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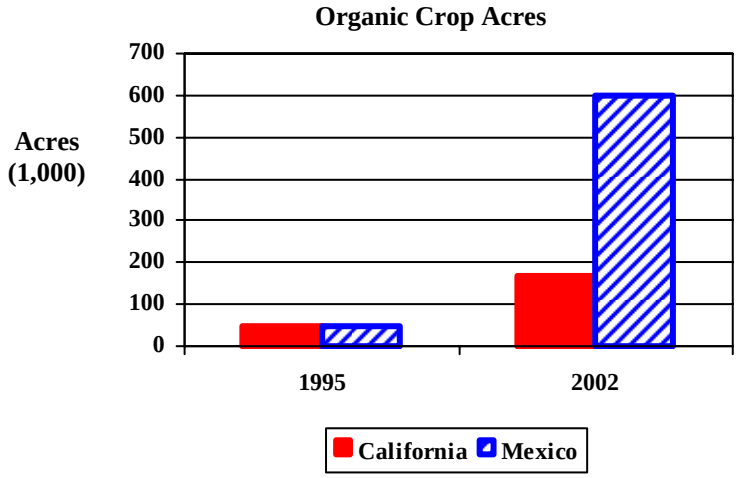

The Outsourcing of Organic Crop Production

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Overview

Much has been written recently about the "outsourcing" of United States jobs to foreign countries due to lower labor costs abroad. Millions of jobs in textile manufacturing and in computer systems have moved off shore resulting in increased importation of foreign goods and services. U.S. labor rates are often cited as being ten times higher than the wages in most developing countries.

On the other hand, a popular current message is that the growing of crops using organic production methods is flourishing in the U.S. This message is further embellished in statements that organic crop production is the fastest growing agricultural sector in the United States. It is important to make a distinction between the consumption of organic products and their production. While it is accurate to say that the consumption of organic goods is growing in the U.S., it is not accurate to say that there is any significant growth in the domestic production of organic crops and it is certainly not accurate to say that organic crop production is the fastest growing production sector in agriculture.

Organic growers incur higher production costs than do growers using conventional production practices because they do not use synthetic chemicals to kill weeds. Instead of killing weeds with chemicals, organic growers rely on laborers to kill weeds with hoes and by hand pulling. Growers of organic vegetable crops, for example, spend close to $1,000 per acre to kill weeds in comparison to the $50 per acre spent by growers who use chemical herbicides. The growing of organic celery, carrots and lettuce in California requires 50-75 hours of labor per acre for weed control. Each hour of hand labor is budgeted at $10 which covers a minimum wage plus administrative, supervisory, transportation, and benefit costs.

It should come as no surprise that the production of organic crops is being outsourced to countries such as Mexico where the cost of farm labor is $1-2/hour.

The Data

The popular way to present data on organic crop production is to simply chart the increase in organic acreage in isolation.(see Figure 1) By looking at the data in this way, the conclusion is drawn that organic crop acreage tripled from the early 1990s increasing from 400,000 acres to 1.5 million acres.

Several other data sources can be used to put the organic crop acreage numbers in perspective. First, organic crop acreage accounts for less than 1% of total US crop acreage which totals close to 303 million acres. Secondly, organic crop acreage growth can be charted against other agricultural sectors which experienced far faster growth over the same time period. Figure 2 charts the increase in organic acreage alongside the growth in the production of biotech crops in the U.S., which increased from less than 100,000 acres in 1995 to over 80 million acres. Seen with this perspective, the "increase" in organic acres is almost flat and certainly not the fastest growing segment of U.S. crop production.

The rapid widespread adoption of biotech (genetically-engineered) crops in the United States provides another important perspective since the primary factor in their adoption has been the cost savings advantages they produce for growers, particularly in the area of weed control. It has been estimated that U.S. soybean growers have reduced their cost of weed control by $20 per acre on over 50 million acres (a $1 billion/year savings) by planting crops that have been engineered to tolerate the applications of inexpensive herbicides. This technique allows the herbicides to kill weeds without harming crop plants.

The comparison of organic crop growth versus biotech crop growth can be further illustrated with data for California which ranks first among the states in terms of total organic crop acres. Figure 3 compares the trend in total organic acres in California with the trend in the planting of biotech cotton. Organic crop acres increased in California from 40,000 in the early 1990s to 172,000 in 2001. Biotech cotton acres in California increased from less than 1000 acres in 1997 to close to 300,000 acres, almost double the number of acres of organic crops in the state.

The primary motivating factor in the adoption of biotech cotton acres in California has been the significant cost savings offered to growers who previously had to employ hand weeders to remove certain difficult to control weed species. Reductions in hand weeding costs of over $100 per acre have been cited as the economic benefit of planting biotech cotton in California.

Figure 4 charts the trend in organic crop acreage in California through 2002 which is the latest year that data are available. As can be seen, there was a downward turn in organic acreage in California between 2001 and 2002, with acreage decreasing from 172,000 acres to 168,000 acres. This downturn is accounted for by decreases in acres of organic crops that are dependent on labor for weeding. It is considerably cheaper to move the growing of these crops from California into Mexico where the costs of labor to perform the same weed control tasks are $9 per hour less. Thus weed control in a Mexican organic lettuce field costs $50/acre in comparison to $500/acre in California. The most rapid growth of organic acres has taken place in Mexico. Figure 5 charts organic crop acreage in Mexico which increased from 50,000 acres in the mid 1990s to close to 600,000 acres. Over 85% of Mexico's organic crop production is for export, mostly to the U.S. Much of the Mexican organic crop acreage is on the Baja peninsula just south of California. Ironically, these Mexican organic operations are being certified as meeting organic standards by U.S. certification organizations.

The serious decline in organic cotton acreage in the United States illustrates the noncompetitive nature of U.S. organic crop production. Figure 6 charts U.S. organic cotton crop acreage which peaked at 25,000 acres in 1995 declining to 9,000 acres in 2002. The growing of organic cotton in the United States required many workers with hoes to kill weeds. Ultimately it was simply more economical to employ workers with hoes in India to grow the organic cotton at far less cost than to produce it domestically. Large apparel manufacturers with lines of organic cotton clothing seek out the least

costly supply of organic cotton and, as a result, do not purchase organic cotton from U.S. organic farmers. This has led to the demise of organic cotton in the United States.The use of hoes in US organic cotton fields represents a return to the old days when laborers were plentiful and willing to work for 10 cents an hour.

The Future

The latest National Organic Farmer Survey identifies some of the overriding concerns of the industry with regard to its future viability in the United States. The main conclusion from the Survey is the importance of maintaining price premiums for organic crops. In order to cover the higher costs of organic production, organic crops must receive a higher price than crops produced with conventional methods. And yet, the Survey cites numerous examples of the inability of U.S. organic growers to command premium prices in the marketplace. The primary reason cited for this inability is a "flood" of cheap imported organic foods. Thus, the outsourcing of organic crop production is having the ripple effect of depressing prices U.S. organic growers receive for their produce which, in turn, threatens the economic viability of organic production in the U.S.

The outsourcing of the growing of fruit and vegetable crops is not confined to organic production. Much of the growing of non-organic conventional crops is also being outsourced due to lower labor costs in foreign countries. This outsourced production is particularly widespread for labor-intensive crops such as asparagus, which are increasingly being imported from low cost production countries.(see Figure 7) Much of the labor costs for fruit and vegetable growing are incurred at harvest. Again, it makes little sense to pay laborers $10/hour to harvest asparagus in the United States when the exact same task can be done in Peru for $1/hour.

Since the U.S. cannot compete based on labor costs, the future competitiveness of U.S. crop production will rely on technological improvements to reduce labor, such as mechanical harvesting, or to increase yield, which lowers the per unit cost of production. The increased use of chemical technology will be one of the keys to keep U.S. agriculture competitive. For example, chemicals to reduce the cost of harvest by loosening fruit, promoting uniform ripening, and defoliating plants are being tested. Other chemicals are being tested to control pests that currently reduce yields.

The problem that organic growers face is that their dependence on labor is much more pronounced than that of conventional farmers. Because of their non-use of synthetic chemicals, organic growers will not be able to adopt many of the cost-saving, yield-enhancing chemical treatments that will be adopted by conventional growers. Organic growers will not plant genetically engineered plants which will continue to advance yields and cost savings for conventional growers. As a result, it is fairly predictable that in the future the U.S. organic industry will be largely outsourced to other countries with cheaper labor costs.

References

1. Acreage, United States Department of Agriculture, National Agricultural Statistics Service, 2003.

2. Cotton Varieties Planted, Untied States Department of Agriculture, Agricultural Marketing Service, 2001.

3. "Herbicide Resistance Demanded in Cotton," Western Farm Press, October 21, 2000.

4. "Farmers Give Roundup Ready Good Reviews," Delta Farm Press, December 5, 1997.

5. "Demand for Transgenic Varieties Not Slowed," Delta Farm Press, March 27, 1998.

6. Klonsky, Karen, "Organic Agriculture Production in California," CCOF Magazine, Vol. 17, No. 2, p. 14, Summer, 2002, available at http://www.ccof.org/ccoffoundation/magazine.php.

7. Bolgenholm, Vanessa, The Use and Importance of Handweeding in Organic Farming, letter to Jose H. Millan, Deputy Secretary, Enforcement, California Labor and Workforce Development Agency, 2004, available at http://www.croplifefoundation.org/cpri_resbriefs.htm.

8. Wood, Marcia, et al, "Organic Grows on America!," Agricultural Research, Vol. 50, No. 2, February, 2002.

9. Earthbound Farms, http://www.ebfarm.com/, 2004.

10. Greene, Catherine, and Amy Kremen, U.S. Organic Farming in 2000-2001, United States Department of Agriculture, Economic Research Service, Agriculture Information Bulletin #780, 2003.

11. Del Cabo Farm, www.delcabo.com.

12. Vegetables and Melons Situation and Outlook Yearbook, United States Department of Agriculture, Economic Research Service, July, 2003.

13. Walz, Erica, Final Results of the Fourth National Organic Farmers' Survey: Sustaining Organic Farms in a Changing Organic Marketplace, Organic Farming Research Foundation, 2004 available at http://www.ofrf.org/publications/survey/.

14. Marquardt, Sandra, “Organic Cotton: Production and Market Trends in the United States and Canada-2001 and 2002,” Proceedings of the 2003 Beltwide Cotton Conferences, p. 362, 2003.

15. “Mexico Spreading Organic Eating at Home,” Boston Globe, September 30, 2004.

Figure 1: Organic Crop Acreage in the United States

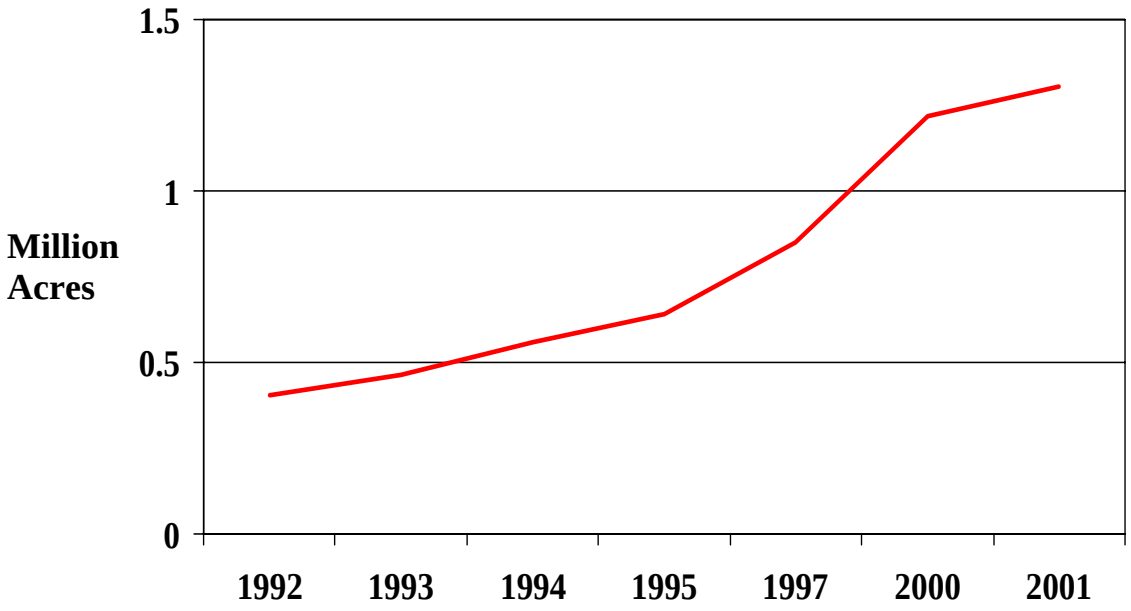

Figure 2: Organic and Biotech Crop Acreage in the United States

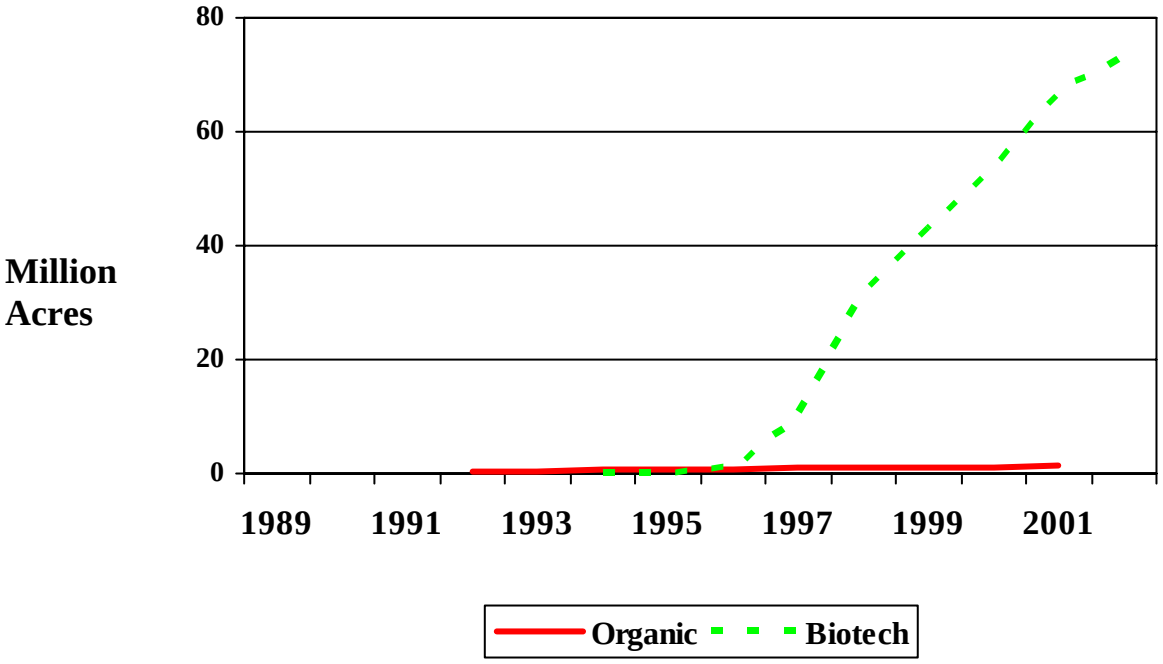

Figure 3: Biotech Cotton and All Organic Acres in California

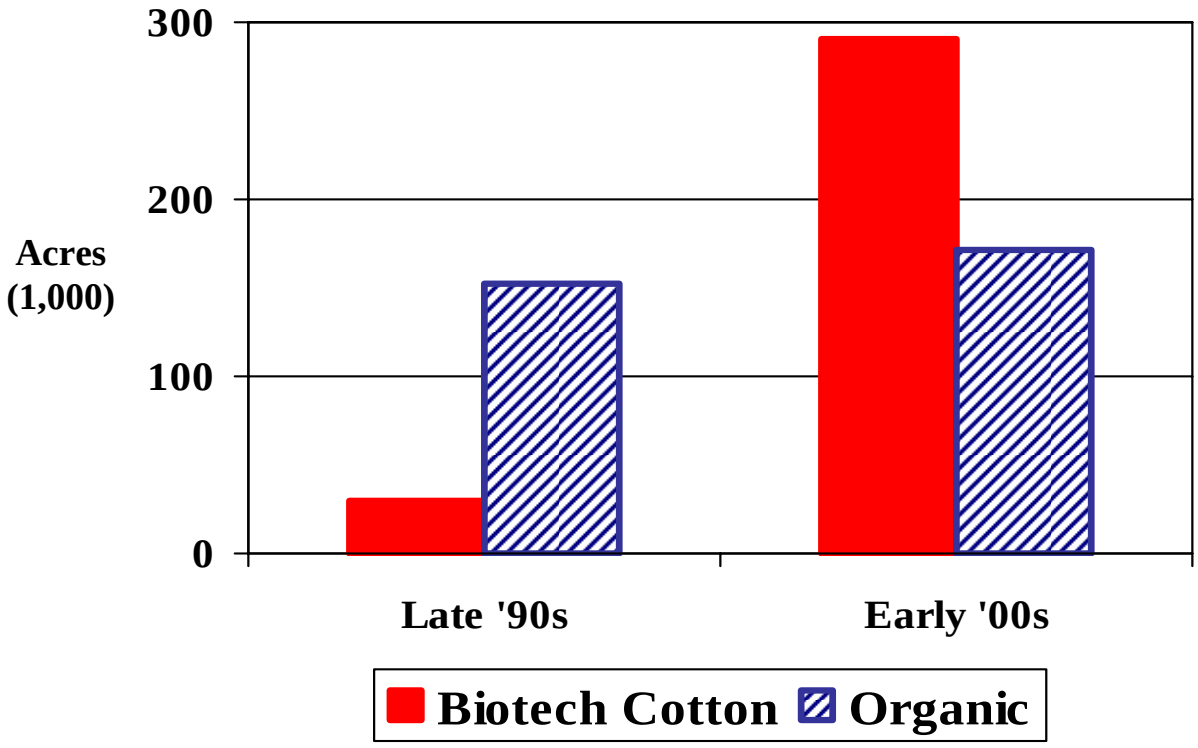

Figure 4: Organic Crop Acreage in California

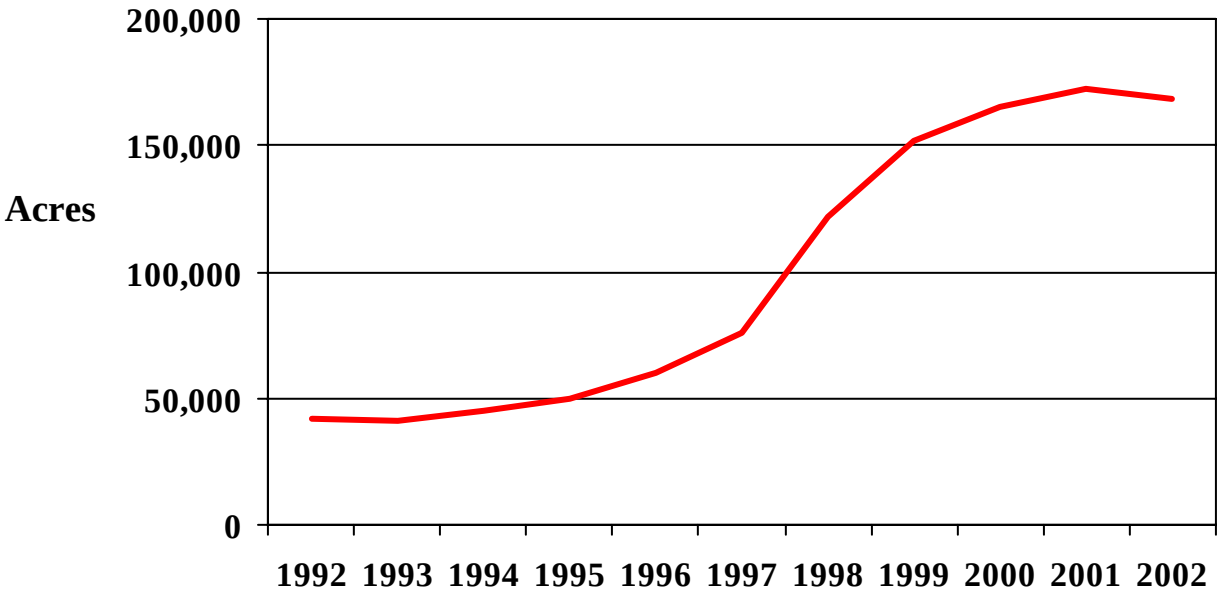

Figure 5: Organic Crop Acreage in Mexico

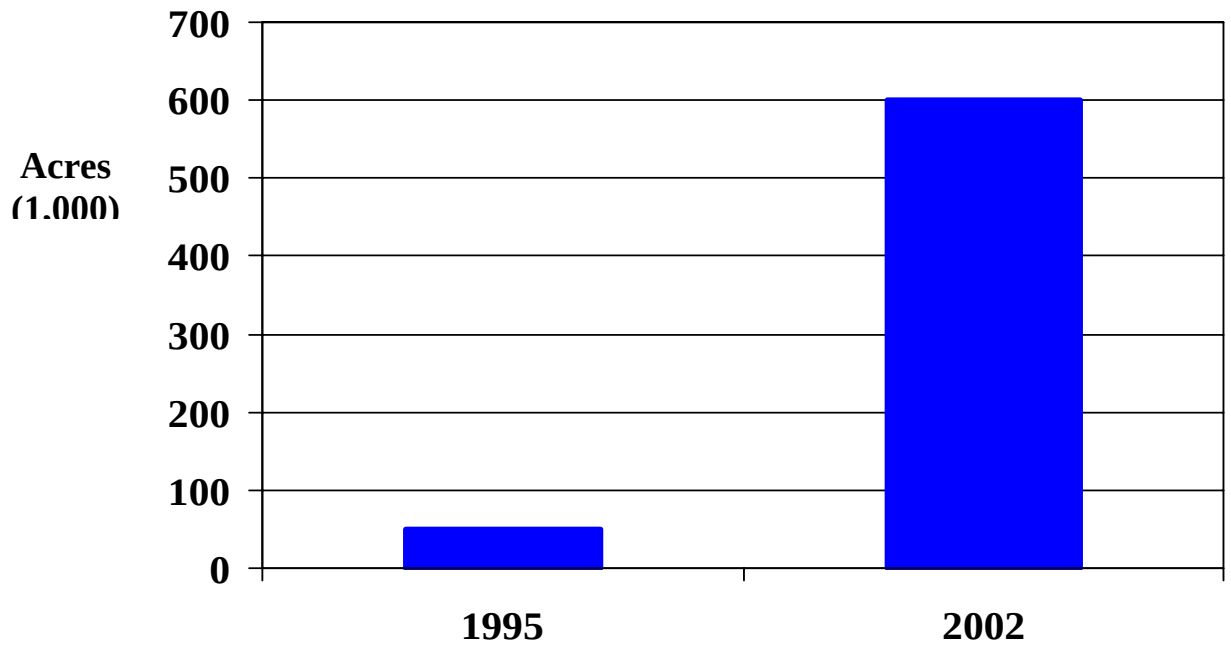

Figure 6: Organic Cotton Acreage in the United States

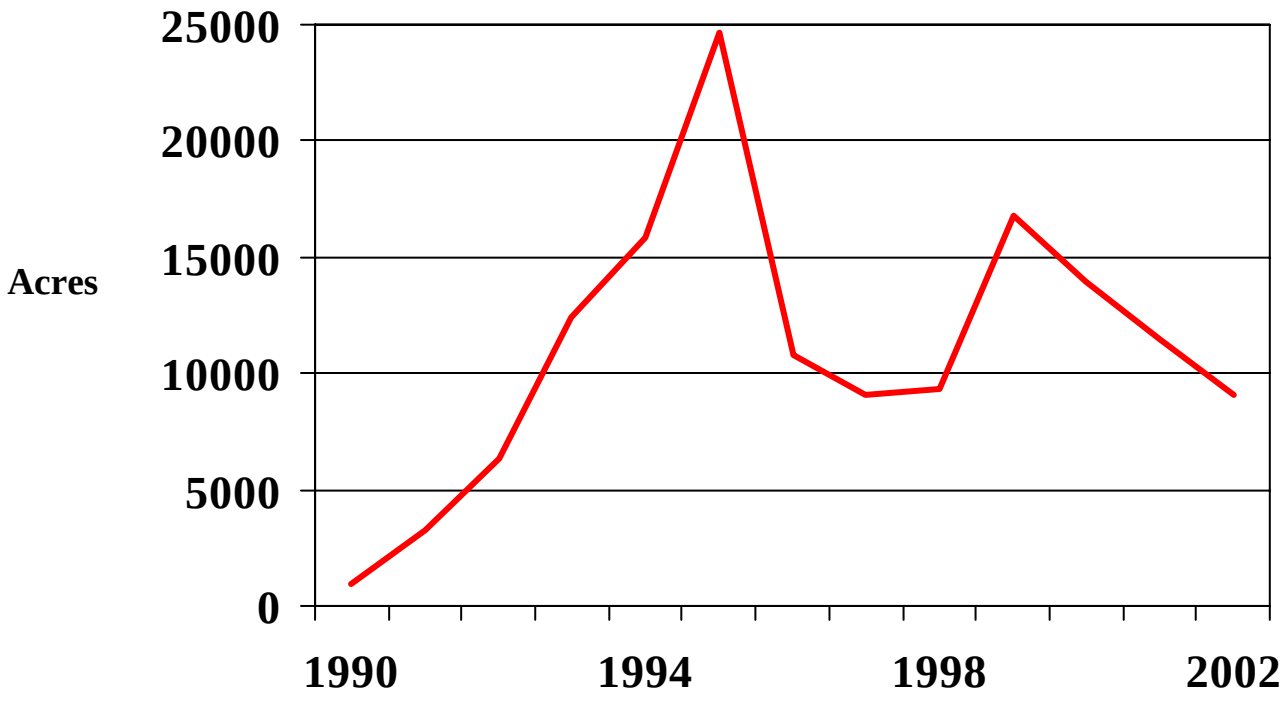

Figure 7: Asparagus: Domestic Production vs. Imports in the U.S.