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Department of
Agriculture**



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Research Report 211



U. S. Cooperatives in International Trade, 1997-2002

Preface

This report describes export activity of U.S. agricultural producer-owned cooperatives during the period 1997 through 2002. This activity is described in terms of dollar values of exports by commodity group and destination market (region), shares of U.S. agricultural exports, as well as a profile of cooperatives engaged in international trade.

Methodology

USDA Rural Development Cooperative Programs began an annual survey of cooperative involvement in international markets in 1997. Before 1997, cooperative exports and imports were measured at 5-year intervals.

Data for this report were gathered directly from cooperatives through a voluntary, mail survey questionnaire. Cooperatives were asked to report dollar values of exports for each calendar year 1997-2002. For exports, this included all sales normally recorded by the cooperative as an international sale, with exceptions for products sold into U.S. territories. Figures for non-respondents were generated from secondary sources, or based on past performance, market conditions, and relative magnitudes of U.S. exports or similar commodities.

To ensure confidentiality, survey results have been tabulated and presented so that no single respondent is identifiable. This means that data for some commodities and some markets are combined into subgroups in which at least three respondents are represented.

Definitions

- A cooperative is a business organization owned, controlled, and benefiting the people who use the organization--in this case, farmers.
- An export sale is defined as a shipment to a foreign destination except to U.S. armed forces or U.S. diplomatic missions abroad, for their use; and U.S. territorial possessions Guam, Puerto Rico, and the Virgin Islands.
- Two main commodity categories and three subcategories are used in this report:
 - o Bulk commodities are high-volume, homogeneous products that have received little or no processing, such as coarse grains, rice, wheat, oilseeds, and cotton.
 - o High-value products (HVPs) are those commodities that have been subjected to a higher level of processing and/or require special handling. HVPs can be further divided into three subcategories:
 - Raw HVPs consist of unprocessed items with relatively high per unit values, such as fresh fruit and live animals.
 - Semi-processed HVPs are partially processed or “ingredient” products that are generally not ready for final consumption and include flours, oils, meals, and hides and skins.

Preface

- Processed HVPs are generally ready for final consumption at either the food retail or food service level having been fully processed.

Contents

Preface	i
Methodology	i
Definitions	i
Introduction	1
Market Conditions	1
Overview of Cooperative Export Results 199702002	2
Who Exports	5
Numbers	5
Concentration	5
Size of Cooperative Exporters	6
Export Composition	6
Export Markets	7
Product Category Detail	10
Bulk Commodities	10
High-Value Products (HVPs)	12
Summary	14
Reference	14

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Tracey L. Kennedy

Introduction

Producer-owned cooperatives have long been an important part of U.S. agriculture. Beginning as early as 1810, cooperative enterprises in the U.S. have helped farmers pool resources and share risk to weather uncertainties and correct imbalances in the market.¹ Over the decades, cooperatives played an increasingly important role, and by 1930, more than 12,000 cooperatives served nearly 3.1 million farmer-members in every subsector of U.S. agriculture.²

The proportion of U.S. agricultural production exported has increased from 2 percent in 1940 to around 17 percent today.³ Cooperatives continue to play an important role in export markets. They have served not only as originators of large volumes of bulk commodities subsequently exported by other firms, but have developed their own direct exporting capabilities, effectively capturing returns from exporting previously lost to intermediaries. Indeed, many cooperatives have become the dominant exporters in their particular commodity subsectors. Cooperatives have also faced challenges over time—as have other firms—in the face of changing market conditions and trading dynamics.

The purpose of this report is to present an audit of cooperative export activity for the period 1997 to 2002, describing the role of and magnitude of coopera-

tive trading activity relative to U.S. agricultural trade as a whole. The time period is significant in that it represents the first time that annual time-series data have been available. Before 1997, USDA collected cooperative data at 5-year intervals.

Market Conditions

Market conditions, both internationally and domestically, changed dramatically in the past 20 years. On the production side, fewer and larger farms increasingly characterize U.S. agriculture. As farmers caught in the cost-price squeeze were forced to abandon their operations, larger, more efficient farms have picked up the slack in production so that now, although farm numbers are down 60 percent, production has doubled. The structure of the cooperative sector was directly affected. In 1950, more than 10,000 cooperatives served over 6.5 million members and recorded \$8.7 billion in sales. By 2002, 3,140 cooperatives with 2.8 million members reported net business volume of almost \$100 billion.⁴

Technological advances and changes in trade policy effectively erased national borders for the movement of commodities, labor, capital, and information. Income growth in much of the developing world has changed the consumption habits of millions of consumers, resulting in drastic shifts in agricultural production and trade. Food manufacturing and retailing continued to concentrate among fewer and fewer large firms with the global presence and power to demand precision in product attributes and delivery from producers. This created great opportunity for those willing and able to adjust in order to compete, as well as greater uncertainty amidst this higher level of competition. But, while the U.S. produces more than the domestic market can absorb and 95 percent of the world's consumers reside outside the U.S., the competi-

¹ David Cobia, editor, *Cooperatives in Agriculture*, p. 111, Regents/Prentice Hall, 1989.

² Cobia, p. 118.

³ USDA/Economic Research Service.

⁴ USDA/RBS website: www.rurdev.usda.gov/rbs/coops/data.htm. "Number of Cooperatives & Memberships by Major Business Activities," 2002.

itiveness of U.S. producers in some markets was challenged by foreign producers with lower land and/or labor cost, closer proximity to foreign markets, and more favorable domestic policies.⁵

Compounding this are periodic upheavals in national economies and financial markets, which now have more far-reaching effects than ever. The period covered in this report, 1997-2002, is in some ways an anomaly in that the first 3 years were marked by a regional financial crisis in Asia that spread to Brazil and the former Soviet Union, then had ripple effects around the world. The overall effect of currency depreciation, slowed economic growth, and high interest rates in these countries affected agricultural production, consumption, and trade worldwide. In crisis countries, lower consumption due to the higher cost of imports and reduced income led to reduced exports to those markets for U.S. producers. Although this decline in volume was offset by increased export volume to other markets, export value fell 15 percent between 1997 and 1999 due to low commodity prices.

These influences, especially the financial upheaval in Asia and the continuing restructuring among cooperatives, are reflected significantly in the cooperative trade data presented here. Despite successes, the history of cooperative involvement in international markets has also been tempered by failure challenges, stemming in many cases—in addition to the uncertainties of international markets—from complications involving the same unique characteristics that set cooperatives apart from other forms of business. For example, the user-owner nature of cooperatives with its requisite ties to a particular domestic production base can limit the scope of their activities in foreign markets, relative to their private- or investor-owned competitors. Marketing cooperatives whose purpose is to provide a home for members' products may be precluded by statutory limitations from taking full advantage of multiple sourcing strategies that noncooperative traders use to substitute lower cost products. In low-margin businesses, such as the grain trade, the ability to access low-cost products at the appropriate time and market proximity is critical. In addition, cooperatives, as owner-financed businesses, are often insufficiently capitalized, limiting investment in technology and facilities, as well as in advertising and

market development activities necessary to differentiate and position products in the most lucrative markets.

However, some cooperatives are finding the flexibility to redefine their presence in international markets through partnerships, alliances, and marketing agreements with other firms—cooperative- and investor-oriented. These options allow cooperatives to enhance their operational efficiencies and financial strength, gaining access to marketing and transportation expertise, value-added opportunities and markets that they may not have the wherewithal to access otherwise. For example, two cooperatives—MBG Marketing and Naturipe—have in recent years allied with the Chilean firm Hortifrut S.A. to form Global Berry Farms to form a worldwide system for procurement and marketing of a full line of berries and berry products. Sunkist, Inc. is now importing nonmember fruit for sale in domestic markets. And DairyAmerica, a marketing agency in-common, tied with the New Zealand Dairy Board to market nonfat dry milk from DairyAmerica's cooperative owners. Seald Sweet, a major Florida citrus cooperative, joined with a Belgian company, De Weide Blik, in 1998 to form a limited liability company to “provide the flexibility to work with a number of commercial entities and the ability to raise capital for new ventures.”⁶ These alternatives challenge the traditional cooperative identity and only time will tell if the need to adapt to dynamic conditions in a global market through structural and operational innovation is compatible with the cooperative mission of representing and protecting the interests of particular sets of member-producers.

Overview of Cooperative Export Results 1997-2002

Brisk sales in pre-recession Asian markets and sharp increases in sales of bulk commodities led to record cooperative export sales of nearly \$7.9 billion in 1997. Following that record high, cooperative exports were down more than 40 percent in 1998, reflecting declining demand and the subsequent fall in commodity prices in Asian markets, as well as the economic pressures related to currency devaluations and other policy changes in other regions (Figure 1). A period of recovery began in 1999-2000, but not to 1997 levels, reflecting possible permanent shifts in consumption and trading patterns, as well as in the structure of the cooperative sector—namely, the exit of several significant cooperative players. Through 2002, the value of agricultural exports by U.S. cooperatives dropped

⁵ USDA/ERS. “Agricultural Trade and the 1997-99 International Financial Crisis,” *Agricultural Outlook*, Jan/Feb, 2000.

⁶ www.sealdsweet.com

Figure 1— Agricultural Exports by Cooperatives, 1997-2002

Million dollars

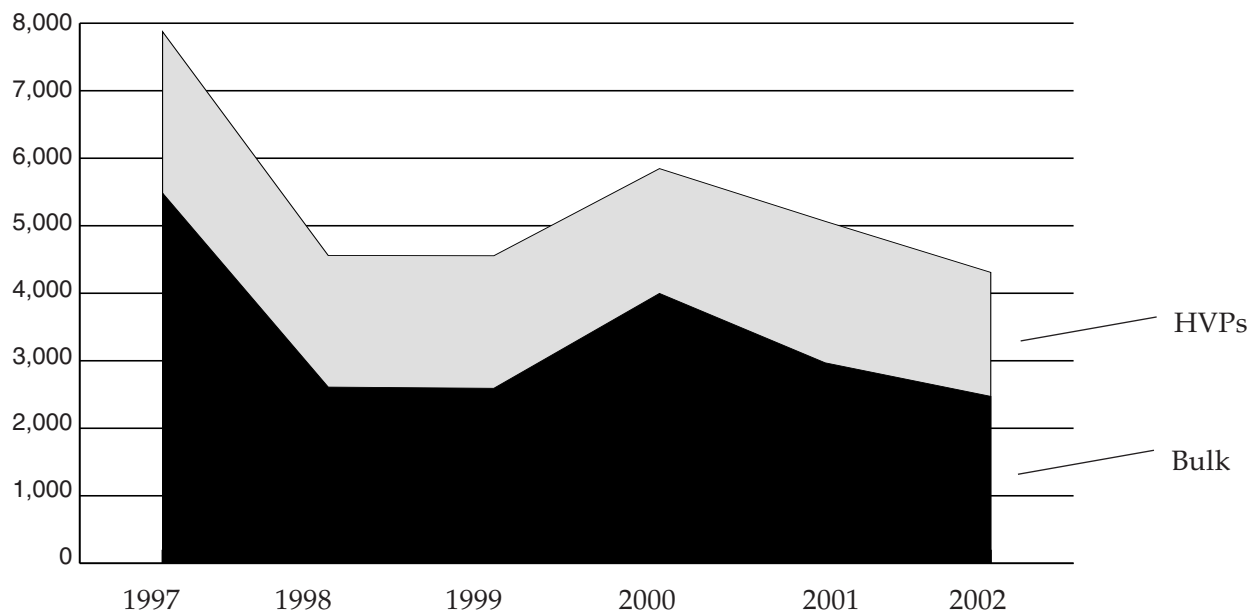


Table 1—Cooperative Exports by Category, 1997-2002 (\$millions)

	1997	1998	1999	2000	2001	2002
Bulk Commodities	\$ 5,482	\$2,609	\$ 2,591	\$ 3,997	\$ 2,969	\$2,472
Raw High-Value Products	931	827	616	657	653	609
Semi-Processed High-Value Products	363	140	469	202	271	104
Processed High-Value Products	1,095	982	878	988	1,170	1,123
Total Exports	\$7,874	\$ 4,559	\$ 4,555	\$ 5,846	\$ 5,065	\$4,308

more than 45 percent. U.S. agricultural exports, by comparison, declined by only 7 percent over the same period.

Value of exports by commodity category shows similar patterns of decline with greater volatility evident in bulk commodity sales (primarily grains, oilseeds, and cotton). Indeed, 84 percent of the decrease in value of all cooperative exports over the period can be attributed to bulk commodities, which lost almost half their value in 1998 and 1999, before showing improvement in 2000, then dropping off again in 2001 and 2002 (Table 1, Figure 2).

Only the processed HVPs category—mainly processed fruits, vegetables, and meats—recovered to surpass 1997 levels.

Exports of raw HVPs that consist primarily of fresh fruits and tree nuts—products in which cooperatives have traditionally had a strong market presence—have lost around one-third of their value since 1997, but have remained relatively stable since 1999-2000.

Fluctuations in bulk export values are consistent with changes resulting from the Asian financial upheaval, as well as the inherent volatility of the bulk commodity trade. However, the magnitude of changes in cooperatives' export sales—especially in bulk commodities—is significantly different than changes in U.S. sales of the same commodities. Figures 3 and 4 show percentage changes in values of cooperative exports of bulk commodities and HVPs, respectively, compared to values of U.S. sales of the same products.

Figure 2—Agricultural Exports by Cooperatives, 1997-2002

Million dollars

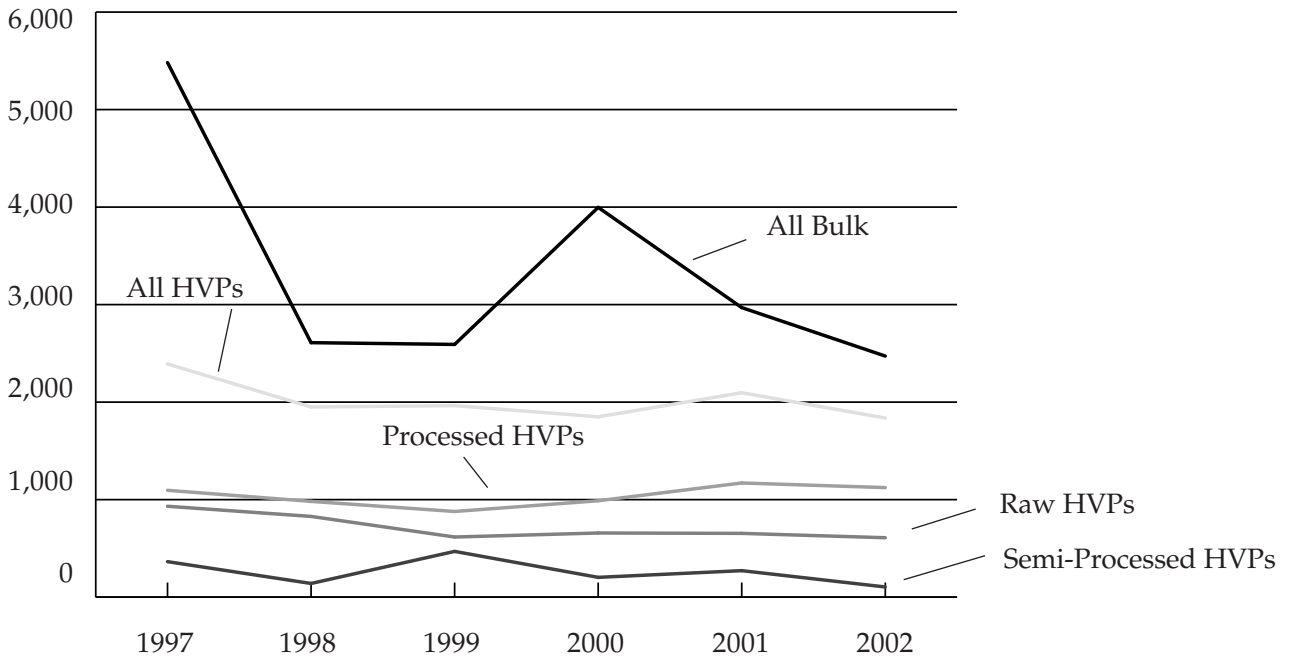


Figure 3—Changes in US and Cooperative Bulk Export Values 1997-2002

Percent

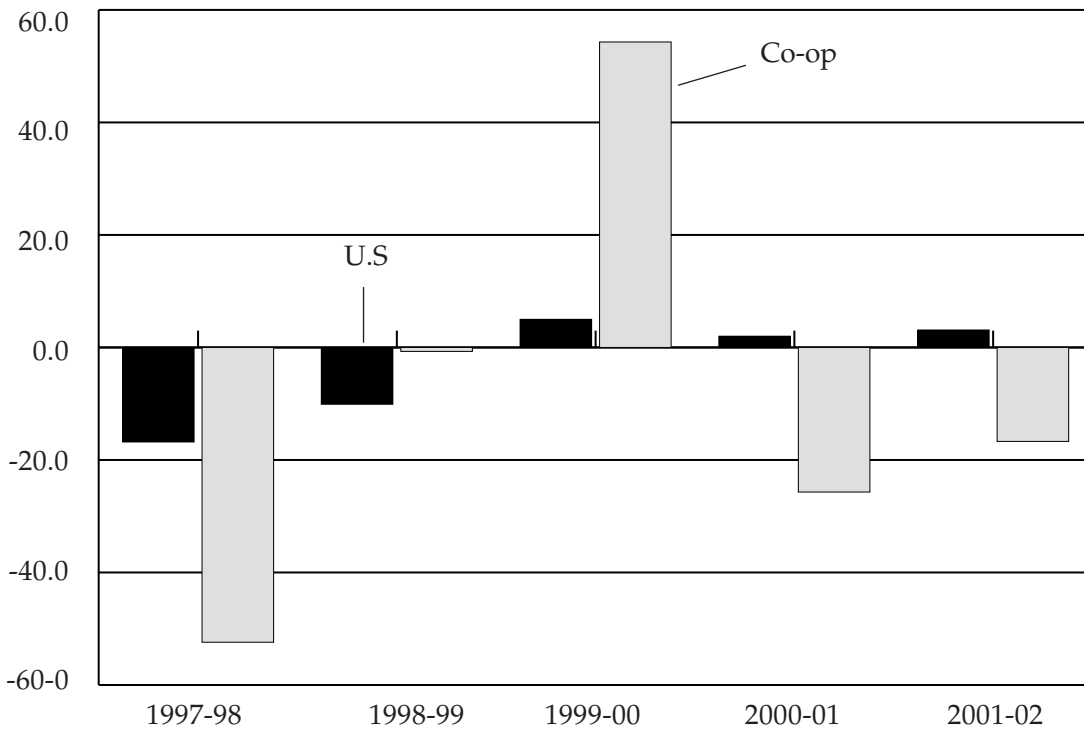
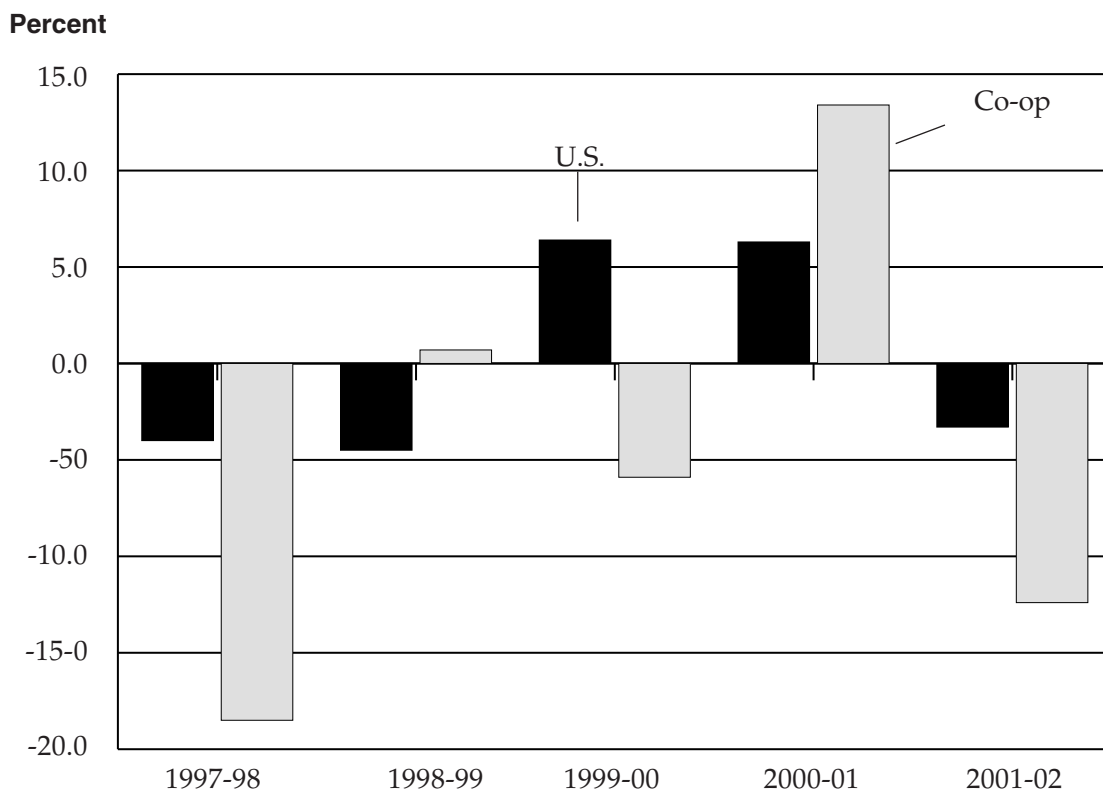


Figure 4—Changes in US and Cooperative HVP Export Values 1997-2002



Cooperative exports by and large show much wider variations throughout the period than compared to U.S. exports. For example, from 1997 to 1998, the value of U.S. exports of bulk commodities fell 16.8 percent, while the value of cooperatives' bulk exports fell more than 54 percent.

Even sales for HVPs, which are typically not subject to the same kinds of volatile swings as bulk commodities, show significant departures from the patterns exhibited by U.S. sales of similar products. These differences may or may not be market-driven. In some categories, particularly bulk commodities in which a high proportion of export sales is concentrated among a relatively small number of exporters, the exit of one or a few of those firms has a large impact.

Who Exports

Numbers

The known universe of U.S. cooperative exporters is relatively small, anywhere from 80 to 125. This survey encompasses those cooperatives known historically through previous surveys to have been consistent exporters as well as any newly identified

from other sources. Over the period, a number of cooperative exporters reporting ranged from a low of 80 in 2002 to a high of 96 in 1998, with an average of 87. At least 75 percent of these cooperatives were consistently engaged in exporting from year to year.

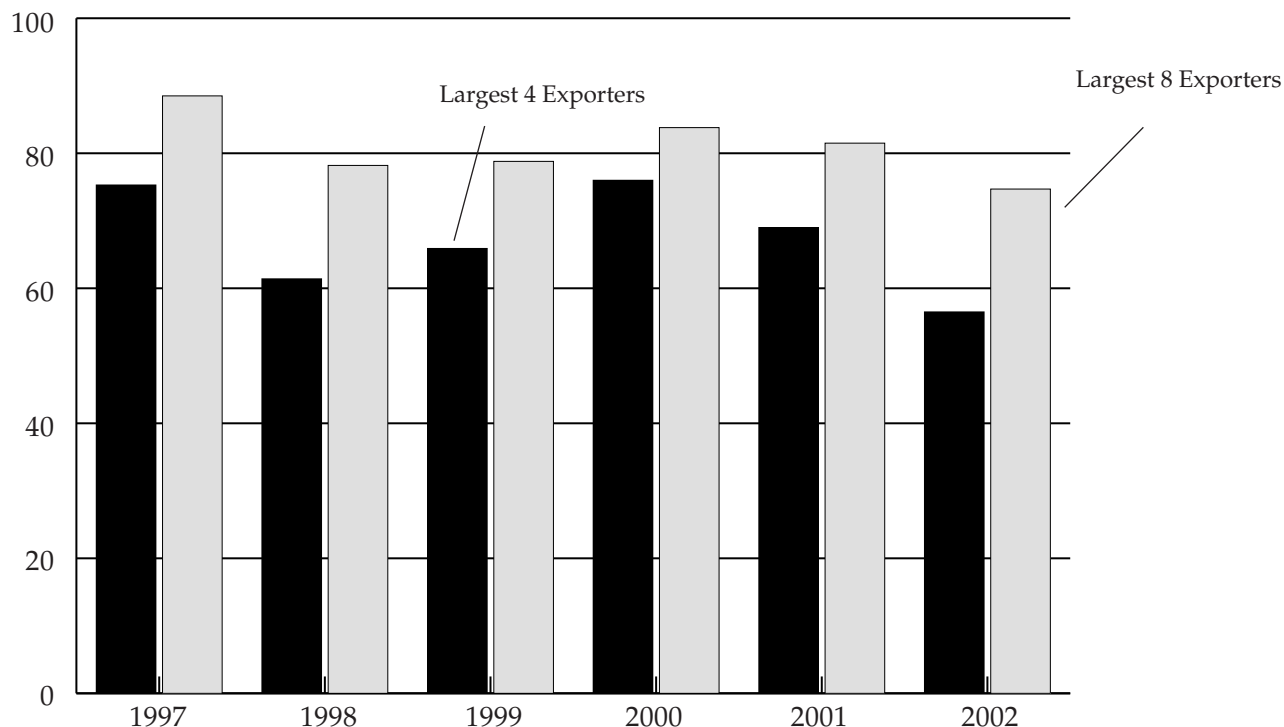
Concentration

Although there are close to 100 U.S. cooperatives active in exporting at any given time, just a handful of firms are responsible for the largest proportion of export sales. Over the period, the largest four exporters accounted for between 75 percent (1997) to 56 percent (2002) of total cooperative exports (figure 5). The largest eight exporters accounted for between 88.5 percent and 74 percent over the period. The result of this high level of concentration among a few exporters is that a market downturn or the exit of one of these players has a significant impact on reporting export results, often skewing the numbers away from usual market trends or trade patterns.

This is magnified further as there are often only a few cooperatives engaged in the export of a particular product. Therefore, sharp changes in export values over time must be viewed in this context. The low fig-

Figure 5—Concentration of Cooperative Exports 1997-2002

Million dollars



ures for the period—occurring in 2002—reflect this, as this marked the exit of Farmland Industries from grain exporting.

Size of Cooperative Exporters

Cooperative exporters are a diverse group in terms of firm size (as measured by total sales), magnitude of export sales and products handled. Cooperatives with total sales of as little as \$1 million registered exports—many on a consistent basis—as did Fortune 500-sized firms. The level of export activity varied greatly, from those with just a few thousand dollars in export sales to a handful with billions of dollars in export sales. However, magnitude of exports in and of itself is not necessarily an indicator of the importance of exporting to a particular firm. A number of cooperatives with seemingly small levels of export sales are consistently in the market, having developed and cultivated foreign customers, some of which constitute a sizeable or otherwise important part of their overall business.

From a firm-level perspective, individual cooperative's reliance on exports can be measured by export intensity—dividing export sales by total sales. Over the period, the top four cooperative exporters regis-

tered export intensity of 30 to 70 percent, including the next four largest that dropped the low end of that range to 10 percent. By commodity category, among cooperatives primarily engaged in bulk commodity exports, cotton and rice registered the highest export intensities, while tree nut and fresh non-citrus fruit handlers relied most heavily on exports among HVPs exporters.

Export Composition

Composition of cooperatives' exports in terms of bulk commodities vs. HVPs is significant relative to the composition of world and U.S. trade. Until about 20 years ago, world and U.S. agricultural trade was comprised largely of bulk commodities—mainly grains, oilseeds, and cotton. Gehlar and Coyle point out that the grain trade once served as a proxy for agricultural trade—an “indicator for measuring agricultural trade growth.”⁷ This is no longer the case. Globalization and its impact on income and subsequent shifts in con-

⁷ Mark Gehlar and William Coyle, “Global Food Consumption and Impacts on Trade Patterns,” Changing Structure of Global Food Consumption and Trade, WRS-01-1, USDA/ERS.

sumption and production had a dramatic impact on the composition of both world and U.S. agricultural trade. Indeed, between 1997 and 2002, the proportions of U.S. agricultural exports accounted for by bulk commodities and HVPs have flip-flopped, with HVPs now dominant. In 2002, bulk commodities made up less than 30 percent of world agricultural trade, while the figure for the U.S. was around 37 percent.⁸ Exports from U.S. cooperatives, however, are dominated by bulk commodities, which averaged 60 percent of total cooperative exports over the period (Figure 6).

This may be reflective of the traditional cooperative role as originators or first handlers of basic commodities, but begs the question of the future of cooperatives in grain exporting an environment in which some cooperative leaders favor less reliance on international markets by increasing domestic demand for grains through renewable energy and livestock, while others suggested that the traditional bulk commodity business will soon cease to exist.⁹ This has increasing played out—particularly in grains—with cooperative forays into meat packing operations and ethanol production; in the ceding of export functions to larger multi-

national trading firms through a variety of alliances and joint ventures; and in the demise of major cooperative exporters like Farmland Industries.

Meanwhile, global trade in HVPs has become increasingly important, accounting for approximately 40.4 percent of world trade and more than 60 percent of U.S. exports. Because cooperative exports of the same types of products remained relatively stable over the period, the apparently narrowing gap between bulk and HVP sales results from the dramatically declining value of bulk commodity exports and subsequent shrinking total, rather than significant growth in HVPs sales. Cooperatives' solid presence in some HVP markets are indicative of its strong base in a number of specialty products—tree nuts and meats, for example. However, even as of the end of the period measured and thereafter, changes in some cooperatives' structural and operating status will alter this dynamic.

Export Markets

The impacts of an array of factors on U.S. agricultural export patterns are mirrored in cooperative trade patterns as well. Domestic and foreign agricultural and trade policies, trade liberalization, exchange rates, and the emergence of other countries as major competitors (especially in bulk commodities) contributed to significant changes in trade patterns.

As shown in Figure 7, with the exception of Latin America, cooperative exports to major markets fell off sharply after 1997 in the wake of the Asian financial

⁸ Carol Whitton, "Processed Agricultural Exports Led Gains in U.S. Agricultural Exports Between 1976 and 2002," FAU-85-01, USDA-ERS, February 2004.
⁹ John R. Dunn, et al. *Cooperatives in the 21st Century*, Cooperative Information Report 60, USDA/RBS, November 2002.

Figure 6—Composition of U.S. and Cooperative Exports 1997-2002

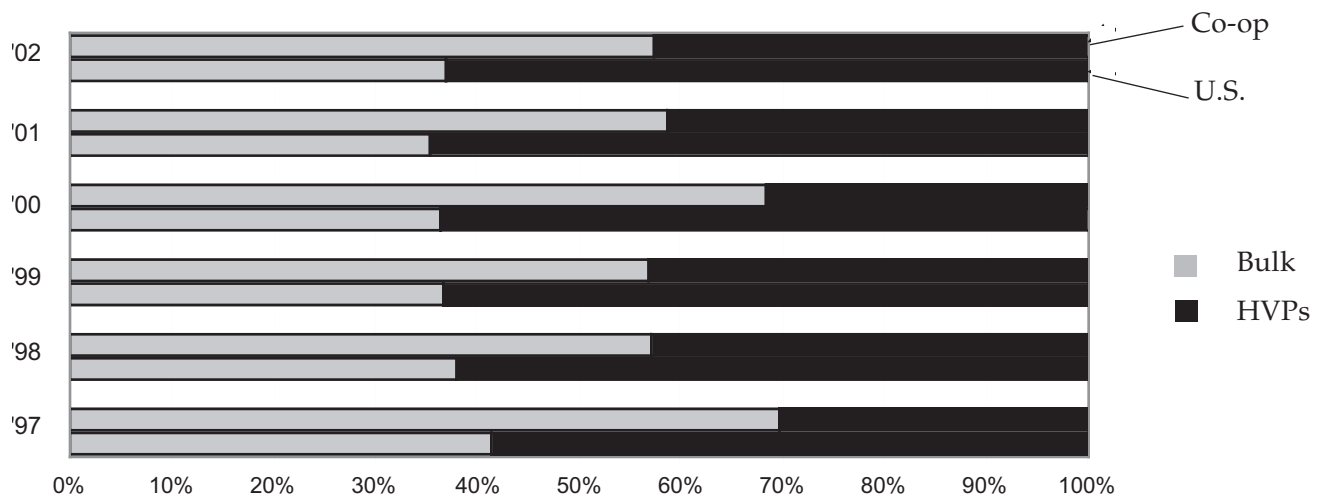


Figure 7—Cooperative Exports by Market 1997-2002

Million dollars

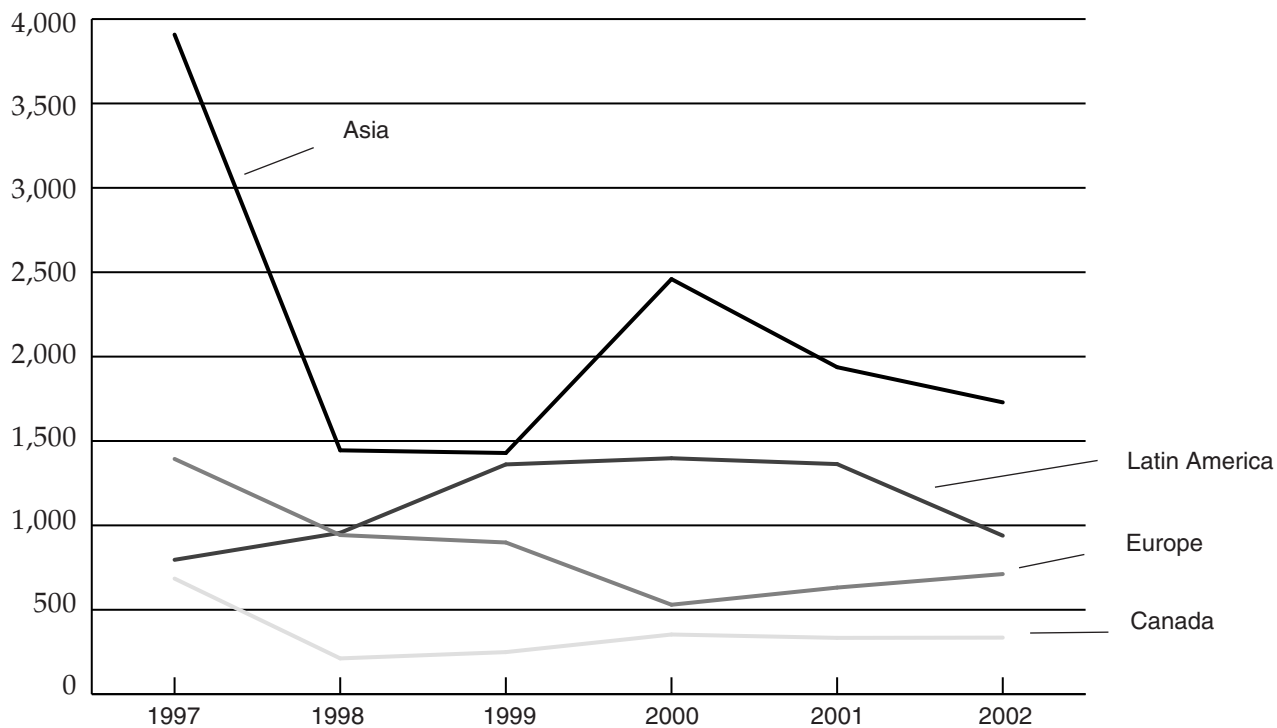


Figure 8—Cooperative Exports of Bulk Commodities by Market 1997-2002

Million dollars

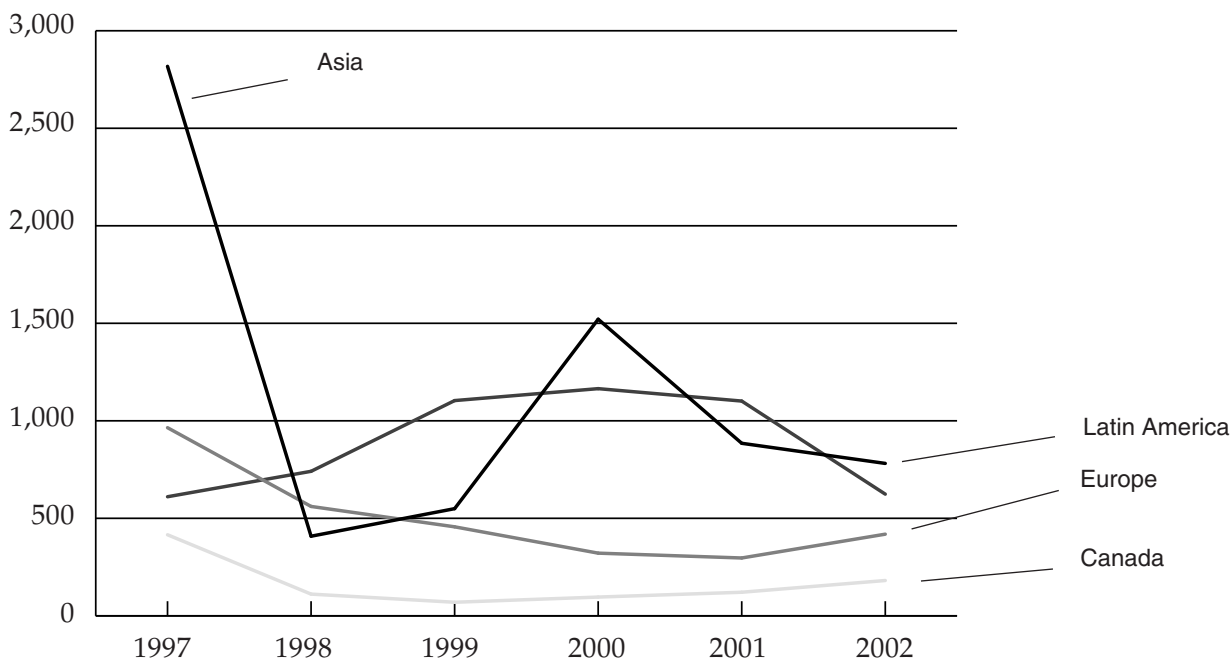
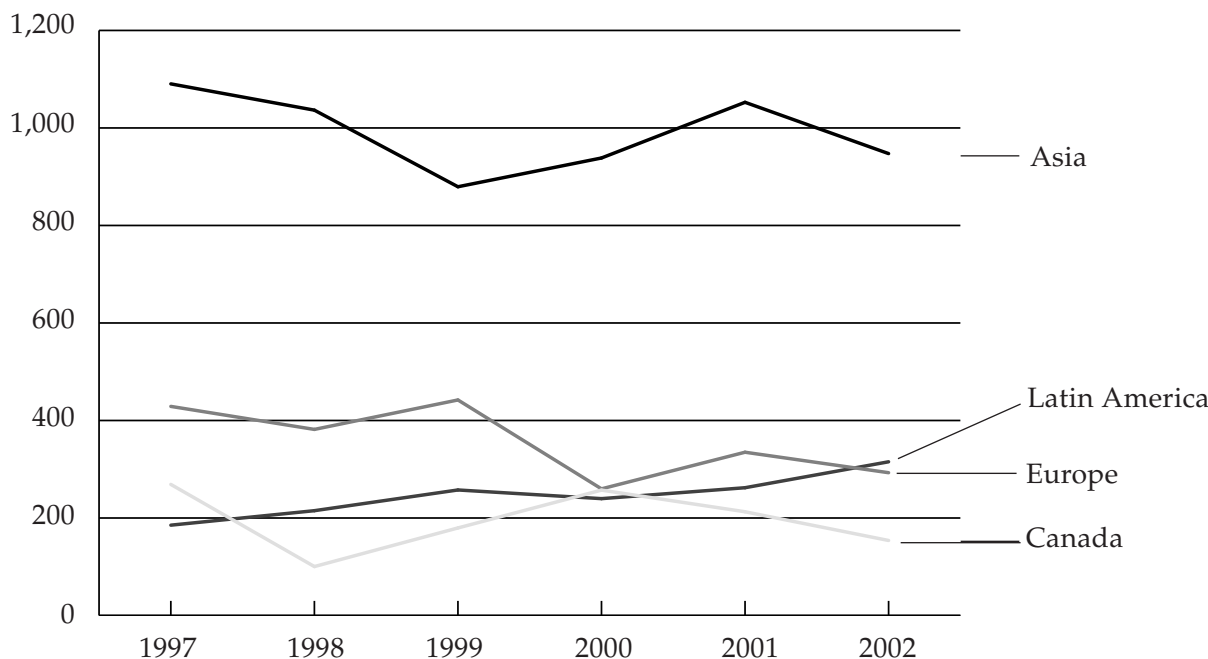


Figure 9—Cooperative HVPs Exports by Market 1997-2002

Million dollars



crisis. Cooperative exporters then struggled to recover, with mixed results in still dominant Asia as well as in Europe and Canada.

However, though values are far from 1997 levels, Asian markets remain the dominant destination for cooperative exports despite declining in share from nearly 50 percent at the beginning of the period to around 40 percent during the last 2 years.

Asian markets led in bulk commodities in 1997, again in 2000 and 2002, but were overtaken by Latin American markets in the intervening years (Figure 8). The market for consumer goods in Asia and indeed, the rest of the world, was relatively unaffected by the Asian-led currency crisis of the late 1990s. Asia clearly remains cooperatives' most important market for HVPs, accounting for an average of more than 53 percent of all cooperative HVP exports over the period, far outdistancing Europe, the next largest regional destination at 18 percent (Figure 9). Because the Asian region consists of both highly developed economies as well as developing markets, the pattern described here in which Asia led in both bulk commodities and HVPs is consistent with observations that developed countries import the most consumer-oriented products, while developing countries import a higher proportion of bulk commodities.¹⁰

Latin American markets—mainly on the strength of Mexico—have emerged as key markets for cooperative exporters, accounting for as much as 42 percent of all bulk exports by cooperatives and averaging almost 30 percent over the period. The sharp drop in bulk sales to Latin America in 2002 is likely attributable largely to the decline in grain sales after Farmland Industries ceased operation.

HVPs are of increasing importance in Latin American markets—especially Mexico—growing 130 percent over the period to challenge European markets even as cooperative HVP sales to all markets remained relatively unchanged.

In 1997, Europe was the second largest regional market for all cooperative exports. From 1997 to 2002, cooperative export values to Europe dropped by almost half—from \$1.4 billion to \$711 million. Almost 80 percent of the value lost was attributable to declining bulk sales values. Bulk sales, which dominated cooperative exports to Europe from 1997 through 2000, were overtaken by HVPs in 2001 and 2002, with each category comprising just under half of the total.

¹⁰ Changing Structure of Global Food Consumption and Trade

European markets for U.S. bulk commodities in general declined after the introduction of grain and oilseed price supports in the 1970s and the European Union's subsequent emergence as a net exporter of coarse grains as well as a growing market for high-value consumer-oriented products.¹¹ Europe remained the second largest market for HVPs, albeit just barely as Latin American markets continue to gain on the strength of rising consumer incomes.

Cooperative sales to Canada dropped sharply in 1998 before rising through 2000, and remained fairly stable throughout the rest of the period, but only at 50 percent of the 1997 levels. Exports to Canada, dominated by bulk commodities in 1997, had leveled out to be comprised almost equally of bulk and consumer-oriented products by 2002. By 2002, bulk commodities had lost more than half of their value. HVP sales also dropped off sharply in 1998, but recovered through the period to almost 86 percent of 1997 levels.

As in Latin American markets, cooperative exports to the Middle East actually increased from \$236 million in 1997 to \$254 million in 1998 (gaining in both bulk and HVP sales) before declining throughout much of the rest of the time period. Bulk sales, which dominated cooperative exports to this region, declined to only 36 percent of 1997 levels, while modest sales of HVPs actually gained ground by about 25 percent.

Sales to African markets, dominated by bulk sales—much of it through aid programs, were down by one-third over the period. Bulk commodities lost 62 percent of their value by 2002. Sales of HVPs in Africa averaged only \$7 million per year, most of it to South Africa—the continent's only developed market.

Cooperative Shares of U.S. Exports

Cooperatives' contribution to U.S. agricultural trade can be partially measured by shares—the percent of all U.S. agricultural sales accounted for by cooperatives. This is only a partial measure in that it does not include products originated by cooperatives and initially sold domestically, then exported by another firm, either in its original form or as a processed product. As shown in Figure 10, the cooperative share of all U.S. exports reached its low point of 8.6 percent in 2002, compared to its high of 13.8 percent in 1997. Similarly, cooperative's bulk commodity share dropped from a high of 23.2 percent in 1997 to just 12.6 percent in 2002. HVP shares also declined over the entire period—though more modestly than bulk—from their highest

point of 7.2 percent in 1997 to 5.7 percent in 2000, before gaining slightly to just over 6 percent in the last 2 years of the period.

U.S. agriculture is twice as dependent on foreign markets compared to the general economy.¹² Measured as exports divided by farm cash receipts, agriculture's "export reliance" ranged from 22 to 26 percent during the 1990s. Export reliance for agricultural cooperatives—measured as export sales reported divided by net business of all cooperatives—ranged from 6 percent to almost 10 percent during the period 1997 to 2002. Again, because "export sales" as used in this survey include only direct sales, products that may have been originated by cooperatives and sold through or to an export intermediary would not be reflected.

Product Category Detail

Bulk Commodities

Until 2002, wheat had historically been the largest component in the cooperative bulk export sales category, accounting for as much as 64 percent of bulk exports in 2000, and averaging more than 40 percent over the period. It also was the most volatile, owing not only to price and currency issues throughout the period, but also to changes in the cooperative grain subsector, including divestiture of export facilities, the formation of alliances with other firms that took over direct exporting functions, and the failure of an important cooperative wheat trader. The value of cooperative wheat exports plummeted 84 percent over the period (Figure 11). Its value in 1998 dropped 49 percent to \$1.1 billion before sharply spiking up more than 118 percent to almost \$2.6 billion in 2000. Its precipitous fall to only \$350 million in 2002—a drop of 74 percent from the previous year—likely reflects a permanent change in cooperative structure—the exit of one of the largest cooperative exporters, Farmland Industries.

Export sales of coarse grains (primarily corn), usually a significant component of bulk sales, declined 66 percent over the entire period, but experienced an even sharper drop—95 percent—from 1997 to 1998 before recovering to \$561 million by 2002, just one-third of its 1997 value. The emergence of several significant competitors played a role here, as well as the impact of biotechnology as some markets refused to

¹¹ Whitton p.2.

¹² Foreign Agricultural Service/Online: Importance of Trade for Agriculture. June, 2002.
www.fas.usda.gov/info/factsheets/TPA/economy.html.

Figure 10—Cooperative Shares of U.S. Exports, by Commodity Group 1997-2000

Percent

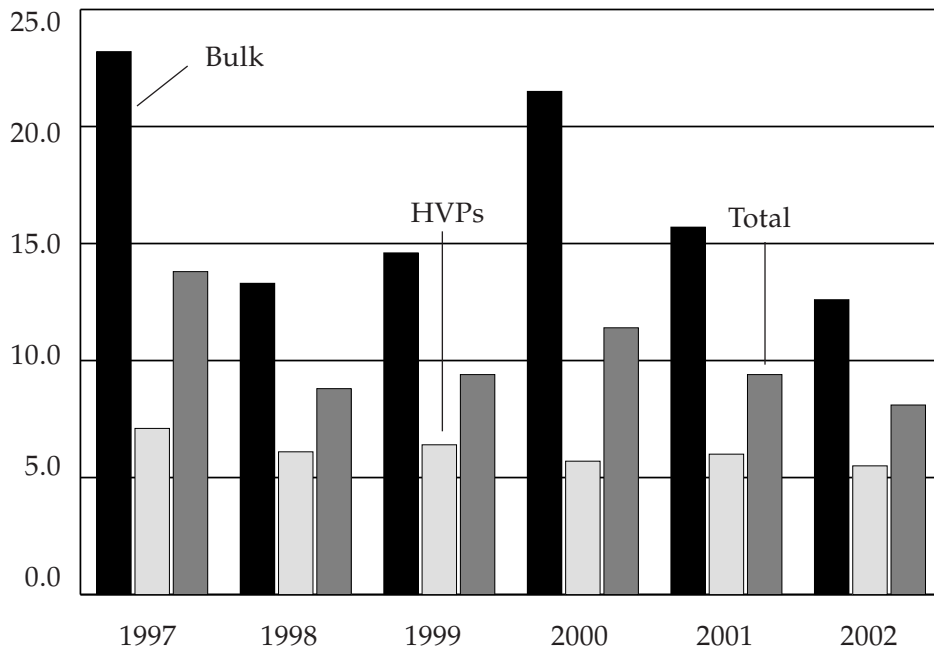
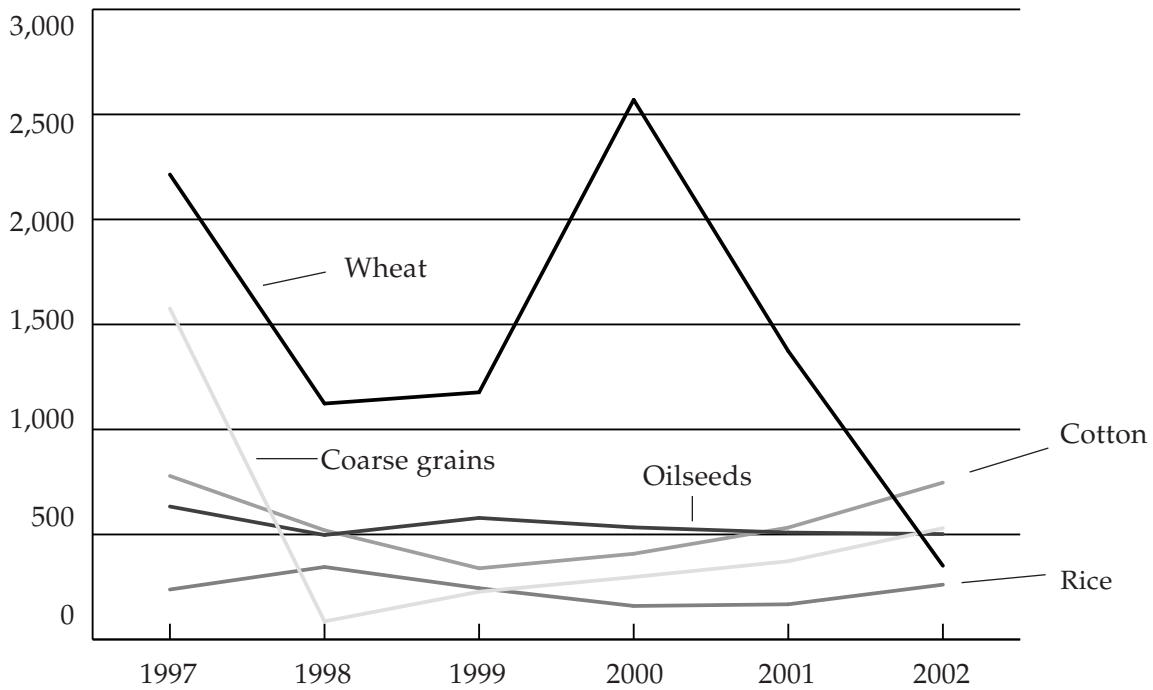


Figure 11—Bulk Exports by Cooperatives 1997-2002

Million dollars



accept genetically modified grains. Together, wheat and coarse grains account for 95 percent of the drop in cooperatives' total bulk export sales.

Cotton exports, always a significant component in the cooperative export mix, were down just 4 percent from 1997 to 2002. However, during the beginning of the period, they declined 56 percent through 1999 before climbing back to near-1997 levels in 2002. Cotton was the highest valued cooperative bulk export in 2002.

Sales of oilseeds—mainly soybeans—fell 20 percent over the entire period, though most of this decline occurred in the early years and sales were fairly stable throughout the remainder of the period.

Rice was one of the few cooperative exports that actually gained from 1997 to 1998, increasing in value 45 percent from \$237 million to \$345 million. Export values then fell about 30 percent in each of the next 2 years before rising to above-1997 levels in 2002, likely on the strength of strong demand from Brazil and other Latin American markets.

High-Value Products (HVPs)

Raw HVPs. Raw HVPs are those products with a relatively high unit value due to product attributes and/or the need for special handling, but which have undergone little or no processing. For cooperatives, these are mainly fresh fruit-citrus and deciduous—and tree nuts. Raw HVP exports occurring in less significant amounts are combined in “Other” and include live animals, fresh vegetables, planting seeds, nursery products, and cut flowers.

Overall, raw HVP export values declined by more than one-third over the period. Falling fresh fruit sales accounted for more than 70 percent of that decline. As shown in Figure 12, until 2002, fresh fruit was cooperatives' dominant raw HVP export, accounting for as much as 56 percent of that category. The Asian financial crisis that led to changes in consumption patterns played a significant role here, as have prohibitively high tariffs in some markets. In addition, increased competition from China as well as changing tastes in domestic markets forced the closure of a number of cooperative apple packers in the Pacific Northwest.

Cooperatives are a major presence in the tree nut industry, which is highly dependent on exports that annually account for over 40 percent of U.S. tree nut supplies.¹³ Cooperative exports fell 38 percent through 2000 in the face of low producer prices and

subsequent production and export declines, before climbing back to near 1997 levels to overtake fresh fruit exports.

Semi-Processed HVPs. This category includes products that are partially processed for ingredient markets or are otherwise not considered ready for final consumers. These products include feeds, meals (primarily soybean), vegetable oils (primarily soybean), and for cooperatives, other less significant products such as hides and skins, sugars, sweeteners, and beverage bases.

As seen in Figure 13, meals are clearly the most volatile component of this category, although the reasons for this are not clear. Feed continue to be the largest component through much of the period, but at much lower levels after dropping off in 1998. Vegetable oils had been a significant component before 1998, but now barely register.

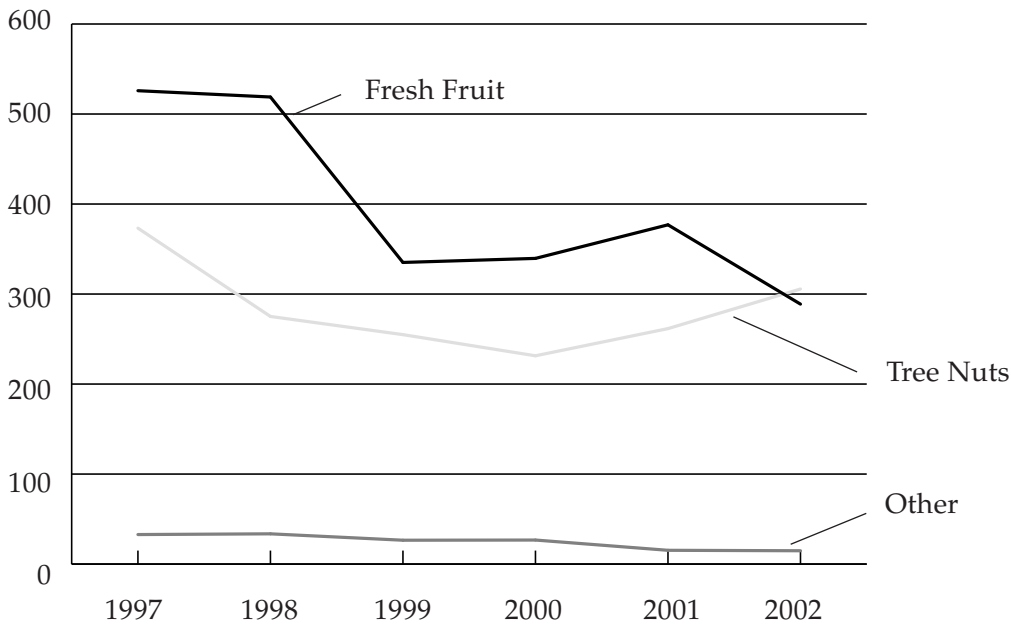
Processed HVPs. Since the mid-1990s, meat products (beef, pork, and poultry) have overtaken processed fruits and vegetables as the largest component (in terms of value) in the cooperative trade of processed HVPs (Figure 14). Indeed, concentrated efforts by a few large cooperatives greatly elevated the cooperative presence in markets for meat, both internationally and domestically. Meats accounted for an average of 54 percent of all cooperative exports of processed HVPs over the period. Cooperatives experienced price-related declines in meat export values in 1998 and 1999, but saw significant growth from 1999 through 2001 on strong demand in key markets. Processed fruits and vegetables declined almost as precipitously. Export levels of these types of consumer-oriented products are often subject to fluctuations in exchange rates.

The increases evident in exports of dairy products as of 2001 are likely due to reporting changes, as well as the advent of several dairy exporting coalitions, specializing primarily in the sale of nonfat dry milk.

¹³ USDA/ERS, Briefing Room: Fruit and Tree Nuts. www.ers.usda.gov/Briefing/FruitAndTreeNuts/trade.html

Figure 12—Cooperative Exports of Raw HVPs 1997-2002

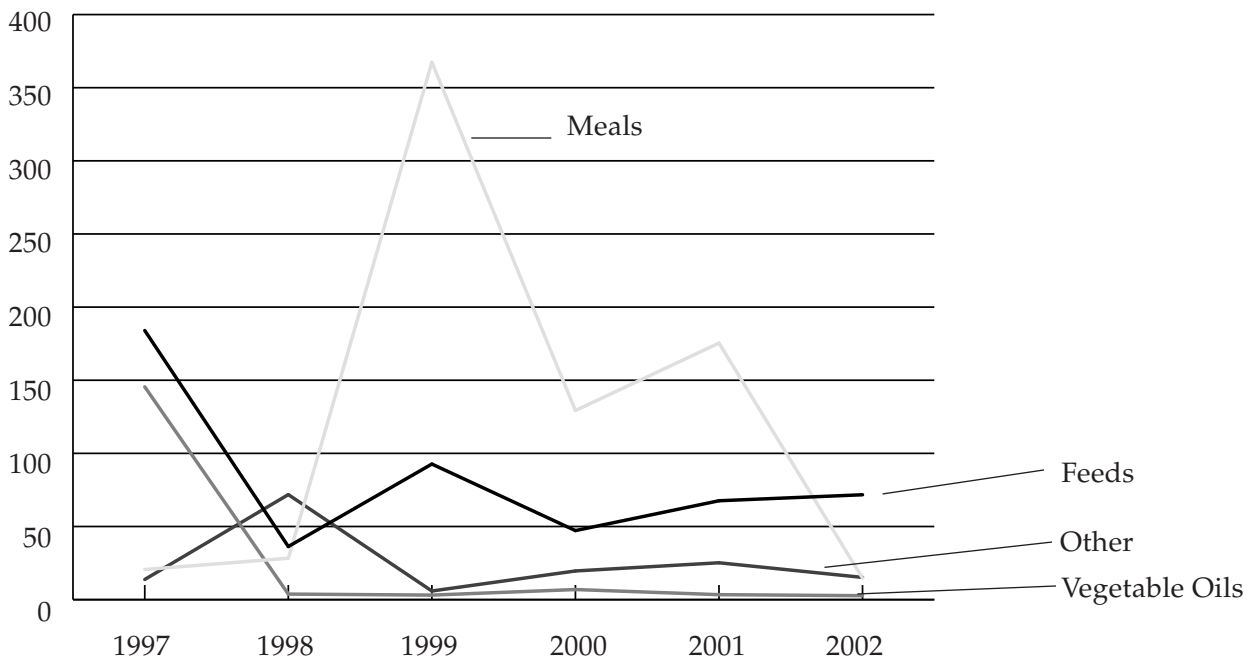
Million dollars



Other semiprocessed HVPs includes hides and skins, sugars, sweeteners, and beverage bases, and other semiprocessed HVPs not identified.

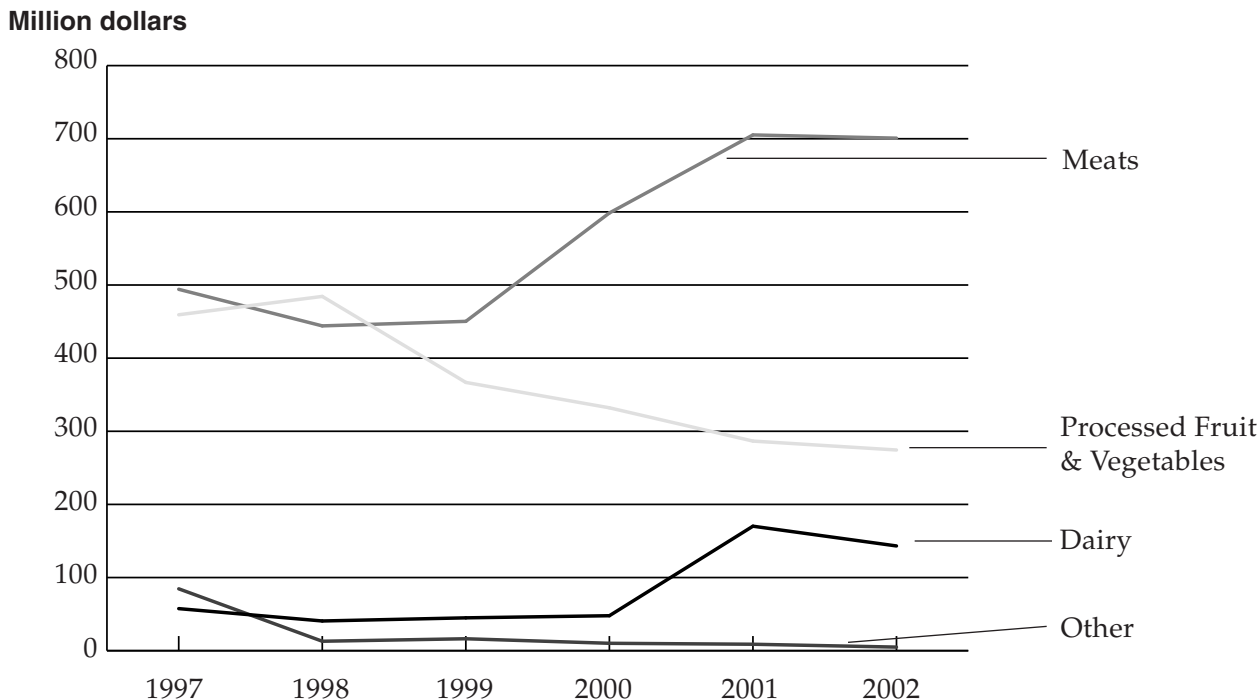
Figure 13—Cooperative Exports of Semi-Processed HVPs

Million dollars



Other semiprocessed HVPs includes hides and skins, sugars, sweeteners, and beverage bases, and other semiprocessed HVPs not identified.

Figure 14—Cooperative Exports of Processed HVPs 1997-2002



Other processed HVPs includes flours, pet foods, frozen bull semen, wine & beer, snack foods, and other processed HVPs not specifically identified.

Summary

The future of producer-owned cooperatives in international markets is uncertain. As a group, cooperatives did not keep pace with the global trend toward more reliance on exports of HVPs rather than more volatile commodities. At the same time, that cooperative base in bulk commodity exports were eroded by the emergence of formidable competitors in world grain markets, as well as instability among some large cooperative exporters. Individually, though some cooperative exporters of HVPs continue to do well, others struggle with foreign competition and the need to access capital to boost marketing efforts. Increased attrition as cooperatives fail or transition away from the cooperative form of business will continue to erode direct producer presence in international markets. The data presented here point to two key questions: 1) At what level can producer-owned bulk commodity handlers function in a global market? And 2) Can cooperatives—especially those in high-value markets—evolve structurally and operationally in a way that allows them to remain competitive, but still adequately represent producer interests? The answers to these questions may be the key to whether the trends appar-

ent in this data are transitory or whether they represent significant permanent change in the cooperative presence in global markets.

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Appendix A—Data Tables

Table 1—**Agricultural Exports by Cooperatives, 1997-2002 (\$ millions)**

	1997	1998	1999	2000	2001	2002
Bulk Commodities	\$ 5,482	\$2,609	\$ 2,591	\$ 3,997	\$ 2,969	\$2,472
HVPs	2,392	1,950	1,964	1,849	2,096	1,836
Total	\$7,874	\$4,559	\$4,555	\$5,846	\$5,065	\$4,308

Table 2—**Cooperative Exports by Destination, 1997-2001 (\$ millions)**

	1997	1998	1999	2000	2001	2002
Africa	\$405.9	\$373.5	\$213.5	\$602.8	\$195.8	\$149.9
Asia	\$3,907.9	1,444.6	\$1,428.9	\$2,459.3	\$1,937.3	\$1,728.9
Canada	\$684.7	\$211.8	\$249.1	\$353.4	\$333.5	\$345.5
Europe	\$1,393.6	\$942.7	\$898.6	\$581.2	\$631.5	\$711.6
Latin America	\$796.0	\$956.0	\$1361.2	\$1404.6	\$1,363.2	\$939.1
Middle East	\$236.6	\$254.2	\$155.6	\$84.9	\$329.4	\$100.2
Other*	\$449.3	\$376.8	\$248.9	\$359.9	\$274.7	\$344.2
Total	\$7,877.4	\$4,559.7	\$4555.8	\$5846.3	\$5,066.6	\$4,308.9

* Includes Oceania and unidentified destinations

Table 2a—**Cooperative Exports of Bulk Commodities by Destination, 1997-2002 (\$ millions)**

	1997	1998	1999	2000	2001	2002
Africa	\$395.2	\$345.1	\$201.5	\$592.4	\$193.2	\$147.1
Asia	\$2,817.6	\$408.2	\$549.5	\$1,520.9	\$884.7	\$781.5
Canada	\$415.7	\$111.4	\$69.6	\$96.2	\$120.9	\$181.1
Europe	\$964.7	\$560.9	\$456.4	\$321.4	\$296.6	\$418.7
Latin America	\$610.6	\$741.0	\$1,103.7	\$1,164.9	\$1,101.2	\$623.9
Middle East	\$197.5	\$209.4	\$119.4	\$57.8	\$286.7	\$71.9
Unidentified	\$81.4	\$233.8	\$91.7	\$243.4	\$86.0	\$247.9
Total	\$5,482.7	\$2,609.8	\$2,591.8	\$3,997.0	\$2,969.3	\$2,472.1

Table 2b—Cooperative Exports of HVPs by Destination, 1997-2002 (\$ millions)

	1997	1998	1999	2000	2001	2002
Africa	\$5.8	\$10.3	\$1.4	\$8.2	\$11.3	\$2.9
Asia	\$1,025.1	\$1,000.9	\$796.3	\$908.6	\$968.4	\$947.4
Canada	\$185.5	\$81.5	\$127.9	\$133.1	\$156.7	\$153.9
Europe	\$387.8	\$343.9	\$285.8	\$228.4	\$301.9	\$292.9
Latin America	\$145.4	\$171.9	\$126.9	\$205.1	\$236.7	\$315.3
Middle East	\$37.7	\$51.3	\$31.7	\$45.4	\$40.8	\$28.2
Unidentified	\$208.2	\$125.4	\$97.7	\$97.8	\$103.4	\$96.2
Total	\$1,989.7	\$1,774.9	\$1,466.3	\$1,618.4	\$1,807.9	\$1,836.8

Table 3—Cooperative Shares of U.S. Agricultural Exports, 1997-2002

	1997	1998	1999	2000	2001	2002
Bulk	23.2%	12.8%	15.4%	21.5%	15.7%	12.6%
HVPS	7.2%	6.5%	6.4%	5.7%	6.0%	6.2%
Total	13.8%	8.9%	9.7%	11.4%	9.4%	8.6%

Table 4—Bulk Commodity Exports by Cooperatives, 1997-2002 (\$ millions)

	1997	1998	1999	2000	2001	2002
Wheat	\$2,213.9	\$1,123.3	1,176.8	2,569.6	1,372.8	350.9
Coarse Grains	\$1,575.7	\$86.2	227.5	297.4	372.6	530.1
Rice	\$237.9	\$345.2	244.2	159.5	167.5	261.0
Oilseeds	\$633.1	\$497.5	578.8	533.7	509.1	501.9
Cotton	\$778.6	\$520.0	338.9	408.1	532.8	746.9
Other Bulk	\$43.5	\$37.4	25.6	28.7	14.6	81.2
Total	\$5,482.7	\$2,609.6	2,591.8	3,997.0	2,969.4	2,472.0

Table 5—Cooperative Exports of Raw HVPs, 1997-2002 (\$ millions)

	1997	1998	1999	2000	2001	2002
Fresh Fruit	525.9	518.9	335.1	339.6	376.9	288.8
Tree Nuts	373.2	275.1	254.9	231.4	261.6	305.6
Other	32.8	33.6	26.5	26.7	15.3	14.8
Total	931.9	827.8	616.5	657.8	653.9	609.2

Table 6—**Cooperative Exports of Semi-Processed HVPs, 1997-2002 (\$ millions)**

	1997	1998	1999	2000	2001	2002
Feeds	184.0	36.3	92.7	47.2	67.6	71.7
Soybean meal	20.6	28.3	367.4	129.3	175.4	14.7
Vegetable oils	145.5	3.8	3.1	6.9	3.4	2.7
Other	13.8	71.8	5.9	19.6	25.2	15.2
Total	363.9	140.2	469.1	202.9	271.6	104.3

Table 7—**Cooperative Exports of Processed HVPs, 1997-2002 (\$ millions)**

	1997	1998	1999	2000	2001	2002
Dairy Products	57.5	40.6	44.9	47.8	170.2	143.2
Proc. Fruit & Vegetable	459.3	484.4	366.8	332.1	286.6	274.4
Meats	494.1	444.1	450.3	598.5	705.2	700.8
Other	84.6	12.9	16.3	10.1	8.8	4.9
Total	1,095.6	982.0	878.4	988.5	1,170.8	1,123.3

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The cooperative segment of RBS (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs. RBS also publishes research and educational materials and issues *Rural Cooperatives* magazine.

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