans. However, the

relative program emphasis on each aspect of the policy statement has changed over the years. Today the newest emphasis is on safety and nutritional balance.

The question is whether we will move deliberately toward an explicit, formal, structured nutrition policy which will then serve as the basis for our food and farm policies *or* whether we will continue by gradual shifts in emphasis to evolve a comprehensive food policy.

The reality of the situation is that the U.S. will continue to develop a set of programs based on food and nutrition rather than just farm policy objectives.

The general public is becoming increasingly involved in developing food and agricultural policies which include objectives of nutritionally balanced and safe foods as well as economic protection for farmers.

NATURAL RESOURCES: IMPLICATIONS FOR AGRICULTURAL, ENVIRONMENTAL, AND ENERGY POLICIES

William V. Neely, Roy R. Carriker and Norman Rask*

ABSTRACT

Society places increasing demands on land, water, energy, and the environment. In an age of relative resource scarcity, development of policies related to food and agriculture must include consideration of the tradeoffs among society's goals for food production and all the other uses of limited resources. This paper identifies soil and water conservation, agricultural land retention, and agriculture energy issues and policy alternatives, with attention to the need for consistency among programs and objectives.

INTRODUCTION

Recent emphasis on energy, environmental, and land use issues has brought focus on the implications of natural resource use for agricultural production. These implications are emerging as major factors in food and agricultural policy formation.

This paper reviews the problems, issues, and alternative policy approaches in soil erosion, agricultural nonpoint pollution, land losses from conversion, and the implications of liquid fuel shortages on the agricultural and food sector. Some alternative policy approaches for dealing with the issues are discussed.

SOIL CONSERVATION

The Problem of Soil Erosion

Surveys in 1935 showed that soil erosion had ruined approximately 100 million acres of U.S. cropland for practical cultivation over the preceding 200 years. More recent studies show that soil loss through erosion is a continuing problem. Water erosion represents the dominant form of soil loss in the United States, delivering approximately 4 billion tons per year of sediment to waterways in the 48 contiguous States. Wind erosion is less severe than water erosion, estimated at one billion tons eroded per year. The annual transfer of 5 billion tons of soil to streams and elsewhere is the equivalent of about 7 inches of soil from about 5 million acres.

Soil is also continuously being formed at an estimated rate of about 1 inch in 100 years. This amounts to about 1.5 tons of topsoil per acre per year. The average annual loss of topsoil from agricultural land is estimated at 12 tons per acre, although rates of soil loss and soil formation both vary according to such factors as climate, vegetation, soil disturbances and the nature of the subsoil.

The effects of soil erosion on cropland productivity are difficult to generalize because of the influences of such factors as crop variety, soil nutrients, soil structure, topsoil depth, drainage, temperature, moisture, and pests. Studies which account for these factors suggest that soil erosion reduces crop yields, primarily because of reduced nitrogen content, impaired soil structure, deficient organic matter, and reduced availability of moisture to plants.

Economic impacts of soil erosion on a producer in a single year can be relatively minor, since yield reductions typically amount to a few percentage points per acre per inch of topsoil loss. Cropland losing a fraction of an inch of topsoil per year would experience small productivity losses. Moreover, gradual reduction in potential productivity of the land has been offset over the years by several changes in crop production practices, especially the introduction of better yielding plant varieties, and heavy applications of chemical fertilizers. One set of calculations has indicated an annual loss of over 50 million tons of plant nutrients to soil erosion costing $6.8 to $7.8 million to replace. Another estimate, in terms of energy, is that 5-gallon equivalents of fuel per acre are used each year to offset productivity losses due to soil erosion on croplands; if applied on the 400 million acres, this amounts to the equivalent of 50 million barrels of oil.

Those who argue for greater public and private investment in soil conservation point to two concurrent trends: steady increases in world population, and steady increases in price (and impending reductions in supply) of petroleum based fossil fuels. Assuming the best U.S. cropland is already in production, increased supplies of food and fiber for the future will depend on growth in productivity per acre. Topsoil is an essential base for the future productivity of agriculture.

Another major argument for soil conservation identifies soil erosion and associated phosphate and pesticide runoff as a major source of water pollution. About 1 billion of the 4 billion tons of water-borne sediments end up in the ocean, and the remaining 3 billion tons settle in reservoirs, rivers, and lakes. An estimated 75 percent of this sediment comes from agricultural lands. Suspended sediments impair light penetration in water, thereby reducing productivity of aquatic ecosystems. Added

*Neely is Public Policy Specialist, Science and Education Administration, Extension, U.S. Department of Agriculture. Carriker is Agricultural Economist, University of Florida. Rask is Agricultural Economist, Ohio State University.

nutrients can cause deterioration of water through unwanted plant growth. Recreational and aesthetic values of lakes and streams are reduced, municipal water treatment costs may be increased, and the costs of dredging to maintain waterways are increased.

Remedies to Soil Erosion

Soil specialists generally agree that erosion can be reduced by well-known engineering and biological methods and practices. These include contour plowing, terracing, strip cropping, rotating crops to improve soil structure, leaving harvest residues or litter on the soil surface, converting marginal erosion-prone land from crop production to pasture, planting shelterbelts or windbreaks, and practicing minimum tillage (disturbing the soil as little as possible in planting operations and thereby leaving strips of sod between crop rows).

Whether producers conscientiously adopt and maintain conservation practices as a part of an overall management plan is often determined by their competence in conservation practices, and, perhaps more importantly, their assessment of economic returns to investment in conservation. In many instances, farm operators may find that chemical fertilizers and pesticides offer a higher return than investment in conservation practices, at least in the short run. Moreover, there is no economic incentive for the farm operator to consider the damage from sediment erosion from his land on streams and reservoirs. Agricultural returns may not encourage investment of some conservation practices which benefit primarily future generations.

The Agricultural Conservation Policy Setting

Public policy responses to soil erosion problems originated during the 1930's with the Agricultural Adjustment Act of 1933, and the Soil Conservation and Domestic Allotment Act of 1936. These policies were primarily concerned with maintaining farm income. Soil and water conservation were secondary objectives. The Federal Government since then has also used a variety of techniques to reduce agricultural production to stabilize commodity prices at acceptable levels. Land retirement with use of cover crops encouraged soil conservation.

The Soil Conservation Service (SCS), Agricultural Stabilization and Conservation Service (ASCS), and local State chartered soil conservation districts are governmental agencies with soil erosion control responsibilities. SCS was formed in 1935 with the mission of inducing adjustments in land use to improve human welfare, conserving natural resources, establishing a diversified agriculture, and reducing flooding and siltation. The means to these goals was a policy of providing planning, organizational, and technical assistance. Farmer participation was facilitated through formation and use of State authorized soil conservation districts with locally elected directors. The directors develop policies and programs for their local areas with technical assistance provided by SCS. Some states also empower districts to prescribe compulsory land use regulations to control erosion, but few such regulations have been imposed.

ASCS administers primarily price and income support programs but also administers the Agricultural Conservation Program (ACP), which has also been referred to as the Rural Environmental Assistance Program (REAP). Whereas SCS provides technical assistance, ACP provides financial assistance.

Other Federal programs are also aimed at soil and water conservation. Section 208 of the Federal Water Pollution Control Act of 1972 calls for the development of plans by State designated planning agencies for the control of nonpoint sources of water pollution. Section 208 was amended by the Clean Water Act of 1977 to authorize a program of cost-sharing to assist farm operators in capitalizing conservation measures called for by approved 208 plans. The Rural Clean Water Program (RCWP) is to be administered by the USDA in cooperation with the Environmental Protection Agency. Implementation of RCWP has been delayed by lack of Congressional appropriations for its support.

Federal programs to direct and financially support soil conservation programs have met with varying degrees of success in the adoption of soil conservation practices. Recent legislative efforts suggest that many politicians and farm leaders feel that the goal of soil conservation deserves a renewed Federal commitment. The Soil and Water Conservation Act of 1977 (RCA) directs USDA to undertake a comprehensive examination of existing soil resources and assess the fiscal and institutional priorities of current farm policy provisions and program linkages so that future farm policy will more adequately reflect the long run importance of soil conservation.

Alternative Policies for Soil Conservation

The goals of public soil conservation policy are to reduce the loss of topsoil to wind and water erosion and to reduce the volume of sediment runoff into lakes and streams. The techniques to achieve these goals range from modified crop management practices to the construction of terraces. The challenge for policymakers is to identify and select those instruments that induce farm operators to apply whatever conservation techniques are necessary in order to achieve the goals of minimal soil loss and improved water quality. Political acceptability is a constraint to the choice of policy alternatives.

Possible policy instruments for the facilitating of conservation policy range from purely voluntary measures to strict regulatory measures along with a variety of financial incentive mechanisms. A list of these conservation encouraging instruments would include (1) education and technical assistance, (2) tax deductions for conservation investments, (3) low-cost loans for conservation investments, (4) cost-sharing, (5) direct payments, (6) induced voluntary cross-compliance, (7) required cross-compliance between conservation programs and supply

control, price support, target loan, and disaster assistance programs, (8) taxes or charges based on soil losses, (9) regulations mandating conservation practices and prohibiting soil degrading practices, and (10) some combination of two or more of these.

Education and Technical Assistance Programs: Educational and technical assistance programs may be necessary for any concerted effort to reduce soil erosion, since embarkation on a soil conservation program requires technical competence. Such programs have the advantage of providing interested farm operators maximum flexibility to decide when to adopt conservation practices which fit best with existing farm plans. The personnel and organization are available through SCS. However, experience with traditional conservation programs has demonstrated that a strategy of education and technical assistance, when used independently of other measures, is of limited effectiveness. A principal reason is that farm operators face periodic short run financial stress which precludes the type of substantial long-term investment necessary in order to effectively eliminate soil loss and sediment runoff. The SCS claims 2.2 million land users as cooperators, over 3,000 soil conservation districts, and 1.7 million conservation farm plans developed over the years. However, studies reveal that fewer than half the farm operators were using their conservation plans.

Tax Deductions for Conservation Investments: Tax relief measures are allowed by federal law: the soil and water conservation deduction, the investment tax credit, and rapid amortization of pollution control facilities.

Tax relief provisions as soil conservation incentives have limitations. A farmer may not pay taxes every year because of variable income and other tax credits. In those years, tax relief offers no conservation incentive. The Federal tax refund incentive system provides no technical conservation assistance. The tax system does not allow particular regions or practices to be targeted, provides no systematic mechanism for evaluating effectiveness on erosion or pollution, and favors farm operators in higher tax brackets because of the progressive tax structure.

Low-Cost Loans for Conservation Investments: Several major sources of loans are available for agricultural pollution control including: commercial banks, Farmer's Home Administration (FmHA), and the Small Business Administration (SBA). FmHA loan programs require that the borrower be unable to finance the proposed project with personal resources or with loans from conventional sources at reasonable rates and terms. SBA loans are available only to farmers with annual receipts of less than $1 million, who would incur substantial hardship in the absence of the loan, and for whom sufficient commercial funds are not available. For pollution control facilities, the applicant must have a certificate from EPA stating that the investment is necessary in order to meet water pollution control requirements under the Federal Water Pollution Control Act of 1972. SBA maintains only one district office in each State, which tends to limit farmers' access to the program.

Farmers generally use credit for investments that yield the higher rates of return. Unless pollution control investments can compete financially with alternative investments, these loans will play a minor role in the control of pollution from agricultural nonpoint sources. However, loan programs can be targeted to specific conservation practices, can be monitored for effectiveness, and can be made available to low income farmers.

Cost Sharing: The Agricultural Conservation Program (ACP), administered by ASCS, provides cost sharing dollars directly to farmers and has done so since passage of the Domestic Allotment and Agricultural Adjustment Act in 1936. The funding is available for practices that help maintain the productive capacity of agriculture by reducing loss of agricultural soil, water, woodlands or wildlife resources. The program also considers the need to encourage voluntary compliance by agricultural producers with federal and state requirements to solve point and nonpoint sources of pollution. Eligible practices and cost share rates are determined by the local farmer-elected ASCS committee in each county, which also selects who will receive funds from among the applicants.

A similar program is set forth by the Rural Clean Water Program which represents the first major national effort to provide cost sharing for control of agricultural nonpoint sources of water pollution.

Cost sharing programs have failed to elicit farmer participation, even at high percentage levels of cost sharing, in situations where farm operators could not see sufficient economic benefits to the operation. Other cost sharing programs, for practices offering significant economic returns to farmers, have attracted high participation rates, even at lower cost sharing percentages. Experience shows that farmers are sensitive to the probability of private gain when considering cost sharing programs, and that cost share rates must be based on a local assessment of farmers' attitudes toward specific practices.

Cost sharing programs require heavy expenditures for administration and technical assistance. From the public perspective, they offer the advantages of being earmarked for specific practices, allowing funds to be focused on projects yielding the greatest returns in erosion abatement. In practice, however, program objectives have often been compromised to accommodate the preferences of farm operators for production oriented, rather than conservation oriented practices. This is a disadvantage of program administration by farmer-elected local committees.

Cross Compliance Strategies: Proposals have been made for cross compliance programs which require that certain specified conservation objectives be met by farmers in order to qualify for price or income program benefits. Several forms of cross compliance strategies are possible. They are also called conservation incentives programs. The basic

purpose is to advance conservation efforts by changing the primary compliance provision of commodity support programs so that farmers would be encouraged to adopt low cost, accessible soil conserving practices. In return for voluntarily joining the program, farmers would be offered economic incentives through higher target prices for basic commodities. Target prices for farmers who elect not to join the conservation effort would be marginally lower, so the necessary federal expenditure for the program need not necessarily change.

Incentives, in addition to target price differentials, could also include preferential treatment in disaster programs, relaxation of absolute payment limitations otherwise approved by the ASCS, use of higher "normal yield" levels in ASCS direct payment formulas, and tax credits or deferrals.

Complicated program features include the necessity for farm-specific plans, establishment of compliance provisions for different crops and classes of land, and implementation of a two-tiered target price mechanism. To refine and coordinate a cross compliance program would require a research commitment to bring together existing knowledge about soil conservation, its costs and consequences.

Assessments or Penalties on Soil Loss: Another possible policy measure is a sediment effluent assessment for each farm based on the gross soil loss equation and the sediment delivery equation. Multiplying the volume of sediment (perhaps only that portion above some allowable maximum per acre) by a per unit charge would yield an assessment to each operator. The assessment might begin at a lower rate and be increased gradually with the level of soil loss.

In an effort to reduce such payments, farm operators could solicit technical assistance from SCS to identify measures for reducing soil loss and thereby lower the effluent assessment. Cost sharing funds could be made available if installation of structures or other high cost practices were required.

Determining soil losses on a farm-by-farm basis would require a large staff of technicians, and also possibly, an upgrading of technical capabilities beyond the current state of the art.

Regulation: A regulatory approach to conservation policy could key on mandatory implementation of farm level conservation plans. The administration of such a policy would be carried out by Government, possibly by SCS, in cooperation with soil conservation districts. Guidelines would be established which all approved conservation plans would have to meet. A contract would be established between the farmer and the Government, with the latter agreeing to create an approved conservation plan for the farmer. The Government would bear the cost of writing the plan, but compliance costs would be borne by the farm operator. Implementation would be monitored, and penalties would be imposed for non-compliance.

A regulatory approach has the disadvantage, from the perspective of farm operators, of reducing the farmer's control over total farm management planning, placing considerable control into the hands of elected district supervisors. If implemented without cost sharing or other measures to offset farmers' costs of complying, farmers with more severe erosion problems would be comparatively disadvantaged.

AGRICULTURAL LAND RETENTION

About 3 million acres of rural land in the United States are converted to highways, urban development, or other special uses each year. Most of these conversions are considered irreversible and conflict with agricultural land uses, as one-third of the land converted in this manner is cropland.

From a national perspective, continued conversion of agricultural land to non-farm uses is viewed by some as a potential problem in that it reduces a part of the natural resource base needed in order to meet future world demand for food. Some experts express concern about future food production, the leveling off in productivity of agricultural resources, reduction of funds for research on food production, increasing cost and relative scarcity of water and fossil fuels, increasing environmental restrictions on pesticides and other agricultural chemicals, and the need to export agricultural products to offset imports of other products.

There are beneficial aesthetic and environmental effects associated with having land in agriculture rather than industrial, commercial, or residential uses. The market system may allocate too much land to non-farm use if these other aspects of agricultural land value are not considered. Moreover, specific tracts of agricultural land that may contribute very little to the Nation's agricultural output still may support a local economy very much dependent on this agricultural base. Conversion of that agricultural land could have significant local consequences.

Alternative Approaches

Broad policy directions facing society on this issue are: to continue to rely on the present system of allocating land to agriculture, to adopt additional measures designed to protect land for agricultural purposes, or to adopt techniques to give less protection to agricultural land. If it is decided to consider additional means of protecting agricultural land, the following broad categories of strategies may be considered:

- Reduce incentives and pressure to take land out of agriculture.
  - * Make agriculture more competitive.
    - — Minimize restrictive laws and regulations on agricultural lands.
    - — Promote technological innovation in agriculture.
    - — Provide agriculture with preferential treatment for fuel and other resources.
  - * Encourage nonagricultural developments locate on land less suited for cropland.
    - — Discourage sprawl development.

— Require agricultural land impact studies on all public and private projects requiring land use changes.

- Provide controls to discourage transfer of agricultural land to nonagricultural uses.
  * Provide differential assessments favoring agricultural land use.
  * Institute zoning for agricultural lands.
  * Develop agricultural districts.
  * Use buffer zones.
  * Transferable development rights.
  * Public ownership.

Some of these techniques have been used with varying degrees of success. Others have been discussed at length, but actually used in only a few instances. Many of these measures are predominantly suited for adoption at the State and local level.

The Federal Government would be an appropriate level of policy implementation for such alternatives as minimizing restrictive laws and regulations, promoting technological innovation in agriculture, and providing agriculture with preferential treatment for energy supplies. EPA regulation of pesticides has demonstrated the difficulty of balancing needs for controlling ecological and health damages from toxic substances on the one hand, and maintaining a viable agricultural pest management technology on the other. Technical assistance provided by the SCS, educational programs of the Extension Service, and income and financial programs of ASCS and FmHA are well established programs for carrying out a Federal policy of support for innovation in agriculture. Preferential treatment for agriculture in acquiring fuel supplies may be of critical importance during temporary periods of supply dislocation. Attention must be given agriculture's close dependence on other sectors of the economy, however, in long-term schemes for preferential allocation of fuels.

ENERGY AND AGRICULTURE

Energy Supply

Supplies and pricing of energy (particularly liquid fuels) are much a world concern. Some basic perspectives concerning the size and distribution of potential energy resources are needed. Estimates vary on the status of supplies and on how and when various holders of these resources will market them. However, it appears that expected production levels of oil in the major producing countries will not carry the world through the 1980's at current price levels.

Fossil energy resources are very unevenly distributed in terms of reserves, location, and use. Coal is by far the most abundant resource, but communist countries have nearly 50 percent of these reserves, the U.S. has about 30 percent and the rest of the world has the remaining 20 percent. Oil, which represents only 16 percent of the energy reserves, is currently providing over one-half of energy use (table 1).

Trends in production, use, and level of proven reserves of oil and gas in the United States are cause for concern. With the exception of the addition to gas and oil reserves resulting from North Slope discoveries in 1970, production levels have exceeded new discoveries since the late 1960's. The cumulative effect has been a rapid draw down in the

Table 1. World Energy Demand-Supply-1976 by Major Regions

Energy Source	World	United States	Other OECD	Russian, China, Eastern Europe	Middle E. Arab OPEC	Other
			(Percent of total supply)			
Supply						
Proved and probable reserves						
Oil	16	1	1	1	10	3
Natural gas	12	1	1	4	5	1
Coal	66	21	10	32	—	3
Uranium	6	2	3	P	—	1
Solar-hydro[1]	—	—	—	—	—	—
	100	25	15	37	15	8
Demand			(Percent of total use)			
Oil	54	14	19	13	1	7
Natural gas	18	7	3	8	—	—
Coal	19	6	4	9	—	—
Uranium	2	1	1	—	—	—
Solar-hydro	7	1	1	2	—	3
	100	29	28	32	1	10

Source: Supply-adapted from Russett Demand-UN Statistical Yearbook - 1976.

[1]Not directly measurable as a stock resource.

reserve level. There is little optimism that the trends over the past 13 years will be reversed or even substantially changed. U.S. drilling activity is now at the highest level since the 1950's and has increased over 80 percent above the low point in the early 1970's yet new discoveries remain low. We are using most rapidly the energy sources which are in smallest supply.

Energy Use in the U.S. Food Systems

In recent years, oil and natural gas have provided about three-quarters of the total U.S. energy budget. However, within the total food system, they supply about 85 percent of the energy use and within production agriculture, over 90 percent. Within the larger food system, including food processing and manufacturing, dependency is on natural gas, while farm production and marketing distribution rely principally on oil.

Price decontrol and tight world oil supplies will likely force relative prices of these two sources higher. While some conservation efforts are effective, it is possible that substantial reductions in use could lower agricultural production. The current productivity of the agriculture industry indicates that agriculture might continue to use these inputs at higher prices. The impacts of higher prices are not uniform since some products and regions are more energy intensive than others. Differences in use of crops, fertilizer, and irrigation are responsible for differences. As energy prices rise relative to other inputs, specific crop competition between regions and optimum crop mixes within regions will change.

Since the use of oil and natural gas is critical both in quantity and timing for agriculture and since agriculture is a relatively small user of these energy sources, special efforts must be made to secure adequate supplies during critical use periods. It is important that these production relationships and the productivity implications of short energy supplies for agriculture are well understood when allocation priorities are established.

Increased Domestic Energy Production: Agricultural Impacts

Domestic energy production can shift away from oil and natural gas toward coal, with additions from shale oil, tar sands, biomass and low head water power. Wind and solar energy will increase substantially, but the future of nuclear energy is unclear. Surface disruption (of agricultural land), disposal of waste material, water contamination, and increased water demands for energy processing and possibly transportation are the principal impacts on agricultural resources. Development of biomass as an energy source could affect food production and agricultural resource use more directly.

Biomass As An Energy Source: There are three general sources of biomass: sucrose, starch, and cellulose products. Each requires a somewhat different processing technology. Sucrose or sugar products, such as sugar cane, sweet sorghum, and sugarbeets can be processed directly to alcohol through a fermentation process. Starch products, such as corn, potatoes, and other grains must be first converted to sugars and then fermented. Cellulose products such as straw, corn stover, and wood are the most difficult to process. Grains can be stored and shipped reasonably long distances for production resources. Sugar products generally are bulky, heavy, and perishable and, thus, must be produced near a processing plant. Harvest of both cellulose and sugar products for use as energy sources involves removal of much residue material from the field, and on some oils this could increase soil erosion and nutrient depletion.

The processing technology and economic relationship relevant to biomass conversion have not been clearly established. The specific source or combination of resources that will be the most profitable for biomass conversion to energy have not been identified. The choice will vary from region to region. Once a plant is located, it could determine the land use within the immediate vicinity, especially in the case of a major plant utilizing a bulky energy crop.

The small on-farm technology has generated much interest. Many farmers are investigating the feasibility of producing enough alcohol to satisfy their own fuel needs. Positive and negative aspects are associated with on-farm energy production. Capital costs could be high per unit of energy produced. Quality might be low unless sophisticated equipment and technology are used. Operating costs may also be high depending on processing heat and labor sources. On the positive side, many farmers may be able to use waste material for both the energy feedstock and for process heat. Solar and wood energy may provide process heat for fuel production. Use of farm produced energy needs would lessen dependence on uncertain fuel markets and in some cases could lower total energy costs to the farm operation.

Crop removal is also an issue. The amount of residue that can be safely removed is a function of several factors including crop rotation, tillage practices, soil type, and slope. It is estimated that allowable levels of residue removal could increase soil nutrient requirements by 5 percent for phosphorus, 6 percent for nitrogen, and 20 percent for potassium.

Impact of Energy on Food and Agriculture

The specific impacts of the energy supply price problem on agriculture can be identified in three general categories: demand for agricultural commodities, supply or cost of production, and resource use.

Demand Factors: The demand factors will operate in both positive and negative ways. First, the impact on the general economy as reflected through higher energy prices will be felt in the form of continued inflation, low real growth rates, increased marginal tax rates, and a shift of relative income toward holders of the scarce resources. Consumers will thus face a declining real discretionary income and rising food costs. This situation will bring a

negative impact on food demand, especially non-staple food items. Thus, some shifts are likely in the food basket mix and percent of income spent on food.

An industry that incorporates alcohol production from biomass materials will constitute a new, and growing, source of demand for agricultural resources in the production of traditional as well as some non-traditional products and residues. This could compound the negative effect and the net impact from the demand side could increase the intensity in the use of agricultural resources.

Supply Factors: Costs of energy inputs will increase. These increases will not be equally distributed among commodities, regions, or production-processing stages. The greatest relative impacts will be apparent on energy intensive systems that include, among others: irrigated crop production, nitrogen dependent crops, crops produced on light soils, and heavily processed or transported commodities. The production of energy crops themselves will add additional demand for energy inputs and if complete crop removal is associated with energy production, then additional nutrient replacement might be necessary. Further, if poorer land is brought into crop production for energy, the input cost per unit of output will increase.

Resource Use: The anticipated supply adjustments that flow from the supply-demand factors noted above have important implications for resource use. Land use patterns will clearly be affected. Some marginal irrigation regions can be expected to return to dryland farming. Competition for water use in coal and shale oil areas may put further pressure on limited irrigation water supplies. Synthetic fuel production from biomass sources will intensify land use in other areas. Use of crop residue or whole plant removal for energy production will affect soil depletion rates through increased erosion and nutrient removal with concomitant effects on water quality.

Policy Alternatives for Energy and Agriculture

Several policy issues related to energy and agriculture arise in connection with anticipated adjustments in the supply of and demand for agricultural resources. They are: fuel allocation priorities, an alcohol fuel policy, a special policy for on-farm alcohol production, and the use of set-aside acres for alcohol production.

Fuel Allocation Priorities: Given present energy demand-supply projections and the establishment of a fixed but declining ceiling to oil imports, it is most likely that mandatory liquid fuel allocations might be necessary in the near future. Agriculture and the entire food system have an important stake in how these allocative decisions are made. The nature of the production process in agriculture is such that specific forms and quantities of energy are needed during key time periods. Delayed availability of these energy inputs could have substantial negative effects on the quality and quantity of food produced. The manner in which agriculture uses energy makes agriculture particularly vulnerable to adverse impacts of energy use allocation decisions.

An Alcohol Fuels Policy: The prospect for a synthetic fuel industry raises some new issues and adds further weight to some existing policy concerns. Price subsidies for energy crops, raw products guarantees, alcohol processing plant locations, construction subsidies, and perhaps limits on alcohol production from biomass to protect food production are all new areas of policy. Water rights for food production in the face of increased demands from synthetic fuel plants, allowable residue as related to soil loss and nutrient depletion, and the resource implications of crop expansion to less productive lands are all issues that will receive increased emphasis as an alcohol fuels policy is developed.

On-Farm Alcohol Production: Some special policy consideration is vital to assist the orderly building and use of many small alcohol plants on farms across the country. Safe, effective, adaptive, low cost plans must be developed and made available to potential users. Licensing procedures must be made as simple as possible. Special financing should be available. A method should be sought for integrating the surplus production from small farm stills into a broader distribution network. Since the alcohol produced from farm plants is likely to be of low or variable proof, this integrative function may take the form of special use categories or centrally located additional processing to provide a standard product.

Use of Set-Aside Acres: Use of set-aside acres for alcohol production is an alternative. Idle acres would be put to use to produce energy crops. Food and feed production would not be reduced by this production. The payments for not producing would be redirected into subsidies necessary to make alcohol crops competitive. Costs of the alcohol crop subsidies would be roughly equal to the historical set-aside payment levels so no new funds would be needed. However, the resulting level of production will not solve the liquid fuels problem, but could add some negative factors. Recent estimates indicate that the use of set-aside acres would provide about 1.6 billion gallons of alcohol per year. This is only about 1.5 percent of the annual consumption of gasoline in the United States. Also, these acres have provided flexibility in crop production in terms of agricultural production capacity. This effect could be lost if the conversion to energy crops is permanent.

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HOW AGRICULTURAL AND FOOD POLICIES ARE DEVELOPED

Harold D. Guither and J.B. Wyckoff*

ABSTRACT

The Senate and the House take basically different approaches to legislation dealing with food and agriculture. The Executive branch also develops legislative proposals to be considered by Congress, which also Congress may consider. Staff members of the House and Senate Agriculture Committees are directly involved in drafting bills and provide access points for citizens and organizations with interests and concerns. The number of lobbyists involved has increased as the number of interest groups has grown. The Congressional budget process also affects how agricultural and food legislation will be handled. The final policy decisions are a compromise among the Senate, House, the Executive branch, and the interest groups most directly concerned. Each citizen has an opportunity to participate in the policymaking process.

Traditional farm price and income support programs have become of interest to many people besides farmers and the business firms that supply inputs to farms or handle and process farm commodities. Many people and groups are concerned about a broad range of issues dealing with food production, processing, prices, quality, trade and distribution. Environmental issues, safety, labor problems, and the need for food and improved nutrition for low income people at home and abroad have also moved to the forefront in policymaking.

THE LEGISLATIVE SETTING

One of the basic differences in the development of agricultural and food legislation is how the Senate and the House of Representatives view such legislation. All 100 Senators have agricultural constituents in their States. However, probably less than 100 of the 435 House members have significant agricultural constituencies. For the majority, their constituencies are urban and tend to be more concerned with retail food prices, food quality, and food stamps than with farm prices and income. Thus, it is possible for the Senate to pass much more "liberal" bills favoring farm producers, knowing very well that the House, with its urban influence, will alter such bills until they come more nearly acceptable to the Administration.

Since less than four percent of the population is involved in agricultural production, it does not represent a very strong voting bloc. Yet, production agriculture has seemed to enjoy much more influence than the size of the voting public involved would seem to indicate. This may be because inclusion of those employed in storing, transporting, processing and merchandising farm commodities makes the farm and food industry the nation's largest employer. Food itself is also important to everyone.

Many urban Congressmen have roots in rural areas a generation or two past, and agricultural leadership in the House and Senate has been strong. The committees to which a new Congressman or Senator is assigned help determine the success of their legislative careers. While many view assignment to the Rules or the Ways and Means Committees as the top choice, the Agriculture Committees have enjoyed a good reputation as a committee assignment.

Even though a "farm bloc" no longer exists, considerable strength for agricultural interests still persists in parts of the South, Midwest and the Great Plains. This provides a power base from which farm- and rural-oriented legislators can negotiate and form coalitions with urban-oriented legislators to achieve legislative objectives.

THE POLICYMAKING PROCESS

The public decision process begins with the voters' decisions as to who will represent them in Congress and serve as President. Once this is determined, the process of organizing personnel within the executive branch and the Congress becomes a key factor. The philosophy, leadership ability and political savvy of those selected in the executive agencies and the Congressional committees related to food and agriculture have much to do with resulting legislation. The shifts from the seniority system, the increased size of the agriculture committees and the increasing number of House members with no rural constituency have changed the content of policies adopted.

In the formal process, the executive branch may develop its own legislative proposals or cooperate with the Congressional agricultural committees in examining alternative policy options. Congress, operating through committees and subcommittees, narrows the decisions and drafts specific bills which they forward through the Rules Committees and majority leadership for consideration by the whole House and Senate. Conference committees, with representatives from both Houses, negotiate a compromise on any differences. Final approval by

*Guither is Extension Economist in Public Policy, University of Illinois. Wyckoff is Extension Economist in Public Policy, Oregon State University.

both Houses sends the bill to the White House for the President's signature or veto. A two-thirds favorable majority is required in both Houses of Congress to override a veto.

Both a new President and a new Congress were involved in development of the Food and Agriculture Act of 1977. The legislative backgrounding began with a report on food and agricultural policy by the Congressional Budget Office in April 1976. Later in 1976, the Senate Agriculture Committee issued a series of papers on food and agriculture policy. The Department of Agriculture was also involved, preparing the Agricultural-Food Policy Review—a compendium of papers on various issues and choices open to Congress for new legislation in January 1977.

Senator Talmadge, chairman of the Senate Agriculture Committee, strategically started the formal process by introducing a bill in January 1977. This led both the House and Senate Agriculture Committees to hold hearings during February and March. Representative Foley, chairman of the House Agriculture Committee, simultaneously had his committee staff independently drafting a bi-partisan bill which he hoped would gain sufficient support to pass the House and be acceptable to the President. This bill, too, was introduced.

The Administration had also prepared a proposed bill which was not officially introduced. The provisions of this bill, however, were considered along with the House and Senate bills in the markup process. The chairman of the House Agriculture Committee, the Secretary of Agriculture and the President were in close communication at several stages as the bill moved through Congress to assure that the bill finally passed by Congress in September would be acceptable to the President.

Executive Departments and Agencies

Since the 1930's the President and executive agencies have taken varying degrees of initiative in proposing legislation that provided the basis for new or amended agricultural and food policies.

The Secretary of Agriculture may take the lead in developing proposals for the Administration, as he did in 1977. The research staff in the U.S. Department of Agriculture provides support in drafting the new or revised legislative proposals. The Department of Agriculture may seek ideas and reactions for its field staff, from public hearings or advisory committees, or from various organizations that have interests and concerns.

The Secretary of Agriculture represents the President and the Executive branch of government in this process of drafting legislation, holding hearings, and in the markup of bills in Congress. He plays a key role in working out compromises which usually are needed to successfully move a bill through Congress and into law.

In preparation of executive proposals, the President may confer with the Secretaries of Agriculture, Commerce, State, and Treasury on specific issues which are of concern to the respective departments. Also, any program that involves expenditure of Federal funds gets a close scrutiny from the Office of Management and Budget. Yet, the decisions made in the Executive branch are often difficult to rationalize. Much randomness in policy choices is often present. While many decisions on farm programs are made in the Executive branch, the rationale behind the choices, the process followed, and ultimately who makes the choice are not at all clear. It is also hypothesized that the process changes as the power positions within the White House and among cabinet officers change. Ultimately, when the decisions of the Executive branch are finally made, the President may send them to Congress as part of an annual message or as specially proposed legislation.

Congressional Committees

In Congress, agricultural and food policy legislation is considered in the House Committee on Agriculture or the Senate Committee on Agriculture, Nutrition and Forestry. Major farm legislation in recent years has been introduced first by the Senate Committee. The chairman of the committee, via instructions to the committee staff drafting the bill, has a strong influence over the major provisions and the type of legislation to be introduced. The Senate Agriculture Committee is traditionally pro-farmer and agri-business and tends to set price supports high, leaving it to the House to develop a bill acceptable to the Executive branch.

This leaves it to the House Agriculture Committee to be "realistic" in considering non-farmer views in its role as a compromising agent.

Role of Congressional Staff

The original drafting of the bill under the direction of the committee chairman is a significant stage at which important ideas and proposals can enter the process. Since staff members of the House and Senate Committees are directly involved in drafting bills to be introduced, they have become perhaps the single most important access for citizens and organizations into the legislative process. Representatives and Senators are so involved with their committee work and political activities that they depend very heavily upon their staffs' recommendations in the development of legislation and subsequent votes on bills that come before Congress.

Getting to know key Congressional staff members may be at least as important as knowing the members of Congress. A single phone call or one paragraph letter to key staff members indicating that you have some input for particular legislation usually will result in the opportunity to communicate your ideas either verbally or in writing.

Staff members are always interested in gaining the best possible input to upgrade the quality of their recommendations to their committees or members of Congress. This provides ready access into the legislative process by citizens, as well as representatives of groups with vital interest, concerns and ideas for bills. Where major differences exist

between groups involved in an issue, some effort may be made to resolve these differences, if possible, before the bill is introduced.

Lobbyists

Many Congressmen view lobbyists as being well-informed in their areas of concern. Although the information provided by lobbyists may be biased in the direction of their interest, most Congressmen feel that it may be the most reliable information that they can obtain. If lobbyists overplay their hand they lose their credibility and effectiveness. Thus, they are subject to a certain amount of restraint in how they operate in the legislative process.

More than 400 major national and regional organizations and groups have shown an interest and concerns in agricultural and food policy issues from 1977 through 1979. The efforts to influence the direction of policy decisions include testimony before congressional committees, letters, direct contact with the members of Congress and their staffs, phone calls, soliciting letters from organization members to their representatives in Congress, and participation in hearings called by agencies and Executive department engaged in administrative decisions and rulemaking to carry out legislation.

Lobbyists from major farm organizations traditionally have been less effective than they might have been because they seldom can agree on the form of the legislation that affects them. The Farm Bureau and the Grange may express positions that are greatly different from the National Farmers Union, National Farmers Organization, or the American Agricultural Movement. Commodity organizations came into their own in framing the 1973 bill. They have a narrower focus on specific issues and make significant contributions in hearings and discussions on some issues. The numbers and diversity of views from the various producer groups may confuse some legislators and may give them considerable latitude in how they decide to vote.

INTRODUCING A BILL

Any member of the House or Senate may introduce a bill. Hundreds of bills are introduced every year. But to get serious consideration, a bill must be introduced by a committee member and usually must be favored by the committee chairman. To get more attention, the sponsor of a bill may pass a copy to his fellow members in the House or Senate and give them the opportunity to add their names as co-sponsors. However, a large number of co-sponsors does not guarantee automatic passage of the bill.

After a bill is introduced, either in the House or Senate, it is referred to a committee for consideration. Both the Senate and House Agriculture Committees have subcommittees to which the chairmen may refer the bills. Subcommittees have gained increased authority and power over proposed bills in recent years. They may kill a bill, amend it, rewrite it, or combine it with other legislation.

Hearings

Hearings are usually held in the subcommittees where witnesses with knowledge of the subject may be invited to testify, or public witnesses may ask to be heard. Some subcommittees hold hearings at locations around the country, as well as in Washington, D.C.

Hearings provide a public forum where witnesses can support, criticize, or suggest changes that might cause problems later on. Witnesses may be more knowledgeable about the subject under consideration than the professional staff members who drafted the bill. Department of Agriculture, or other agency officials, who will be responsible for administering such a bill if written into law, usually have views about whether the bill could be administered effectively, the possible costs, and consequences if put into law. Hearings are a legitimizing process. Seldom will hearings kill a bill, but they may lead to changes or amendments that will make it more acceptable and improve its chances for passage in both House and Senate. They also provide the opportunity for any citizen to express his views on a bill.

If individuals or groups wish to oppose the legislation, it is in their interest to determine where the sponsorship of the legislation originated and what the motivation for the legislation is by the sponsoring group. By doing so, it is quite often possible to attack legislation on the basis of dramatizing special interests, either internal or external to the government or the industries involved. The possibility of forming coalitions with non-aligned groups to strengthen the political clout in exchange for future support for other issues often occurs in this process.

The Markup Process

After the hearings, committee members go to work on the markup process. They review each section of the bill, debate its merits and what its effects might be. Wording may be changed or amendments may be added.

Most markup sessions are open to the public. Interested persons, groups and agency officials can attend and observe how those parts of the bill in which they have a major interest are handled and may respond to questions if asked by members of the committee. This is a very important point in the resolution of key questions on certain issues.

Committee Action

The major input from members of Congress is at the committee stage. Subcommittees may prepare separate parts of a major bill which then are combined into a single bill. When the House Agriculture Committee has approved a bill, it is sent to the Rules Committee. The Rules Committee chairman decides when a bill will be considered by the whole House. In the Senate, the majority leader decides the order in which legislation will come up. The House Rules Committee or the Senate majority leader can decide to hold a bill from further consideration and effectively kill it for that session of Congress, if not forever.

Floor Action

When a bill reaches the floor of the House or Senate, any member may attempt to add amendments. Getting an amendment added and passed is not an easy task. The member who wants to add an amendment must be recognized by the Speaker of the House or President of the Senate. Unless many members disagree with the Committee bill that has been brought to the floor, or strongly support the proposed amendment, its chances of passage are not very good. Most amendments introduced to consideration by the whole House without action in committee fail.

Coalitions and trade-offs are often needed to get final passage of a bill. In a major farm bill, the commodity sections may be worked up in subcommittee and then combined in the final committee bill. Although some members may not like all sections of the bill, they respect the work of other subcommittees and may accept those proposals to get their own subcommittee contributions written into the final bill. The commodity price support provisions in the 1977 bill were accepted by the whole committee because the commodity support advocates accepted the food stamp and food assistance provisions in the bill. The levels established were the maximum acceptable to the President as worked out in a compromise framework by Committee Chairman Foley.

Conference Committee Actions

After bills pass both House and Senate, they must be made identical before going to the President for his signature. If differences exist, a conference committee comprised of selected members of both the Senate and House Agriculture Committees is required to work them out. The resulting compromise bill is then sent back to both Senate and House for final passage.

THE BUDGET PROCESS AND AGRICULTURAL LEGISLATION

The Executive budget moves from the President to Congress in January. All Executive departments have worked for months with the Office of Management and Budget in preparation of this budget. But as in many other policy issues, the President proposes, but Congress disposes.

The Congressional Budget and Impoundment Control Act of 1974 established a procedure—called the budget process—by which Congress is required to establish an overall budget, and then to consider individual spending and tax decisions in the context of the budget.

Before the Act was passed, Congress considered fiscal matters piecemeal and had little control over the total amount authorized or appropriated. Under the new budget process, Budget Committees were established in the House and Senate and the Congressional Budget Office was created to develop cost estimates of bills, keep score on spending and tax decisions, analyze economic trends, and conduct specific studies requested by committees.

Under the new budgeting procedures, by March 15 all standing committees in the House and Senate, including agricultural committees, report their recommendations for spending on existing or prospective programs under their jurisdictions. The Budget Committees then prepare and report a first resolution indicating recommended spending targets for the fiscal year beginning October 1. The first resolution must be passed by May 15. A second resolution, adopted by September 15, updates the first resolution and sets a ceiling for spending and a floor for revenues.

Certain features of agricultural programs complicate using the budget process as a means to allocate spending for agriculture. Crop conditions, weather, and market prices can influence the cost of a program considerably. So, in effect, Congress is estimating marketing conditions and decisions by the Executive branch when it sets a spending budget for agricultural programs.

Since the budget process has been in operation for only a few years, it remains to be seen how seriously Congress will follow its budgeting process. However, it seems certain that future agricultural programs will face additional scrutiny as a result of the budget process. A budget conscious Congress could use the process to allocate maximum spending on agricultural and food programs and thus eliminate or require modifications of certain programs.

The Appropriation Process

The House and Senate committees on agriculture are authorizing committees. They may authorize a maximum amount to be spent on a given program. The actual appropriations originate in the Agriculture Appropriation subcommittees of the House and Senate and then become part of the total appropriations passed by the full committee.

Many times, the appropriations are less than the amount authorized. The Appropriations Committees may appropriate less than authorized, but they can not exceed the authorized amounts.

RECONCILING FARM, CONSUMER, CONGRESSIONAL AND ADMINISTRATION INTERESTS

Agricultural producers have many desires which are in direct conflict with the welfare of the consumers of their product. Support prices to farmers which are high enough to lead to higher food prices to consumers are an example.

Among agricultural producers, there are different views and policy positions. Different commodity groups desire different programs. Higher grain prices result in higher feed prices to livestock producers, so they are not equally acceptable to both grain and livestock producers. Producers of crops sold for export have different policy positions than those producing products consumed almost completely in this country.

Farmers themselves differ in their willingness to accept programs, depending upon the financial conditions of their own operations. Those who own their land are less inclined to push hard for high direct price supports than those who have recently purchased land and machinery and have large payments to meet each year. These differences have been demonstrated by divergent policy positions among the farm organizations such as Farm Bureau and the American Agricultural Movement.

For individual producers, buying land and equipment during high price periods and paying off mortgages with income from products sold during lower price periods causes problems which have been vocalized by the American Agriculture Movement in recent years.

In addition to economic differences, farm groups differ in their political philosophy, such as the degree of Government involvement they want to see influencing their farming operations.

There are trade-offs among members of Congress. The Congressmen from rural areas have different clientele and different interests than urban Congressmen. Congressmen from rural areas of the South and Midwest have more sympathy for agricultural legislation than those in the Northeast. Congressmen from the West have more interests in water development for irrigation of crops than those from the cornbelt and the South.

In voting on major policy issues, there is little motivation for members of Congress not to vote for legislation proposed by single purpose interest groups. Since these special interest groups will support those who vote in their favor while there is no organized opposition against this special interest legislation, the member of Congress gains votes or support by voting for it while losing little because there is no organized opposition. The consideration of whether the special interest group legislation is in the "real" public interest is not of major concern from a political standpoint. Since each member has to stand for re-election, the general public interest is quite often submerged under the political expediency of a particular Congressional vote.

Trade-offs occur among committees. To get support for a piece of legislation of special interest to a particular subcommittee, they will negotiate with other committees to gain their support while supporting legislation which the other committee wishes to have passed. These trade-offs are quite subtle, but occasionally they become apparent.

Agricultural and food policy objectives of producers, input supply and processing firms, consumers and the Administration vary widely and also change over time. The difficulty in arriving at an acceptable sugar program is an example. So, the passage of any legislation that sets the direction of national and agricultural and food policy will require compromise.

Overall Administration objectives also enter into the compromise process. If the major administrative objective is to control inflation, or balance Federal expenditures with expected revenue, then limits must be placed on the amount spent for agricultural and food programs, as well as other parts of the total budget. If the objective is to increase food aid to the poor or help more of the hungry overseas, while members of Congress are committed to reducing Federal expenditures, then differences must be resolved.

Trade-offs between rural and urban interests, between commodity groups and food assistance concerns, or between producers, industry and environmental groups bring about the compromises that result in bills that are finally approved by Congress and the Administration.

This compromise process was evident in 1977 in the House. The problem was that the Senate had passed a very expensive bill while the President demanded an inexpensive one. The House Agriculture Committee chairman forbade any member of his committee from introducing the Administration's bill, thus avoiding open confrontation. Instead, he charged his staff to produce a nonpartisan bill, working with representatives of commodity interests and others within the agricultural power cluster to gain their support.

The biggest problem was the level of price supports for wheat and corn. He finally convinced representatives of these commodities that even though he would favor higher supports, the President would never accept them. Thus, ". . . it won't help farmers for us to pass a bill the President won't sign."

The chairman gained the urban Congressmen's support by agreeing to eliminate the purchase requirement for food stamps. The Speaker of the House also helped pave the way with the White House by telling the President that the House committee chairman was working miracles lining up support for a lower cost bill. When it became evident that an amendment would be offered on the floor to raise support levels retroactively because of rising production costs, the Committee chairman met with the President and encouraged him not to fight this as it would lead to a bitter floor fight and might defeat the entire bill.

The President agreed, provided he was granted the flexibility to lower the amount of Government loans to farmers and if he could withhold Government program benefits from farmers who did not comply with acreage set-asides. The House committee chairman then surprised his colleagues by introducing the 1977 support price amendment which was quickly passed. The total bill then passed easily, 294-114.

The House Agriculture Committee chairman then worked in the House-Senate Conference Committee to develop a compromise more nearly resembling the House Bill, which the President signed. Compromises had to be accomplished between rural and urban interests in the House, between the House and the Senate, and between Congress and the White House.

Implementing Legislation

Implementing legislation once it is passed by Congress and signed by the President may also require compromise and resolution. The Secretary of Agriculture has considerable latitude in interpreting the legislation and developing administrative procedures. Agencies within the Department and outside organizations with special interests will try to influence the Secretary's decisions at this point in the process.

The forces influencing the direction of future U.S. agricultural and food policy have divergent economic, political and social goals for farm operators, farm workers, rural citizens and consumers. Social objectives can be in direct conflict to policies that would promote improved economic productivity, or reduce Government regulation. So no one group will get all that it wants in the final compromises that must be made to achieve any new policy decisions.

In recent years, lawsuits in the courts have been used to change regulations and decisions made by the Executive branch on matters dealing with food stamps; food programs for women, infants and children; and land use in Federal reclamation projects. So, the courts have become part of the policymaking process.

THE CITIZEN'S ROLE IN POLICYMAKING

In a system of representative government, each citizen has an opportunity to participate in the policymaking process. Some citizens' groups have become more active than others. Some have been more effective in communicating their interests and concerns relating to agriculture and food.

Some of the basic steps that each citizen can take to have a voice in policy decisions:

1. Be informed on what the most important current issues are. Read newspapers, news magazines, farm papers, public affairs journals. Listen to news and public forum programs on radio or television.
2. Take part in educational programs and policy discussions. Attend the public affairs and policy programs sponsored by the Extension Service, local civic groups, churches, community colleges, and farm organizations.
3. Sort out facts, organization objectives, personal preferences, and emotion as you study the issues and develop your position. Help an organization to which you belong develop its positions on policy issues.
4. Join a political party. Work within it for the policy goals that you feel are appropriate, and the candidates that you believe represent your views and those of the majority in your community.
5. Vote for the candidates of your choice.
6. Run for office.
7. Take advantage of opportunities to make input into the Executive branch by working through White House staff, the staff of the Council of Economic Advisors, the Office of Management and Budget and the Department of Agriculture. There is also opportunity to have input within the U.S.D.A. after legislation becomes law as interpretation and administrative rules are drawn up.
8. Attend legislative hearings. Testify on issues on which you feel qualified to voice opinions.
9. Join a farm organization, civic group, or other organizations where your views on agricultural and food policy can contribute to that group's role in developing policy resolutions. Work toward a more sophisticated use of the lobbyists employed by these groups.
10. Write or call your elected representatives in Congress or your State legislature when you have concerns on an issue.
11. Get acquainted with your representatives and a key staff member during their home district visits and public appearances. Call on them when they are in their local offices in your Congressional district. Become acquainted with their local office staff. Encourage your neighbors and friends to do the same. If visiting Washington, visit your Congressional representatives and their staff.
12. Join in legal actions to get policy decision in the courts.

The concerns of his or her constituents have an important influence in how your representative in Congress will vote. They know that your future vote for them will be influenced by how they vote on the issues you are concerned about. However, you should not expect that your representatives will always vote as you ask them. On many issues, many people will have strong feelings on both sides. Your representative must weigh how people feel from his home State or district and also use his best judgment on the consequences of each choice he has to make. In addition to knowing how to gain access to the process, the key to increased effectiveness is the timing and the quality of the input. Experience and training will improve results.

THE AGRICULTURAL AND FOOD POLICYMAKING PROCESS

The Executive Branch

A. Secretary of Agriculture briefed by:
   1. USDA officials with input from their research and extension components.
   2. Representatives of special interest groups, e.g., farm organizations, commodity groups, consumer groups, agribusiness, etc.

B. Proposals checked by OMB and other Cabinet Departments

C. Discussed with the President

D. May then be:
   1. Introduced as a Bill
   2. Presented as a Presidential address
   3. Used as input into Congressional proposals and bills

Major input points: A,1 and A,2.

The Congress

A. Congressional agricultural committees by background:
   1. Congressional Committee Staff
   2. Congressional Research Service
   3. Congressional Budget Office Studies
   4. Individual Congressman's staff
   5. Consultant studies authorized by the Committees
   6. Lobbyists and representatives of interested organizations
   7. Interested citizens

B. Legislation is drafted and introduced
C. Referred to committee and subcommittees and hearings held
D. Subcommittee and committee markup
E. Subcommittee and committee approves and reports bill out
F. Senate Majority Leader or House Rules Committee schedules floor appearance
G. Bills are amended and passed on the floor
H. If conference is necessary to develop an identical bill, conference is called
I. Conference report goes to each House of Congress for approval
J. Goes to White House for President's signature
K. Legislation is then sent to the USDA for implementation.

Major input points: A,1;A,4;A,6;A,7;C.

Limited input: D;G;H;I;K.

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