

# Bring back the U.S. castor crop!

*Castor has not been a commercial crop in the United States for many years, but increasing use has led to formation of an International Castor Oil Association. In this article, Robert Hawkins argues for reintroduction of castor as a commercial crop in the U.S. The article is based on his presentation to the association meeting held this past June in New York City.*

Twenty years ago we had a crop of castor beans in the United States. It covered some 80,000 acres at its high point in 1965. The harvest, averaging 1,800 pounds an acre, totalled 145 million pounds, or the equivalent of 65 million pounds of castor oil.

To put this in context, today the United States imports about 92 million pounds a year, including 15 million pounds of hydrogenated castor oil. Our harvest in 1965 was equivalent to 66% of our usage today.

By 1972 the federal government withdrew its permission for farmers to grow castor on land the farmer had been paid not to plant in more traditional crops—cotton or grain sorghum.

During that year the castor oil-consuming companies had a pricing disagreement with the farmers cooperative that grew and crushed the castor seed. The companies walked away from the bargaining table confident that the farmers would capitulate. Instead, the farmers switched to sunflowers, but during the same year the rest of the country also switched to sunflowers. The market price for sunflowers dropped and everyone lost: the farmers their investment, the castor oil-consuming companies a domestic supply of raw materials. The industry was in the hands of the Brazilian and Indian castorseed miller.

The following year the price for imported castor oil rose 400% (Fig. 1), and then as the price drifted down in 1974, the Brazilian government permitted the Brazilian millers to form a cartel in which castor oil prices were fixed and supplies controlled. For six years the cartel controlled prices in Brazil while sales from India, the only other world-class supplier, were controlled by its State Trading Company (STC).

In 1981 the Brazilian cartel was disbanded and in 1984 India's STC pricing control was removed. In the meantime the demand for castor oil in the U.S. had declined by 30% as the cartel and the monopoly kept prices abnormally high. Even today the actions of the Brazilian government to mandate an artificial export price and the Indian government to create artificially high values for domestic oils result in a supply-demand imbalance in which government action tends to exaggerate the price and supply fluctuations due to natural causes: weather conditions and alternative crop prices.

The belief among the world's large-consuming companies—Atochem, Boley, Caschem and Union Camp—is that a more stable and reasonably priced supply of

castor oil would justify greater research and development, and a greater marketing effort for castor-based products.

There are two essential requirements for such a condition to develop:

- First, more efficient castor agriculture through use of modern hybrid seeds that yield more seed per acre and with higher oil content in the seed. In developed countries, i.e., high labor cost countries, efficient agriculture also means mechanized planting, cultivating and harvesting and the use of herbicides and pesticides to allow castors to reach their full potential. Mechanization means dwarf hybrids—three to four feet tall, and hybrids that retain the seed pod on the plant until after harvest.

- Second, a castor supply must be more directly influenced by the requirements of the farmer, and those of the markets for castor oil products and less influenced by the short-term traders and the castor oil millers—in short, a direct relationship between farmer and castor product manufacturers.

The objective is to find whether we can again nurture a castor crop in the U.S. that can be justified on economic grounds, and can then write enforceable contracts for castor seed, and later castor oil, at prices which are (a) satisfactory to the farmer, i.e., competitive with other uses for his land, (b) competitive with prices from Brazil, India, Thailand and China, and, above all, (c) stable, because the farmer will know he has a guaranteed market for his crop based on a pre-established pricing mechanism.

This objective does not include substituting a U.S. crop for all imports since competition will pro-

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## VIEWPOINT

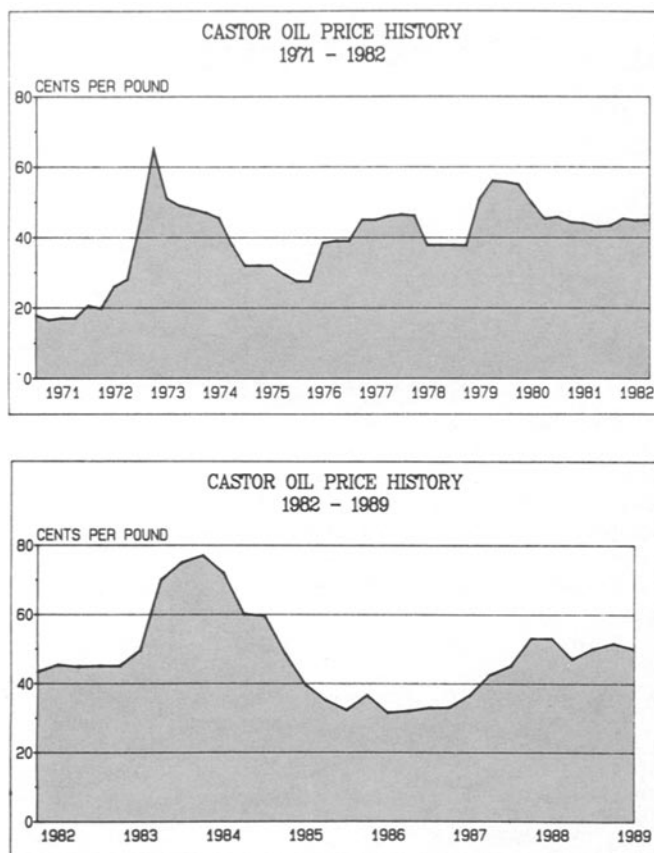


FIG. 1. Castor oil price history (1971-1982 and 1982-1989).

vide incentive for more efficient production in all growing areas, and the world's castor oil industry will have a more solid base from which to grow.

The economic basis for planting castor in the U.S. is as follows: In Texas the competition is cotton and grain sorghum. The land is irrigated and the cost of irrigation will vary with the amount of rainfall in season, and whether the water is distributed by irrigation channels or overhead, center-pivot sprayers.

The costs break down like this: land rent, \$100 acre; hybrid seed, \$40; irrigation (center pivot), \$45; cultivation (\$5 per acre, seven times each season), \$35; fertilizer (120 lbs. N+P), \$25; herbicide (Treflan), \$12; and harvesting, \$25—for a total cost of \$282 per acre.

It is estimated that at a yield of 2,000 pounds an acre, the farmer would need a selling price of 20-25 cents a pound for castor seed. That's not exactly a competitive price today (equivalent to \$1,100 per metric ton, FOB, Brazil); however, the maximum yield in the 1960s was 2,700 pounds an acre, which would translate to oil delivered to the East Coast at 38 cents a pound for oil (equal to \$740/MT FOB, Brazil).

Although 2,700 pounds an acre was not achieved on a consistent basis, it is claimed by some farmers that the care and cultivation of crops in those days of relatively high prices were much less stringent

than they are today. The prospect of anything like 2,700 pounds an acre and a castor seed with a higher oil content makes a domestic experiment well worthwhile.

The U.S. Department of Agriculture and members of the agricultural committees of both houses of Congress increasingly have become concerned that U.S. agriculture depends too much on too few crops, and want to see new, alternative and unsubsidized crops grown in the U.S. There are now three bills before Congress to establish an agency to meet these objectives.

It is believed that when Congress settles on a program, it probably will involve the R&D for five new crops to be subsidized for three years until it can be seen which can stand alone economically. It is hoped the department will see the good sense of adding castor—a crop for which the market already is established and which could improve our balance of trade by \$35-40 million a year—to its alternative crop program.

By next spring it should be possible to establish the economic and political basis for a new domestic crop to act as a counterweight to the erratic action of the international castor market.

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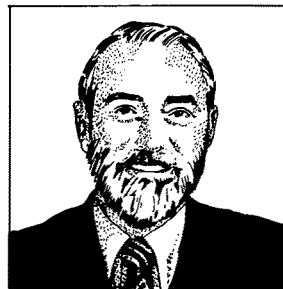
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# Vegetable oil stocks show decline

*Vegetable oil stocks in Rotterdam at the end of August were significantly lower in 1989 than they had been in the three previous years, and the declines in stock from the start of each year through Aug. 30 have been steeper for 1989 than in recent years. Dave Bartholomew, commodity trade representative at the Chicago Board of Trade for Merrill Lynch, believes this state of decline may be a harbinger of dynamic activity in oil trading.*

Rotterdam vegetable oil stocks continue their steady decline. In some instances this is the lowest in four years, most notably soy oil and rape oil. No doubt this is due largely to the slower crush rate in Europe during past months. The rapeseed and sunflower crush rate of soybean crush will not pick up appreciably until October. Until then, an active program of importing meal and pellets will continue.

Another reason for the draw-down in vegetable oil stocks is likely due to the campaign of shipping finished oils in drums and retail containers to Russia and the Eastern Bloc. While no statistics are avail-



able, it is known that the quantity is significant. In this way the Soviet Bloc is better able to move more quickly to increase retail food supplies in not only salad oils, margarines and cooking oils, but also baking goods and many other items which include vegetable oils as an ingredient.

Table 1 provides a tabulation of Rotterdam stock comparisons at the end of August for the past four years. In some instances those are dramatic reductions, especially the principal seed oils: soy, rape and sunoil. It is impractical to think that low stocks at Rotterdam can create strong prices because so many other factors also apply, but, on the other hand, a large inventory there can keep a market from becoming more firm.

Table 2 shows that the stocks of those same oils have been reduced radically since the first of the calendar year, this season more than in the past. Thus it can be seen that this year is definitely not typical. It cannot be said that it is usual for stocks to decline as they have this year as the Northern Hemisphere season ends and new crop harvest approaches because they did not do so in the previous years. The draw-down this year is unique, is worthy of special attention, and may be predictable of some dynamic market action in the period ahead.

Malaysian palm oil stocks have not gotten as large as might have been expected at this time of year. And they probably will not grow excessively in the months ahead. A primary reason is that price discounts to other oils are certainly attractive. This is very important in stimulating demand because most of the potential for demand expansion lies in those countries having the largest populations and limited financial resources. China is seen as an especially likely potential destination for palm oil market expansion. Production operations in Malaysia and Indonesia are significantly controlled, one way or another, by persons of Chinese origin, which no doubt is an aid in doing business with China.

TABLE 1

Rotterdam Vegetable Oil Stocks at End of August\*

	1989	1988	1987	1986
Soybean	5	26	15	19
Rapeseed	14	46	35	54
Sunflower	26	58	58	66
Palm	25	20	34	44
Palm kernel	13	22	17	21
Coconut	52	81	79	68
Groundnut	8	10	11	6
Totals	143	263	249	278

\*In thousand metric tons.

TABLE 2

Changes in Rotterdam Vegetable Oil Stocks from Jan. 1 to Aug. 30\*

	1989	1988	1987	1986
Soybean	-69	+4	+1	+8
Rapeseed	-74	+24	+2	+22
Sunflower	-9	+8	-26	+19
Palm	-21	-15	-17	-10
Palm kernel	+3	+7	-2	-6
Coconut	-45	-8	+7	+25
Groundnut	-12	-2	+5	+2
Totals	-227	+18	-30	+60

\*In thousand metric tons.