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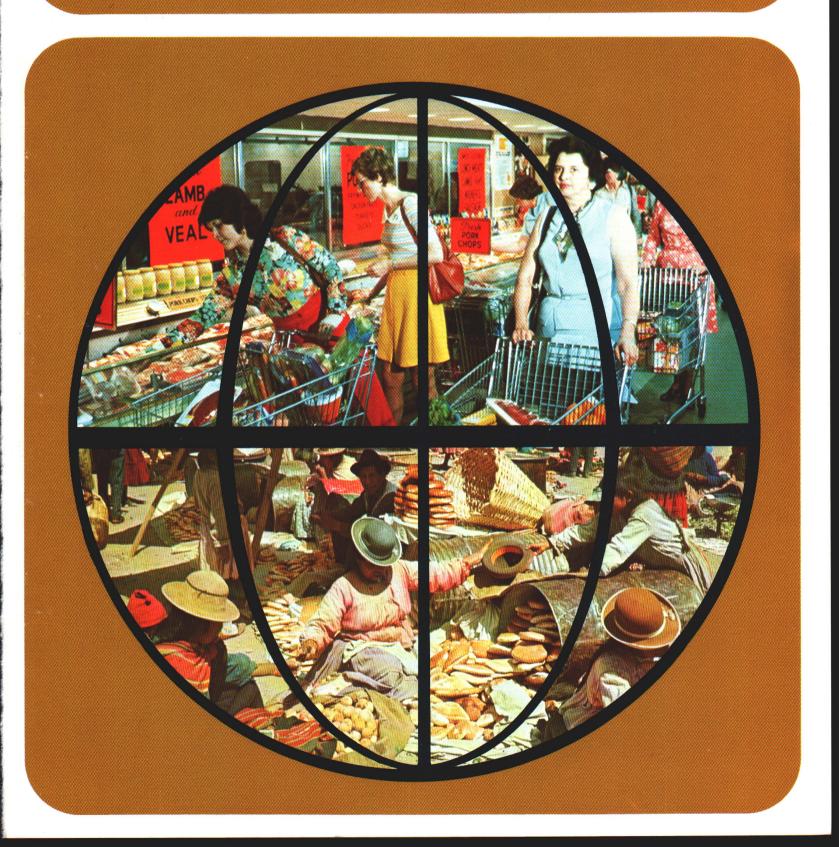
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WILL THERE



By James P. Houck, University of Minnesota, and Wallace Barr, The Ohio State University

"A hungry man is not a free man."
Adlai Stevenson, 1952

Across the nation and throughout the world people are uneasy about the world food situation. They ask how bad is the situation today? What will it be like tomorrow? They want to know where and why malnutrition and hunger exist. They question if, when, and how the world food crisis will touch them and their families. They wonder if shortages and high food prices of recent months and years foretell a food shortage that will soon grip the entire planet.

The Path to the Present

Most people find it hard to think of billions of bushels or millions of tons. These numbers mean little in our daily lives. Even food calories per person per day is not an everyday idea for most of us. Yet, calories tell much about the adequacy of diets around the world. Figure 1 divides the percent of calories consumed into the important nutritional groups. Figure 2 shows the average number of calories consumed by each person per day.

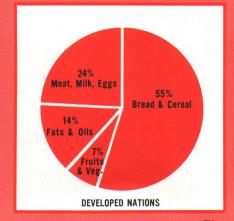
Notice the difference in diets between "developed" (rich) and "less developed" (poor) nations. Keep in mind the recommended daily calorie intake for a 150 pound man is 2700 calories. For a 120 pound woman, it is 2200 calories. The rich countries include Canada, the U. S., Japan, countries in Western Europe, the USSR, and other Eastern Bloc countries. The poor countries are located in Africa, Asia, and South America. Some oil-exporting countries are very rich in terms of money, but their economies are less developed. Many of their people are poor.

Figure 3 pictures total food production and population growth during the past 20 years. These charts are expressed as a percent with the base, 1961-65, equal to 100.

The less developed world has performed well in growth of total agricultural output. With a 2.5 to 3.0 percent increase in food production each year, they kept pace with the most advanced agricultural countries in the world.

But, food production barely kept pace with a like

PERCENT OF CALORIES CONSUMED FROM IMPORTANT SOURCES



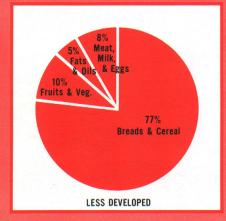
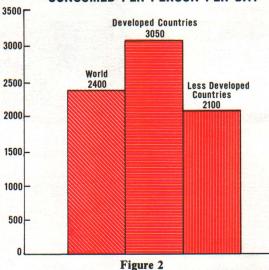


Figure 1

ESTIMATED AVERAGE NUMBER OF CALORIES CONSUMED PER PERSON PER DAY



population growth rate. So, the amount of food available for each person gained very little, if at all, in the poor nations during these last 20 years. Average diets in many poor regions of the world are inadequate for good health and growth. More people than ever must be living with inadequate diets simply because there is little more food per person than 20 years ago.

Output changes can be disastrous for millions of people on the knife-edge of "just enough" and "much too little." This is especially true if only meager food supplies can be imported from other countries.

The less developed nations import only 5-8 percent of the grain they use. The grain enters through commercial trade or food aid. It is often a crucial 5-8 percent, but still a small part of the total used.

Emergency food aid has been necessary to pull the monsoon dependent regions in South Asia through major harvest failures. This includes the densely populated subcontinent of India, Pakistan, and Bangladesh.

Africa has dropped in the amount of food available per person during the last six years. Much of the deterioration has been in nations of the Central African region, called the Sahel. Here, results of drought and livestock pressure have been disastrous for many people. People in Africa are among those who can least afford a drop in the

quantity or quality of their diets. They consume only 1,730 calories per person per day.

The Current Picture

Thousands of words have been written and spoken about the current situation. Almost anything said is too simple. But, the following events, which have piled on top of each other since 1971-72, are among the leading causes:

- 1. Bad weather in important production areas caused recent decreases in output for all three major classes of grain: wheat, rice, and coarse grains. Much of this bad weather occurred in highly-populated areas of the Indian sub-continent and Africa. Some poor weather occurred in exporting nations, too.
- 2. Large grain stocks were depleted for worldwide sale or distribution. Australia, Canada, and the U. S. reduced inventories through the early 1970's by keeping land idle.
- 3. Soviet Russia and the People's Republic of China unexpectedly imported large supplies of grain through commercial markets.
- 4. Wealthy grain importing nations bought more grain for livestock feed. Devaluation of the U. S. dollar made U. S. farm exports cheaper for many countries.
- 5. The world experienced price inflation. There were shortages of nonfarm inputs, such as fertilizer and fuels.
- 6. Food became a political tool in international relations.

Events like these strain the fragile world food market. The nations and people who bear the biggest burden are those who can least afford it.

Food Picture to 1985

Are recent events just short episodes? Or, have we come to the beginning of the end in the grim race between population and food?

Several research studies come to similar conclusions about the world food picture until 1985. All are based on past trends, corrected for likely changes in the future. Details beyond 1985 are too "clouded" to foresee on the basis of past and current trends.

FOOD PRODUCTION AND POPULATION

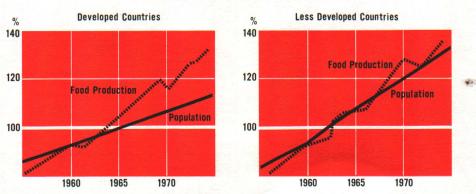


Figure 3

TABLE 1.
Potential Food Demand and Production to 1985

Region	Volume growth rates	
	Demand	Production
	(percent	per year)
Developed countries	1.5	2.8
Developing market economies	3.6	2.6
Africa	3.8	2.5
Far East	3.4	2.4
Latin America	3.6	2.9
Near East	4.0	3.1
Asian centrally planned economies	3.1	2.6
All developing countries	3.4	2.6
World	2.4	2.7

Source: Food and Agriculture Organization, United Nations (1974).

World food demand is shown in Table 1 and is expected to grow by 2.4 percent each year during this time. Of this total, about 2 percent will come from population growth each year. The remainder will come from income growth converted into food demand. Total food demand growth rates are much more certain than food production growth rates.

The world food supply, in the next decade, is expected to grow by about 2.7 percent per year. Much of the increase in food output will come from improved yields. More cropland could be used. Scientists say we are using about one third of the potentially arable land.

Countries with poorly fed people can increase output but are faced with many problems beyond physical limitations. These problems include the economic, social, cultural, institutional, and political limitations that have caused much hunger and must receive attention in the future. Improvements are needed in such things as transportation, storage, tenure arrangements, credit availability, taxation, production incentives, and other factors influencing production responses and income levels.

Demand growth is expected to be greater than supply growth in the less developed countries during the next ten years. This has led one official to say, "For the next decade or so, it is likely that world food production will keep a half step ahead of population growth. However, there will be times and places of critical shortage."

If imports are not increased, diets will drop below already meager levels. Also, food prices will continue to rise. These trends are most fearful in Africa and the Far East. Import needs in the poor nations will triple from 25 to nearly 80 million tons by 1985 if availability per person is to be maintained. Although the outcome may be some mixture, three possibilities are implied by these projections:

1. Less developed countries will be able to increase commercial food imports. Imports will be large enough to overcome major decreases in diets. Economic growth will permit it.

2. The wealthy nations will offset future shortages in food production. Food imports will come from food aid and/or transfers of money.

 There will not be enough commercial trade or aid. Increased malnutrition and widespread hunger will occur in less developed countries.

Experts stress the chance of sudden year-to-year change in the world food picture. The chance for feast, followed by famine, is very strong.

Some Views and Attitudes

More than likely, there will be "enough" food of all kinds for the wealthy world. But, millions of others will have much less than "enough." They will have no financial means to secure it. Therefore, tough choices confront us—here and abroad.

A few people think nothing can be done about the world's food problems during the next ten or twenty years. Others feel man is not fully at the mercy of population trends and production problems. They feel he can adjust. His social, political, and economic systems can adapt. New technologies and improved policies can be developed at international and national levels.

One choice is to give little or no help to poor countries with chronic food shortages. This choice has support in one way or another throughout the U. S. Supporters argue that we must harden our hearts to the present plight of people in poor, overpopulated lands. They feel that giving continual food aid will only prolong adjustments that must come. We are adding to the misery that present and future peoples in those lands will endure. Others say aid will surely cost U. S. food consumers and taxpayers more money. They feel it's not worth it.

On the other hand, millions of Americans feel that doing nothing is not acceptable. They believe that other choices confront us.

How Can We Help?

Year-to-year changes in food supplies will likely be great, especially in poor lands. If there are to be fewer famines, food reserves and stockpiles of grain will play a major role. Private trade probably will not carry enough inventories to cover sudden large drops in output. This is because net returns are unlikely to equal storage costs. National governments and international agencies would need to be involved. Some programs do exist. But, many people feel they are inadequate.

Food reserve programs will have to overcome many problems. These include the questions: Who will hold the reserves? How will acquisition and storage be financed? How will payments be made? How do we get the food to where it is needed? Who will control the reserves?

Nations in the less developed world must continue to provide most of their own food. The United States and other nations with large food supplies can help. But, we cannot feed the world. Thus, policies that help nations improve their agricultural production and marketing systems are crucial.

Brochure No. 2, "Who Will Get It?" discusses storage options to assist in meeting our domestic and foreign commitments.

These efforts include support for agricultural research in the poor regions. For some nations, food aid may be required until they can feed themselves. Many believe that aid should depend upon self-help efforts within nations that receive food aid. Time and resources must be devoted to marketing and distribution systems. Financial and technical aid in marketing are needed to insure that gains in farm productivity are transmitted through society.²

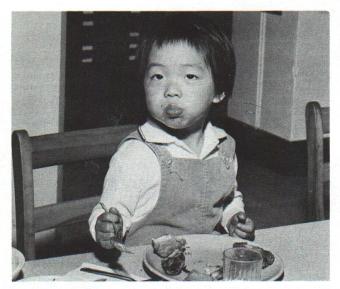
In general, food demand is steadier and less subject to policy actions in the short run than is supply. This does not say that a food stamp program or Organization of Petroleum Exporting Countries increased earnings do not affect food demand. But in the long sweep of years, the behavior of both population and income growth will be crucial.

About 95 percent of all U. S. food is sold in commercial markets. Therefore, it is important to help poor nations earn the money needed to enter world food markets. For example, the poor nations need access for products they have to export into rich nations' markets.

In the meantime, many Americans support a humanitarian "policy" change. People are urged to eat less meat and use less fertilizer. The idea is that reduced consumption at home leads to more food in poor nations. But, poor nations still need money to buy this food or fertilizer. Or, someone needs to buy the products and ship them to the poor nations. Furthermore, a reduction in fertilizer use could lead to higher costs and thus higher food prices for everyone. Reduced meat use in developed countries without offsetting action to move additional food to poor nations would tend to reduce farm prices and food production in developed nations.

Population control efforts are needed to reduce the long-term pressure on this earth's resources. Success will have to overcome thorny social, religious, nationalistic, and moral issues. Different population growth rates make the international aspects of this policy very complex. For example, worldwide population is growing at 2.2 percent each year: Western Europe grows at 0.3 percent while Southeast Asia and tropical South America both grow at 3.0 percent.

If current growth rates continue, world population will double by about 2,000 A.D. By 1985, 91 out of 100 babies born will begin life in less developed lands. By 2,000 Å.D., this will increase to 93 of each 100. The results of successful population control, in terms of reduced pressure on scarce resources, will not show up for many years after programs are launched.



Food demand is steadier than supply.

The long run population problems are recognized but not discussed in length in YOUR FOOD. This effort focuses on food needs during the next decade. But, that does not reduce the importance of population policies.

Some Barriers to Change

Developing countries are faced with many limitations that influence food supplies or ability to purchase food. Many of these involve people's values and short-run interests. They will be hard to change because of cultural and institutional traditions. Included are land holding patterns, lack of low cost credit, high taxes, lack of production incentives, outmoded inheritance laws, and inadequate transportation, marketing, and communications systems.

Better education is an important step toward solving the world food problem. Improved literacy will pave the way for higher production. People will better understand the basics of nutrition.

Summary

Everything cannot be done at once. The resources will not be available. Difficult policy choices must be made.

Is a food balance at some low level enough? Should we expect a higher level of nutrition as the least acceptable condition? What quality of human living do we really expect?

This is the first in a series of six leaflets dealing with YOUR FOOD. The leaflets are part of an educational program guided by a multidisciplinary National Steering Committee. Assisting in the project were the National Public Policy Education Committee, Extension Service, and United States Department of Agriculture cooperating with the state extension services and the Farm Foundation. The other leaflets in this series on YOUR FOOD are (2) Who Will Get It?, (3) How Will It Be Shared?, (4) Will It Be Good and Good For You?, (5) Who Will Control It?, and (6) Food and Politics. The purpose of the leaflets is to deal with the food situation, food issues, and some alternatives. They do not advocate or predict a particular method or course of action. With more complete information, those involved in policymaking should be able to make decisions that are acceptable to consumers, producers, business and industrial firms.

² Brochure No. 3, "How Will It Be Shared?" discusses assisting the poor in our country as well as people in poor nations.

The U. S. could increase its food production far beyond present levels. In recent years, about 300 to 330 million acres have been planted in crops. But, as much as 450 million acres of land could be planted. To increase the acreage planted to crops, land would need to be shifted from pasture, woods, and other less intensive uses. Since productivity is low for much of this land, investment would be required in fertilizer, lime, clearing, drainage and/or irrigation. Because of development costs and lower productivity of additional land, production costs would tend to be higher for the additional output. The right kind of incentives could encourage producers to make the needed investments and pay the higher costs. Producers would need to be convinced that demand for more products would be strong enough to justify long term investments.

Although they may have a higher cost, new techniques and better seed varieties could increase production. Thus, U. S. consumers can be sure of enough food during the next ten years. The food problem in this country is one of cost, not availability.

Will Consumers Have to Spend a Larger Share of Their Incomes on Food?

Between 1960 and 1972, the share of consumer income spent on food steadily declined. The sharp rise in food prices in 1972-73 stopped the long-run decline. Since that time, the share of consumer income spent on food has gone up about 2 percent. Higher food prices were due to higher farm prices and higher marketing costs. Farm prices have not remained at 1973-74 levels. But, they are not likely to decline to levels of the 1960's, either. If consumers want to keep on eating large amounts of meat, milk, and eggs, they may need to spend a slightly larger share of their income for food than they did before 1972. Even so, the share of income spent on food is not likely to rise very much.

How much a family spends on food depends on what they buy. Food costs can be held down by using more grain and vegetables, and less meat. Converting grain into meat involves some loss in efficiency.

Diets with less meat, milk, and eggs would lower the total demand for grain. This could make more grain available for exports. But, it also would reduce prices and incomes of both grain and livestock farmers. It would lower the incomes of businesses and persons who produce and distribute livestock products as well.

Prospective Changes in Demand

About 80 percent of the total farm production in the U. S. has normally been used in American households. Commercial export demand took from 16 to 22 percent over the past decade. Food aid shipments have amounted to between 2 and 3 percent.

How Does Population Growth Affect Demand?

Changes in domestic demand for food have been much smaller and predictable over the past decade than changes in export demand. This is likely to remain true in the future. Growth in demand is due mainly to population growth. Demand is also affected by changes in in-



The U. S. could increase its food production far beyond present levels.

come and life styles. More women working outside the home, increase in suburban living, higher mobility, a higher proportion of teenagers, and more knowledge about food and nutrition affect demand. The rate of growth in demand for food in the U. S. is likely to decline slightly over the next decade. This is due to a drop in the birth rate.

The U. S. population growth rate has slowed. It went from a yearly rate of about 1.7 percent in the 1950's to less than one percent today. With fewer children and teenagers in the years ahead there will be less demand for certain foods such as hamburgers and french fries.

Real per capita incomes (current incomes adjusted for the effects of inflation) may not rise as fast over the next decade as they did in the 1960's. The slower rate of growth is likely because of high energy prices and added costs of controlling pollution.

How Are Eating Habits of U. S. Citizens Changing?

Based on recent trends, we can expect a modest increase in per capita demand for cheese, low-fat dairy products, poultry, meat, and beef. Per capita demand for pork, potatoes, non-citrus fruit, and grain for direct human consumption is likely to grow little, if at all. This means that growth in demand for these products will depend mainly on population growth. Per capita demand for eggs, whole milk, and butter will continue to decline.

Within the U. S., demand for farm products is expected to grow between 1.1 and 1.4 percent per year. This is slightly more than the expected one percent rate of population growth. This growth rate should present no serious challenge to American agriculture. The critical question is: What is likely to happen to export demands for U. S. farm products?

Why Trade? Why Not Strive for Self-Sufficiency?

Many countries look to the U. S. for a part of their food needs. The main reason for importing food is to lower food costs. It is cheaper for some countries to im-



by Bob F. Jones, Purdue University; Kenneth L. Robinson, Cornell University; and Lois A. Simonds, The Ohio State University

Consumers in the United States face no real threat of food shortages during the next ten years. There will be enough, plus some left over to share. But, Americans must answer such questions as: How much food should we produce? How should the supply be divided between use at home, commercial exports, and aid to countries short of food? Should eating habits change so there will be more food for others? If eating habits are changed, how could this food be made available to others? The choices made will affect the prices consumers pay for food, the share of their income spent for food, and the income of farmers.

How Much Food is Available?

Grains and root crops like potatoes, cassava (tapioca), and yams provide a large part of the world's food energy. Some of these products are eaten directly while others are fed to livestock.

Annual production of grain in the U.S. is slightly more than one metric ton (2204 pounds) per person. This is about 5 times the average yearly production of 400 to 450 pounds per person in such countries as India, Indonesia, and Bangladesh (Figure 1). The amount of grain produced per person in poor countries, when consumed directly, will meet arout 75% of the minimum calorie needs. Grains also provide a large part of an adult's protein requirements. If people in the U.S. were to eat like people in low income countries, 4 to 5 times as many people could be fed from our current production.

Four hundred and fifty pounds of grain per person is enough to meet a large part of the minimum calorie needs. But, there is little left over for conversion into livestock products or for food reserves. For this reason, a country with only this much grain production is in a dangerous situation if bad weather cuts yields.

Can U. S. Food Supplies for Human Use Be Increased?

At present, about 15 percent of the grain produced in the U.S. is used for seed, industrial uses, and direct human consumption. The U.S. converts about twothirds of its grain production and oilseeds (mainly soybeans) each year into livestock products. Pasture, hay, and other products which humans do not eat make up about one-half of the total ration for livestock. The amount of grain fed to livestock varies with prices. In years of short grain crops, more animals are slaughtered. Less grain is fed to those that remain.

The amount of food exported can vary. Anywhere from 20-30 percent of our grain is sold abroad. This is enough to provide the minimum calorie needs for at least 200-300 million persons.

ESTIMATED AVERAGE ANNUAL PER CAPITA PRODUCTION & USE OF CEREAL GRAINS*



Figure 1

port food than to produce it themselves. Access to imported food allows a country to specialize in those products (food or non-food) in which its resources are well adapted. A country produces those products for which it has the greatest comparative advantage. It trades for products that other countries can produce at lower costs. For example, the U. S. could produce bananas to meet its demands, but it would require an elaborate system of green houses. This would make bananas much more expensive than when they are produced under natural tropical conditions.

Through specialization and trade, the average cost of food is reduced. There is greater efficiency in the use of resources. Thus, trade on a continuing basis benefits both

the U.S. and its trading partners.

Specialization increases total world production. When other countries are able to take advantage of this, they increase total world production and their ability to purchase both food and non-food products on the world market. For some countries of the world with large populations, the best course of action may not be to increase food production but to increase the output of products which can be traded for food. But, world markets must be open to the increased imports. Unfortunately, special interest groups often look upon increased imports from a very short run perspective.

The general public, as well as farmers, has a stake in maintaining export markets for farm products. In 1974, farm exports earned \$22 billion in foreign exchange. This is about 4 times as much as in 1964. Food imports in 1974 amounted to only about \$10 billion. This left a \$12 billion trade surplus to pay for imported oil and other needed materials such as aluminum ore, tin, platinum, etc.

Farmers rely on export markets to take more than 20 percent of the total U. S. farm output. More than 70 percent of farm export earnings are from grains, soybeans, and soybean products (Figure 2). In recent years, the U. S. has exported about two-thirds of its wheat production, over half the soybean and rice crops, and over one-fifth of the corn crop. Exports are also important to producers of fruits and vegetables, and such non-food products as cotton and tobacco.

Sudden changes in farm prices are often related to changes in export demand. As exports have increased in recent years, U. S. farmers have been placed in a precarious situation. Likewise, consumers have been subjected to greater fluctuation in food prices. The surge in foreign demand, which began in 1972, contributed to the doubling of grain prices in 1973-74.

Export demand could decline again as it did in the 1960's. If this happened, there would be serious problems for many U. S. grain producers. Consumers would benefit in the short-run from possible lower food prices. However, the U. S. would have a hard time paying for imported products.

Do Our Food Exports Make A Difference to Others?

Other countries have become more dependent on the U. S. for food and livestock feed. By the mid-1970's, the U. S. was supplying about one-half of all grain that moved in world trade. During the 1960's and early 1970's,

the U. S. carried large inventories of grain. This was a result of its price support programs. These provided a reserve other countries could draw on in time of need, although it was not planned for this purpose. When demand for grain increased sharply in 1972, the U. S. provided almost 90 percent of the increase. This depleted our reserves. Since the U. S. is so important in world grain markets, the availability and cost of grain on world markets is strongly influenced by what happens here.

About 60 percent of our farm exports go to industrialized, high income countries (Figure 2). Much of the grain imported by these countries is used to feed livestock.

Small quantities of U. S. farm products are sold to middle and low-income countries with rapid rates of income growth in recent years. These include Taiwan, Brazil, and Mexico. Middle East petroleum exporting countries are rapidly becoming major customers for U. S. farm products, industrial goods, and technology.

About one-fourth of our exports go to countries at the lowest end of the income scale. These are countries such as India, Pakistan, and Indonesia where food supplies, even in good years, are close to minimum needs. Most of these shipments are regular commercial sales. These sales earn dollars.

The surge in farm exports which occurred between 1971 and 1974 was entirely cash sales. Concessional sales (long-term credit) and donations were valued at less than \$1 billion dollars in 1974, or about 4 percent of the total value of farm exports. About one-fourth of such food aid consisted of donations to foreign governments or voluntary relief agencies. The other three-fourths consisted of dollar sales paid for with long-term credit at low interest rates.

Forecasting exports depends on many uncertain factors. The weather in the Soviet Union, the monsoon in Asia, growth in income, the balance of payments, and political decisions about imports all affect exports.

VALUE OF U.S. FARM EXPORTS, 1975



Figure 2

Food importers can be divided into two groups. One group earns enough from their exports to pay cash for food from abroad. The other group includes those countries where incomes are low. Their exports are so small that they cannot afford to pay for large imports over an extended period. Most of the world's malnourished population live in the latter group of countries. Thus, it is a mistake to think that population increases in those countries will cause great increases in demand (need plus money) for U. S. farm products, unless some way can be found to finance larger imports.

Growth in demand for U. S. farm exports in the commercial market is likely to be less in the next ten years than in the past three. This is because income growth abroad is likely to be less. The oil exporting countries are exceptions.

The greatest possibilities for increasing exports lie in food short countries where the population base is large and growing fast. Where food production continues to lag, the need for food aid will increase greatly.

Food Aid: How Significant Is It?

During the past 20 years, the U. S. supplied over 80 percent of the world's total food assistance. Current food aid programs date from 1954 when Congress enacted what is now called "P. L. 480" or "Food for Peace." A purpose of that Act was to build commercial markets. However, many people viewed the Act as a means for disposing of government surpluses. Food aid was offered when it was politically acceptable to both recipients and to our government.

There is increased concern about starvation and malnutrition in other countries. Yearly P. L. 480 shipments dropped from a peak of over \$1.5 billion in the 1950's and early 1960's to less than \$1 billion in 1974, although expansion occurred in 1975. But, the amount of food made available has declined even more. This is because less can be purchased with the same dollar. The main commodities shipped have been grains, soybean oil, and non-fat dry milk.

Why Have U.S. Grain Prices Recently Been So Variable?

Since 1972, world agriculture has experienced unstable prices. World supplies have been reduced in some parts of the world due to bad weather. Rising incomes led to increased demand. This was followed by widespread unemployment in many countries, partly due to the energy crisis. Major policy decisions were made in the USSR and China to import grain. Opening U. S. markets to these two giants caused a surge in demand for our products.

Many countries, such as those in the European Economic Community and Japan, protect their consumers and producers from unstable world prices. This throws a larger burden of adjustment on those countries that rely on export markets. Food prices in the U. S. would rise and fall less if other countries permitted more price flexibility within their borders.

What Changes Have Occurred in Foreign Demand?

U. S. farm exports are likely to follow an upward trend over the next decade. Although an average rate of growth of 2 to 3 percent per year is expected, the upward path



Bad weather reduced food supplies in some parts of the world.

will be uneven. If this growth occurs and there are no large reserve stocks, both farm and food prices can be expected to fluctuate more. Frequent price changes create uncertainty over future food availability. Household budgeting becomes harder. It also creates problems for farmers and may lead to inefficient use of their resources.

Demand growth could outpace supply. If this happened, food and farm prices would rise and society would be concerned with what has been called a "food problem." If the reverse prevails, farm product prices would fall. We would then have a "farm problem" similar to that of the 1960's. No one can be certain which will happen over the next ten years.

The means for dealing with these problems lie in a combination of government and private actions. The U. S. faces no shortages of food for its own people. The major problems appear to lie outside the U. S. But, the U. S. cannot separate itself from the world food problem.

Measures the government might take to deal with the "food problem" can be listed under "domestic policies" and "trade policies."

On the domestic side, policies include:

- 1. Increased domestic production.
- 2. Food assistance programs.

On the international side, policies include:

- 1. Storage programs.
- 2. Export controls.
- 3. Elimination of import restrictions.

Another alternative is to rely solely on the free market to decide both consumption and production. This alternative is not discussed because of the problems which arise from the international markets.

Increased Domestic Production

We could follow policies that would increase output. These include: (1) An increase in support prices to provide more incentives for farmers; (2) Priority allocation of natural gas and other energy sources for fertilizer and

crop production; (3) More money for agricultural research, stressing development of new technology lead-

ing to higher yields.

Throughout the 1960's and up to 1972, government control programs were operated to support or increase low farm income. These programs kept as much as 15 percent of the cultivated land idle in the "soil bank." These controls were removed or relaxed in 1973, 1974, and 1975. In 1975, there were no restrictions on production except for rice, tobacco, and peanuts. Acreage controls on rice have now been suspended as a result of legislation adopted in 1976.

Support prices for farm products could be raised to provide greater price insurance and more incentive for farmers to increase production. Major commodities supported in the past 40 years have been grains (wheat, corn, rice, sorghum, etc.), soybeans, peanuts, cotton, tobacco,

sugar, and dairy products.

Except for a period during WWII, support prices have not been used to encourage production. But, they have been used to put a floor under farm income. They could again be used to encourage production.

Food Assistance Programs

Food assistance programs were started as a means of expanding food demand and making more food available to low income people. Since the late 1960's, these programs have been among the fastest growing items in the federal budget. In early 1975, just under 20 million people, or about one in 11 U. S. citizens were in the Food Stamp Program. This program cost the U. S. government nearly \$5 billion in 1975.

Food assistance also includes programs to improve child nutrition (principally the school lunch program) and assist the elderly. Spending for these programs was

over \$2 billion in 1975.

The total effect of all domestic food programs on food purchases is relatively modest. They add about 4 percent to total expenditures for food. Such programs could be expanded to reach more people.

Through taxation, these programs transfer income from one group in society to another. Thus, the main effect of an expanded program would be to increase the welfare of low income participants. It would have a small effect on the demand for farm products.

Storage Program

Storage proposals focus on grains and oilseeds. These are the major commodities which suffer from changing export demands. Such commodities can be safely stored for several years. This is not true of fruits, vegetables, meat, and eggs. However meat production can be evened out to some extent by keeping constant grain supplies and prices.

An alternative to a grain storage program would be to create a monetary food fund. This could help countries better compete in world markets when supplies are short. However, a fund would not increase food supplies but would decide how emergency food needs would be financed and is discussed in leaflet No. 3.

U. S. reserves of grain (the amount of grain left from the old crop at the beginning of the new crop year) have ranged from 100 million tons in the early 1960's to about 24 million tons in 1975. About 60 million tons has been suggested as a reasonable reserve for the late 1970's. This tonnage would be made up of about two-thirds feed grain and one-third wheat. There would be enough grain to take care of all but extreme changes in production and demand.

Farmers, private traders, exporters, and importers of grain will hold some grain if there is no government storage program. Price fluctuations will be greater if there is sole reliance on private action rather than a combination of private and publicly held reserves. There is no guarantee that private holdings will be managed to reduce price fluctuations. Private holders could decide to hold on to their grain in times of rising prices. Price fluctuations would then be greater.

If the government wants to build up reserves, it will tend to support or raise prices while supplies are being bought. After the inventory is purchased, we could expect lower prices. Prices would rise less in years of short crops or high export demand. Consumers, livestock feeders, some businessmen, and exporters would gain whenever grain was put back in the market. But, they would lose when grain was being acquired.

Opponents present two major objections to a policy of government owned grain. 1) It adds to government cost. 2) It can lead to an excessive accumulation of grain, which would depress farm prices.

The annual costs of storing publicly held grain would be about \$4 to \$5 per person per year. There is no way to avoid such cost if reserves are to be maintained. It doesn't matter whether they are in private hands or government ownership. However, there are added costs to consumers when there are not enough reserves. Food prices are higher in years of shortages.

Some people argue that large government held inventories reduce incentives for production. Whether or not storage holdings depress prices depends more upon the buying and selling prices for grain. If selling prices were far above buying prices, perhaps 50 percent, production incentives would not be reduced.

Current policy is to avoid any large build-up of government held grain. Prices would have to drop drastically from 1974-75 levels before the government would again buy any significant amount of grain.

Export Controls

Large year-to-year changes in export demands have caused much of the instability in farm prices during the past ten years. Export controls would make more of the total supply available for domestic users. This would lower farm and food prices. But, such action would reduce export earnings. It would likely endanger future markets for U. S. farm products.

When importing countries have their supplies cut off, they can be expected to give higher priority to increased production. Or, they turn to other supply sources. Thus, a conflict emerges. In the short-run, consumers want to hold down food costs. In the long run, the U. S. wants to maintain export markets for grains, soybeans, and other products.

Recent fluctuations in export demand have been due to varying grain production in the Soviet Union. Selective, rather than general, export controls might be used to protect regular buyers from instability. An alternative would be to enter into long-term agreements with selected customers. The recent Soviet-U. S. grain agreement is an example.

Elimination of Import Restrictions

Import restrictions are used to protect U. S. producers of beef, dairy products, and until recently, sugar. Sugar quotas and limits on domestic production expired when the Sugar Act was not renewed in 1974. Intergovernmental agreements now limit the amount of frozen meat that can be imported. Beef imports would be larger if present controls were eliminated. This would reduce prices of low-grade beef for both producers and consumers.

Larger imports of dairy products would reduce consumer costs only if prices were above government support levels, as in early 1974. The present Agricultural Act requires the government to buy up certain manufactured dairy products if prices drop below support levels. Any increase in imports would require offsetting purchases of U. S. dairy products by the government. Government costs would be higher. There would be no net gain to consumers.

Greater dependence on imports could lead to lower prices in the short run. But, there would be less incentive to maintain production. Greater dependence on imports could also lead to more unstable prices.

U. S. restrictions on imports of non-food products, particularly such labor intensive products as textiles, shoes, and apparel, limit the ability of foreign buyers to purchase food on world markets. If these restrictions were lifted, U. S. imports of non-food products would likely increase. Hungry nations would be less dependent upon aid and their food consumption levels could increase.

Policy Flexibility Needed

The policy options stated are appropriate if the U. S. continues to experience rising prices and tight world food supplies. Different policies would have to be considered if surpluses began to build up again. Some may think this is very remote. But, it could happen if two or three good crop years were accompanied by a drop in export demands.

The options for dealing with surpluses are just the

opposite of those discussed. Production could be reduced by letting farm prices drop enough to discourage production. We could store surpluses and dispose of them on concessional terms. Or, we could limit sales or production by farmers through quotas, acreage allotments, and land retirement or "set-aside" programs.

Lower prices eventually will reduce production. But to rely solely on lower prices to control production could seriously harm farmers.

Temporary surpluses of some commodities can be stored. But, if they become large, storage costs may become too high. There may be pressure to return to programs like those of the 1960's. Under these, farmers were paid to keep land idle. This too can be looked upon as a form of food reserve.

Summary and Conclusions

Consumers in the United States presently face no threat of food shortages. But, many people in less developed nations do face this threat. Food shortages in other parts of the world cause increased demand for U. S. exports. Thus, events outside the control of the U. S. affect U. S. consumers.

We have many options open. We can produce more food. Or, we can reallocate our supplies of grain if we need to feed more people. The central issue of food in the United States is one of price, not availability. Food will cost more in the future than in the past. But, any increase in the share of income spent on food is likely to be small. Future food costs will depend more upon the rate of inflation in processing and distribution costs than on prices of farm products.

Instability in the foreign market raises several questions. (1) How can consumers be protected from sudden increases in foreign demand? (2) How can our regular purchasers be protected? (3) How can producers be protected against sharply decreased exports?, and (4) Should grain reserves be publicly held?

We could increase the amount of grain shipped to both commercial markets and to food aid recipients. How much we ship commercially depends on how much other countries can import. It also depends on our ability to work out long-term arrangements to keep production high enough to meet both our consumer needs and foreign demand.

How much food aid we provide depends on how much money we decide to spend for this purpose. The countries most in need are likely to be least able to pay for additional imports.

This is the second in a series of six leaflets dealing with YOUR FOOD. The leaflets are part of an educational program guided by a multidisciplinary National Steering Committee. Assisting in the project were the National Public Policy Education Committee, Extension Service, and United States Department of Agriculture cooperating with the state extension services and the Farm Foundation. The other leaflets in this series on YOUR FOOD are (1) Will There Be Enough?, (3) How Will It Be Shared?, (4) Will It Be Good and Good For You?, (5) Who Will Control It?, and (6) Food and Politics. The purpose of the leaflets is to deal with the food situation, food issues, and some alternatives. They do not advocate or predict a particular method or course of action. With more complete information, those involved in policymaking should be able to make decisions that are acceptable to consumers, producers, business and industrial firms.



Some of the major policy issues have tried to increase food production.

attempt to achieve fairness in prices, income, and taxes. They work to increase the efficiency of the food market system.

In the mid-1970's, some of the major policy issues tried to:

- 1. Increase employment.
- 2. Increase productivity.
- 3. Make the marketing system more efficient.
- 4. Make the marketing system more competitive.
- 5. Reduce barriers to trade—trade in all products and not just food. Restrictions hamper all international commerce, including food.
- 6. Improve the economic development of food short nations.
- Improve the international money system and lending institutions.

The picture at mid-decade is not bright. The U. S., along with other countries, has not made great strides in improving the "partake-together" market sharing of food. Per capita consumption of food around the world has increased little during the past 20 years. Since 1973, unemployment has grown and is hard to correct.

But this should not stop efforts to improve the market system. Market trading still controls food consumption for most of the world's people. Fortunately, if hungry people in the world can get enough money to buy more food, food producing and exporting nations can provide it.

The Non-Market System for Sharing Food

Sharing can mean to "give or grant." Some food has long been made available for hungry nations that cannot afford to buy all the food they need. Food, mostly grain, is sold at lower prices or given free to those who cannot pay.

Failure of the market system to meet all food needs has resulted in some non-market sharing. Market and non-

market sharing of food are intertwined. Improvement in the market system reduces need for non-market sharing. This is especially true internationally.

Who Needs Food Aid?

People may need food aid for many different reasons. Some may be victims of their own circumstances, others may need food because of social or national problems. Examples are:

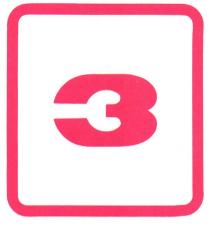
- 1. Acts of God: Events such as earthquakes, droughts, floods, and other natural disasters can create a need for outside food aid for thousands, or even millions of persons.
- 2. Variations in dependency: In every country there are many people who simply cannot provide for themselves. Most obvious of these are the very young, the elderly, and the handicapped. They must be supported by society. Throughout history, the extended family or tribe supported them. Now, with larger social and economic boundaries, a broader social unit supports them. Many ask how far the bond of sympathy and support now reaches. It could be worldwide!

Others in the population who need food have less obvious situations. These are people who are at least partly employed but just can't earn enough money to provide for themselves. Some are handicapped by their own limited talents. Some have run into misfortune. To what extent should a person be left a victim of his own limitations? Should he be deprived of food for himself and his family?

3. Acts of Man: The hardest aspect of non-market sharing relates to acts of man. All human beings are caught in institutional systems over which they



Failure of the market system to meet all food needs has resulted in some non-market sharing.



HOW WILL IT BE SHARED?



By Jan Armstrong, Purdue University;
Harold F. Breimyer, University of Missouri-Columbia;
Douglas Ensminger, University of Missouri-Columbia;
and Bob F. Jones, Purdue University

Of all of man's basic needs—food, clothing, and shelter—food is the only item so crucial that it is a part of man's religions. "Give us this day, our daily bread..." is a part of the Lord's Prayer. Each of the great religions has given some attention to food. Food is a part of the social feeling of all people. It is truly a universal need.

The Meaning of Sharing

There is much argument about how the world's people should get their daily bread. One extreme says "let 'em starve." The other side has feelings of brotherhood and sympathy.

Two views of sharing are important to food policy:

- 1. One meaning of sharing is "to partake together" jointly or cooperatively. This says that the market system for food sharing is a joint effort. Each shares according to his productivity and/or buying power.
- 2. A second meaning of to share is "to grant." To grant usually means to give food away. This giving may be out of generosity, mercy, or a sense of justice. Often, it is in response to urgent need. This is non-market sharing of food.

The Market System for Sharing Food

The market system is the main method for sharing food within a nation, and world-wide. The system depends on and reacts to national policy.

Within any country, the most basic issue is trying to make sure that every able-bodied person has an opportunity for gainful work. Employment, more than any other factor, controls how well individuals of a country are nourished. A more balanced buying power could lead to a better, more balanced nutrition level.

For the market system to function, production and marketing processes must be efficient. They must be free of monopoly. Failure in these processes hurts consumers.

International Trade

The great bulk of food trade, at home or between countries, is commercial. In 1974-75, farm products exported from the U. S. totaled about \$22 billion. This is about \$100 per U. S. person.

Food can flow fairly freely among nations when these conditions exist:

- 1. Exporting nations keep up their food production.
- 2. Importing nations earn foreign exchange by producing and exporting other kinds of products.
- 3. Trade is not unduly restricted by trade barriers such as quotas and tariffs.

In recent years, these conditions have not always existed. At times, some exporting countries have had poor crops. Some food-short nations have not been able to earn enough foreign exchange. There are still many things that block trade.

Both developed and less developed nations have tended to put up trade barriers. They have often been non-tariff barriers. The barriers may keep countries with hungry people from finding markets for their export products. If this happens, they won't be able to enter international markets to buy food.

As of 1975-76, food-trade relationships among nations have been scrambled by the sharp rise in prices of petroleum and other raw materials. Nations rich in those materials are now able to bid freely for food. Countries that import minerals are in worse shape. The situation can be desperate for nations which have to buy both minerals and food.

Policies to Improve the Market System

The U. S. and other nations have developed policies to improve operation in their market systems.

Countries follow policies which increase employment. They try to provide a good system of education. They have no control, such as legal processes, social norms, or industrial unemployment. The circumstances may be brief or lasting. But, they can be controlling.

How Shall We Share Food, or Why?

In large measure, policies for non-market food sharing are made as national policies. Some of the questions raised are:

Is there a sense of justice that leads mankind to share food across international borders? Is it wrong for people in the Western World to consume many times (perhaps five times) as much of the world's resources per person just to feed themselves? Do national governments have a choice in their policy postures? Should they act considerately and charitably? Should they act on the basis of power? Should they act on a basis of helping another country develop and grow to a self-sufficient nation? Can they encourage food-short nations to give food production a high priority?

The U. S. has been the most generous nation in the world in sharing its food. But, we have not always done so for unselfish reasons. At times we have wanted to unload our surpluses. We have hoped for gratitude and political allegiance. Gratitude we didn't get. The score isn't in yet on political rewards. But, our nation has not been unfeeling. We have not acted solely on power-centered national interest. The motives have been mixed—both humanitarian and political.

Food As a Policy Tool

The balance between food and population in the world promises to become critical in years ahead. Some 40 developing nations face the prospect of a deficit of 75-80 million tons of grain by 1985. Developed countries are expected to increase the quantities they can export in a like amount. In this situation, arguments tend to drift away from human sympathy and charity. They tend to lean toward using food as a power tool.

The prospect is that policy will not be made on the basis of either extreme. The U. S. is so influential that it can hardly avoid combining food aid with its political relationships. But it is not so all-powerful that it can flaunt its food as a power device.

Evidence shows that our nation is becoming more dependent on others for raw materials. Many of our suppliers are developing countries. So, the terms of sharing are changed.

Another element in this new equation is the growing skill of suppliers to control their stock of resources. They, too, can use their resources as power tools. They will likely do so in any power contest engaged in by the United States or other nations.

Policies For Non-Market Sharing of Food at Home

The U. S. and most advanced countries have accepted some public responsibility in providing food for their



Eating habits are affected by personal values and preferences.

own disadvantaged people. However, there are still questions whether these policies result in the "right" programs and benefit the needy. There are three alternatives:

- 1. No food or income aid.
- 2. Family assistance plans (transfer payments).
- 3. Food aid.

No Food or Income Aid

This appears in any listing of alternatives. But, it is hardly acceptable in a highly developed and socially conscious nation such as the U. S.

Family Assistance Plans

Present income programs, or transfer payments, include direct assistance programs such as Aid to Families of Dependent Children (AFDC), aid to the blind and disabled, and others. The programs have become large and increase even more during economic stress. Programs vary from state to state.

Proposals have been offered for broader and more standardized income maintainance programs, such as a Family Assistance Plan (FAP) or negative income tax.

Income programs (direct assistance) enable families to buy more food. But, they do not ensure that the family will do so. Partly for this reason, a number of programs have been food-specific. However, some persons favor the direct cash approach. They argue that recipients receive personal satisfaction from a wider range of consumption choices when aid is not food-specific.

Food Aid

Food aid, or supplementary food programs, now include basic child nutrition programs, food for the elderly, and the food stamp plan. In mid-1975 a new pilot Special Supplementay Food Program for Women, Infants and Children was introduced.

These programs are food-specific. But, they do not increase food consumption in proportion to their cost. To an extent, recipients substitute the subsidized food for their normal spending. In the food stamp plan, for example, only about 60 percent of the cost to government represents more family food buying.

Not all influences on diet are economic. Society creates social pressure, peer group standards, and stigmas that affect eating habits. Eating habits are also affected by personal values and preferences. Some people do not know about nutrition. Programs of action range from education to restricting advertisements that discourage good nutrition. The Expanded Food and Nutrition Education program is a special activity of the federal-state Extension service. It teaches lower income families the basis of nutrition and food preparation.

There is also the question of level of aid. The question of "how much will be shared" is a big one. Estimates of cost under any aid plan are not hard to make. The question of "how much is enough" is another matter.

Policies for Non-Market Sharing of Food With Other Nations

Policies to help relieve the food problem of poor countries divide along two paths. One is to give technical and other developmental aid to poor countries. The object is to teach them how to improve their ability to obtain food, either by giving food a higher national priority and producing it themselves or being able to buy it on the world market. This kind of help is longer term. If it works, it would help poor countries participate more fully in the market system for sharing food.

The other path is concessionary food aid, including grants and donations.



Many poor regions of the world need technical aid.

The Historical Record

For more than 20 years, Public Law 480 has been the major U. S. vehicle for food aid. In those two decades, concessionary sales, barter, and grants of food under P. L. 480 totaled nearly \$26 billion.

In 1974, P. L. 480 deliveries were \$800 million. Late in the year, the shipment rate was increased. Deliveries for the fiscal year 1974-75 were around \$1.2 billion.

Even at the increased 1974-75 rate, the U. S. was selling 25 times as many farm products commercially as for P. L. 480 credit. We were selling 70 times as much commercially as we were "giving" in grants and donations. For many years, the U. S. has engaged in governmental

For many years, the U. S. has engaged in governmental programs to carry technical knowledge to developing nations. A number of private foundations pioneering in the field have sponsored programs to do the same thing. Technical aid has not been confined to agriculture.

In many cases, the best opportunity is to develop the industrial capacity of nations. This would increase their ability to earn exchange for buying food in world trade. Industrial development was a major goal of U. S. technical aid for many years.

The Policy Choices

Food and technical aid policies need to be evaluated all the time. They must be modified in view of changing conditions. Review may result in either continuation of presen policies or selection of new policy alternatives. The choices open to the U. S. are:

- 1. No food aid.
- 2. No technical aid.
- 3. Food aid and monetary food fund.
- 4. Technical aid.
- 5. Changed consumption patterns.
- (1) No food aid: There is little question about whether to provide emergency aid to victims of earthquakes, floods, or severe local droughts. Most Americans are willing to help the mass victims of inhumane acts of man.

These situations are desperate and call for immediate supplies of food. But the tonnages involved are small when compared with the amount required to bring the diets of the world's undernourished people up to a minimum acceptable level. To deny short-run emergency aid would be unacceptable to many Americans.

The amount of long run food aid given will depend much more on the availability of food supplies and cost of aid. To give no aid could have a bad long run effect on the U. S. leadership position in the world.

(2) No technical aid: A certain amount of U. S. technical aid will likely be available in one form or another. One form is through private investment abroad. This is accompanied by American equipment and "know how."

Another form is the technical agricultural assistance provided by government, universities, and foundations. In the end, it would appeal to some persons in the farm sector. They view it as contributing to their competition for markets abroad. This has a short-run and a long-run effect. In the short run, some markets for U. S. agricultural products may be reduced. But in the longer run, increased food production will help general economic



Some people ask if food aid commitments should be supported by building up reserve stocks of grain.

development. This would likely result in expanded markets for U. S. food products as a whole.

(3) Food Aid: The amount of food aid required to bring all undernourished people of the world to a minimum acceptable level of living is very great. It is costly. And, it may not bring long-run solutions to the problem. Dependence on food aid may permit a country to underinvest in its own food production. The country may let its agricultural production lag even further behind the growing population. Dependence on food aid tends to reduce producer incentives to increase food production. Imported food often lowers the prices local producers receive for their food products.

Two other questions are involved in granting food aid. How should food aid be distributed among countries? Should it be strategic or humanitarian? Recent evidence suggests that the U. S. Department of State has tended toward using P. L. 480 as a power arm in foreign affairs. On the other hand, leaders in the Congress have looked with favor on meeting more critical human needs. In 1974-75 Congress enacted legislation that said humanitarian needs must be given considerable weight in food aid policy.

Should food aid commitments be supported by building up reserve stocks of important foods, mainly grains? If stocks are needed, should the U. S. manage them? Or, should there be cooperative action by several countries? Who should finance them? Who should hold them? And, who should control their acquisition and release?

These are hard questions to answer. The Agriculture Committee of the National Planning Association recommends that a reserve program be multi-national. But, the committee advised the U. S. to move ahead on its own if cooperation is not achieved.

A monetary food fund would be an alternative to grain storage. This would be a fund which would be accumulated and made available to purchase food in case of an emergency. All nations of the world would be asked to support such a fund. A monetary food fund would enable poor countries to better compete in world food markets when emergencies arise. It would not interfere with markets. However, such a fund would not increase the world food supply or even out supplies from one year to another. It would not keep market prices stable. In fact, there would be more price variation as recipients entered the market to bid for available supplies. The higher prices would reduce consumption for those not receiving aid from the fund, and more food would be available to fund recipients.

(4) Technical aid: The U. S. could greatly help advance agriculture in other nations. However, much of the new technology is best suited to the 12-15 percent of the world's irrigated agricultural land.

There is plenty of technology for irrigated land. But, technology for regions of limited rainfall falls short.

The U. S. can help expand world food production through its activities for technical aid. However, many questions and issues remain. It is necessary to review these questions in view of changing circumstances. How much technical assistance should be provided? How should aid be given? Under what conditions should it be offered?

To decide how much technical aid should be offered, a closer look needs to be taken at the pay-off from technical aid versus direct food aid. Obviously, where it works the technical pay-off is the greater. This is particularly true in the long-run.

From the donor's viewpoint, it may be good to require programs for investment in agriculture. Also, increased food production requires incentives to encourage producers to take the necessary risks involved to increase production.

The most common drawback to more food per person has been related to population control. The P. L. 480 program of a decade ago had stern terms. It required that effective efforts toward population control be made before a country could qualify for P. L. 480 food. But, the terms were not strictly enforced. Most likely, they could not be enforced world-wide. Attaching strings has merit but may not be practical.

(5) Change consumption patterns: A change in eating habits could increase the amount of food available for food aid. If consumers in developed countries would change their eating habits, more food could be released for other uses. Voluntary self-denial of high resource—using foods will not assure that food not eaten will find its way into food aid. But, a national program of food aid could divert food into foreign aid shipment.

Often, talk of changing eating patterns misses two major points. One is that food is being singled out for attention. Rich nations also consume more than their share of the housing, transportation, health facilities, and most other goods of the world. The other is that the problem is more a transfer problem than it is one of eating habits. Are rich countries willing to tax themselves enough to help people in other nations get more food? Which rich countries are willing?

These questions lead to the further question of how other nations can be induced to share responsibilites. At the November, 1974, World Food Conference in Rome, the proposal was raised that new international organiza-

tions be formed to assist food and technical aid programs. It was also hoped that newly-rich petroleum exporting nations would join in and help finance food aid.

Population Control

The population issue has not been widely discussed in this section. This has been done, first, because it is a longer term issue. The need for food for hungry people today is a result of population and other policies of past years, not of the present.

Second, the population-food balance today may reflect very uneven food distribution (poor "sharing"). Stopping population growth would not by itself bring population and food into balance.

Third, population control is a different "kettle of fish" from food production and marketing. The U. S. cannot force other countries to control their population. It can better influence production and marketing.

This does not decrease the importance of controlling future population growth. It must be done. It will be done—either through farseeing courses of action or by starvation. Population control is necessary. But, it will not solve the world's food problem by itself. The other steps shown here must be taken, in whole or selectively.



Population control is important.

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WILL IT BE GOOD & GOOD FOR YOU?



By Velma Seat, Oregon State University; Margy Woodburn, Oregon State University; William J. Vastine, Texas A & M; and Sylvia Lane, University of California-Davis

People worry about the food they eat. They worry because: (1) They buy more processed foods and know little about them. (2) They read about poor conditions in food processing plants. (3) They hear about the dangers of food additives, pesticides, contaminants, and food poisoning.

We now have ways to find impurities in food which could not be found a few years ago. So, more publicity has been given to food safety.

Foodborne Illness

The greatest food safety problem today is *foodborne* illness (food poisoning). Foodborne illness is caused by bacteria that contaminate food. The problem bacteria are:

- 1. Salmonella a living bacteria that can cause illness when eaten.
- 2. Clostridium perfringens bacteria that produce heat resistant spores that can cause illness.
- Staphylococcus aureus and Clostridium botulinum
 bacteria that produce poisonous toxins.

Foodborne illnesses are unpleasant but seldom fatal. They are often thought to be a virus or the 24-hour flu. The exception is *Clostridium botulinum*, which does not occur very often, but is a killer. Botulism has been a problem in improperly home-canned vegetables, meats, and fish.

Bacteria can be a danger whenever and wherever food is handled or stored. Improper handling of food in the home often causes illness. Thus, consumers need to do their share in preventing foodborne illness.

How to Prevent Foodborne Illness

- At home: (1) Keep cold food cold (40°F. (4°C.) or below) and hot foods hot (140°F. (60°C.) or above).
 - (2) Scrub hands and work surfaces each time after fixing raw meats, poultry, and seafoods.

Outside the home: Inspection laws help guard against foodborne illness caused by improper food handling or processing. They are made and enforced by the Food and Drug Administration (FDA), United States Department of Agriculture (USDA), state, and local agencies.

Continuous inspection required of meat and poultry falls under the jurisdiction of the USDA. It helps assure consumers that their meat supply is clean and wholesome. The USDA is also responsible for the safety of imported meats. Meat is inspected when it enters the United States. Only countries with inspection standards at least equal to those of the United States are allowed to ship meat into this country. USDA field inspectors inspect foreign plants at least twice a year.

Continuous inspection of seafood plants is voluntary. Processing and packing plants, which work under the National Marine Fisheries Service's "voluntary inspection service," may carry a Federal inspection mark which says the product is safe.

Food processing and handling firms maintain quality control and sanitation programs. They try to follow "Good Manufacturing Practices" (GMP). These are standards set by the FDA based on surveys of existing industry production processes.

Food manufacturers/processors work to define food safety hazards and try to correct and control these hazards. Reputable firms are very concerned with food safety—their business depends on it.

Improved handling of perishable foods means better health for consumers.

What About Food Contaminants?

Contaminants may enter foods at any stage of production, processing, and distribution. Some non-poisonous contaminants cannot be completely avoided by good manufacturing practices. Many are repulsive, such as rodent hair and insect parts.

FDA has set "Filth Guidelines" to help define just "how much" or "how many" contaminant particles are allowed. These do not describe a contamination level that is average, acceptable or often found in industry. But

they do stand for a level at which action will be taken to remove products from the interstate market.

Do Foods Contain Toxic Compounds?

It is impossible to avoid all *toxic compounds* in food because some occur naturally. For instance, the green portion of potatoes contains *solanine*, which tastes bitter and in large amounts may be harmful. It is caused by exposure to natural or artificial light.

The question is not whether toxic compounds exist. The question is, can they be controlled to avoid a health hazard? The answer is yes. Using proven handling practices from production to consumption reduces the presence of toxic compounds to a safe level. Further research and improved handling practices can reduce them even more.

What About Food Additives?

Additives are both man-made and natural. People consume about five pounds of these substances each year. But, this amount has been increasing each year. Additives perform many functions. Vitamin D is an additive used in milk to make it more nutritious. Additives such as salt, spices, and flavorings are used for flavor. Some additives prevent spoilage. For example, sodium or calcium propionate slows down mold growth in breads. Stabilizers, such as vegetable gums and pectin, give a smooth texture to many foods. Color is added to many foods to make them look more tasty. Examples of these are cheese, margarine, maraschino cherries, and soft drinks.

Are additives safe? Who is responsible for their safety? Since 1958, all proposed additives must go through strict testing to provide evidence of safety. Shortly after the 1958 food additive amendment, the FDA published a list of additives which scientists considered safe for their intended use. This classification of products "generally recognized as safe" (GRAS) is now being reviewed by experts. This is needed because testing methods are improved. Also, larger amounts of additives are being used in some new products.

Should We Use Pesticides?

Studies show that certain pesticides are needed to produce food economically. Without them, the price of food would be many times higher. If pesticides are used, some residue may be on the food when it is eaten. At one time this might not have been found. But, we can now measure minute amounts.

The FDA has set limits on how much pesticide (with careful regard for human safety) can be on food. Market basket samples of food are tested for pesticide residue every two months by the FDA. Records kept over a five year period show that the amount of pesticide in food we eat is well below that regarded as safe by the Food and Agricultural Organization of the United Nations/ World Health Organization (FAO/WHO).

By October, 1977, pesticide applicators must be trained and certified to apply restricted pesticides. All pesticides are registered with the Environmental Protection Agency. To be registered, the pesticide must work for its intended purpose. It must be safe for people and



Studies show that certain pesticides are needed to produce food economically.

animals when used as directed. However, consumers should always wash fresh fruit and vegetables before eating them.

How Can We Make Our Food Safer?

Our food can be made safer to eat by:

- * Clean handling.
- * Storing food under safe temperatures in the home.
- ★ More help for food handlers so they can meet desired standards; information on how to prevent or deal with problems.
- ★ More inspection, laboratories, and educational programs on food safety at federal, state, and local levels.
- ★ Funding for food safety legislation. Often laws are passed without money to make them work.
- ★ Better industry methods for safe and clean handling, processing, and storage of food.
- ★ Research on what and how much of different substances is safe in human food.
- ★ Research on methods to make and keep food safe. The questions are:

Should we ban additives when there is any danger that they might cause cancer, even though we are not sure (the Delaney Clause¹)? For example, nitrites are used in curing meats for color and flavor. If they are banned, meats will be less tasty. There will also be more danger of botulism. Is the threat of cancer really that great?

Can we afford to ban pesticides? There would be less food and food would cost more if we did.

Should we ban all contaminated food? Not only would this raise the price of food, but is obviously impossible because foods are natural products.

¹ The Delaney Clause is a part of the Food Additive Amendment of 1958 which says, in effect, no material may be added to a food if it has been shown to cause cancer in man or animal.

How should available money be divided? Should more money go into research? Or into enforcement of regulations to keep food safe? Or into education of industry and consumers so food will be safer? In placing funds, government and industry must weigh how much good it will do against the costs.

Do we need more laws and regulations to keep food safe? Or, should we work harder making those we now have work better?

The problem is finding the right answer.

Nutritious Food

Are We Well-Nourished As a Nation?

Compared to other nations, we are well-nourished. But, individuals without money to buy enough food, or those who have money to buy enough but make poor choices, often have low intakes of one or more nutrients. Most often these nutrients are iron, calcium, and Vitamin A. Nutrition is especially important to infants and young children, adolescents, pregnant women, and the elderly. These groups are the most likely to be poorly nourished.

Are Americans' Food Habits Improving?

U. S. Department of Agriculture studies in 1955 and 1965 showed that food habits have not improved. People ate more meat and poultry, soft drinks, prepared desserts, and alcoholic beverages. They ate fewer green and yellow vegetables and fruits, dairy products, and grains. With food prices still going up, what will our food habits be in the next ten years?

How Do We Find Out About the Nutrients in Foods We Buy?

Nutrition labeling can aid food shoppers in the U.S.A. It is now required by the Food and Drug Adminstration on foods which make a nutritional claim, or to which nutrients have been added. Nutrition information is also voluntarily provided by food manufacturers on the labels of many other foods. Nutrition labeling identifies what nutrients are in the food.

The Federal Trade Commission (FTC) checks on honesty in food advertising. The FTC has proposed new standards for nutritional claims in food advertising, which are being considered.

Are Our Foods Less Nutritious Today Than in the Past?

Today's food may be better for you than in the past. Methods of processing foods have improved. So, fewer nutrients are lost.

The nutrients food manufacturers add to processed foods also affect their nutritional value. Enrichment and fortification add nutrients to foods. Regulations in many states require that some foods be enriched or fortified. For example, white bread may be enriched with iron and B vitamins.

Food manufacturers have designed many fabricated products. Fabricated foods are foods from ingredients put together to imitate other foods. Although the major nutrients may be added, trace mainerals may be missing.



Today's foods are better for you than in the past.

What Are We Doing to Improve Nutrition?

Food availability, social change, economic resources, methods of distribution, and nutrition education affect how well people are nourished.

Economic progress is needed so more people can earn a living. Some people do not have enough money to buy the food they need, even in the United States. The Food Stamp Program was developed to serve their needs. Those eligible may buy food stamps to purchase food for their families. They pay for the stamps with the money they can afford from their limited incomes.

There are also programs for children from eligible families. The reduced-price and free school lunch, school breakfast, and "special milk" programs help provide the food they need. The women's, infants', and children's supplemental feeding program is for mothers and young children with special food needs. This is the Special Supplemental Food Program for Women, Infants and Children up to four years of age. For those over 60, there is the Nutrition Program for the Elderly. Meals are served to those who come to a "congregate" dining area. The place where they "congregate" is often within walking distance in urban areas or transportation is provided. This same program takes hot meals to the homes of elderly shut-ins.

Many people do not eat what they should to stay healthy. Even those who can afford to often do not. Nutrition education is needed. This can be through Extension education programs or through the schools. It could be through television, newspapers, advertisements, or whatever ways will help people learn.

Research is needed on new foods that will provide nutrients at a lower cost. Research and development cost money. But, often they pay off by giving us more and better food at lower costs.

Do We Have a Nutrition Policy?

One is being developed. The five goals of a National Nutrition Policy being considered by the Senate are to:

- (1) Make sure there is enough good food at reasonable costs
- (2) Maintain food resources to meet national and international responsibilities
- (3) Give all people a sound understanding of nutrition

(4) Maintain safety and quality standards

(5) Support research and solve important problems

The goal is to have enough good food for all to be wellnourished.

Food Quality

What Is Food Quality?

Our definition of quality depends on what we expect. This is determined by such things as personal tastes, culture, income, education, age, and mobility. The way food looks, its flavor, color, and texture are some things which make people enjoy food.

Quality probably influences consumer buying more than anything. Family food buyers may not consider nutritive value and food safety. However, they always think of the foods their families like and dislike.

It is hard to predict what quality of food people want. Tastes vary with background. For example, the person who has always eaten margarine may prefer its flavor to that of butter. Someone raised on butter may not care for margarine.

Food manufacturers spend millions of dollars trying to find out what consumers like. They want to make products that will sell. Every year many products fail to meet the test of consumer acceptance.

What is the Value of Food Grading?

There are voluntary grading programs for many foods we eat. Most grades were developed for marketing information. As a result, they may not be as useful to the consumer. If used, grade standards help consumers buy foods that are a consistent quality.

Are There Any International Food Standards?

Much time is being given to developing international food standards. These standards are to protect consumers against health risks and fraud. They also assist international trade. Nearly a hundred countries belong to the Codex Alimentarius Commission. One of the basic goals of the commission is to bring together all food standards into one code. The commission is working on the composition, labeling, additive, contaminant, pesticide residue, sanitation, and analytical aspects of food. The problem in their work lies with the attitudes of the many nations. The wealthy nations want to minimize risk. The poor nations will accept higher risk to keep people from going hungry.

Will Open Dating Help?

Open dating is a date which everyone can understand. Is is placed on *perishable products* to help maintain better quality food. Dating promotes better handling and rotation in food stores. But, it is not a guarantee. Mishandling at any level, including the home, can lower quality.

What Can You Do As a Consumer to Insure Quality?

- * Learn about grades placed on food.
- ★ Learn about nutrients.
- * Read the labels.
- * Read the dates on dated foods as a guide to freshness.
- ★ Shop when you have the time to compare foods.
- ★ Inform the manufacturer, public officials, or the Food and Drug Administration if the label on a food product is wrong. Inform them if the quality of the product is poor.
- ★ Inform the store manager or a public official if food is not being properly handled. Tell them if you get "short weight" (below the weight stated on the label).
- ★ Maintain home refrigerators at 40°F. (4°C.) and freezers at 0°F. (—18°C.).

What System Do We Want?

A big question facing all of us is "what kind of a food system do we want?" Will an unregulated economy that depends on capitalism's profit motives serve our needs? Would a government controlled system be better? What balance between controls imposed by industry, government, and consumers is best?

We must remember there are no "free lunches." Most programs result in increased costs. These must be paid for in the end by the consumer. Those who pay must decide. The costs should be compared to the benefits. Likewise, risks and benefits must be considered. The wealthy are willing to spend more for safe food. But, is everyone willing to pay?

Some questions that must be resolved are:

- 1. Food Safety. How "safe" must foods be to be "reasonably" safe? Who should decide this, and how? What will new programs cost? Is banning a suspected additive, pesticide, herbicide, or other production aid better than setting reasonable tolerance levels?
- 2. Food Quality. Should quality standards based on consumer desires be developed? Would they be used? Would the supply of foods be altered? Would the costs be worth it?
- 3. Nutrition. Should you have the right to be malnourished? Should good nutritional habits be developed through education? Or, should strict controls on market products and food aid programs force good nutrition?
- 4. Consumer-Industry-Government. Is self-regulation adequate? Or, must government perform this task? Should government activities be focused on prevention? Or should government focus on punishment?

Many questions could and should be added to this list. Consumers must accept responsibility for the foods they buy, prepare, and eat. Difficult choices must be made. But, in a democracy, the choices are ours.

This is the fourth in a series of six leaflets dealing with YOUR FOOD. The leaflets are part of an educational program guided by a multidisciplinary National Steering Committee. Assisting in the project were the National Public Policy Education Committee, Extension Service, and United States Department of Agriculture cooperating with the state extension services and the Farm Foundation. The other leaflets in this series on YOUR FOOD are (1) Will There Be Enough?, (2) Who Will Get It?, (3) How Will It Be Shared?, (5) Who Will Control It?, and (6) Food and Politics. The purpose of the leaflets is to deal with the food situation, food issues, and some alternatives. They do not advocate or predict a particular method or course of action. With more complete information, those involved in policymaking should be able to make decisions that are acceptable to consumers, producers, business and industrial firms.



WHO WILL CONTROLIT?



By Harold G. Love, University of Kentucky;
Bruce W. Marion, University of Wisconsin-Madison; and
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The U. S. food system is a giant machine that involves many farm and nonfarm activities. It produces and distributes thousands of food items to American and foreign consumers. As the system has grown, the activities of nonfarm industries have become more important.

The food system is like an assembly line. People and firms at each stage add to the value of the final products.

Firms that provide production inputs such as fertilizer, farm machinery, feed, and credit contribute about 25 percent to the value of food. Farmers add 15 percent. They receive this amount of the food dollar for their land, labor, and other investments. Marketing firms add the remaining 60 percent. One-half of the "marketing bill" is due to labor costs. (See Figure 1.)

In the past, Americans have directed the food system by what they buy in the market. In the market system, this demand is reflected back through each stage to farmers. Farmers then try to adjust their production to meet consumer demands. This influences the amount of inputs farmers buy.

Firms in the food system have grown in size. The entire system is sometimes compared to an hourglass, with the middlemen enjoying most of the control. Many consumers believe their power is slipping. Many farmers feel they no longer control their own futures.

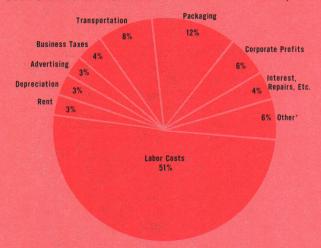
The question is, does the system control us? Or, do we control the system? Control in the food system largely depends on:

- 1) Who has access to and use of resources required to produce food. These are capital, labor, raw materials, information and management.
- 2) Who decides how much is produced, the type, price, and market outlets.

You and the Supermarket

Food distribution was handled by small, family-owned businesses until the 1920's. These small stores were served by family-owned wholesalers. Both were slow to adopt new technology.

COMPONENTS OF BILL FOR MARKETING FARM FOODS, 1974



But, mechanized techniques entered the business. Industries replaced hand labor with machines and began to grow. Operations became integrated. For example, wholesalers expanded into other operations. They integrated processing plants and distribution centers with their wholesale businesses.

Independent retailers developed the supermarket in the 1930's. The supermarket combined self service and cash-and-carry merchandising. Like foods were placed in a central location. Large volumes of food were handled at greatly reduced costs.

The supermarket movement grew very fast. Automobiles and refrigeration made it useful to large numbers of families. Supermarkets seemed well adapted to suburban living which developed after World War II.

Supermarkets are stores that have yearly sales of \$1 million or more. Although these stores were developed by independent food retailers, their huge success paved the way for food chains. About 25 percent of the food was distributed through supermarkets in 1948. By 1975, this had increased to 72 percent.

Early food chains, such as the Kroger Company and A & P, were able to lower the costs of food. They achieved this through low merchandising costs.

Private label products allowed chains to reduce their prices. When customers buy national brand products, they pay for the name and the advertising that goes with it. Private label prices are about 13 percent less than comparable national brand products.

In the past 20 years, nonprice competition between supermarkets has been used to attract customers. Examples include trading stamps, games, decor, choice site locations, adding new product lines, advertising, and longer store hours. These have tended to increase the costs of running the store. New innovations, such as the Universal Product Code, electronic checkout counters, and computerized inventory management would slow the rate of increase of retail costs if they are widely adopted.

A few firms generally have a large share of the supermarket business in local areas, but not nationally. The four largest firms—Safeway, A & P, Kroger, and Acme—have only about 20 percent of the food store business nationally. At the local market level, though, competition is keen. It's common to see the four largest food stores in a given area do about 50 percent of the business. In isolated areas, one or two stores may have most of the business.

Issues in the Wholesale-Retail Food Store Sector

Shelf space and items offered for sale: About 100,000 food items can be bought by food retailers. The average supermarket stocks 9,000 items. Therefore, control of shelf space gives store owners considerable power. Legislation has been enacted to prevent discriminatory pricing by suppliers to buyers. Price differences must be justified by cost differences. Product variety still rests with the retailer, although he needs to stock those products that consumers demand.

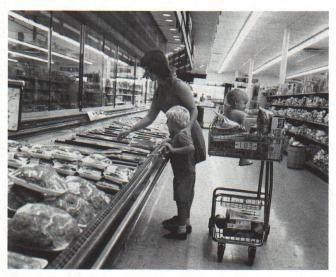
Nonprice competition: Nonprice competition and promotions have increased the cost of food. They also have reduced the amount of price competition. As costs push food prices up too far, some retailers may try to capture part of the market by reducing and discounting prices. This is usually a characteristic of a mature industry.

Pricing and price signals: Consumers lack the information needed to make the best choices among food stores and food products. Food store owners use prices as a merchandising tool. Large price movements of some products may not be related to supply and demand conditions. This distorts the production signals to manufacturers and farmers. Then, supplies may not be enough at some levels in the system. This raises questions about:

1) Should prices be kept low on some products to get shoppers to buy at that store? Should the prices of other products be increased to offset price "specials"?

2) Should products be sold below cost?

Concentration: Market concentration is of concern from two standpoints: 1) In some local markets, a few or perhaps only one firm controls a large part of the food retail business. When this happens, there is not enough competition. 2) Chain and large wholesale buyers have considerable power in dealing with suppliers.



The supermarket combines self-service and cash-and-carry merchandising.

Modern supermarket system doesn't serve all markets: Supermarkets were designed for the mass market. Little time has been given to designing low-cost systems to serve low-income urban, as well as small town markets. Retailers can make more money in areas where there are many middle-income people. Stores in these areas have large dollar sales per store and lower operating costs per unit sold.

Alternatives and Policies in the Wholesale-Retail Grocery Store Sector

Public policy has tried to maintain competition within the industry. Many public policies have aimed to protect the rights and welfare of consumers. Many believe these policies have not been effective in dealing with the above issues. Some alternatives have been proposed:

- ★ Programs to help consumers judge the products, prices, and services of grocers.
- ★ Tax incentives or risk sharing to encourage retailers to locate stores in low income urban and rural areas.
- ★ Encouragement for entry into local markets by aggressive outside companies.
- ★ Stronger policing of retailer-supplier relations through mandatory trade reports.

Eating Away-From-Home

Today, nearly one meal in four is eaten away-from-home. Americans spent about 30 percent of their food dollars for away-from-home meals in 1974. About two-thirds of these meals were eaten in public eating places such as restaurants, cafeterias, and snack bars. One-third were eaten in institutions such as hospitals, schools, in-plant cafeterias, colleges, nursing homes, and military posts.

There are about 500,000 eating places in the foodservice industry. Less growth has occurred in the size of establishment than in any part of the food system. This is because the cost of a meal is not greatly affected by the restaurant size.

During the last 15 years, mass merchandisers have entered the industry. They have applied modern distribution and merchandising methods to establish fast-food chains. Examples include McDonald's and Ponderosa. Recent growth in the away from home market has been concentrated in these fast-food operations.

Fast-food chains grew rapidly through franchised operations. They secured strong market positions. Many franchisers, when they acquired enough money, started "buy-back" programs from franchisees. Some opened new company-operated stores. More profits can be made from well managed fast-food stores in good locations than from franchise royalties.

There are more than 2,500 chains with 40,000 units in the restaurant business. The fast-food franchise group had about 11 percent of the restaurant sales in 1964. But, this had increased to 40 percent in 1974.

Food manufacturing firms have entered the foodservice industry. Forty-one processing agribusiness firms controlled 12 percent of the foodservice market in 1973. Examples include General Foods (Burger Chef), General Mills (Red Lobster), United Brands (A & W), and Heublein (Kentucky Fried Chicken).

Price competition and service were key factors in the growth of foodservice chains. Management training programs, efficient wholesale distribution systems, improved store layouts, menu specialization, sanitation programs, efficient wholesale distribution programs, consistent quality, and strong advertising programs all helped franchise chains succeed.

Entry into the public eating business has been easy. The industry has performed well in terms of product quality, service, and price competition. Customers have benefited through reduced prices.

However, entry into the institutional foodservice sector has become harder. Past performance in the foodservice business is of great importance in awarding contracts. It is hard for small firms to secure new contracts. Contract bids from new firms may not even be considered. In recent years, the institutional market has been a rapidly growing segment of the food system.

Issues in the Away-From-Home-Eating Sector

Franchising: Franchisers can achieve much control through contracts with franchisees and suppliers. They can also obtain control through the power of large advertising programs.

Concentration: This could become a problem in the institutional foodservice sector if entry becomes harder.

Nutrition: There has been concern about the nutritional level of fast-food meals. Studies have been made of a limited number of menus. These have shown the food to be acceptable from a nutritional standpoint.

Alternatives and Policies in the Away-From-Home Eating Sector

A policy consideration is to reduce the control franchisors have over franchisees. Control has been gained through restricting contracts that may tie franchisees to one supplier.

*Instead of past performance history, trial performance periods would make entry easier into the institutional foodservice business.

Food Processing and Manufacturing

During the first two decades of this century, the food manufacturing industry turned from hand labor to machines. Large processors in many food lines emerged. The number of processing plants decreased as machine operations increased. Growth was rapid. Industries took over many of the tasks which had been done before in the home.

The industry changed greatly after World War II. Consumer income rose rapidly. The demand for convenience foods increased. They offered new opportunities for food processors. This gave rise to new product experimentation. New laboratories were needed. Also, large scale promotions were required for new products.

Large food manufacturers had an advantage with new products. Their central laboratories and advertising-promotion departments could serve many types of products. Many food manufacturers expanded into other products. As a result, food manufacturers tend to fall into two groups: 1) large manufacturers of nationally advertised brands, or 2) small and medium sized manufacturers of private label products.

Concentration in the food manufacturing industry is hard to measure. Large food manufacturers often operate in many food industries. They also may be but one part of a large firm that has both food and non-food operations. Some important industries, such as meat packing, have become less concentrated. However, the trend is toward increased concentration, particularly in food manufacturing industries where brands are important.

Profit data are hard to obtain for the food manufacturing operations of large firms. Food manufacturing profits have been at levels near other manufacturing industries and retail food chains. Concentrated industries manufacturing specialty products such as soft drinks and breakfast cereals are exceptions. They have higher profits.

The development of new and more convenient products has simplified consumer meal preparation. However, product experimentation has also increased



Fast-food chains have developed rapidly during the past 15 years.

consumer concern about product safety and quality. Experimentation increases the public burden of making sure products are safe.

Large food manufacturers are among the nation's most aggressive advertisers. While some advertising is necessary to introduce new products, there is little public guidance in advertising. In some cases, advertisements encourage eating habits that may be bad for public health and well-being. For instance, children may eat more sweets and snack foods because TV ads say they are good.

Issues in the Food Processing and Manufacturing Sector

Control over other stages of food production, distribution, and marketing: Food manufacturers have gained some control by owning various stages of production and distribution. They also have gained power through contracts with producers. A large bulk of the vegetables and fruits and a major share of the poultry products are produced under contract. Advertising programs also provide a degree of control over retailers and consumers.

Concentration: There could be problems in some industries with highly differentiated products. Consumers may not prefer one brand of dried beans over another. These products are not differentiated. But, these same people may strongly prefer a certain brand of breakfast cereal or coffee. These are highly differentiated. The market power of manufacturers is much greater where there is strong consumer preference for their products. The preference can be due to real or fancied differences.

Entry: Entry into food manufacturing is hard because of high costs for product experimentation and promotion.

Advertising: The food manufacturing sector spends more on advertising and promotion than any other sector. This increases costs and affects consumer habits. The use of nutritionally inferior foods is sometimes encouraged.

Information: Food manufacturers have access to more and better information. Therefore, they have an advantage in making business decisions, as compared to raw material suppliers or consumers.

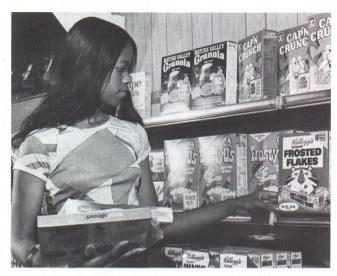
Nutrition: Highly processed foods make it hard for consumers to decide if they are getting the nutrients they need.

Alternatives and Policies in the Food Processing and Manufacturing Sector

Public policy has tried to maintain competition in the food industry. Two methods have been used: (1) Antitrust laws to prevent too much concentration in markets, (2) The regulation of "unfair" marketing practices.

Some believe these have not been effective enough. Some alternatives have been proposed:

- * Form commodity marketing boards which could take control over a commodity on behalf of producers. The board could also negotiate terms and conditions of sales.
- * Monitor and regulate advertising.
- ★ Make regulations concerning successive stages of production.
- ★ Provide market and industry performance information throughout the system.



Highly processed foods make it hard for consumers to decide if they are getting the nutrients they need.

★ Restrict concentration by breaking up very large companies.

The First Handler Level

At one time, almost all farm commodities were sold by farmers to agents. The agents resold these commodities to processors and manufacturers. Now, these agents have often been by-passed. Marketing has become more direct. Food manufacturers now buy many products directly from farmers (or from their cooperatives). Farmer cooperatives have also grown important as first handlers of their members' products.

Two likely points of power at the first handler level are:
1) large farmer cooperatives that sell farm products, 2) large food processors that control two or more stages in the food system.

Many times, marketing cooperatives provide competition to large processors in buying farm products. These cooperatives have confined their business largely to the first handler level. They are not active in food manufacturing, except in a few selected products such as canned grape products, butter, and dried milk.

Issues in the First Handler Level

Concentration: Local markets usually handle a large part of the trade. Many times buyers are few in number. Therefore, buyers are often in a good bargaining position, especially when supplies are plentiful.

Pricing: Prices in many agricultural markets are based upon spot or cash markets. Commodities are sold for cash on delivery. Direct marketing and contracting have increased. Only a small and declining share of the farm output is sold through cash markets.

Market information: Buyers often have superior market information as compared to sellers.

Alternatives and Policies in the First Handler Level

There has been considerable public regulation of trading practices at organized markets, such as auctions.

★ With the trend going away from these markets, regulations may need to focus on direct marketing. Marketing cooperatives and a number of bargaining associations have developed as opposing powers. Their growth could help balance producer-first

handler bargaining power.

★ Market exchange mechanisms, such as tele-auction, tradeable forward sale contracts, and marketing boards, may broaden markets. They could improve price determination. Standardized contracts and more information on transactions that occur outside the organized exchanges also might improve producer-first handler markets.

Agricultural Production

Farms are getting fewer and larger. In 1972, there were about 2.9 million farms as compared to 3.7 million in 1962. Like most industries, a small portion of these farms produce a large share of the output. Less than 3 percent of all farms had sales of \$100,000 or more in 1972. Yet, these farms marketed 40 percent of all farm products.

At the other extreme, 63 percent of the farms marketed only 9 percent of the sales. Agricultural production and power is widely spread. Collective action by farmers and

giant industrialized farms are exceptions.

There were only 400-900 industrial type farms operated by nonfarm corporations in 1970. But, they can have a great impact if they are concentrated in specialized produce such as some fruits, vegetables, or nuts.

Issues in the Production Sector

Large cooperatives: Producers have little power and control. But, in some cases, large marketing cooperatives work in combination with marketing orders. This gives them power to coordinate supply and quality. These cooperatives can use quite a bit of power and control in the market. Milk marketing cooperatives and several fruit and vegetable cooperatives are examples.

Corporate farms: Large industrialized farms may be financed by nonfarm tax shelter money. Thus, they tend to be less affected by market forces. This places family

farmers at a competitive disadvantage.

Production planning and risk: Producers are near the beginning of the food system chain. Consumers buy food at retail. Retailers purchase from wholesalers. Wholesalers get supplies from manufacturers and processors. Processors purchase raw products from farmers. Marketing margins remain about the same over time. So, producers are the ones who are most affected by price changes. This makes it hard to plan how much should be produced. It also causes production cycles.

Alternatives and Policies in the Production Sector

Quite a few public programs have been developed in the past to maintain a minimum level of farm income. Risks and rapid price changes also were reduced. Most of the programs are not operating. Farmers have tried to develop opposing power through cooperatives and marketing orders. They also have formed a few bargaining associations. Some alternatives have been proposed:

- ★ Modify regulations which pertain to cooperatives to prevent mergers which may reduce competition.
- * Make corporations which are mostly nonfarm ineligible for cooperative membership.
- * Modify tax laws to help keep nonfarm tax shelter money from flowing into agriculture.
- * Prohibit corporations with more than 10 stockholders from taking part in farming.
- ★ Form marketing boards to control production prices and the flow of products into the market.
- * Keep grain and oilseed reserves to moderate year to year price changes.

Farm Supplies

The feed industry is not highly concentrated nationally. But, in local markets, one feed dealer may control most of the trade. Entry into the business is fairly easy.

Farmers' cooperatives may give dealers some competition. They manufacture and sell 20 percent of the feed

Of all farm input industries, however, feed manufacturing has the greatest control over farming. Feed manufacturers have little market power. But, they have gained and held customers. Their method is to "purchase" the farmer's right to choose a type of feed. They contract production with farmers. These contracts may involve a transfer of risk from the farmers to the feed suppliers. Farmers are guaranteed minimum payments. About 90 percent of the broilers, 20 percent of the eggs, 42 percent of the turkeys, and 5-10 percent of the fed beef are produced under these kinds of contracts.

Fertilizer, pesticides, and petroleum are major production items. All three inputs depend upon petroleum products as "feedstocks." Several major oil companies are involved in manufacturing pesticides and fertilizer. Farmer cooperatives have become important in the sale of these inputs. In 1972, they sold 32 percent of the fertilizer, 22 percent of the pesticides, and 26 percent of the fuel and oil farmers bought. About 75 percent of the fertilizer and fuels sold by cooperatives came from cooperative owned manufacturing and refining plants. Cooperatives depend upon oil and natural gas corporations for their inputs.

There are only seven "full-line" farm machinery manufacturers. In 1972, the largest four sold about one-half of the world farm machinery sales. These firms manufacture other goods. Only one-half of their sales come from farm machinery.

Dealer service is a big factor in farmers' choice of machinery. Dealer-distributor networks formed by major machinery manufacturers are important competitive devices. Therefore, it is hard to enter into the business. At the local level, a few dealers have most of the trade. Competition is based largely on nonprice factors.

Issues in the Farm Supply Industry Sector

Entry: Money, access to inputs, technical scale requirements, and established brands block entry into the farm supply business. However, farmers have entered into the fertilizer, pesticide, and petroleum industries through joint ventures.

Concentration: Concentration is high only for farm machinery manufacturing. Farmers face only a few sellers. Cooperatives have promoted competition at the local level, except in farm machinery.

Control over production: Large feed firms have control over poultry and egg producers through contracts.

Alternatives and Policies in the Farm Supply Industry Sector

Some alternatives have been proposed:

- ★ Develop information systems about farm input sources. These will broaden local input markets.
- ★ Insure that cooperatives can purchase or secure feedstocks needed to manufacture fertilizers and petroleum fuels.
- * Encourage contract standardization with poultry and egg producers. This would provide comparative information of the terms of these contracts.

Conclusion

Public concern with the food system centers on performance. Does the system deliver foods in the form, quality, place, and time demanded?

There has been much debate on what kind of system can best do this job. Two extreme alternatives are sometimes mentioned—"freedom" and "government control." In a totally free market system, firms and individuals could work in the market in any manner they choose. The government would not interfere in competition, product quantity, quality, or safety.

The totally regulated system might treat the industry as a public utility. Their profits and margins might be regulated.

But neither of these systems has been adapted. Totally regulated industries have not performed well. Government regulation has been costly. And, management worked less to reduce costs because profits were guaranteed.

In the totally free market system, power would tend to occur at various points in the system. There would not be equal power between buyers and sellers. This may reduce the level of performance in the market.

One approach has been to regulate performance directly. Examples include price controls, fair trade laws, and

production quotas. However, these are difficult and costly to administer and may stifle competition. Therefore, public policies have generally been designed to encourage competitive markets or regulate the behavior of firms in the market place.

Anti-trust laws have been one of the major means for dealing with concentrated markets and "unfair" behavior in the market. These laws have reduced anticompetitive behavior. And, they have slowed the trend towards increased market concentration. But, they have not succeeded in stopping conglomerate mergers or in reducing established positions of market power.

Other regulations have governed firm conduct in the market place. Examples include the regulation of unfair competitive practices, labeling and packaging legislation, product grades and grading systems, quality specifications, and weights and standards. Regulating advertising could greatly affect firm behavior and market performance in food industries. Still, other programs have provided special help, such as government guaranteed loans to weaker firms to help them better compete with larger and stronger firms. Special educational help has been given by various institutions to agricultural producers and their purchasing, marketing, and bargaining cooperatives.

Proposals have been made to reduce power in the system. They involve breaking up large firms, preventing mergers, regulating expansion, and restricting large nonfarm firms in farming. To date, the government has been reluctant to take such action.

Consumer groups have tried to communicate consumer desire to firms in the food system and to public policy makers. Examples of issues and programs pushed by these groups include open-dating of food products, nutritional labeling, and unit pricing of foods. There are both benefits and costs to these issues. These have not been clearly stated in many cases. Messages have often been ineffective. This is because of a lack of technical information.

It is best that consumers, producers, and firms at all stages in the food system have correct information. They should have facts about firms' characteristics, products, market supply, and prices. These are needed to make sound decisions. The system by itself will not produce such facts. Those concerned about the future control of the U. S. food system should work toward such an information system.

This is the fifth in a series of six leaflets dealing with YOUR FOOD. The leaflets are part of an educational program guided by a multidisciplinary National Steering Committee. Assisting in the project were the National Public Policy Education Committee, Extension Service, and United States Department of Agriculture cooperating with the state extension services and the Farm Foundation. The other leaflets in this series on YOUR FOOD are (1) Will There Be Enough?, (2) Who Will Get It?, (3) How Will It Be Shared?, (4) Will It Be Good and Good For You?, and (6) Food and Politics. The purpose of the leaflets is to deal with the food situation, food issues, and some alternatives. They do not advocate or predict a particular method or course of action. With more complete information, those involved in policymaking should be able to make decisions that are acceptable to consumers, producers, business and industrial firms.



POLITICS & FOOD POLICY



By Barry L. Flinchbaugh, Kansas State University; and Carole B. Yoho, University of Minnesota

People are concerned about food. They ask about its availability, cost, quality, distribution, and contribution to peace.

World leaders are seeking answers to what they see as questions of urgent public concern. Will future food production be enough? Will there be surpluses or famine? Will food be shared? If so, on what terms and with whom? Will food be safe?

Food policy, like all public policy, is a product of the political system. Food policy changes as old policies are modified and new ones made to meet current needs and problems.

Policy is changed through new laws, programs, regulations, and court decisions.

Food Policymaking: Who Calls the Shots?

In the past, fewer people influenced farm policy. Those who did were easy to identify. They included farm organizations, a group of Congressmen from both parties in the South and Midwest, the U. S. Department of Agriculture, (USDA) and the land-grant universities. These groups designed farm programs. They had enough political power to see that they became law.

That situation has changed. More people are getting into the act. Farm programs are of concern to a wider variety of interests. The focus is being shifted to a broader food policy decided by both farm and non-farm people. Attention is no longer just on food production and farm income. Price, quality, trade, and distribution are included. Environmental and safety problems and the plight of the needy at home and abroad have come into focus.

Congressional Committees

The Senate Agriculture and Forestry Committee, the House Agriculture Committee, and the appropriations subcommittees in each house of Congress are active in making food policy. They were once made up mostly of

Congressmen from farm districts and senators from states with strong agricultural ties. Leadership was drawn mostly from the south.

Farm-oriented people stayed at the helm of those key committees for years. But in recent sessions, many urban and consumer-oriented members of Congress have won committee slots. Farm states are still represented in the Congressional agriculture committee structure. But, more members are concerned with the price of food and other consumer issues.

Executive Departments and Agencies

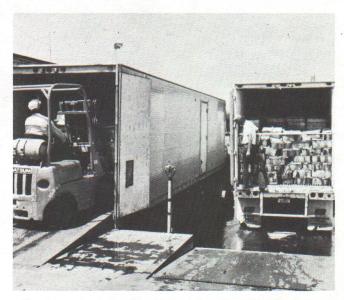
The USDA and the secretary of agriculture are no longer the "farmer's department" or the "farmer's man." Farm programs are only a part of their responsibility. Domestic and foreign food distribution, educational programs, and regulations are administered by the USDA.

The secretary of agriculture has a role in making policy and putting it to use. He attempts to "mesh" food policy into overall administration policy. He is a go-between among Congress, the President and his executive staff, farm concerns, agribusiness firms, and consumers.

The secretary of agriculture directs a large department that carries out food and farm policies. Their actions result from legislation, court decisions, and regulations.

The Office of Management and Budget (OMB) within the President's staff plays a major role in approving and executing U. S. food policy. The OMB is the President's budget arm. It evaluates proposals from a cost viewpoint. Programs are checked in terms of their impact on the budget. Costs are a major constraint.

Food policy is not the main concern of the executive branch. But, the many departments do have direct and indirect impacts on food policy. For example, officials forming general economic policy are concerned with food prices at home. The Council of Economic Advisers and the Treasury Department are interested in agricultural exports. This is the largest earner of foreign exchange. Farm exports are a major factor in keeping a favorable balance of payments. Foreign policymakers in



Food transportation involves much union labor.

the State Department are interested in food aid, technical assistance, and trade policies. The State Department also helped negotiate a long-term agreement with the USSR for wheat and feed grains.

Land use programs of the Interior Department have an impact on food policies. They affect policies through legislation and regulation. The Justice Department can act through its anti-trust power. The Labor Department is concerned too. Food production, processing, transporting, and merchandising involve much labor.

Other government agencies play roles in making and carrying out policies related to food. They include: (1) Food and Drug Administration (FDA), (2) Environmental Protection Agency (EPA), (3) Interstate Commerce Commission (ICC), (4) Occupational Safety and Health Administration (OSHA), and (5) Federal Trade Commission (FTC).

Growing public concern over pesticides and food additives has expanded the role of regulatory agencies. Environmental and safety requirements are designed to improve the welfare of workers and the public. But, they lead to higher food prices.

Interest Groups

Three kinds of interest groups are concerned with food policy. They are producer, agribusiness, and consumerlabor groups.

1. Producer Groups: Producer groups may be either general farm or commodity organizations. Major farm organizations are the American Farm Bureau Federation, National Farmers Organization, National Farmers Union, and National Grange. Each organization includes a cross-section of farming concerns and geographical representation.

Farm organizations work to improve the economic position of farmers. But, they often disagree on how to reach this goal. Their members have different economic interests. So, they are often divided. For example, many grain farmers desire open foreign trade. But, many cat-

tlemen and dairymen are concerned about competition from foreign buyers of U.S. grain and from food imports.

Many commodity groups are gaining more power. Dairy associations, livestock groups, soybean associations, wheat growers, cotton producers, and citrus growers have fewer members than the general farm organizations. But, they disagree less within each group than farm organizations. They have close ties with Congressional agriculture subcommittees and commodity sections of the USDA.

2. Agribusiness: Manufacturers and suppliers of farm equipment, fertilizer, pesticides, and fuel are very interested in farm and food policies. Farm credit firms and large cooperatives lend billions of dollars each year to farmers. So, they have a concern in food policy.

Food goes through much processing as it moves from farmers to consumers. New packaging methods, demand for convenience foods, dominance of certain brand names, and food chain concentration affect processors and retailers. Therefore, they also help make food policy.

3. Consumer and Labor Groups: There are more consumer groups today than in the past. Consumer Federation of America and Consumers Union are examples. Many are, better organized than before. They are concerned with a broad range of consumer interests. But, food policy ranks high on their list. Increasing food prices have placed the price of food on the food policy agenda.

Food Policy Agenda—A list of items, problems or issues in the broad area of food policy. Examples include: setting up a food reserve, food stamps, school food service programs, price support programs, the use of pesticides, food aid to less developed countries, grain embargoes, and the price of food in general.

Consumer reactions affect agricultural bills and executive policies. Congress, the USDA, and the President want to know what consumers think. Consumer representatives:

- (1) Speak in legislative committee hearings,
- Belong to government and industrial advisory councils,
- (3) Review and comment on regulations proposed by government,
- (4) Take part in political party activities.

Labor unions have a stake in food policy. They are consumers themselves. Also, food processing, transporting, and merchandising use union labor. Union rules affect the cost and distribution of food. Minimum wages, fringe benefits, and worker's compensation were placed on the food policy agenda by the unions.

4. Others: Individuals have an impact on food policy. They affect policies through their position or activities.

The news media present food-related issues to the public. They more or less transcend the entire policy-making process. If enough people become concerned about an issue, it gets on the food policy agenda.

A case in point was the TV program on federal farm payments to large land owners and corporate farms.

Limits on payments have since been made into law. The media brought public attention to starvation overseas and malnutrition in the U.S. These have a bearing on food policy.

Foreign customers can affect food policy more than before. The way they react to policies affects trade. Agricultural trade and economic development can affect both foreign and food policies. For example, the Soviets and Chinese, in the era of detente, play a role in our grain

market. U.S. policies that restrict trade in milk, cheese, and meat may be placed on the food policy agenda. Our import restrictions will be discussed in the upcoming General Agreement on Trade and Tariffs (GATT) negotiations by other nations. The U.S. placed farm product restrictions of other nations on the GATT agenda. Of particular concern are the restrictions of the European Community.

The energy crisis and the Organization of Petroleum Exporting Countries (OPEC) have moved the cost of fuel and fertilizer to a higher priority on the food policy agenda.

The Politics of Food

The politics of food have grown more complex. More people are taking part and the issues are more difficult. Therefore, legislation often includes both farm production and food distribution programs. Members of Congress seeking to pass commodity legislation must have support from urban members. Many urban members support farm bills in exchange for rural votes to expand food aid programs.

It is argued that when food reserves are low, price supports may encourage more production. Farmers have less risk and produce more. Urban members of Congress have accepted that. But, they insist on two conditions:



Price supports may encourage farmers to produce more food.

- (1) Government payments to farmers must be limited, and
- (2) Food aid programs must be maintained.

It is not known whether these kinds of compromises will form a basis for future food policy.

Other factors cannot be overlooked in food policy development. These include such diverse elements as weather, changes in congressional rules (such as the Budget Control Act and the seniority system), political party tactics in Congress, and the overall state of the economy. The ability of Congress to form coalitions on food issues will also be a factor.

Other questions have not been answered. Will the courts be used more by groups that disagree with legislation? Will special interest groups be able to get their viewpoints toward food policy considered? Interest groups can make a greater impact if they:

- (1) Research and form positions.
- (2) See the need for flexibility and compromise.
- (3) Make political friends; then work with them.
- (4) Understand the political process.

What Can You Do?

You can take part in politics in many ways:

- (1) Know the issues.
- (2) Take part in educational programs and meetings.
- (3) Sort facts from propaganda and emotion.
- (4) Join a political party and work within it.
- (5) Vote.
- (6) Run for office.
- (7) Attend legislative meetings and hearings.
- (8) Keep in touch with elected representatives.
- (9) Present views on issues in person, by letter, telegram, or telephone.
- (10) Have your name put on your elected officials' mailing lists.

As a Member of an Interest Group

Interest groups are a potent part of the political process. People with common concerns can band together to secure a stronger voice in government. Most groups work on a representative basis. Elected delegates act for the group.

Groups use a number of tactics to influence policymaking and implementation. They can suggest bills favored by the group. They can attempt to kill bills. they can try to change regulations that are contrary to the group's interests. Groups can be influential if they:

1. Maintain contact with members of Congress through their Washington and local offices. Contact by people who live in the Congressman's or Congresswoman's district is more effective than contact by outsiders. It's also good to work with those who influence a public official. They might be members of his or her staff, friends, and business or political colleagues.

Personal contacts between organization members and members of Congress can be useful. A trip to Washington by selected members of interest groups may impress members of Congress. It will also publicize the group and its goals.

Organization members should attend public hearings and committee meetings. Members of Congress are often invited to appear at the organization's meetings. Most large and successful interest groups employ full time lobbyists. They work with Congress and the executive branch.

- 2. Write bills and ask members of Congress to introduce them. It requires much of homework. But, such efforts will clarify the group's stand. Bills also might be used to get publicity, start discussion, or speed up executive action. They might counter bills already introduced.
- 3. Bring pressure upon members of Congress. Besides personal visits, letter writing or phone campaigns by members "back home" have worked. Pressure must be applied at the right time. So, know when to act in the legislative process.
- 4. Form alliances with other organized groups to increase support of a bill. Such coalitions tend to be temporary and limited to well defined purposes.
- 5. Speak at committee meetings or other public hearings.
 - 6. Publicize voting records.
- 7. Monitor regulations, proposals, and administrative procedures.
- 8. Influence appointments to key governmental positions.
- 9. Issue publications, press releases, and other information.
- 10. Go to court. Groups may test the constitutionality of a law or administrative practice, seek injunctions, or join in class action suits.

This list refers to action at the federal level. But, the tactics are similar at the state level.



The politics of food is an ever changing process.

Summary

The politics of food is an ever changing process. Public policies for food are no different from other policies. They are a product of the political process. Many nonfarm interest groups, government officials, petroleum exporting countries, and foreign buyers are taking part. They add to the traditional farm organization and commodity groups. Individuals and groups can enter into the process. It is, after all, OUR FOOD.

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