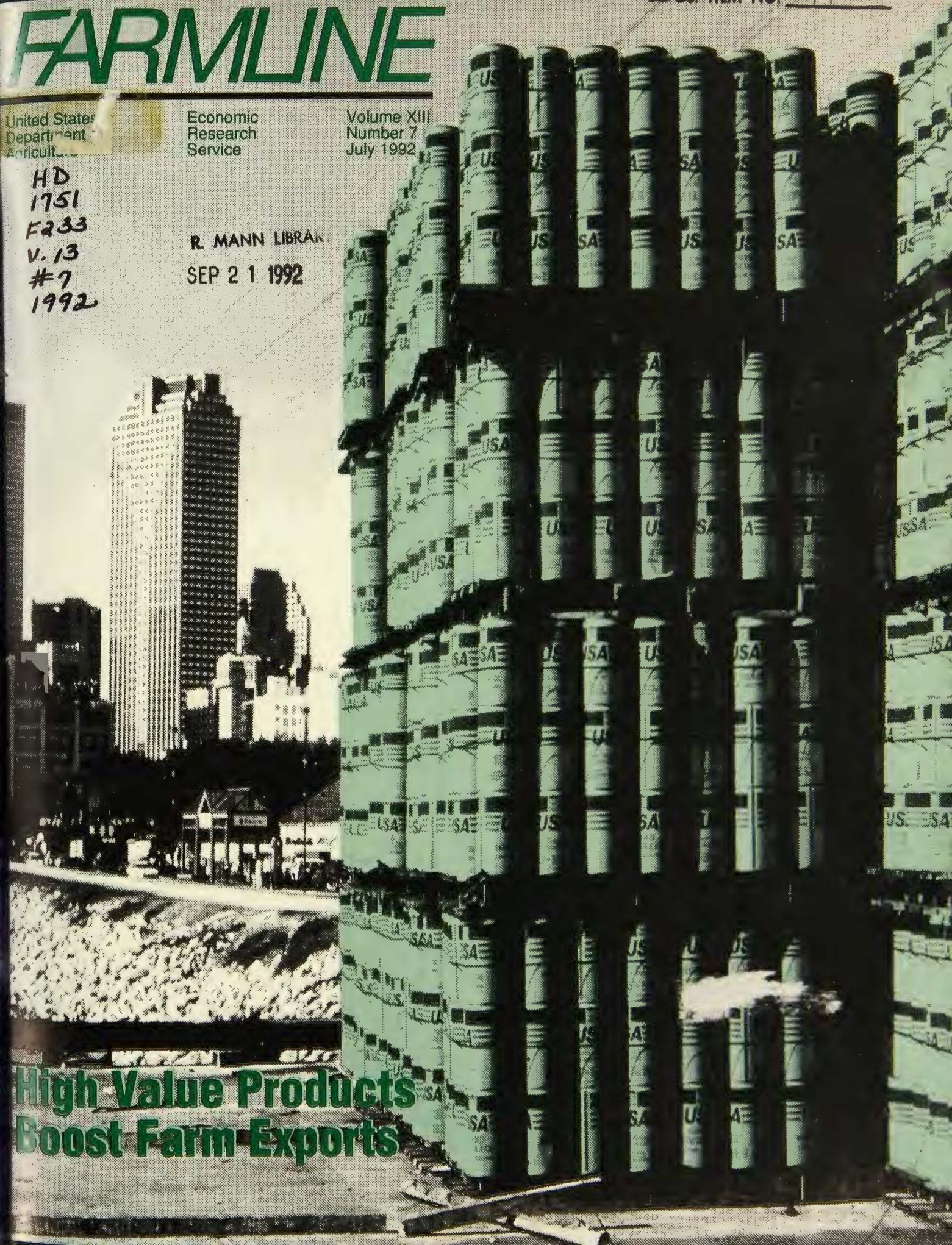
FARMLINE

United States Department of Agriculture
Economic Research Service
Volume XIII
Number 7
July 1992



High Value Products Boost Farm Exports

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FARMLINE (ISSN 0270-5672) is published 11 times a year by USDA's Economic Research Service. Send questions, requests, and editorial comments to *FARMLINE*, Room 228, USDA, 1301 New York Avenue NW, Washington, DC 20005-4789.

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PERSPECTIVES

The Nation's farmers will reap a projected $51-$58 billion in net cash income (the cash available to a farm operation after all cash expenses have been paid) this year.

Deficiency and diversion payments are forecast to drop 10 percent this year. "However, higher conservation and disaster payments will lead to an overall increase in Government payments and boost cash income," explains economist Robert Dubman of USDA's Economic Research Service.

Production expenses are forecast to climb 2 percent in 1992. "Fuel expenses could increase by 5 percent, but hired labor will likely account for the biggest increase, up 7 percent, or about $1 billion, from last year," Dubman says.

Farm asset values (excluding operator households) are forecast to rise no more than 1 percent in 1992, from $846 billion in 1991. The total value of U.S. farm real estate will likely remain unchanged, and most of the asset value increase will come from non-real estate assets. After 6 consecutive years of debt reduction, farm debt rose slightly in 1991 and is projected to do so again this year.

Growers' wheat cash receipts are showing a strong recovery following 2 years of decline. "Prices and production are projected to rise, boosting wheat cash receipts by 25-30 percent in 1992 above a year earlier," Dubman explains. "And, although rice receipts are forecast to decline, total cash receipts from food grains are projected to reach their highest level in 7 years."

Fruit and tree nuts are the other major crop sector likely to realize higher grower cash receipts in 1992, forecast at a record $10 billion or more. "Pacific apple and citrus production has recovered from the freeze damage sustained in 1991, and prices are above trend," Dubman reports.

Corn and soybean receipts are expected to decline about 1 percent from a year earlier. Red meat and poultry receipts are also forecast to slip, with cattle and calf receipts down 4 percent from 1990's record. Hog prices at near break-even levels will lower returns to producers. Dairy sector receipts are forecast up 2-4 percent at $17 to $21 billion, while poultry and egg receipts should also rise to between $14 and $16 billion.

"The general economic recovery could boost demand for agricultural commodities, thereby raising farm income," Dubman concludes. "And continued low inflation and interest rates will help minimize increases in farm expenses."

— Priscilla B. Glynn

FARMLINE

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FEATURES

DEPARTMENTS

SPECIAL IN THIS ISSUE

High Value Products Boost Farm Exports

U.S. exports of bulk farm commodities such as wheat and corn have stagnated in recent years, but sales of beef, chicken, vegetables, fruit, and other high value products (HVP's) are booming.

In fiscal 1991, the value of U.S. HVP exports exceeded the value of bulk exports. This has rarely happened before, except during the two world wars.

"Policymakers often seem more concerned about exports of bulk commodities, but world trade in HVP's is much larger, and growing more rapidly," says economist Stephen MacDonald of USDA's Economic Research Service.

For many countries, HVP's have come to dominate farm trade. HVP's (defined as all commodities other than bulk products) accounted for more than 80 percent of world agricultural trade from 1987 through 1989.

" World trade in these products is much larger, and growing more rapidly, than that of bulk commodities."

Since the mid-1970's, HVP exports (both U.S. and world) have been increasing faster than bulk exports. In the 1970's, world economic growth spurted and credit was available to many poor countries. But the early 1980's saw a significant downturn in world trade. The reasons, MacDonald says, included stagnant economic growth and debt problems in many countries.

Between 1986 and 1990, world HVP exports reached record highs each year, but bulk exports (by value) continued to decline in 1986 and remained below their 1981 peak even in 1990.

In fiscal 1991, U.S. bulk agricultural exports fell again, from $21.3 to $17.5 billion. At the same time, HVP exports continued rising to nearly $20 billion. The total value of U.S. farm exports was down for the first time in 5 years. The decline of about $2.5 billion included $2.3 billion in coarse grains.

Processing of HVP's such as these oranges creates a variety of jobs

Bulk Sales Recovering

For fiscal 1992, export value of bulk commodities is likely to rebound, MacDonald says, but HVP exports will continue to exceed bulk exports.

U.S. HVP exports could rise this year, MacDonald says. If an increase does occur, one contributing factor could be Japan's scheduled lowering of its tariff on imported beef from 70 to 60 percent. Another factor is the expected 4-percent or higher rate of economic growth in Mexico, an important market for U.S. animal products. In addition, horticultural exports to virtually every major market have been rising this year.

However, the strengthening of the U.S. dollar on foreign exchange markets could restrain growth in HVP exports, MacDonald says.

Income growth and changing diets contributed to the expansion of HVP trade in the last three decades. Other factors include technological improvements in transportation, marketing, and product handling.

In 1990, 41 countries imported at least $1 billion in HVP's, and 12 countries imported over $5 billion each. Germany is the world's largest HVP importer.

Most countries export far more HVP than bulk products, but the United States is one

Analysts Use Different Criteria To Classify HVP's and Bulk Products

There is no single, authoritative definition of high value products (HVP's).

Virtually all definitions agree that raw grains and oilseeds are bulk products. And everyone agrees that extensively processed products are HVP's. There is disagreement, however, about how to make other distinctions.

To classify the products that are not obviously in one category or the other, ERS economist Stephen MacDonald says, some analysts use a "price threshold methodology," separating products with arbitrary price cut-off levels. Others classify products intuitively, using conceptual differences.

It would be helpful if agreements could be reached on these matters, because statistical comparisons are difficult when different analysts or agencies use different definitions or classifications.

One method of differentiation involves the role of natural resources in production of a commodity. Natural resources (soil and water, for example) are major components in the increase in value between seed corn (and other inputs) and the corn crop (a raw product) that is harvested at the end of the growing cycle.

By contrast, natural resources are a minor factor in the increase in value of HVP's. For example, corn fed to cattle in a feedlot results in HVP's—meat products. Or, the processing that changes the form of agricultural commodities usually does not involve the use of natural resources.

Increased value can result not only from transformation, but also from handling, transporting, or monopoly pricing. "Anything that increases the value of a product above the cost of its physical inputs raises its value-added component," MacDonald says.

Fresh produce can be placed in the HVP category because of extensive nonprocessing value added. The actual growing process accounts for a small share of the total costs of the product purchased by consumers. Such operations as packing, sorting, cooling, and marketing increase the value of the produce substantially.

Produce sold as animal feed or industrial inputs, however, might not be considered an HVP, because there would not be the same investment in packing, cooling, and marketing.

Different types of a commodity might differ in value, and this can affect whether or not they are categorized as HVP's. Cattle, for instance, could be breeding stock, less expensive grain-fed beef animals, or even less expensive range-fed animals. Therefore, an estimate of world HVP trade that included or excluded all cattle might not be an accurate measure.

Researchers are trying to develop better systems of categorizing HVP's and raw commodities.

"As interest in HVP's continues to grow, more research will result and conventions will evolve regarding what constitutes high value processing," MacDonald says.

of the few exceptions. The most obvious reason is the United States' unrivaled strength as a bulk exporter. U.S. comparative advantage assures that U.S. bulk exports account for a much larger than average share of all U.S. agricultural exports.

However, several other factors reduce the HVP share of U.S. agricultural exports, MacDonald says. The large U.S. domestic market has been sufficient for many U.S. processors and retailers. By contrast, many of the firms in the most competitive HVP exporting countries need exports to achieve economies of scale.

Also, the United States has relatively high labor and other costs, compared with developing countries. This reduces our competitive advantage in food processing, MacDonald says. And the United States is not well connected to the international distribution system, while European and Asian firms have long histories of selling in foreign markets. The United States also has few trading companies, which provide marketing services for other types of firms.

U.S. companies often develop an overseas "presence" through investment rather than trade, MacDonald says. Large companies in particular are more likely to seek licensing agreements or joint ventures with foreign companies or to operate through subsidiaries in overseas markets, he adds.

Barriers Are Significant

Trade barriers against HVP's are significant, and this keeps U.S. HVP exports from growing more rapidly. "All countries discriminate against HVP's," MacDonald says. "Generally, protection of products in-

This specially designed shipping container holds California strawberries

creases as the level of processing rises. Sanitary and health concerns are often used as reasons to restrict imports, as well."

The United States does use export assistance programs to counter other countries' protective trade practices affecting both HVP and bulk commodities. The Export Enhancement Program (EEP) has resulted in additional sales of U. S. flour, rice, frozen poultry, poultry feed, table eggs, and vegetable oil. The Targeted Export Assistance (TEA) program (expanded and renamed the Market Promotion Program—MPP—by the 1990 Farm Act) has provided export assistance by reimbursing eligible participants for a portion of their foreign promotion expenses.

Because U.S. agricultural exports have consisted mainly of less costly bulk commodities in recent years, the U.S. share of world trade by value has been much less than our share by volume. In 1986 the United States had 20 percent of world agricultural trade by volume and 12 percent by value, while the European Community (EC) accounted for 29 percent by volume but 40 percent by value.

From the early 1960's to 1990, the value of world trade in HVP's grew 3.5 percent a year. The EC had the most rapid gains, at an annual rate of 5.5 percent, but much of that trade was between EC countries.

Widespread government intervention in agriculture has constrained U.S. bulk exports, MacDonald says. Such support has increased production in regions of the world that are less efficient in producing farm products. Worldwide government support of agriculture averaged an estimated $100 billion a year during 1982-86. The price impact of intervention has fallen most heavily on bulk products, particularly grains.

The EC's success in capturing a larger share of world HVP trade is directly related to the extensive use of direct export subsidies for dairy products, meat, sugar, and wine, MacDonald says. Subsidies are also provided for processors in the EC, as a means of offsetting the impact of supported prices for raw farm products.

Frequently, these subsidies have been large enough to more than offset raw material prices, in effect subsidizing processing for export.

Countries with a natural comparative advantage in animal products tend not to subsidize their exports and have lost market share of world trade. Australia, for example, is the largest exporter of less processed animal products, but its share of world trade in that category fell from 19 percent in the early 1960's to 11 percent in the 1980's. New Zealand's share fell from 9 to 6 percent and Argentina's from 7 to 2 percent during the period.

Processing Means More Jobs

"HVP exports involve selling both a product and a service," MacDonald says. "Processing generates economic activity."

HVP trade has a significant multiplier effect on the economy, MacDonald says. For 1990, each dollar in bulk exports generated an estimated $1.48 of additional business activity, while each dollar in HVP exports produced $1.70. Some specific products generate much more, MacDonald says.

Of the 1.06 million U.S. jobs tied to agricultural exports, more than half (555,000) are associated with HVP exports. About a third of the jobs generated by U.S. farm exports are nonfarm jobs in food processing, manufacturing, marketing, transportation, and other services.

"It does make a difference whether we export low- or high-value agricultural products," MacDonald says. "HVP exports mean more jobs and more economic activity." ■

Based primarily on information provided by economist Stephen MacDonald, Commodity Economics Division, Economic Research Service.

U.S. Exports of Many High Value Farm Products Have Been Rising

	1986	1991	% Change
		million $	
Animals and products	4,544	7,009	+54
Fruits and preparations	1,156	2,142	+85
Nuts and preparations	753	1,020	+35
Vegetables and preparations	1,084	2,615	+141
Nursery and greenhouse	62	214	+245
Total HVP exports	**13,041**	**21,421**	**+64**
Total agricultural exports	**26,217**	**39,191**	**+49**

Source: Foreign Agricultural Trade of the United States, USDA Economic Research Service, 1987 and 1992 issues.

Converting a bulk commodity such as wheat into an HVP such as flour generates economic activity and creates jobs in the processing, manufacturing, marketing, and transportation sectors

Americans Are Eating More Fruits and Vegetables

U.S. consumption of fresh vegetables increased by 5 percent in the 1970's, and then jumped by 22 percent in the 1980's. This may illustrate an increasing concern about nutrition, according to economist Gary Lucier of USDA's Economic Research Service (ERS).

"Produce, especially fresh items, appeared more frequently on the plates of Americans in the 1980's as they gained an increased understanding of the nutritional advantages of such foods," he says. Most fruits and vegetables are low in calories and fat and high in fiber, vitamins, and minerals.

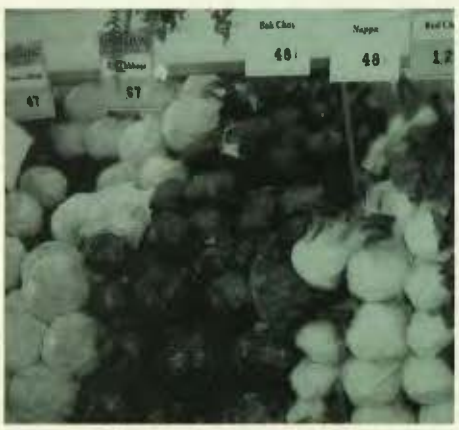
In addition, Lucier points out that since 1975, growth in consumer spending for fruit and vegetables has been exceeded only by spending for poultry.

On a per capita basis, U.S. consumers used about 90 pounds of the major fresh vegetables in 1990, up from about 70 pounds in 1970, according to economist John M. Love, also of ERS. Major vegetables include asparagus, broccoli, cauliflower, carrots, onions, lettuce, sweet corn, celery, tomatoes, and honeydew melons.

Lucier attributes the increased consumption of cruciferous vegetables (broccoli, cauliflower, and so forth) to rising health concerns as well.

Americans' consumption of all fruits—fresh and processed—also rose between 1970 and 1990. Fewer fresh oranges, grapefruit, and lemons were used, per capita, but these declines were more than offset by the rise in consumption of such noncitrus items as pears, apples, peaches, grapes, and nectarines.

Growth in consumer spending for produce has been second only to that for poultry since 1975.



Demand for cruciferous vegetables, such as cabbage, bok choy, and nappa, is on the rise

For example, the average American consumed 50.6 pounds of noncitrus fruit in 1970, compared with 69.8 pounds in 1990. Another ERS economist, Boyd Buxton, attributes much of this growth to greater quantities of fresh fruit imported from Latin America during the winter.

Imported fruit rose from 22.5 percent of the total U.S. supply in 1970 to 29 percent 20 years later. Tropical fruit, in particular, has been in demand.

Changing Demographics

Over the past two decades, Americans' eating habits have led to these changes in the fruit and vegetable market:

- numerous salad bars in restaurants and supermarkets,
- a variety of items eaten year-round, thus boosting import demand,
- improved selection and new varieties, and
- fast-food restaurants that offer tomatoes, lettuce, onions, and other fresh vegetables as condiments, as well as fruit and vegetable salads.

Lucier also attributes the growth in the industry to the influx of Latin American and Asian immigrants, who are accustomed to vegetable-based diets, and to the rising

How the Produce Industry Operates

The fruit and vegetable industry consists of numerous distinct commodity subgroups sharing goals and problems. The two largest groups are the fresh and the processed sectors. The term "processed" refers to the industry's canning, freezing, and dehydrating sectors.

Most fruit and vegetable crops are grown for either fresh or processed use, with limited overlap between the two. (Apples, grapes, broccoli, carrots, peaches, and potatoes are some notable exceptions to this rule.)

ERS economist Gary Lucier cites the introduction of more prolific hybrid varieties that resist disease and bear more fruit as the most important force in improving yields.

Fresh vegetable production is heavily concentrated in California and Florida, but processed vegetables are produced in California, the upper Midwest (canning, in particular), and the Pacific Northwest (largely frozen). Potatoes are produced mainly in the Northwest (Idaho, Washington, and Oregon), with heavy supporting roles for California, Colorado, Maine, North Dakota, and Wisconsin.

popularity of ethnic restaurants, whose menus rely heavily on vegetables, including beans and lentils.

At the same time consumption has been rising, the incomes of American households have been growing: between 1970 and 1990, household income rose an average of 2.7 percent per year, after being adjusted for inflation. Within the same period, the proportion of all working women grew from 43 to 58 percent.

"With more income and less time to prepare food at home, consumers have sought greater convenience," Love explains. They began eating more meals away from home. In 1990, 32 percent of the average U.S. household food budget was spent on meals away from home, up considerably from 23 percent 20 years earlier. Also, fresh produce requires minimal preparation.

Increasing Export Demand

Another major boost to the U.S. fruit and vegetable industry has come from rising exports.

In fiscal 1991, the United States exported about $2 billion worth of fresh and processed fruit, and about $1.6 billion worth of fresh and processed vegetables. Fresh and canned vegetables, grapefruit, and apples recorded the biggest gains that year.

Most of the fresh orange and grapefruit exports, totaling just over $450 million, went to Japan, Canada, the European Community, and Hong Kong in fiscal 1991. Canada, Taiwan, and Hong Kong are important U.S. markets for fresh apples and grapes. Raisins typically account for nearly 10 percent of total fruit exports, with almost $200 million in sales a year, mostly to the United Kingdom, Japan, Canada, and Germany.

Edmond Missiaen, an economist with USDA's World Agricultural Outlook Board, attributes the United States' success as a produce exporter to three factors. "First, even before the Berlin Wall came down, foreign trade barriers had begun to crumble as countries strove to improve their economies," he says. "In 1991, trade liberalization helped U.S. exporters increase their sales to South Korea from $59 million a year earlier to $79 million, and helped them boost sales to Venezuela from $9 million to $30 million."

Many countries throughout the world began moving away from government controls and toward free markets, Missiaen says. As they did, they opened their borders to agricultural imports, especially fruit and vegetables, in an effort to control local prices and promote competition. Missiaen expects this trend to continue even if the Uruguay Round fails.

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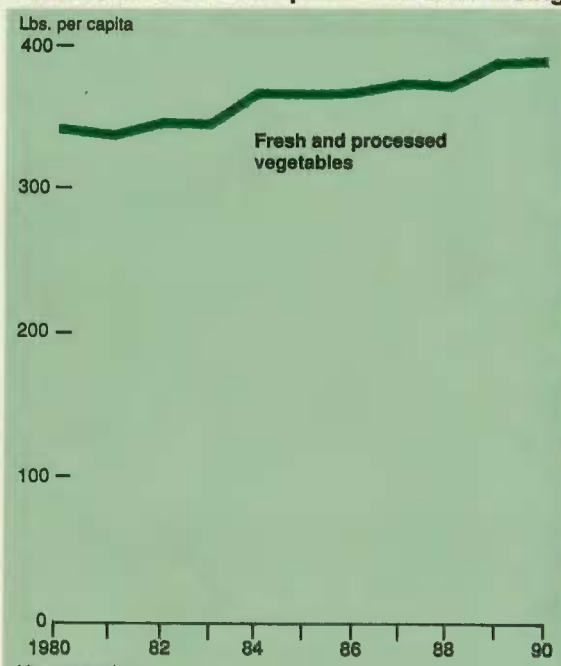
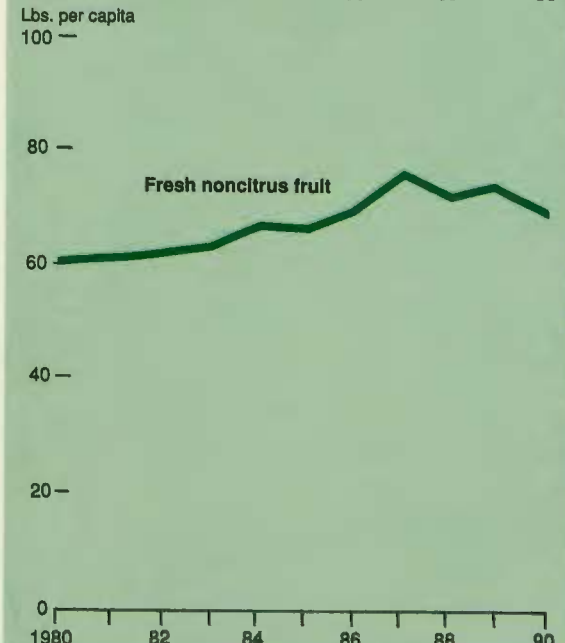
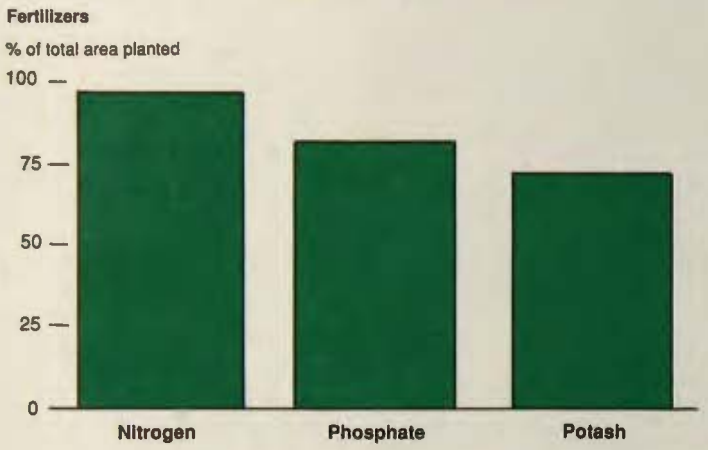
U.S. Produce Consumption Has Been Rising

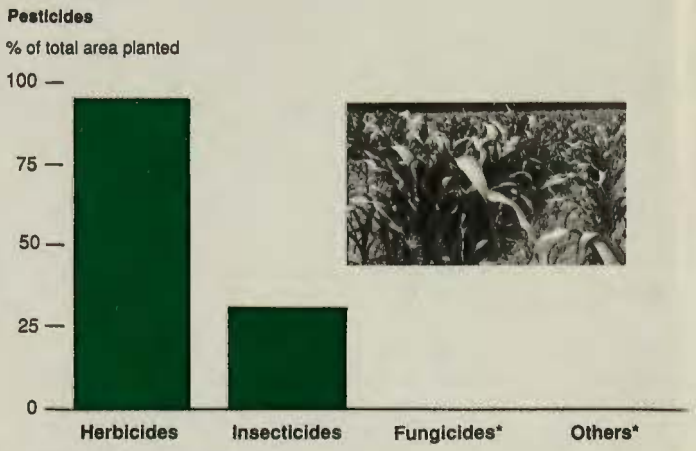




Major U.S. Crops Treated With Agricultural Chemicals in 1991

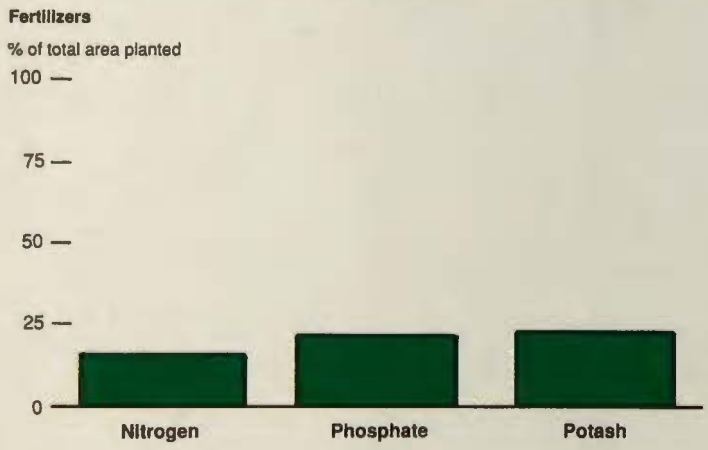
Corn Area (Totaling 68.6 Million Acres) Treated With . . .

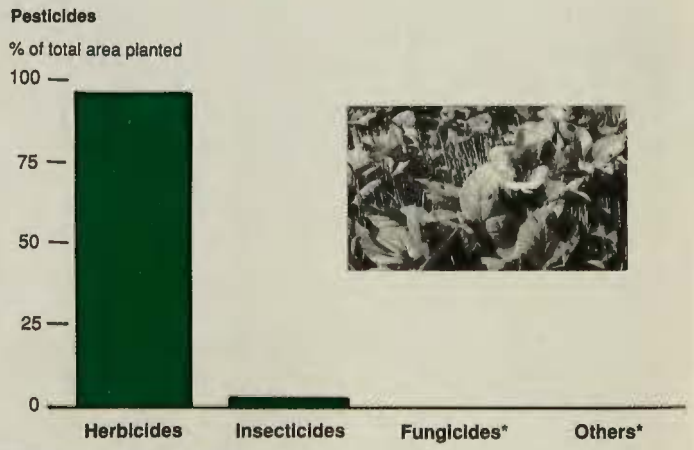




*Applied to less than 1% of acreage.

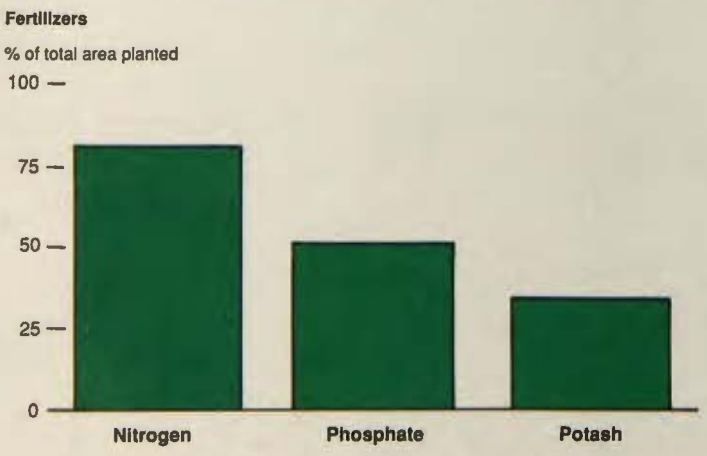
Soybean Area (Totaling 53.2 Million Acres) Treated With . . .

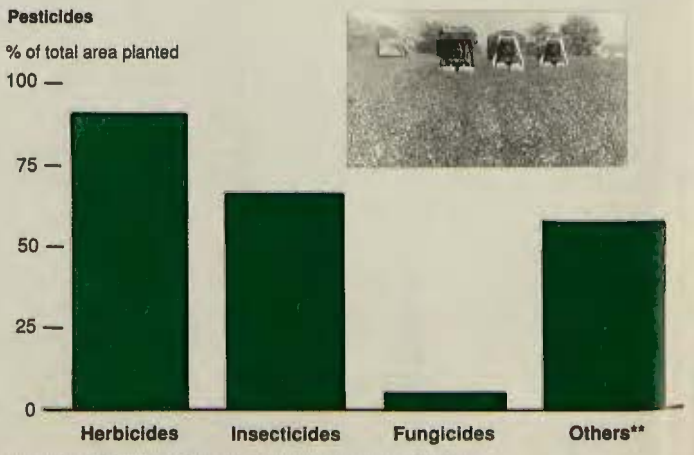




*Applied to less than 1 percent of acreage.

Upland Cotton Area (Totaling 10.9 Million Acres) Treated With . . .

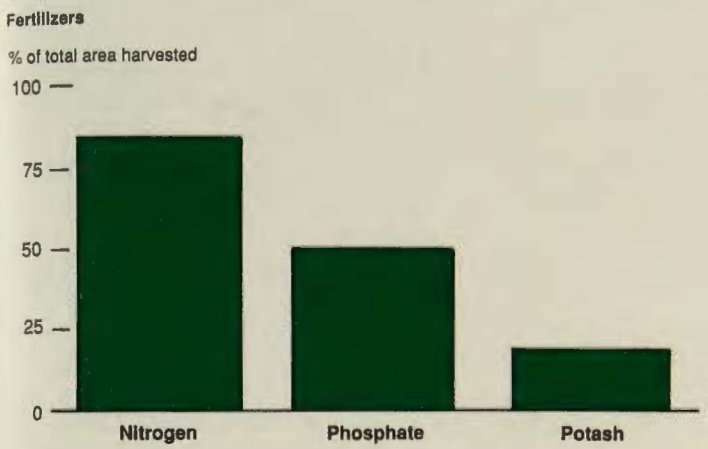


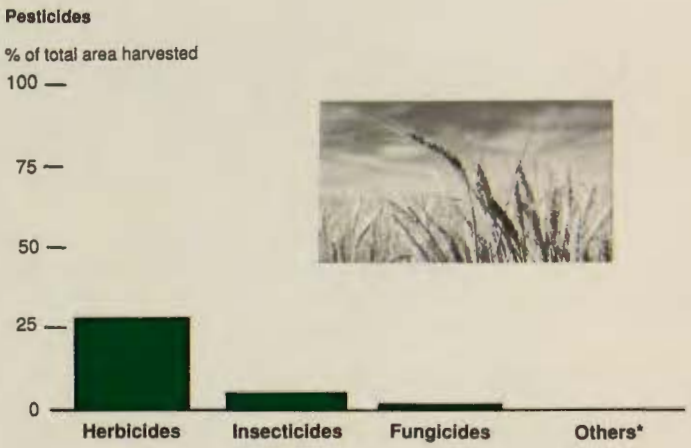


**Includes defoliants, dessicants, and plant growth regulators.

Source: *Agricultural Chemical Usage 1991, Field Crops Summary,* USDA National Agricultural Statistics Service.

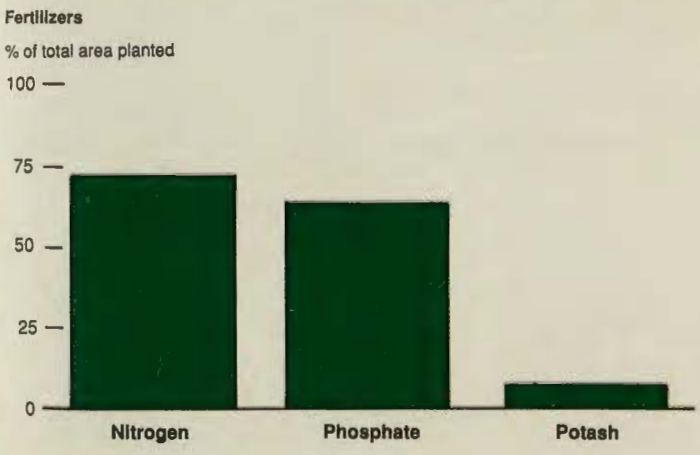
Winter Wheat Area (Totaling 34.1 Million Acres) Treated With . . .

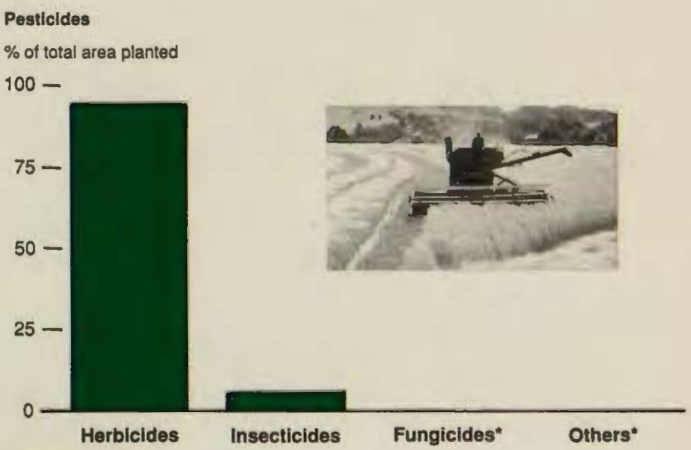




*Applied to less than 1 percent of acreage.

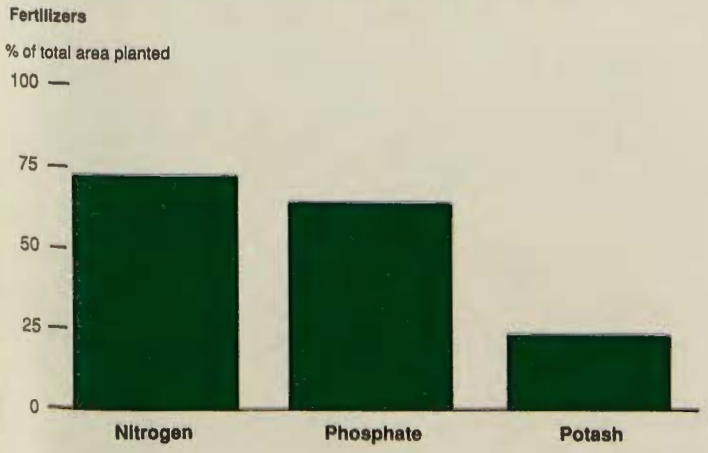
Durum Wheat Area (Totaling 2.9 Million Acres) Treated With . . .

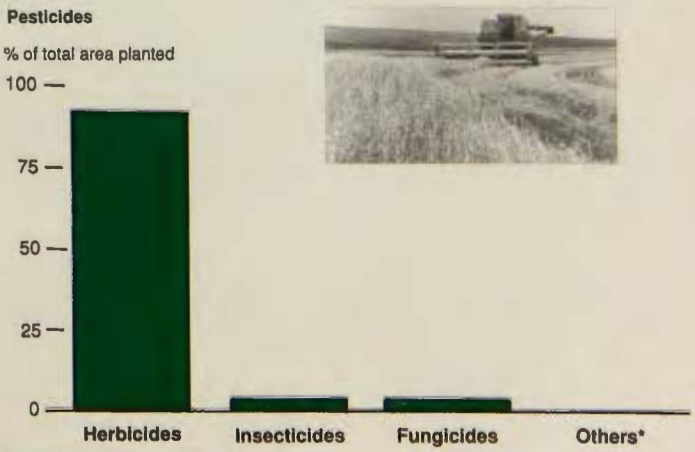




*Applied to less than 1 percent of acreage.

Other Spring Wheat Area (Totaling 13.5 Million Acres) Treated With . . .





*Applied to less than 1% of acreage.

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The Uruguay Round is the latest phase of negotiations being conducted under the auspices of the General Agreement on Tariffs and Trade (GATT), an international organization that began setting world trade rules in 1947.

"The second factor contributing to success in this area is export promotion," Missiaen continues. "Sales increased because of greater advertising and marketing abroad." USDA contributed part of the funds for this work through the Market Promotion Program. In fiscal 1991, horticultural organizations received 48 percent of the $200 million earmarked for these activities.

And third, the devaluation of the dollar in the mid-1980's benefited fruit and vegetable exports. Total produce exports increased 16 and 20 percent, respectively, in fiscal years 1987 and 1988.

Missiaen anticipates that in fiscal year 1992, U.S. exports of fruit and vegetables will increase 13 percent from the previous year. He cites the high quality of U.S. produce, combined with rapidly increasing world demand and diminishing trade barriers, as favoring continued export growth.

Long-Term Consumption To Rise

Love notes that the U.S. produce industry has set a goal to double domestic consumption of fruit and vegetables by the year 2000. The Produce for Better Health Foundation is promoting five servings a day of fruit and vegetables, as recommended by the National Cancer Institute. (The foundation was set up in 1991 by the produce industry to promote nutritional awareness nationwide.)

Five servings a day would require that the average consumer double his or her current consumption. "Therefore, meeting this goal will challenge the foundation," says Love. "On the other hand, USDA's new dietary guidelines—emphasizing fruit, vegetables, and grains—lend support to increased consumption."

Love points out, however, that Americans already raised their rate of consumption of vegetables by 22 percent in the past decade and 5 percent in the 1970's.

"Whether we double our consumption will depend on a number of factors, such as more sophisticated educational programs, targeting groups who have yet to alter their eating habits, or possibly a scientific breakthrough linking specific foods to specific health benefits," he explains. "It's a complex issue, and it's too early to tell what will happen in the 1990's."

The industry will also likely become more responsive to consumer demand for low-priced, high-quality supplies of a variety of

Milestones for the Produce Industry

Here are the facts for 1990:

- U.S. consumers spent nearly $102 billion on fruit and vegetables, compared with $155 billion for all kinds of meat.
- At about $21 billion, the produce sector accounted for nearly 13 percent of all farm cash receipts.
- Produce crop receipts were generated on less than 3 percent (about 8 million acres) of the total area used for cropland (about 282 million acres).
- Per capita use of vegetables and melons was estimated at 392 pounds, on a farm weight basis. ("Farm weight" refers to food in fresh form, prior to any processing.) Fresh vegetables (excluding potatoes) accounted for 38 percent of per capita use, potatoes (all uses) accounted for 33 percent, and processed vegetables (canned and frozen) accounted for 29 percent.

Grocery stores are stocking a wide variety of fresh vegetables to satisfy consumer tastes

Customers Have More Choices

Retailers vie for customers by stocking produce sections with a great variety of fruit and vegetables—in contrast to canned goods or cereals, where the products lining the shelves seem similar, according to economist Edmond Missiaen of USDA's World Agricultural Outlook Board.

Over the past two decades, some retailers have expanded their produce from fewer than a hundred selections to several hundred, according to the Produce Marketing Association.

The choices include such standbys as tomatoes, pears, broccoli, and carrots as well as such newcomers as cherimoya (a tropical fruit used in salads), kiwi fruit, and jicama (a root that can be cooked or used in salads).

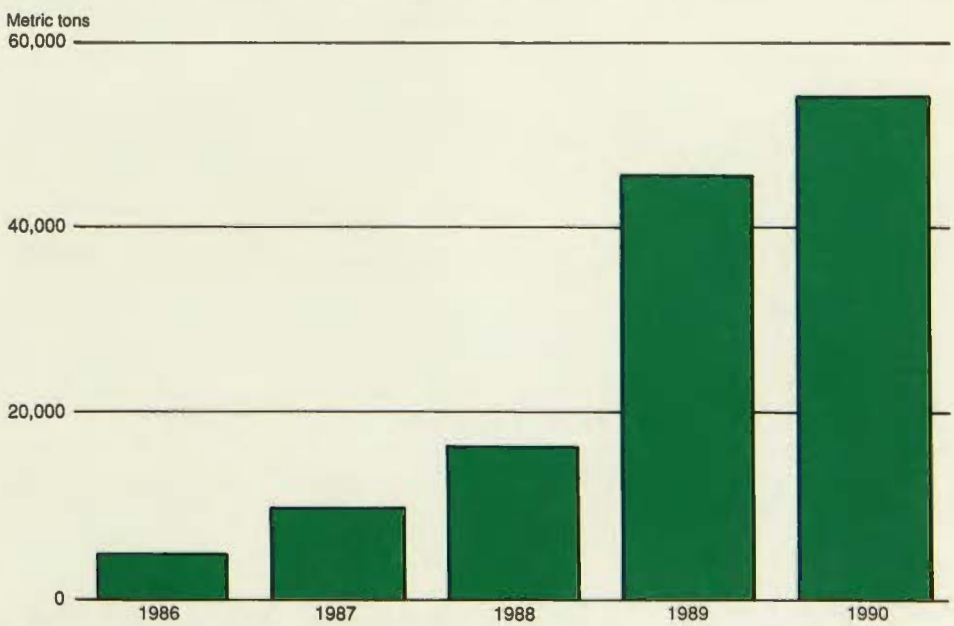
Many of these foods—such as mangoes and cilantro, a leafy green tropical parsley used as an herb, garnish, or vegetable—have been introduced by Hispanic and Asian immigrants. ERS economist Gary Lucier notes that some of the newer items, such as different kinds of leaf lettuce now competing with the traditional iceberg and romaine, have already become quite familiar to Americans.

Demand is rising for these specialty items, as evidenced by increasing plantings in California and Florida. These States' combined harvested area for snow peas, for example, has soared from 1,300 to 7,500 acres over the past 10 years. And demand is climbing for many other specialty items as well.

items. "The industry is changing from being production-oriented to being market-oriented," Missiaen notes. "If consumers prefer one type of apple over another, for example, that message will get back from the supermarket to the grower." ■

Based primarily on information provided by economists Gary Lucier and John Love, Commodity Economics Division, Economic Research Service, and Edmond Missiaen, World Agricultural Outlook Board.

U.S. Exports of Fresh Noncitrus Fruit to Mexico Have Soared



Source: Bureau of the Census, U.S. Dept. of Commerce.

Fewer Owners Hold More U.S. Farmland

By 1988, the number of owners of U.S. farmland had fallen to its lowest level in this century.

At the same time, another number was rising—significantly so.

"The concentration of farmland has substantially increased since the turn of the century," says economist Gene Wunderlich of USDA's Economic Research Service. "Because a small—and decreasing—portion of the population is directly involved in agriculture, U.S. farmland is held by fewer owners now than at any other time in this century."

He notes that in 1988 owners of 1,000-plus acres of farmland—representing roughly 124,000, or 4 percent, of all farmland owners—held 47 percent of all land in U.S. farms and ranches (termed "farmland" for short).

"Landowners of holdings with fewer than 50 acres—30 percent of all farmland owners—have only about 2 percent of the acreage," says Wunderlich.

The size of farm holdings varies by the type of farming, and by region. The Pacific States, for example, have vegetable farms, vineyards, and extensive ranches. They have a large number of both big and small farms, and thus a wider range of landholding sizes.

"In contrast, farms in the Northeast are, on average, smaller in number and more uniform in size and type of farming," says Wunderlich.

Holding size also varies with type of operation, from the tiny "niche" farms that raise mink or operate greenhouses to the large sheep and cattle ranches in the West. Another major trend involved here is the changing makeup of those who own farmland.

Owners and Operators

"Although most farmland is owned by farm operators, the share held by owners who are not farm operators has nearly doubled in the last 43 years, from 22 to 41 percent," says Wunderlich. "Changes in the structure of farmland ownership have resulted in many current owners having little direct contact with farming and ranching."

In 1988 owners of 1,000-plus acres held 47% of all land in U.S. farms and ranches.

What that means, he says, is that decisions concerning larger operations are being made by fewer farmers and fewer nonfarmer landowners. These changes in farmland ownership parallel the growth of farm size, the decline in farm numbers, and the reduction in farm employment.

A 1989 landownership survey conducted by the U.S. Census Bureau—known as the Agricultural Economics and Land Ownership Survey, or AELOS—estimated that, at the end of 1988, there were 2.95 million owners of U.S. farmland. Of these, 44 percent were nonfarmers who owned 41 percent of the 833 million acres of private farmland reported in the Census survey.

"Most of these owners were individuals or husband-and-wife joint owners," says Wunderlich. "Few of the owners, operators, or nonoperators were corporations. Corporations represented only 3 percent of all owners—even though they held about 15 percent of the land."

Almost all operator corporations were family organizations, but nonoperator corporations were typically nonfamily organizations. The landholdings of family organizations were usually larger than those of nonfamily corporations.

"The statistics of landownership in AELOS are intended to reflect only the most general characteristics of owners, interests, and parcels," Wunderlich cautions.

But by focusing on 833 million acres of private farmland, he says, AELOS provides a useful perspective on ownership. AELOS was a followup survey to the 1987 Census of Agriculture. From farm operators and landlords, it obtained financial data and some first-time-ever information on land ownership.

The AELOS data on landownership describe the privately owned portion of the Census land in farms in the United States. Although derived from the 1987 Census of Agriculture, AELOS does not include "public" owners of farmland (Federal and State Governments, railroads, and Indian reservations, for example).

"Comparable data on landownership for the years before AELOS are scarce," says Wunderlich.

AELOS showed that ownership of agricultural land is distributed widely but unevenly. More than 30 percent of the landholdings reported in AELOS were smaller than 50 acres. Landholdings averaged 282 acres, while Census-defined farms, which include ranches, averaged 462 acres.

Rural-to-Urban Shift

Underlying the changes in farmland ownership are demographic, technological, social, and economic factors.

"In 1900, the population was more rural than urban, the number of farms had risen to 5.7 million, and there were about 4.9 million agricultural landowners," says Wunderlich. "By 1945, the population was more urban than rural and the number of farms, at 5.8 million, had declined substantially from the all-time peak of 6.8 million in 1935."

The number of farmland owners was slightly more than 5 million in 1945. In the first half of the century, there were fewer farmland owners than operators. By the middle of the century, there were only slightly more farm operators than farmland owners.

Since the middle of the century, the number of farms and farm operators has declined more rapidly than the number of farmland owners. By 1988, farms numbered 2 million and farmland owners numbered 3 million. "If current trends continue, there will be 1.7 million farm operators and 2.7 million farmland owners by the year 2000," says Wunderlich.

The idea of a farm as a self-standing economic entity is rapidly disappearing in favor of more complex, integrated forms of organization. Landlords and tenants share the management of more than 40 percent of the land in farms that are leased. Nearly 4 percent of farmland lessors are corporations that own 14 percent of rented farmland nationwide.

Sharing Risks

In addition, corporations, which hold 15 percent of the farmland, convert a real property interest into a shareholder interest. Partnerships are formed when two or more persons make a legal agreement to share liability, risks, and returns. Many farm operators—11 percent according to the special census survey—use farm management services. All these arrangements taken together mean that risks and decisions are becoming more widely distributed among persons on and off farms.

"While AELOS suggests some of the diverse interests such as partnerships and leaseholds, a national survey cannot incorporate the full array of interests in land—such as easements, mineral rights, loan collateral, life estates, and tax claims," says Wunderlich.

AELOS, he says, reveals only a small portion of the detail on how designated owners—those identified in the survey as having the major claim and responsibility for the property—share duties and responsibilities with other persons or entities. The information about the 3 million owners included in AELOS should be regarded as an introduction to the distribution of agricultural landownership, not as a conclusion, he says.

The Complexities of Farmland Ownership

Land in farming—or any other activity—can have a plethora of owners, interests, and physical features that go beyond its basic use or scenic beauty.

ERS economist Gene Wunderlich emphasizes this point to explain the complexity of studying farmland ownership—and to suggest some of the limitations involved in analyzing Census data from the Agricultural Economics and Land Ownership Survey (AELOS).

First of all, he says, the ownership of a parcel or unit of land is a blend of interests held by persons or entities. The kinds of possible ownership make for a long, legalistic list: persons (sole, joint tenancy, tenancy in common), partnerships, corporations, syndicates, trusts, estates, and governments.

Then comes the mix of interests.

"Interests are the ingredients of ownership," Wunderlich says. "These interests in land consist of rights, duties, privileges, and liabilities. They prescribe the way the land can be used, held, and transferred, and also determine how the values of land are to be shared."

The types of interests at stake here are leaseholds, easements, covenants, life estates, wills, trusts, future interests, liens, taxes, eminent domain, and escheat. (Escheat refers to the power of government to receive land when no other legal owner can be identified.)

"Through convention, tradition, and law," Wunderlich says, "communities and governments develop the varied structures of ownership. Because the ultimate enforcement of these interests rests with governments, all ownership is, to some degree, public."

Finally, there is the matter of land features and potential uses.

The physical features of the land include the surface (soil, minerals, waterways, vegetation, topography), subterranean elements (minerals, water), and suprasurface (air rights).

At any time, says Wunderlich, the land may be used in a variety of ways, including agriculture, recreation, scenery, mining, drilling, wildlife refuges, transportation (such as roads, highways, and railroads), housing, or any combination of these things. Land is owned and transferred in units called parcels, acres, lots, blocks, and tracts.

Wunderlich adds that the concentrating forces for the ownership and use of agricultural land lie both inside and outside of agriculture. The number of owners declined from a peak of 5 million at mid-century to 3 million in 1988, while owners as a percentage of the population declined from 3.8 to 1.3 percent.

He says that ownership has become more concentrated because farming occupies a large portion of private land, and because a small, shrinking portion of the population is engaged in, or invests in, agriculture. He adds that the decades-long drive toward urbanizthe ation in this country is a major reason for growing concentration of farmland ownwership.

"Agricultural landownership will continue to become more concentrated unless more landowners come from outside of the farming community," Wunderlich says. "In other words, the number of absentee or nonoperator landowners must increase or farmland ownership will continue to be concentrated in the hands of fewer and fewer owners."

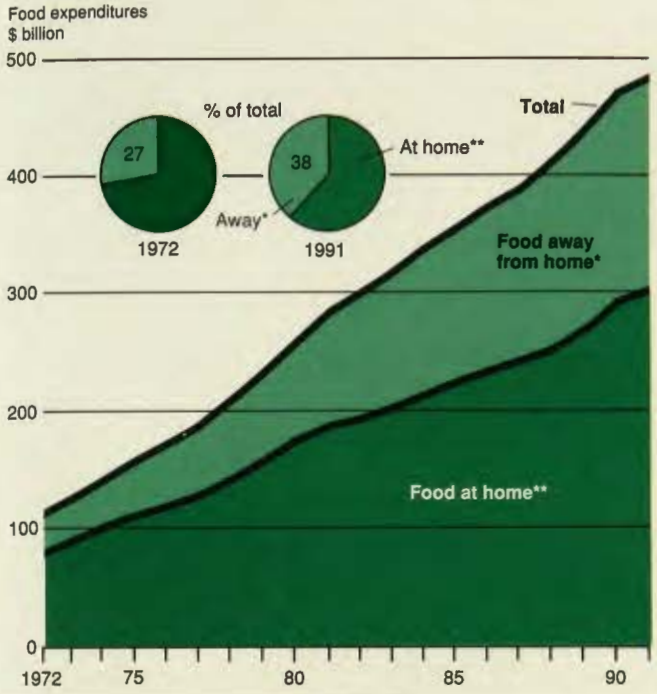
And as the number of farmland owners shrinks, he says, "concentration becomes of greater interest because decisions about the use of land and investment in improvements, conservation, and resource quality are made by an even smaller minority of the overall population." ■

Based primarily on information provided by economist Gene Wunderlich, Resources and Technology Division, Economic Research Service.

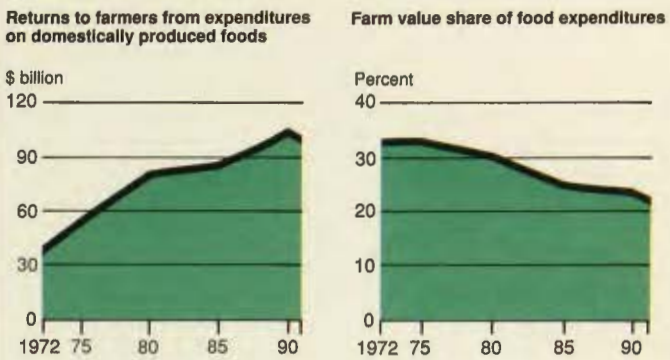
Food Spending Rises, But Farmers' Returns, and Rate of Food Price Increases, Are Down

Data were provided by Denis Dunham, Commodity Economics Division, Economic Research Service.

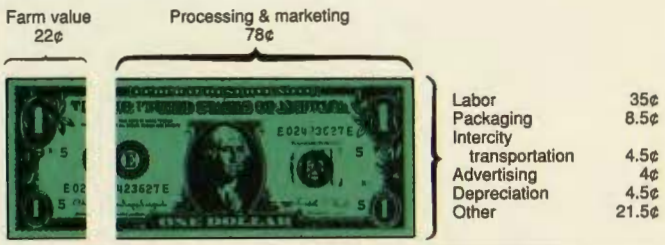
America's Food Bill Rose to $487 Billion in 1991, With 38% of That Total Spent on Eating Out



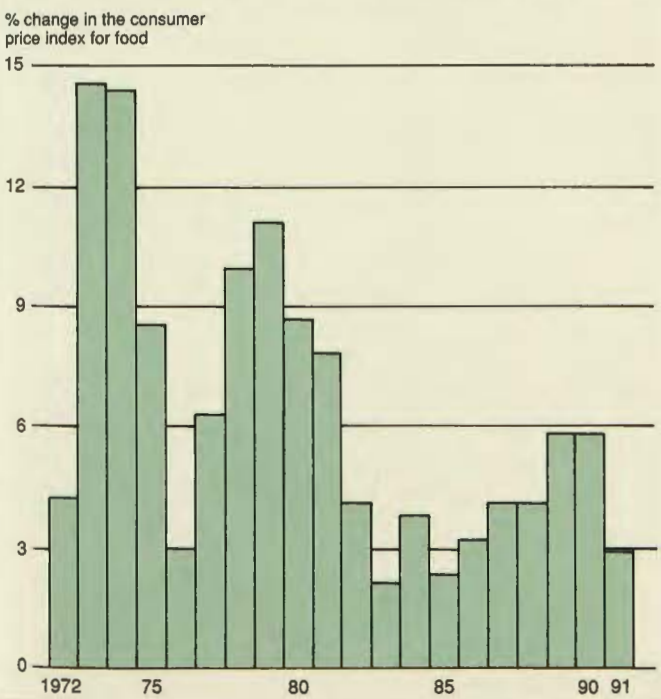
Despite Higher Food Spending, Farmers' Returns Have Declined and the Farm Share of the Food Dollar Has Slipped



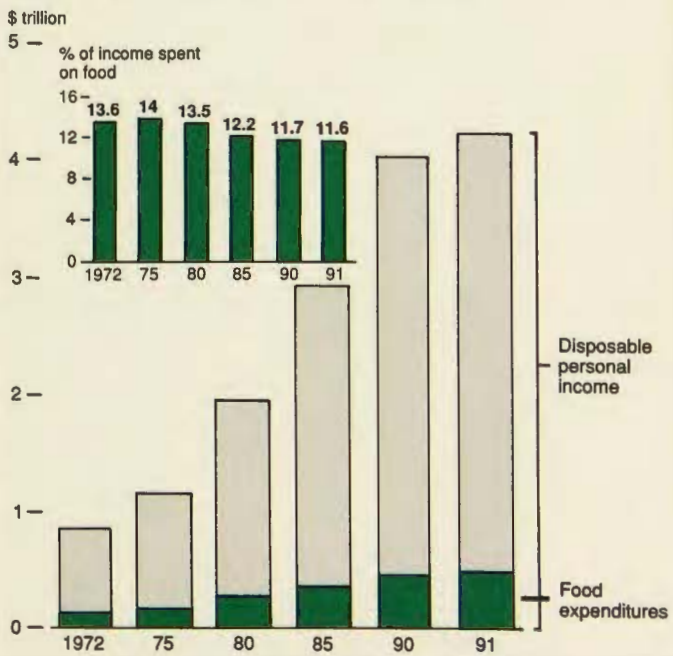
Dividing Up the 1991 Food Dollar



Retail Food Prices Have Climbed an Average of 6.4% a Year Since 1972, But Rose Only 2.9% in 1991



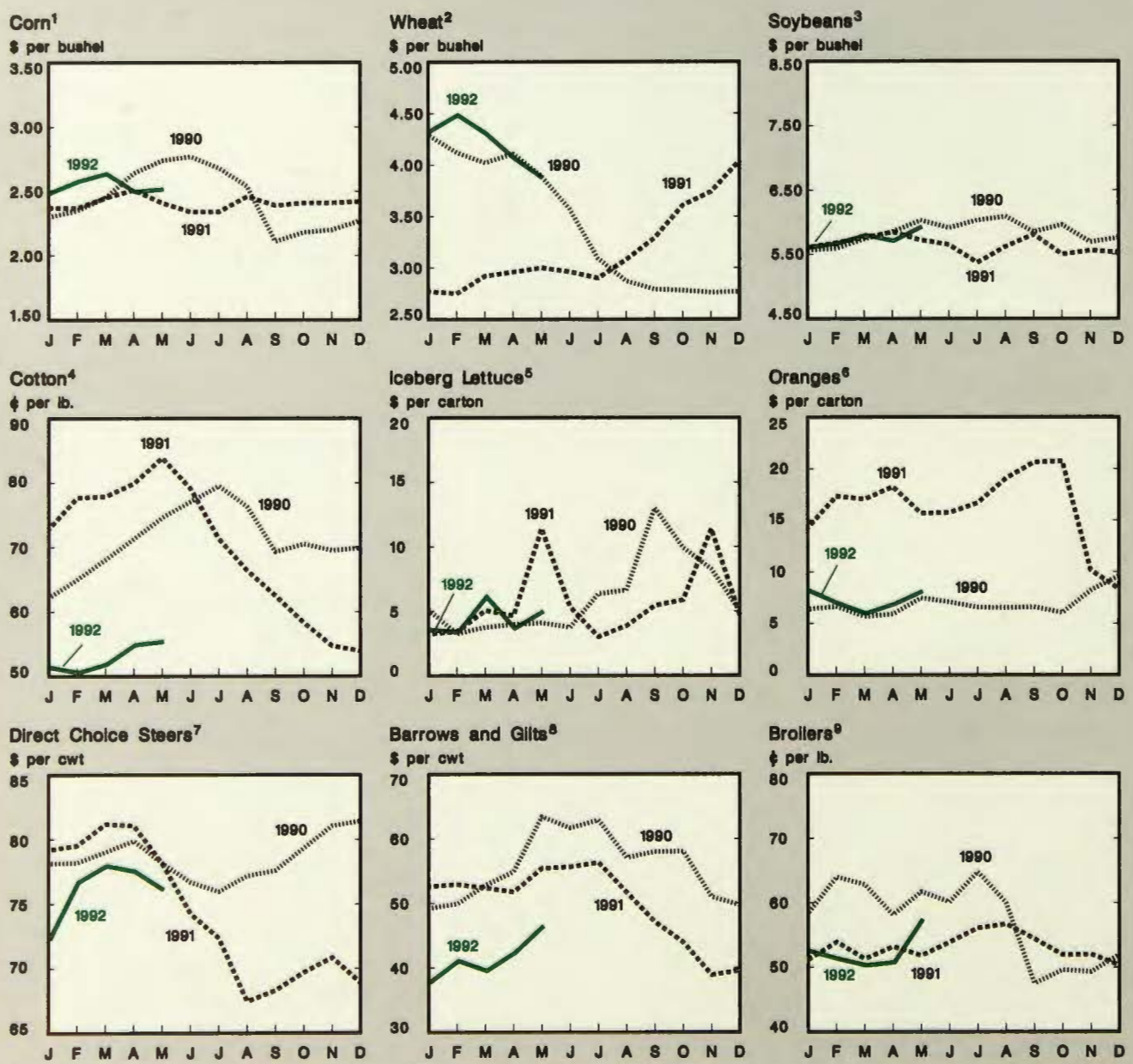
Americans Continue to Spend a Decreasing Proportion of Their Income on Food, Thanks to Increasing Personal Income



*Purchases from restaurants and other eating places; excludes food paid for by government and business.
**Food purchased from grocery stores and other retail outlets primarily for consumption in the home; excludes government-donated foods.

Monthly Price Monitor

USDA's May 1992 inflation-adjusted index of farm prices, from the National Agricultural Statistics Service's Agricultural Prices report, was unchanged from April but 6.6% below a year earlier. Wholesale market prices follow. Corn inched up to $2.52 per bushel. Wheat dropped to $3.88 per bushel, the lowest price since last November. Soybeans, at $5.94 per bushel, reached their highest level since October 1990. Cotton increased slightly to 55.5¢ per pound, while lettuce jumped to $5.04 per carton. Oranges rose $1.24 to $8.20 per carton. Direct choice steers fell $1.41 to $76.17 per cwt, while barrows and gilts jumped to $46.63, their highest price since September 1991. Broilers, at 57.6¢ per pound, reached their highest level since August 1990.



[1]No. 2 yellow, Central Illinois. [2]No. 1 HRW, Kansas City. [3]No. 1 yellow, Central Illinois. [4]SLM 1-1/16", spot market price. [5]Standard carton 24's, California-Arizona. [6]Central California, Standard carton. [7]Nebraska. [8]Omaha. [9]Wholesale, New York. All prices shown are monthly averages.

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