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Staff Paper

MARKET TRENDS AND MARKETING CONSIDERATIONS FOR HAZELNUTS

by

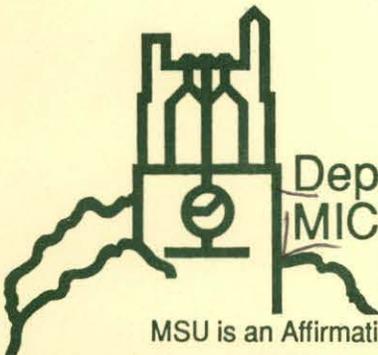
Donald Ricks and Patricia Cely

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Market Trends and Marketing Considerations for Hazelnuts *

by Donald Ricks and Patricia Cely**

Introduction

Can Michigan develop a substantial commercial hazelnut industry? That is a question which has been receiving considerable attention during the last few years. There are some Michigan people who are knowledgeable about hazelnuts who believe that the answer to that question is, "yes". On the other hand, although there seems to be a number of factors which are favorable for the development of a hazelnut industry in Michigan, more comprehensive information is needed on a number of important aspects. In order for a hazelnut industry to grow and to be sustainable, hazelnuts in Michigan must generate sufficient net income to provide profitable returns on investment.

One important part of the information that is needed for Michigan to explore the possibility of developing a profitable, substantial hazelnut industry is information on market and supply trends for the established hazelnut industry. A summary of some of the recent trends on hazelnut supply and markets is the main topic of this paper.

Almost all of the hazelnuts produced in the U.S. are grown in the Willamette Valley of Oregon. Because of its somewhat unique climate, which involves mild, rainy winters and cool, dry summers, the Willamette Valley has had a long-term climatic monopoly on the commercial production of hazelnuts in the United States. Some people who are knowledgeable about hazelnut growing techniques in Michigan, believe that it is not assured that Oregon must continue to maintain its climatic monopoly for growing hazelnuts. These people think there is a

*Based upon a presentation given at a Hazelnut and Chestnut Conference in Traverse City, Michigan, March 23, 1991. Much of the information on markets and supply trends summarized in this paper is part of a research project in progress which will result in a forthcoming Masters degree report by Patricia Cely.

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good possibility that Michigan can also successfully grow hazelnuts. That possibility needs continuing further analysis on various technological and economic aspects related to Michigan conditions.

It is interesting to note that, aside from hazelnuts, the tree crops grown in Oregon's Willamette Valley are similar to those grown in Michigan (Table 1). During the 1970's and 1980's Oregon's acreage of prunes and sweet cherries declined due to market related, low-price pressures. Michigan growers of those two crops also felt somewhat similar market pressures. In contrast to sweet cherries and plums, during the last two decades hazelnut acreage in Oregon increased considerably because of favorable markets. Can Michigan, with its different climate also develop and expand hazelnut acreage and production?

Table 1. TREE-FRUIITS AND NUTS IN OREGON'S WILLAMETTE VALLEY

	<u>ACRES</u>
HAZELNUTS	28,000
SWEET CHERRIES	4,500
PRUNES	2,800
TART CHERRIES	2,200
PEACHES	1,000
APPLES	1,000
PEARS	400

How might a crop, which is essentially brand-new, at least in commercial volume, fit into Michigan's tree and perennial crop picture in the future? The current acreages of Michigan's perennial crops, as indicated by the latest acreage surveys, are shown in Table 2. A new, untried crop like hazelnuts is not likely to replace any of Michigan's top four perennial crops, which are apples, tart cherries, asparagus and blueberries. On the other hand, if hazelnuts can

be profitably grown in Michigan, perhaps they might fit in somewhere as a crop of moderate acreage which adds to Michigan's diversity. Part of the current interest in a new crop like hazelnuts is, of course, because each of Michigan's top four established crops, apples, cherries, asparagus and blueberries, have either experienced serious problems of over supplies and low prices, or are in danger of facing oversupplies sometime within the next few years. By contrast, the available information from the established Oregon hazelnut industry indicates that hazelnuts have had a supply-demand balance that has been generally favorable for growers. Furthermore the expectation is that this favorable balance will likely continue in the foreseeable future.

Table 2. MICHIGAN FRUIT AND ASPARAGUS ACREAGE

	<u>ACRES</u>
APPLES	61,700
TART CHERRIES	44,000
ASPARAGUS	25,000
BLUEBERRIES	14,000
GRAPES	11,600
SWEET CHERRIES	10,700
PEACHES	8,800
PLUMS	3,900
PEARS	1,700
APRICOTS	240
NECTARINES	180

In analyzing the possibilities for developing an economically viable new industry, such as hazelnuts in Michigan, it is important to consider the market and supply trends of the established industry. It is also important to consider an overall, long-run strategic marketing plan for the industry in question.

An Overall Strategic Marketing Plan

Any commodity industry needs to have a well-analyzed overall strategic plan for strong marketing for that industry. This needs to include analysis of what kinds of products, quality etc. that are desired for the various market segments. This marketing plan also needs to be based upon realistic recognition of the competitive strengths and weaknesses of the industry in the state in question -- in this case Michigan. Part of an industry's marketing plan should include analysis of the most important market segments, approaches and marketing strategies that would be most appropriate for a new industry to maximize its long-term profit possibilities.

There is a need for a well-thought-out strategic marketing plan whether the industry is a long-established one like tart cherries, apples or blueberries, or whether it is a new industry such as is being considered for hazelnuts and chestnuts. If the industry is a brand new one, like hazelnuts, particularly if it is a perennial crop, the very early stages of development of that industry are a particularly good time to analyze and develop a strategic marketing plan. At that early stage there are many wide-open opportunities for good analysis and planning--but there are also many unknowns. By contrast in the long-established tart cherry industry a lot of work has been done to try to develop consensus about what the long-term strategic marketing plan ought to be. But this is much tougher to accomplish once an industry has been established, with a lot of different people's opinions. It is also much more challenging in some respects to accomplish when supplies are substantially greater than demand and hence there are severe economic pressures on the industry.

A strategic marketing plan for an industry is different than that for an individual firm. An industry's strategic plan provides overall planning guidelines. It is not real specific. Individual firms are, of course, going to operate quite differently from one another in many instances.

A Michigan industry's overall marketing plan needs to take into account major market trends and opportunities for Michigan. The industry's marketing plan should also take into account an analysis of what the established industry's marketing strategy is. Michigan's marketing strategy for hazelnuts may be somewhat the same as Oregon's, but probably will also be somewhat different in many respects.

For a marketing plan for Michigan, Michigan's competitive position needs to be analyzed along with Michigan's advantages and Michigan's obstacles. One of Michigan's major obstacles is climate. Perhaps some of Michigan's important advantages can arise from what seem to be superior varieties regarding quality and high yields that Cecil Ferris has developed. Transportation costs to certain markets would, of course, also would be one of Michigan's advantages.

A strategic industry marketing plan needs to include an analysis of what market segments or niches would be particularly advantageous for Michigan. Another aspect that needs analyzing is: Which market segments have the best potential to return high prices? For example, Oregon has found that an important high-price market is the domestic in-shell market, although this market does not seem to have large potential further growth in sales volume. Michigan needs to analyze which markets segments will likely be good high-price markets for Michigan and which have large volume growth potential for Michigan. Another aspect that needs to be analyzed is: What quality advantages might Michigan have and how can these best be exploited?

Another important aspect to keep in mind for an effective industry marketing plan is that selling cheap is a last resort in terms of an effective long-term strategy. Sometimes an industry is forced to sell cheap, and it therefore at times must be done, particularly when supplies are greater than demand. But it is an approach to be avoided if possible. A well-

analyzed long-run strategic marketing plan can be one component to help avoid the necessity of selling much of industry's production cheaply at unprofitably low prices.

In analyzing an industry strategic marketing plan, it is important to consider the potential benefits of strong industry marketing organizations. Most successful perennial crop commodity industries in the United States have a major effective marketing organization, or perhaps a combination of marketing organizations in the industry. These can help expand the demand for the commodity and can provide strong marketing for that commodity. Many Oregon hazelnuts, for example, are marketed by the large Sun-Diamond organization which has several national brands that are owned by its members including Diamond Walnuts, Sun-Maid Raisins and Sunsweet Prunes. Many hazelnuts are also marketed by Blue Diamond which has long been the industry-dominating co-operative for the almond industry. Another example is Ocean Spray which markets a very high percentage of the U.S. cranberry industry's output.

The early stages of development of a new industry is a particularly opportune time to think about and perhaps develop a marketing organization and effective marketing arrangements. When the blueberry industry was getting started in Michigan back in the 1930's, the leaders and pioneers in that industry had the foresight to realize the importance of a strong marketing organization for their infant industry. It is reported that back when there were only about 10 major blueberry growers, they all got together and formed a major marketing organization for the industry called The Michigan Blueberry Growers Association. This organization provided strong marketing and aided the Michigan industry's growth during the several decades of the development of that industry. The blueberry marketing organization was a very important part of the growth of that industry into one that is quite large today. Perhaps a similar marketing organization would be desirable for strong nut marketing if a hazelnut, or a chestnut industry is to develop in Michigan.

The Oregon hazelnut industry has a combination of marketing organizations. In addition to the two previously mentioned co-operatives, Sun-Diamond and Blue Diamond, the hazelnut industry has a bargaining association and a federal marketing order supply management program. This combination of marketing organizations helps the hazelnut industry to implement their long-term marketing strategies for the industry. Apparently this combination of marketing organizations is working fairly well for them. It is important for Michigan to analyze what combination of marketing organizations would be most effective if a Michigan hazelnut industry can be established.

Trends for Major Hazelnut Markets

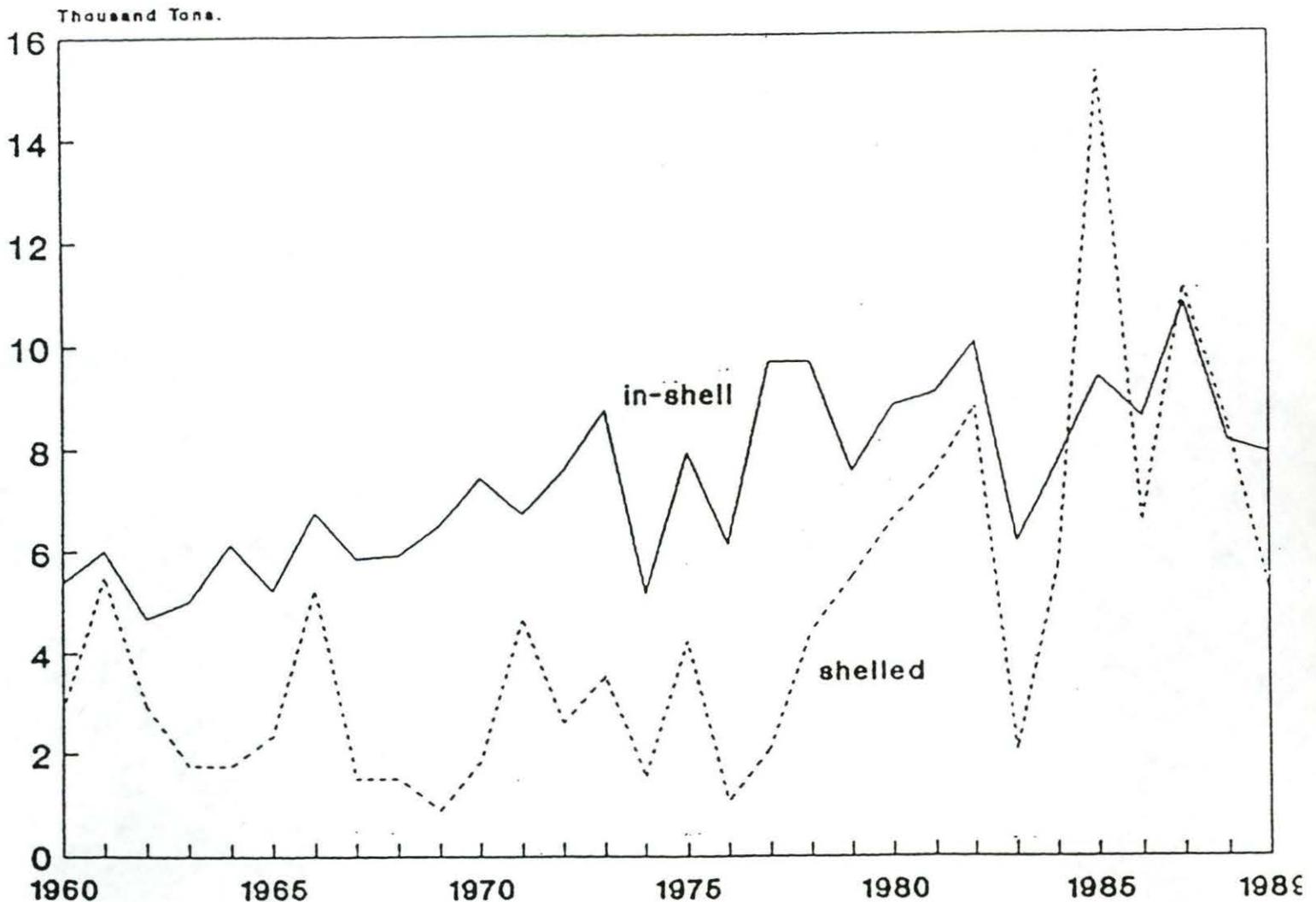
Two major market categories for hazelnuts are the in-shell and the shelled markets. Trends in industry sales for these two major markets are shown in Figure 1.

The trend for the in-shell market is relatively flat. There have also been some fluctuations in the in-shell sales, in part, because of crop size fluctuations. The Oregon industry indicates that they expect the flat, little growth trend for in-shell hazelnuts to continue. So this mature market does not seem to have a lot of growth potential, particularly for the domestic portion of the in-shell market.

The in-shell nuts are primarily sold around the holiday season for Thanksgiving and Christmas. It is a high-priced market. So part of the strategy of the established industry is to fill that high-priced market first. On the other hand they try not to oversupply this market, because that would take away some of the important advantages that they have regarding high prices.

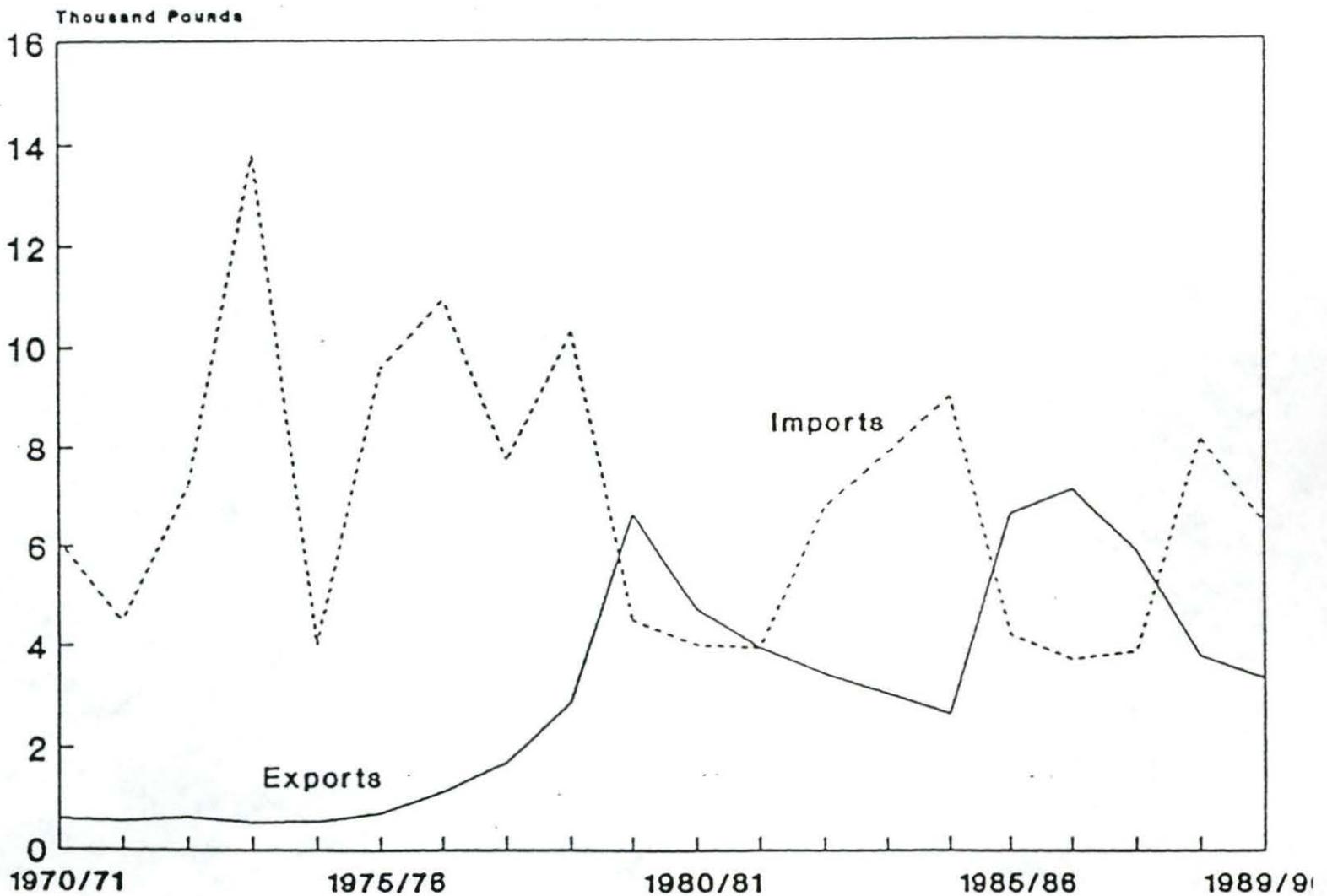
The main growth market for the established hazelnut industry has been the shelled market (Figure 1). Although there has been some annual fluctuations in industry sales of shelled hazelnuts, there has been a significant upward growth trend in this market during the late 1970's and the 1980's. The hazelnut industry expects this growth trend to continue in the future -- both for domestic sales and for export sales. So for the U.S. as a whole the main market with a potential for substantial growth is for shelled hazelnuts.

FIGURE 1 HAZELNUTS - UTILIZATION OF SALES



Both imports and exports are quite important for U.S. hazelnut markets. The trend for exports of hazelnuts from the U.S. is up somewhat, as is shown in Figure 2. This expansion of exports is desirable for the U.S. hazelnut industry. The trend on imports of hazelnuts into the U.S. is down (Figure 2). Imports also fluctuate substantially from year to year depending, in part, upon the size of the crop in the U.S., upon the world hazelnut production and upon foreign exchange rates. As hazelnut production in the United States is expanding, the U.S. hazelnuts are substituting to some extent for some of the imports.

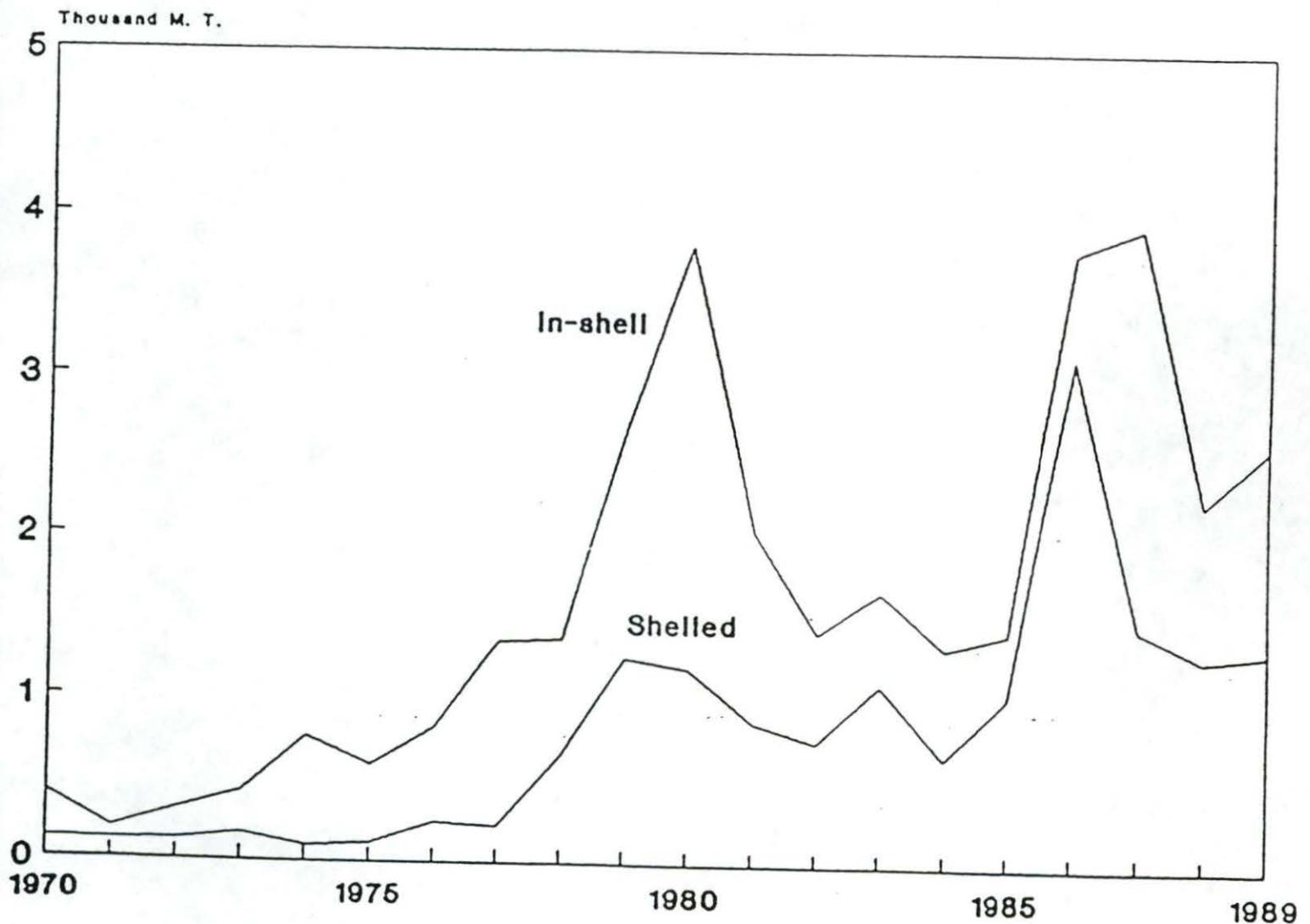
FIGURE 2 HAZELNUTS - IMPORTS AND EXPORTS



Exports of in-shell hazelnuts have shown an upward trend (Figure 3). There are substantial fluctuations in these exports as well. U.S. in-shell exports are expected to continue to increase in the future. The U.S. industry has some real advantages in the in-shell export market for hazelnuts. The U.S. produces large, high quality nuts that are well received, especially in some of the main importing countries such as Germany.

The export market for shelled or kernel nuts is highly price competitive. The main export competition is provided by Turkey and Italy. These countries produce generally large supplies of small nuts which are often exported at very competitive prices. They also have freight cost advantages to western European export markets. The U.S. does not seem to have

FIGURE 3 HAZELNUTS - TOTAL EXPORTS

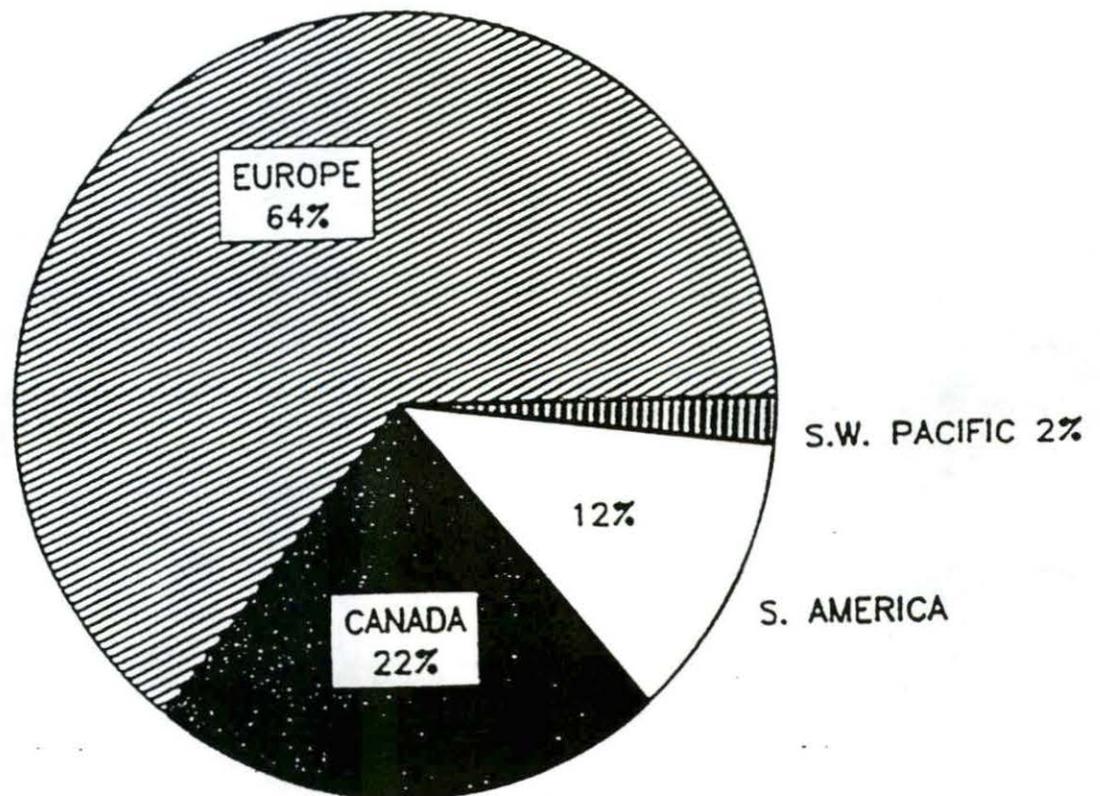


any pronounced advantages in this highly price-competitive shelled export market. This market has shown a small amount of growth trend for the United States. It is, furthermore, not considered a market with high potential for future growth for U.S. exports. This is, in part, because of the need to compete strongly price-wise with the large supplies from Turkey and Italy.

Exports of in-shell hazelnuts from the U.S. are sold heavily into Europe, especially to Germany (Figure 4). Canada also receives a significant share of U.S. in-shell exports. Some of these in-shell exports also go to South America.

FIGURE 4

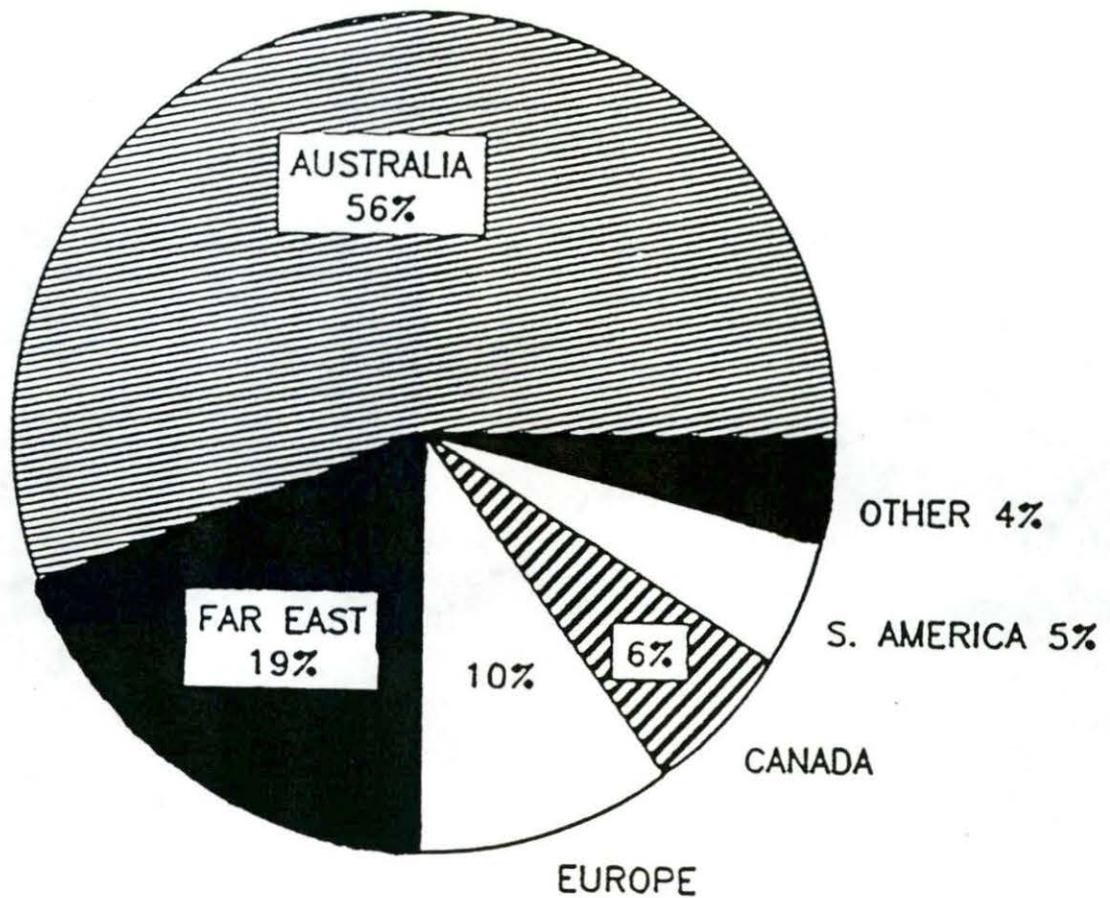
HAZELNUT EXPORTS IN-SHELL



Exports of the shelled kernels (Figure 5) go to very different countries in the world in comparison to in-shell nuts. Many shelled hazelnut exports are sold to Australia and Far Eastern countries. Some, but smaller amounts, go to Europe and to Canada. Since the Turks, with their low-price kernels, are highly competitive in the European markets for kernels, the U.S. exports only small amounts to the European markets for shelled hazelnuts.

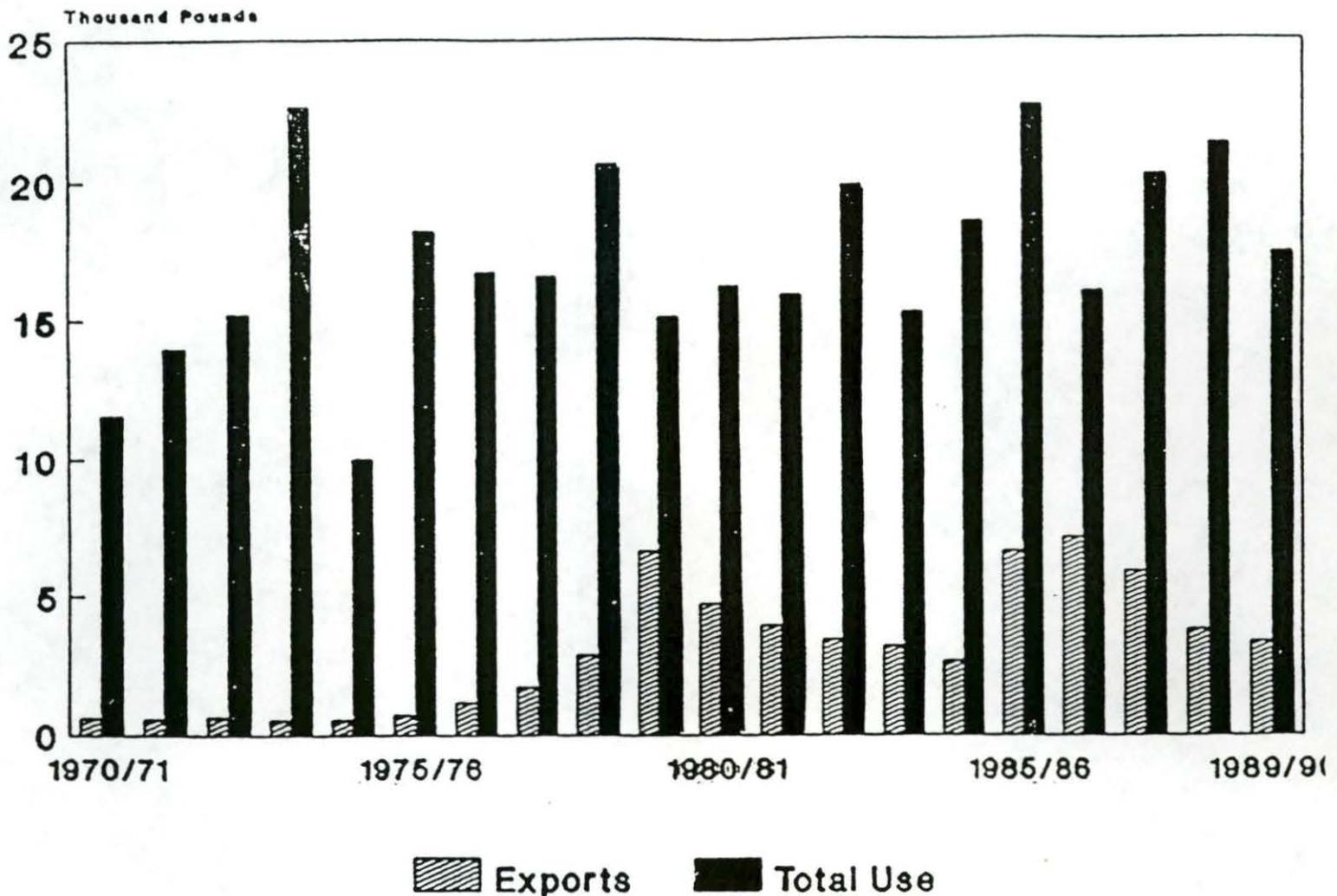
FIGURE 5

HAZELNUT EXPORTS OF KERNELS



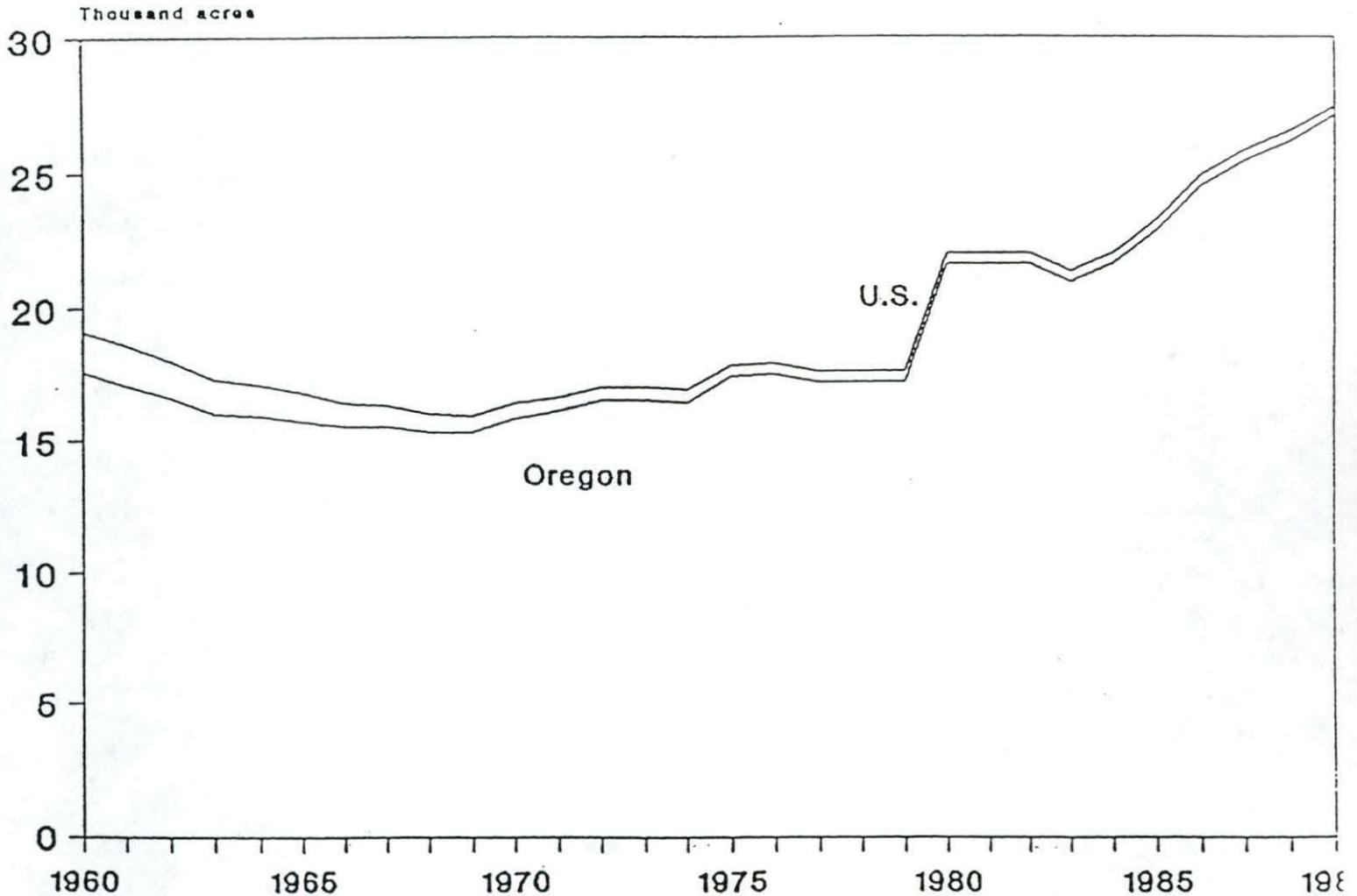
Eventhough the export markets are important and expanding, the U.S. market is really the more important one in respect to volume of sales. This is illustrated in Figure 6. The U.S. market takes considerably more volume of hazelnuts than does the export market. The domestic market would be top priority for Michigan-grown hazelnuts, although the export markets also affect the overall U.S. supply-demand situation and the markets for the established industry in Oregon.

FIGURE 6 HAZELNUTS - EXPORTS AND TOTAL USE



On the supply side, trends in bearing acreage provide a useful indicator of past and future production. The trend in bearing acreage is shown in Figure 7. The bearing acres were quite stable for a long time until the late 1970's. Then during the 1980's bearing acres of hazelnuts have expanded substantially. The expansion of bearing acres is expected to continue in the future.

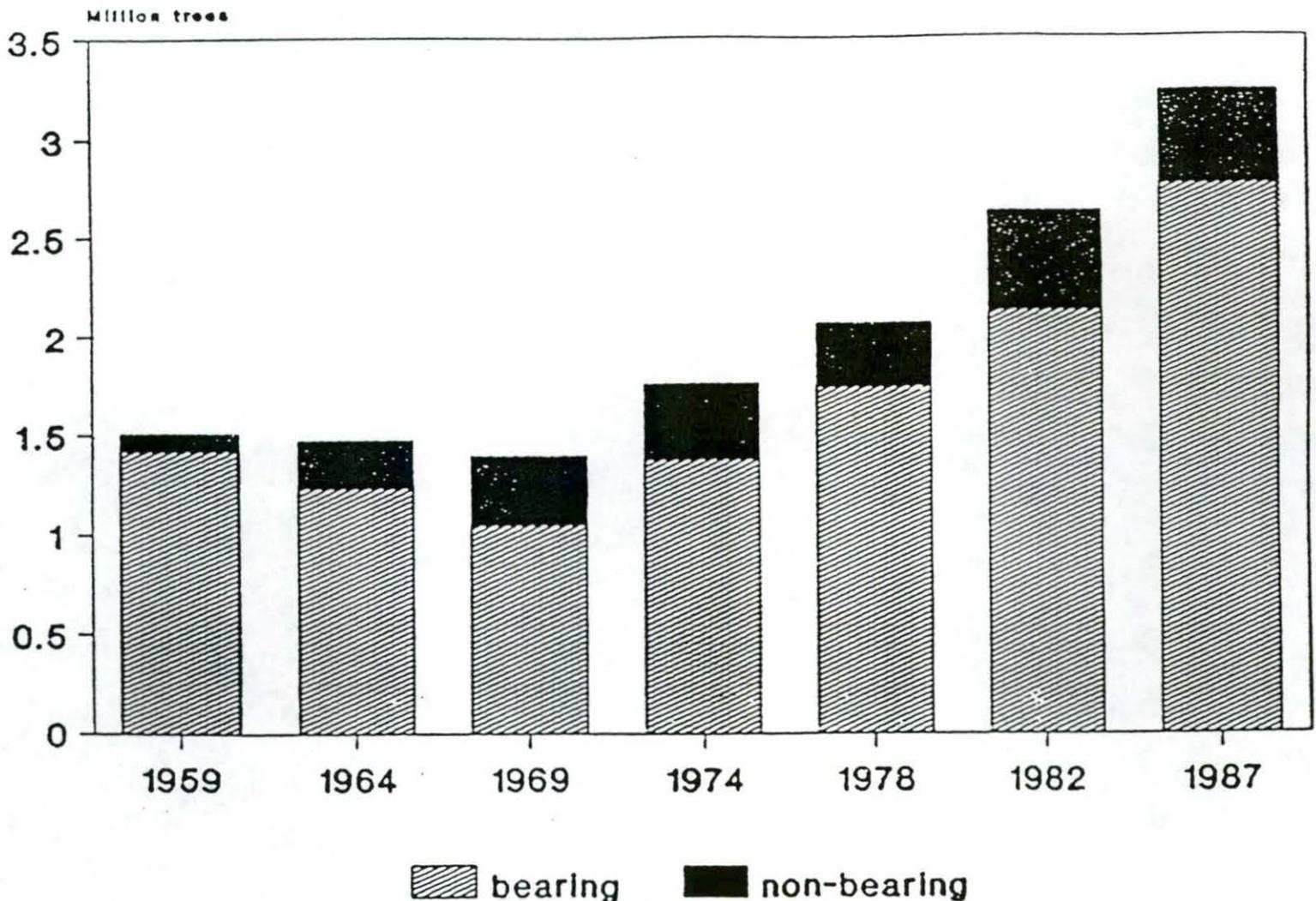
FIGURE 7 HAZELNUTS - BEARING ACREAGE
Oregon and U.S.



New plantings and non-bearing acreage have been relatively high during the late 1970's and 1980's (Figure 8). Non-bearing acres remain high and are a major reason that future U.S. hazelnut production is expected to expand.

Expanding acreage means increasing supplies to compete for markets for U.S. hazelnuts. On the other hand the expanding production does not seem likely to be an overpowering phenomenon. The established industry believe that the demand is likely to grow considerably with good potential to possibly grow is as much or more than the supplies. This is in contrast to the supply-demand situation for Michigan's top perennial crops, tart cherries and apples, and perhaps blueberries and asparagus in the future as well.

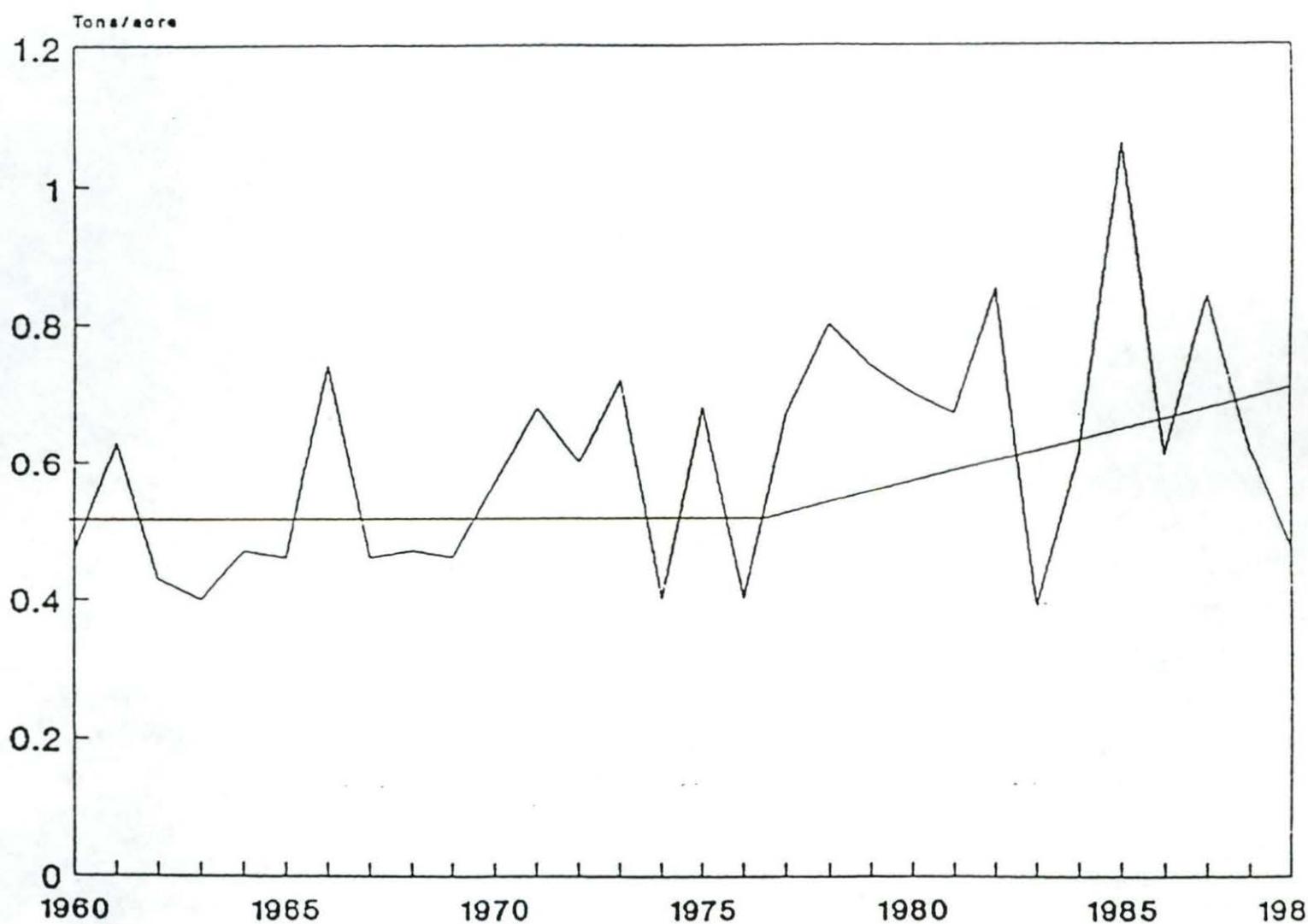
FIGURE 8
HAZELNUTS- BEARING AND NON-BEARING TREES



A major reason why hazelnut acreage in Oregon has been increasing is that this crop has been a moderately profitable one for a number of years. Oregon people indicate that although hazelnut growers cannot expect real large, get-rich profits, moderately positive profits have occurred for most of the last 10-15 years and are expected to continue in the foreseeable future.

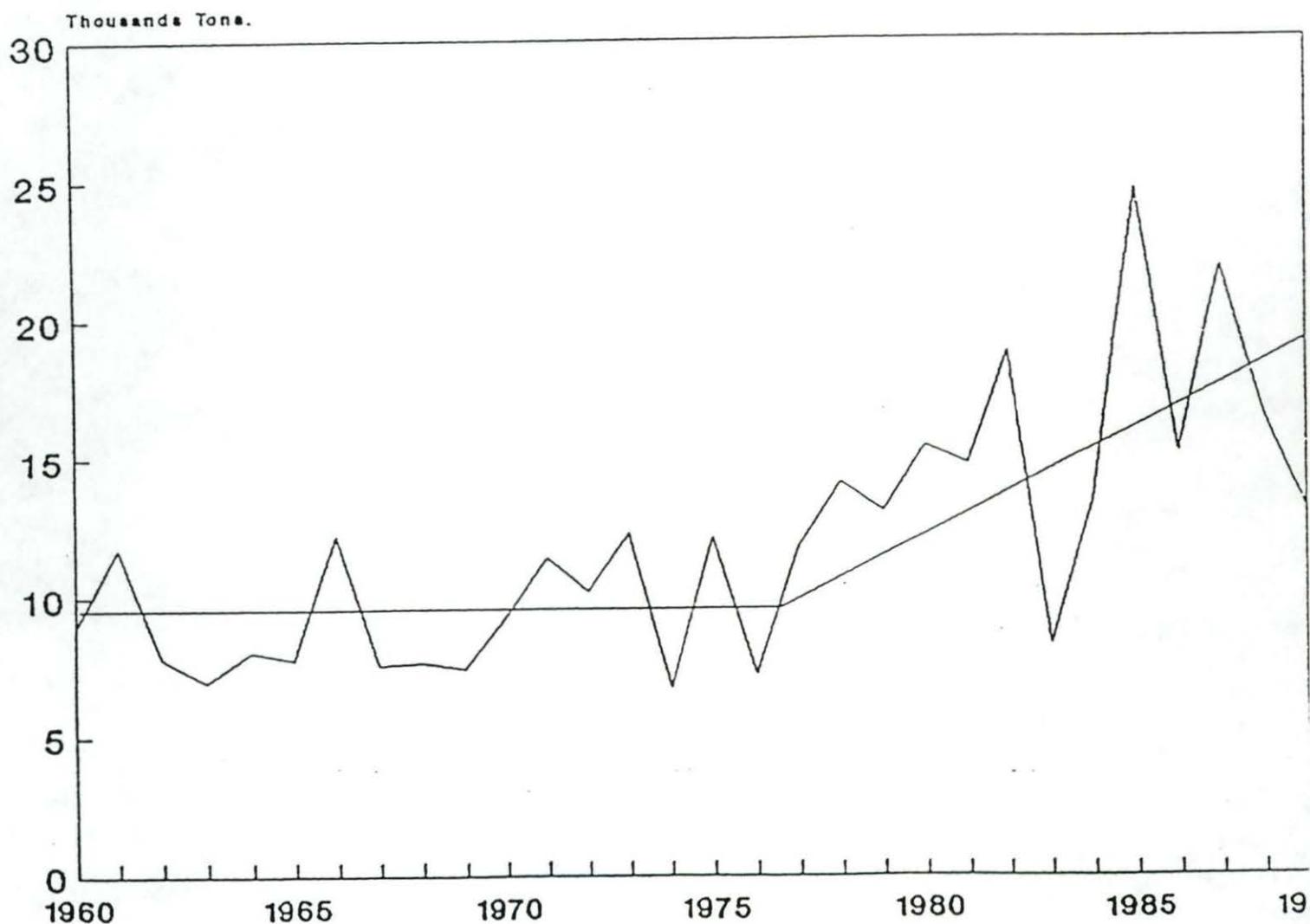
Supplies of a crop like hazelnuts are also affected by yields per acre. There has been an upward trend in average yields per acre in Oregon since the late 1970's (Figure 9). Average yields have also shown substantial annual fluctuations.

FIGURE 9 HAZELNUTS - YIELD PER ACRE



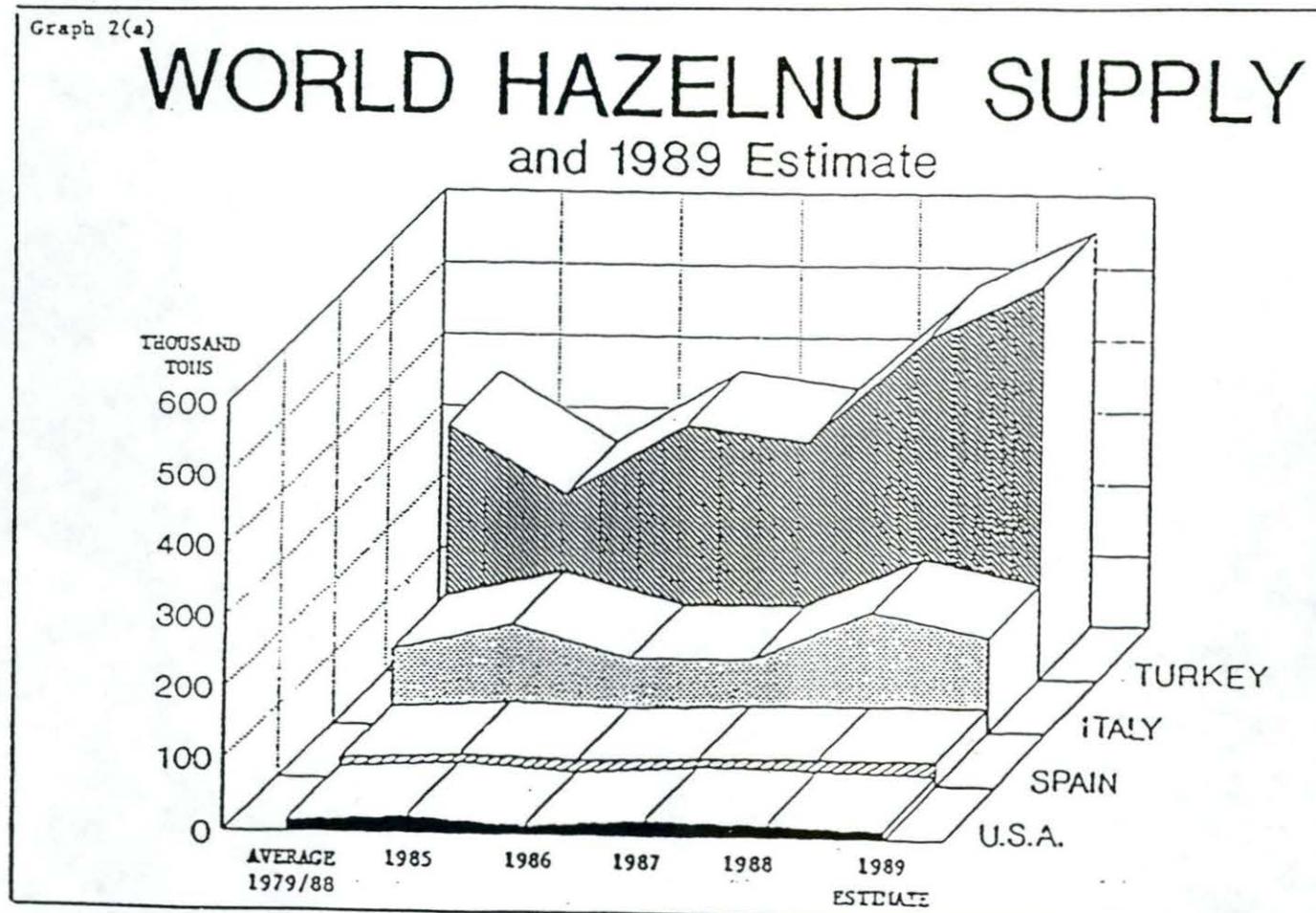
The combination of the trend toward higher yields per acre plus the trend toward more bearing acres together provide a definite upward trend in national supplies of hazelnuts. This is illustrated clearly in Figure 10. It is interesting to note that until the late 1970's, there was a flat trend in U.S. hazelnut production. Since the late 1970's, however, there has been a substantial upward trend in production and supply because of the growing acreage and upward yield trend. It is quite positive on the other hand that the established industry believes that demand has expanded and can continue to expand in a comparable magnitude to the supply increases.

FIGURE 10 HAZELNUTS - U.S. PRODUCTION



World supplies can have a substantial impact on U.S. export markets and upon imports into the United States. World supplies are also important in their impact on prices both in other countries and the United States. Turkey is the largest hazelnut producing country. As shown in Figure 11, Turkey produces many times more hazelnuts than does the United States. Italy is the second largest producing country. Spain also produces hazelnuts in somewhat larger quantities than the United States. Since Turkey and Italy are the two largest producing countries the world supplies are influenced most by the production in those two countries. Their supplies are most influential and competitive for the shelled markets.

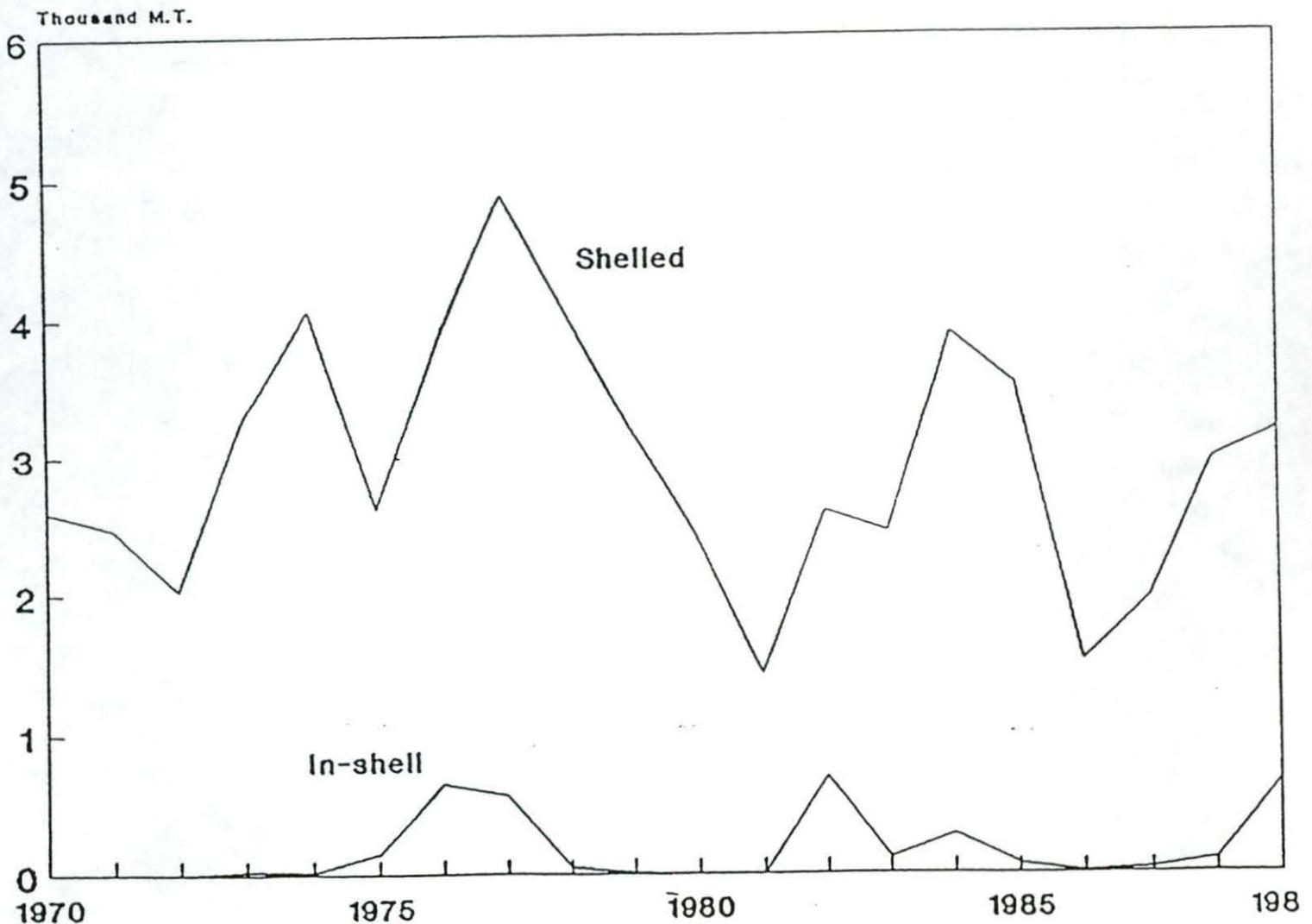
FIGURE 11



Source: Hazelnut Marketing Board 1989 Annual Report.

The U.S. imports some hazelnuts, primarily shelled nuts particularly when the U.S. supplies are short because of a short crop (Figure 12). Some imports when supplies are short are desirable for the U.S. industry in order to maintain continuity of markets. The varying need for imports to supplement the U.S. production is a major reason why imports fluctuate considerably from year to year. As shown in Figure 12, there has also been a general downward trend in imports of hazelnuts into the United States. This is, in part, because the expanding U.S. production has tended to take the place of imports except in short-crop years. Figure 12 also shows that imports into the U.S. of in-shell hazelnuts have been quite small. The U.S. industry tends to fill the domestic in-shell market almost completely.

FIGURE 12 HAZELNUTS - TOTAL IMPORTS

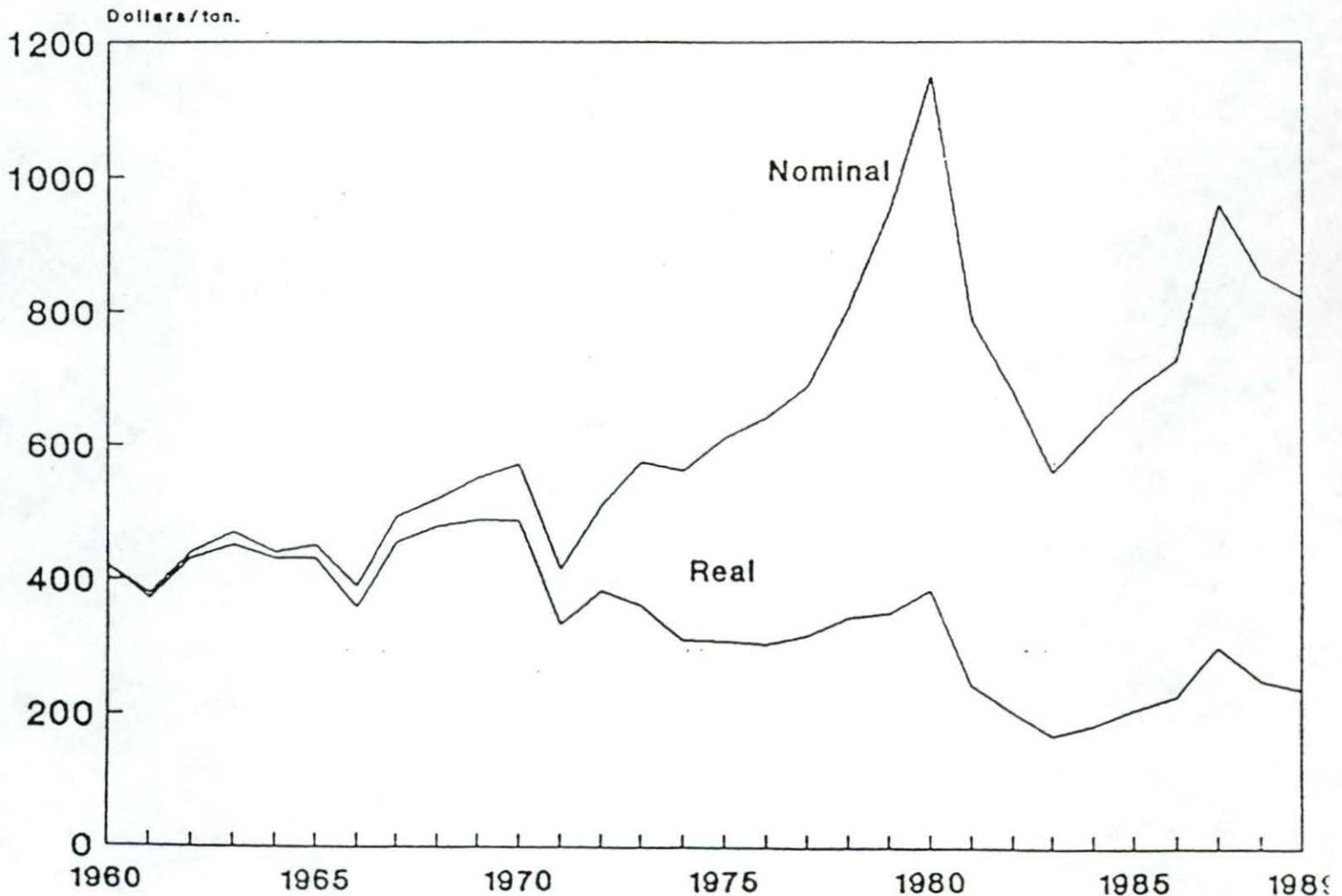


Grower prices is another aspect that is very important to consider for Michigan. Before investing in the planting of a potential new crop, particularly a perennial crop like hazelnuts, a grower needs to analyze the prices which might realistically be obtained in the market place. Prices which have been received for hazelnuts by Oregon growers are shown in Figure 13. There has been a general upward trend in grower prices received since the mid-1970's. There has also been some substantial fluctuations in prices received.

It is interesting to note that when adjusted for inflation, the resulting "real" prices have trended gradually downward compared to the early 1970's (Figure 13). During the 1980's,

FIGURE 13

HAZELNUTS - SEASON AVERAGE GROWER PRICE NOMINAL AND REAL PRICE



however, growers' real prices (adjusted for inflation) have been relatively stable. Thus during the last 10 years grower prices have about kept pace with inflation. The price trends for hazelnuts, even when adjusted for inflation, have been more desirable for growers than has been the case for tart cherries and to a lesser extent for apples in Michigan during the 1980's.

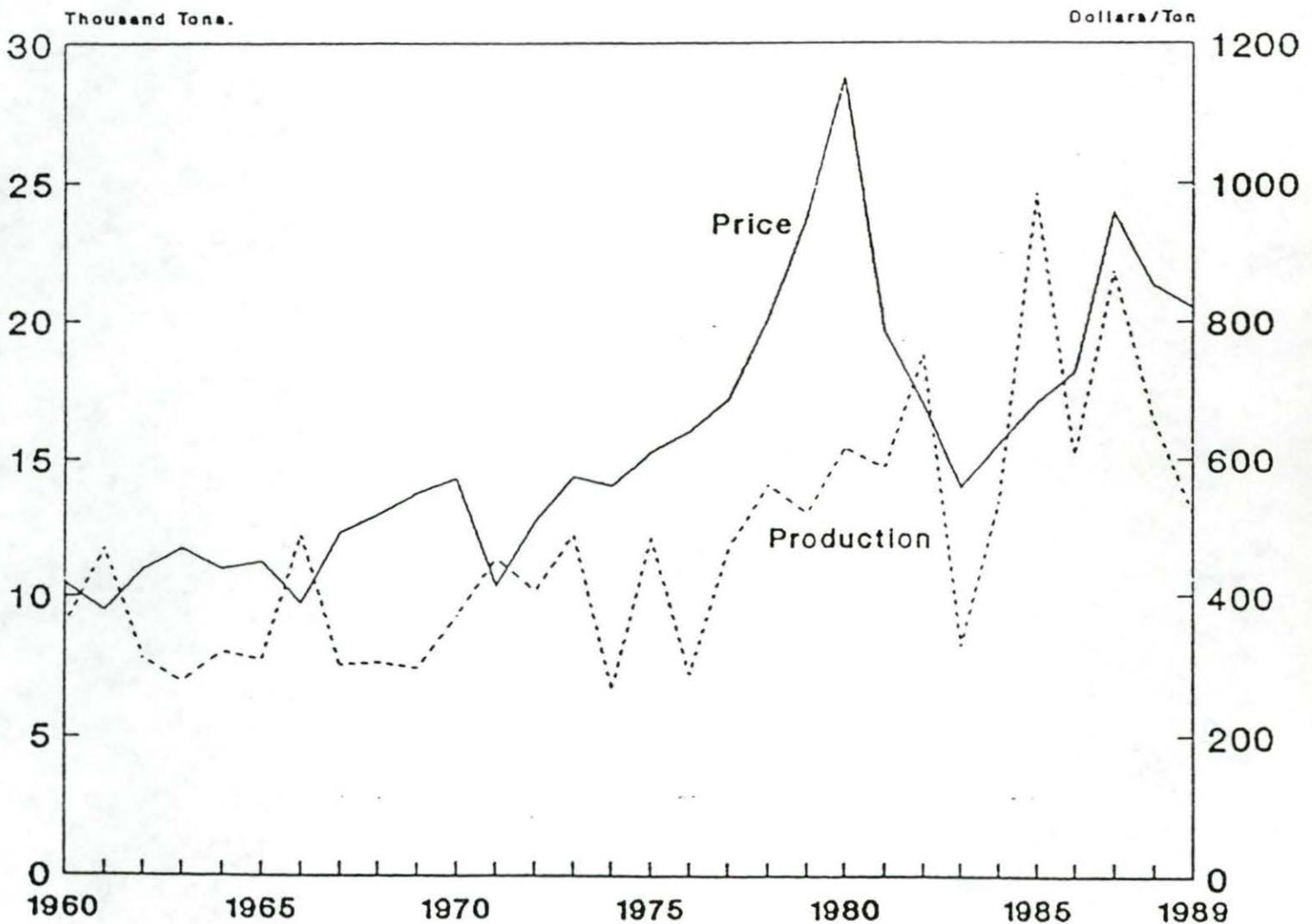
When considering prices for hazelnuts, it is interesting to think about what factors are important in determining these prices. Some of the established hazelnut industry experts indicate that price for U.S. hazelnuts are influenced by factors such as the following: (1) world production, for which Turkey is especially large and important, (2) the U.S. crop size, (3) carryover stocks, both in the world and the U.S., (4) foreign exchange rates, (5) supplies and prices of competing nuts such as almonds, walnuts, pecans and pistachios, (6) consumer preference trends, (7) new uses of hazelnuts by food manufacturers, (8) the quality of the hazelnuts, and (9) the actions of the hazelnut industry's marketing organizations.

A comparison of annual U.S. production of hazelnuts to grower prices is shown in Figure 14. For most commodities it would be expected that when the crop size is large, prices will be down, and when production is down, prices will be up. For example, that type of pattern is very definite within the U.S. tart cherry industry. But for hazelnuts, it doesn't seem to work that way. As shown in Figure 14, when U.S. production has increased, there have been a number of years when growers prices also went up. Conversely when U.S. production was at its lowest level during the 1980's, prices were also very low. It appears that there must be other factors which influence hazelnut prices which are more important than U.S. hazelnut production. The established hazelnut industry experts confirm that this is the case -- that the U.S. production is only one factor in determining hazelnut prices and that other factors sometimes outweigh U.S. production in importance. This is partly because the U.S. production is quite small compared to the world production.

This situation has some distinct advantages. It seems to be one reason why, although the Oregon industry's production has increased substantially, grower prices have also trended upward. It also means that some moderate hazelnut production in Michigan would probably not have a major impact on market prices for U.S. hazelnuts.

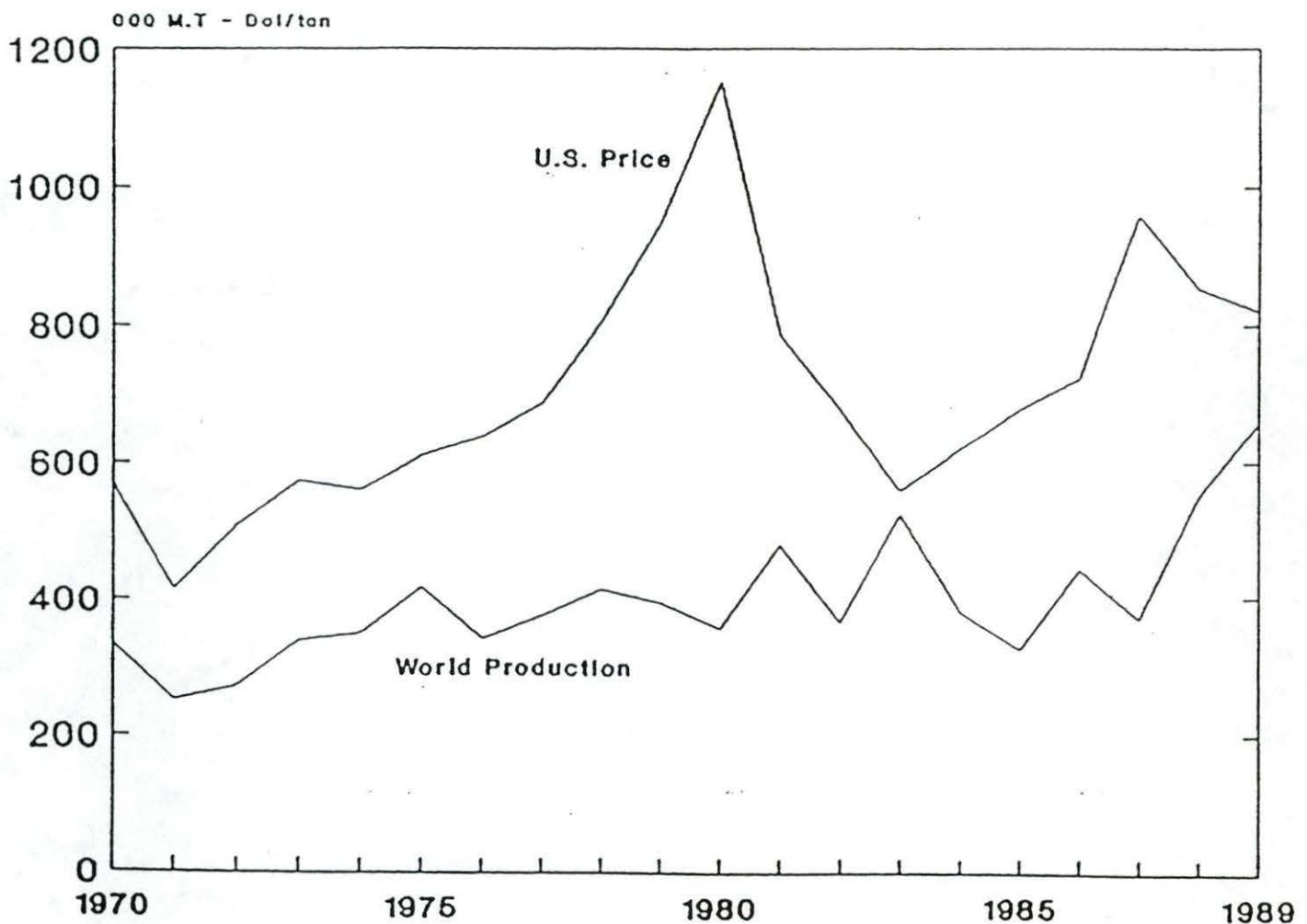
FIGURE 14

HAZELNUTS - U.S. PRODUCTION AND PRICE



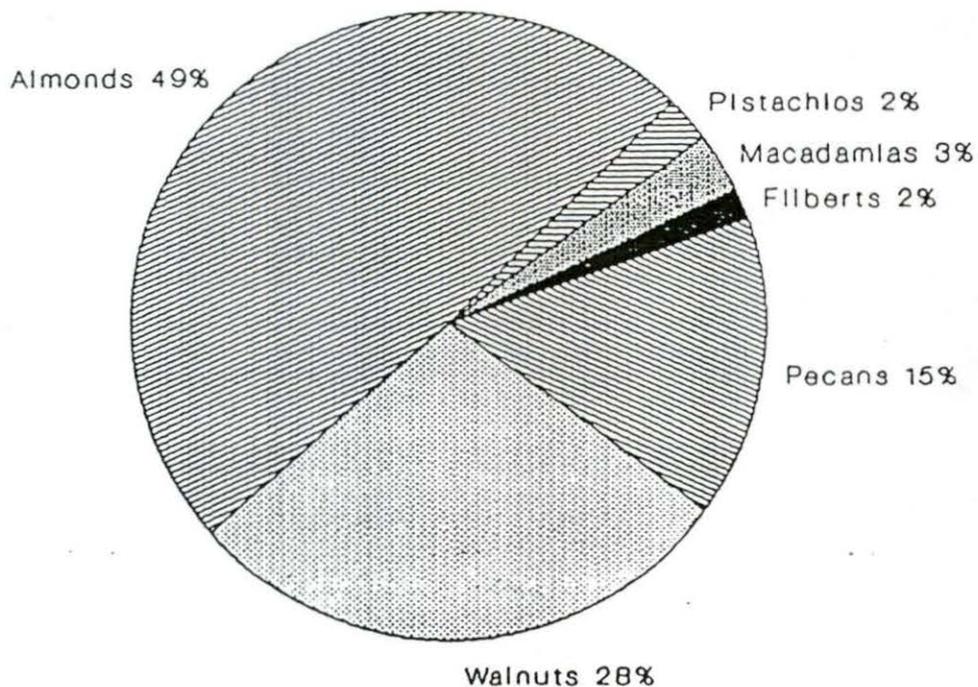
As mentioned earlier, world production and supplies have a significant effect on grower prices for U.S. hazelnuts. The relationship of world production to U.S. grower prices is shown in Figure 15. As shown in the graph in most years the U.S. price is responsive to world production. That is, usually when world production decreases, the U.S. price goes up; and when world production increases, U.S. price decreases. So this substantiates that the world production is an important factor in its influence on U.S. grower prices for hazelnuts.

FIGURE 15 HAZELNUTS - WORLD PRODUCTION AND U.S. PRICE



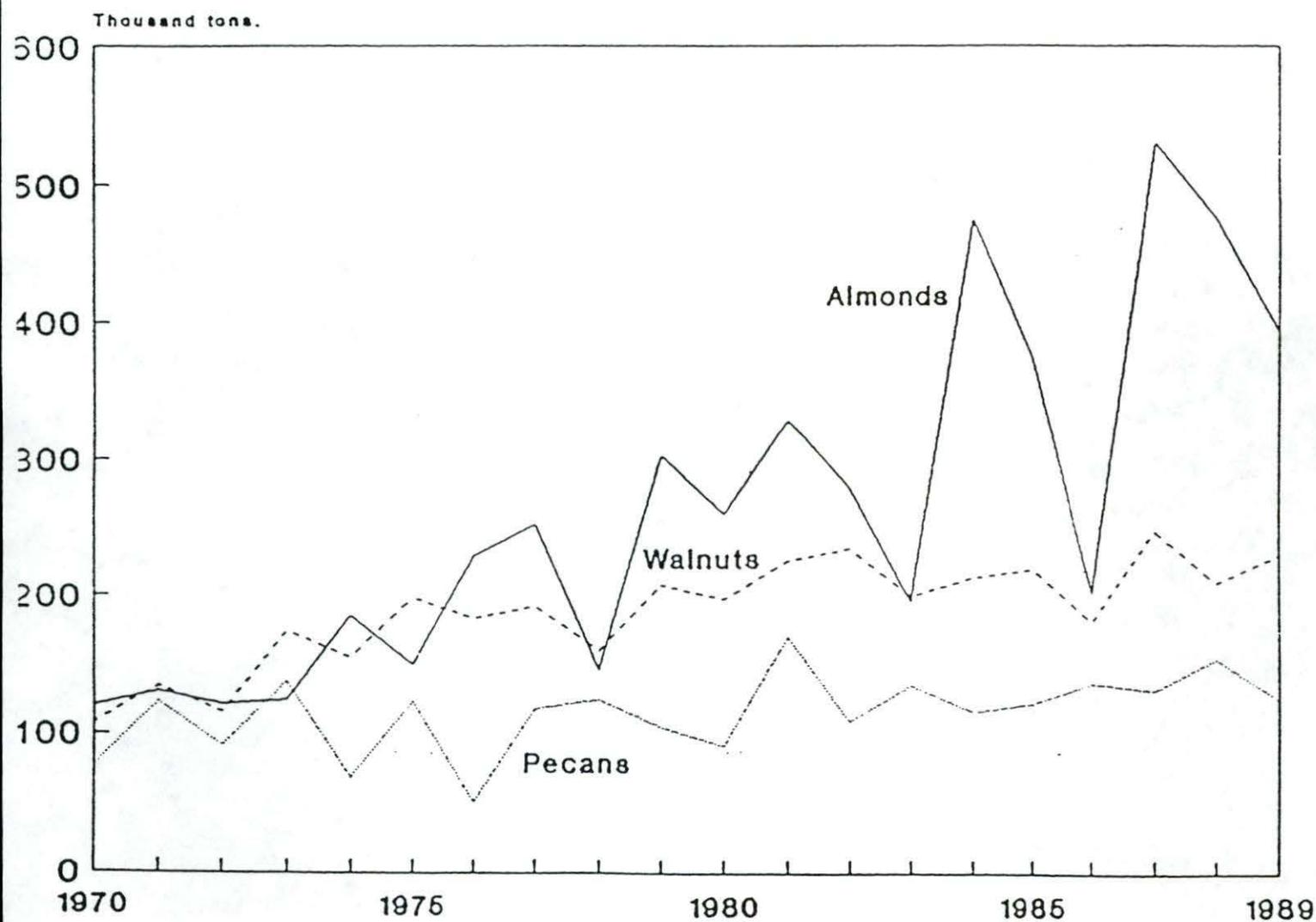
Market conditions of competing nuts can have an important influence on the markets for hazelnuts. The major nuts produced in the U.S. are almonds, walnuts and pecans. Each of these nuts are much larger in volume than are hazelnuts. Almonds, which is the largest U.S. nut crop, comprise an average of almost 50% of the total U.S. nut production (Figure 16). Almonds are a huge industry with now over 400,000 acres in California. Walnuts make up 28% of the total nut production while pecans amount to 15% of the total. By contrast hazelnut production amounts to an average of only 2% of the U.S. total nut production.

FIGURE 16
TREE NUTS - U.S. PRODUCTION 1989



Trends in the production of these three important nuts are shown in Figure 17. Walnuts and pecans have experienced gradual upward trends in U.S. production since the late 1970's. Almonds have on the other hand demonstrated a very large growth trend. By the late 1980's almond production had increased over four times its previous level during the early 1970's. Almond production has also shown some very large annual fluctuations. This very large growth in production has also been accompanied by large increases in demand for almonds. The large growth in the almond industry and its markets has been a real success story.

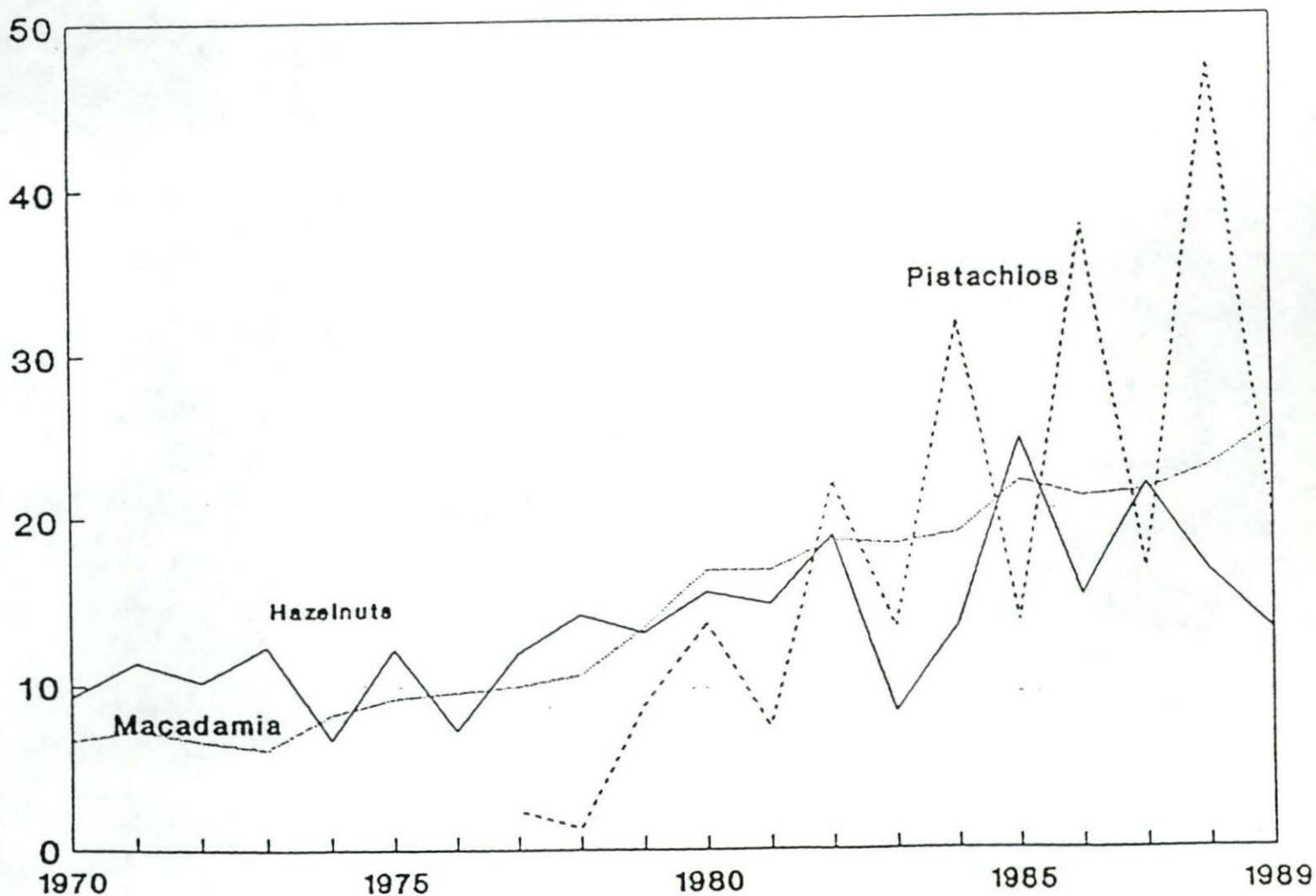
FIGURE 17 MAJOR TREE NUTS - PRODUCTION



The large growth in almond production provides considerably more competing supplies of this relatively close substitute for hazelnuts. On the other hand the large increase in almond demand also suggests that market demand for some kinds of nuts can be quite expandable. Because of this, some nut industry people in both the west and in eastern states are optimistic about the potential to expand the demand for nuts, including hazelnuts.

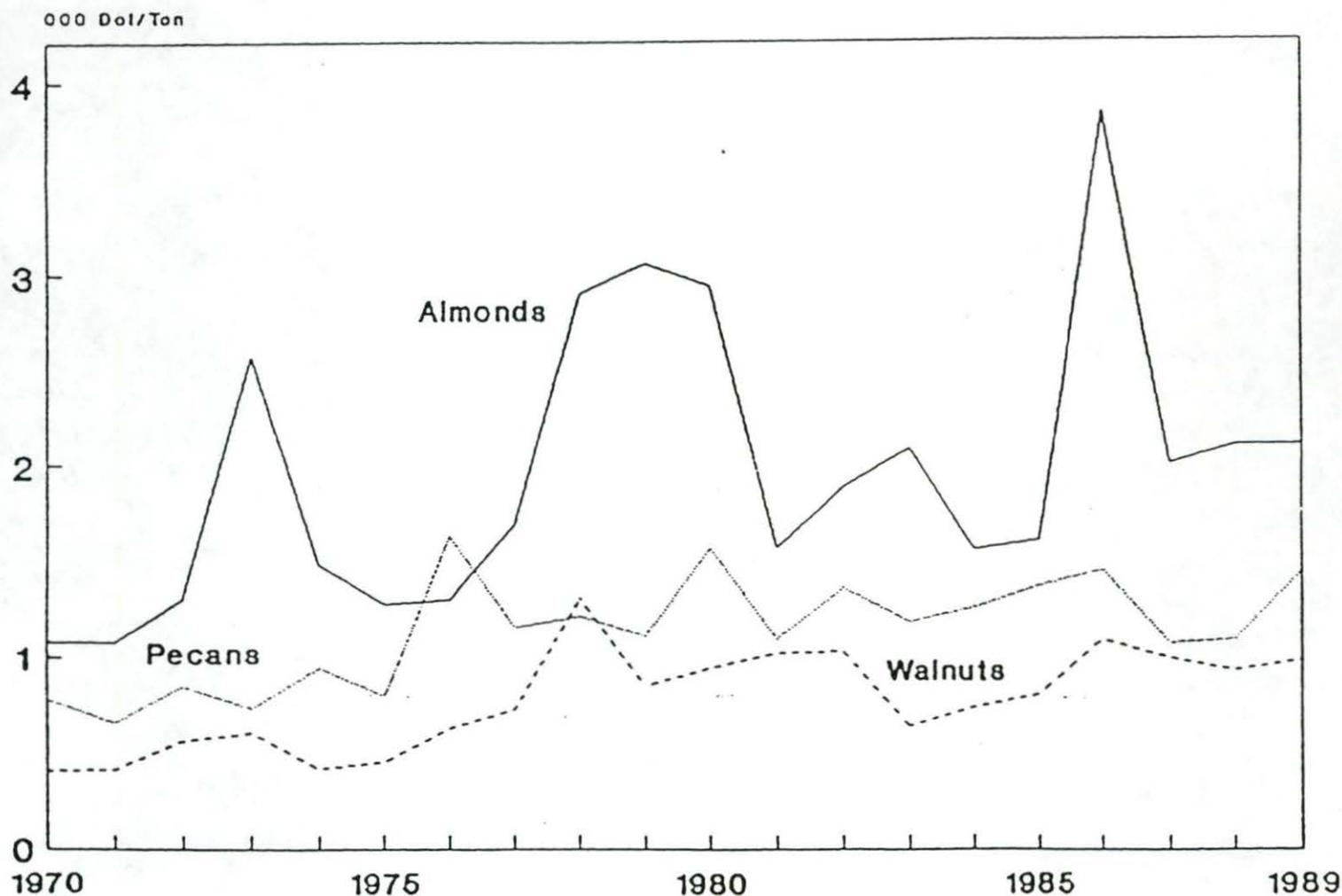
The upward trend in pistachio nut production is shown in Figure 18, along with the regular, very large annual fluctuations in production. It appears that, although tart cherries formerly held the "U.S. record" for the largest and most regular fluctuations in annual production, pistachios have taken over that dubious distinction.

FIGURE 18 MINOR TREE NUTS - PRODUCTION



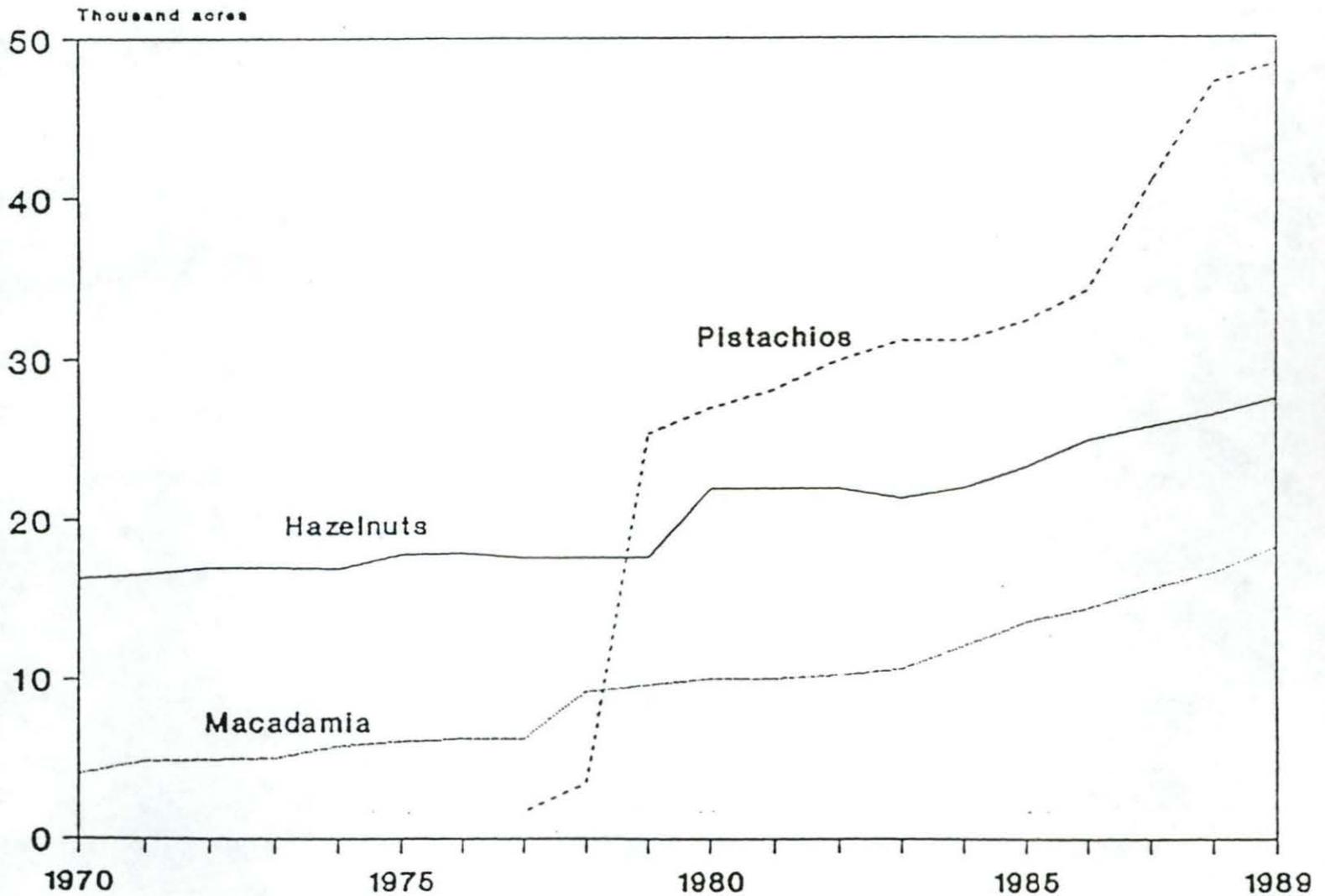
Price trends for the major tree nuts, almonds, walnuts and pecans, are shown in Figure 19. Prices for pecans and walnuts have been fairly steady during the last decade or so. This seems to be related to the relatively stable production of these two nuts. Almond prices have demonstrated some very large fluctuations in prices. These price fluctuations are not surprising in view of the large fluctuations which have occurred in almond production. When almond prices are unusually high, this may provide some good market opportunities for hazelnuts, which are reportedly a fairly close substitute for almonds in mixed nuts.

FIGURE 19 **MAJOR TREE NUTS - PRICES**
SEASON AVERAGE GROWER PRICE



It is interesting to compare acreage trends for the two minor nut crops, hazelnuts and pistachio nuts (Figure 20). Although hazelnut acreage has been expanding somewhat, the recent increase in acreage of pistachio nuts in California has been quite dramatic. Pistachio nuts were almost a zero industry in the late 1970's. Since then that industry has had very large expansion in its acreage and production growth.

FIGURE 20 MINOR TREE NUTS - BEARING ACREAGE



One of the most important aspects of the pistachio industry is that it continues to grow rapidly. This rapid growth of an infant nut industry shows that it can be done under certain conditions. Can Michigan nuts duplicate the recent very large and rapid growth experience of California pistachios? Probably not to that same degree. But it, at least, demonstrates another success story of fast growth for a nut industry that was just recently very small.

Summary

The trends in markets, supplies, prices and competing nuts, which have been reviewed here, are relevant for the overall economic situation that affects the established U.S. hazelnut industry in Oregon. These also explain some of the major factors which affect the U.S. wholesale markets for hazelnuts. These kinds of market trends provide an important component of the needed background information to help evaluate the economic possibilities for planting some hazelnuts in Michigan. Small plantings of hazelnuts in Michigan will, however, likely be marketed substantially into local markets. Thus the impact of wholesale market conditions on Michigan markets and prices will be somewhat indirect. Nevertheless the market and economic conditions of the established hazelnut industry and the other competing nuts provide an important overall setting that would influence nut markets in Michigan.