

ECONOMIC SIGNIFICANCE OF SUNFLOWERS IN WORLD TRADE

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This is an appropriate time to talk about the economic significance of sunflowers -- a crop which has had a great impact on the world vegetable oil market in recent years.

Today, for example, vegetable oil prices are unusually high and the apparent surplus of the last few years has all but disappeared. One reason, according to all observers, is the cessation of Russian sunflower oil exports.

Three years ago just the reverse was true. When the Soviet Union doubled her exports of sunflower oil in one year the result was a drop in the price of other oils and an apparent large surplus.

These two examples demonstrate the influence of sunflowers on the world market -- a crop that today is the second most important source of edible oil in the world. In this position, it plays a significant role in world trade, and unquestionably it will continue to have a profound effect on the vegetable oil industry during the next decade.

Today I want to look at the economic significance of sunflowers in two decades -- the one we've just passed and the one we are entering.

Ten years ago I would not have predicted that sunflower oil would pass up cotton, peanut and coconut oils as an edible oil source on the world market. We did not foresee that production of sunflower seed would grow from 13 billion to 22 billion pounds by 1967. Nor could we have predicted that the production of sunflower oil would more than double in ten years' time.

At that time, the Soviet Union had not indicated that it would clobber the market with 728,000 tons of oil in 1967 -- twice the amount shipped just the year before. Argentina, the world's second biggest sunflower seed producer, grew 1,120,000 tons of seed that same year, and East European countries shipped 117,000 tons of oil, compared to 68,500 the previous year.

This deluge of sunflower oil naturally threw the market into a spin. Soybean oil prices plummeted from 11 to 7 cents a pound; safflower seed tumbled to \$80 a short ton delivered and sunflower oil itself fell from \$250 to \$150 a ton ex tank Rotterdam.

Around the globe, countries began to substitute the cheaper sunflower oil in their products. Japan, who had purchased but 4,000 tons of sunflower oil the year before, took on 80,000 tons -- almost wiping out the safflower oil industry in the United States. Countries in Europe bought 160,000 tons, compared to but 8,500 tons just five years before. West Germany bought more sunflower oil. The Netherlands, Italy and France used large quantities of sunflower oil for the first time. East Germany bought 91,400 tons in 1966

--and even Bulgaria, a leading sunflower seed exporter, bought the Russian oil.

The lower-priced sunflower oil seemingly overwhelmed the market, causing a "surplus" of other oils almost overnight. Why did the Soviet Union choose to flood the market with sunflower oil in the late 1960's?

Contrary to most observers who say the decision to sell was based on an oil surplus, I believe the decision was based mainly on the need for hard currency. Simply put: the Russian government decided to sell it instead of eat it.

Earlier, the Soviet plan was to increase domestic supplies from 7 to 10 Kg per capita. Increased oil supplies coming along in 1966 due to a good crop and an ever-rising percentage of oil in the seed could have gone into local consumption and still not reached the goal of 10 Kg per capita.

In a planned economy it is possible to make these arbitrary decisions. No real surplus is needed. The commodity is merely diverted from the domestic market and sold at a price necessary to make the sale for the exchange desired.

I don't think the Soviet Union had a significant surplus of oil in 1967. She sold over 700,000 tons of oil primarily at the expense of the domestic diet, as evidenced by this apparent decision not to increase vegetable oil per capita.

There are, of course, other reasons why the Soviet Union selected the year 1967 to double its exports. The country produced good crops of sunflowers in 1966, 67 and 68, on more acres, with a yield average of 1,232 pounds of seed per acre. Also, during that time, there was a significant increase in oil content of the seed, due to Academician Pustovoit's breeding and selection efforts. For example, the percentage of oil recovered on a commercial basis from the seed in the Soviet Union in 1950 was 28 per cent; it was nearly 38 per cent in 1960 and about 44 per cent in 1968. In 1966 there was at least 800,000 tons more oil than there was in 1950 on the same acreage because of higher yields and higher oil content.

Record oil production, along with the need for hard currency, continued in 1968 when the Soviet Union exported 787,000 tons of oil, and in 1969 when she shipped 716,000 tons. All this time the sunflower oil flow kept the price low and built up an apparent surplus of other oils. There was no sign that Russian exports would recede.

But they did stop -- almost as quickly as they had started -- last August. So today we are seeing the effects of that decision. Soybean oil prices have been up to 11 and 12 cents a pound. Crushing plants are working around the clock to satisfy the demand for vegetable oil around the world. New crushing capacity is proliferating.

The April edition of the Soybean Digest reports that new solvent extractors are being constructed in Bulgaria and Rumania. Extraction capacity is being increased in the United States, France and many other places around the world.

The surplus of oil outside the Soviet Union has all but disappeared.

Argentina sold oil so fast at these prices that its government had to ban exports of it.

The high oil prices we are experiencing are encouraging growers to plant more oilseed crops throughout the world. In our own country farmers in the Red River Valley have contracted to grow twice as many sunflowers now that the contract price has been raised from 3.5 to 4 cents a pound. Farmers know they can earn \$44 an acre with sunflowers, comparing favorably with other cash crops. And, we expect more sunflowers have been planted in the South this year.

More sunflowers also are being grown this year in Europe. Rumania, particularly, is expected to produce a record-breaking 1,025,000 tons of seed, with the addition of one-hundred-thousand hectares, unless there was great damage from the recent floods. Argentina just harvested 1,040,000 tons, compared to 876,000 tons last year. Brazil had its first 1-million-ton soybean crop and Canada is nearly doubling its rapeseed planting.

A surge of palm oil is coming from Nigeria, Malaysia, Colombia, Dahomey, Indonesia and the Ivory Coast. Now that we've passed this sunflower oil flood, said one analyst, we might be seeing a new one of palm oil.

There is also a sharp increase in safflower acreage, now that Japan can no longer get the sunflower oil it wants for its salad oil industry. But this is relatively minor in the total oilseed picture.

Farmers in this country intend to grow 43 million acres of soybeans this year -- a million more than the record crop in 1969, which started with a heavy carryover. Last year the United States exported 5 billion pounds of oil and oil equivalent, with an increase anticipated this year. That export market appears most attractive now that the Soviet Union is keeping its oil.

We are also told that the U.S. growers are increasing their cotton acreage by 3 per cent and flax by 11 per cent.

Canada expects to increase its exports of rapeseed by 500,000 tons and its flax by 300,000 tons this year. European countries are also predicting bigger crops of rapeseed.

Now, while all this oil-producing activity is going on, the demand for vegetable oil is unusually heavy.

Part of this demand can be traced to the social revolution affecting many countries throughout the world. The concern over giving people a better diet is beginning to affect political decisions.

In Pakistan and India, for example, there is a concerted effort to raise the per capita vegetable oil consumption from its current average of only 8.1 pounds. Large quantities of oil under Public Law 480 are going to India and Pakistan. Significantly, free dollar oil is also moving to those countries.

Japan, with a per capita oil consumption of 30 pounds, continues to develop as a market for soybean oil used in western-type foods. Last year Japan bought 2.6 million tons of soybeans, 330,000 tons of rapeseed and

100,000 tons of sunflower seed.

Even the United States, with its per capita vegetable oil consumption of 52 pounds, intends to use more than the record 10.4 billion pounds of food fats and oil consumed last year. This record resulted from increased use in the major feed categories -- salad and cooking oils, shortening and margarine.

The demand is greater from West Germany and the East European countries. Incidentally, the West Germans bought one-fifth of the U.S. soybeans sold abroad last year.

Up to recently, vegetable oil has largely been in surplus, despite the big increase in world population and apparent needs. Today, about 40 million tons of oil are being consumed and that total is growing by 900,000 tons each year.

While demand has been growing as the new decade begins, some supplies of oil have been reduced. Marine oil availability last year was down because of the poor fish catch in Peru and Norway; Africa had a small 1968 peanut harvest and Europe experienced a small rapeseed crop in 1969.

The combination of greater demand and shortened supply raises the question of whether this demand can be met. The Commodity Problems committee of the United Nations Food and Agriculture Organization studied this question and concluded: "If world demand were to show the same gradual increase as in recent years, the increase in estimated world production might not be sufficient to meet it."

Hanging over this present picture of good oil prices and almost feverish efforts to supply the growing demand is the big question of the Soviet Union's oil trade intentions.

A large part of the answer to the economic significance of sunflowers in the future lies in the actions of the Soviet Union. This year the Soviet Union plan calls for 4.86 million hectares of sunflowers, practically the same as last year's 4.8 million hectares. The crop is off to a good start with generally favorable moisture conditions in the major growing areas.

Last year the conditions were not so favorable, and the crop was about 6.3 million metric tons -- a drop of six per cent from the 1968 crop, or a reduction of about 150,000 metric tons of sunflower oil. With lower vegetable oil prices at that time, we anticipated that their exports would be down, but we had little reason to expect that the Soviet Union would keep its sunflower oil almost completely from the export market.

The question most of us are asking is: When will we see the Soviet Union export in large quantities again? No one really knows. It could happen tomorrow, because, as I've stressed, I think the Soviet Union does not necessarily have to have a surplus of oil to export significant amounts.

However, I think it might be more difficult for them to export large quantities now than it was three years ago. At that time they had an abundance of oil and they exported it. Now, however, internal pressures to use the oil at home might prevail. In 1967, 68, and 69 they exported it before it could become considered part of the local supply. It is claimed that the Soviet Union has a limit of about five million hectares of good

sunflower land available on a rotation basis each year and this provides little opportunity to expand acreage to get more oil for export. Therefore, if she truly wants to feed 10 kilograms per capita there would not be an exportable surplus.

But those are only possible clues to the mystery of why the Soviet Union is holding its oil off the market as higher prices prevail. The market keeps testing her, but, so far, it appears that she doesn't need the hard currency as much as she wants the oil for home use. Those inside the Soviet Union who want sunflower oil more than foreign exchange are winning the argument to improve the diet.

But, unquestionably, the Russians could export sunflower oil at any time. My own view, shared by Harry Walters, a foreign regional analyst for the U.S. Department of Agriculture, is that this year the Soviet Union's production of seed could be up 500,000 tons, meaning she could have 600,000 or 700,000 tons of oil to export.

Over the next three or four years, Walters believes that the Soviet Union probably will export around 500,000 tons of oil each year.

And there are other factors to consider in predicting the vegetable oil market for the years just ahead.

This should be the decade of the hybrid sunflower. Russia could have the hybrid planted commercially in three or four years, boosting yields perhaps as much as 20 per cent or another million tons of seed. By that time, however, the Russian population growth will demand only 200,000 tons more seed. That could leave some excess for export. The hybrid will surely stimulate greater sunflower production in the United States. Ken Johnson, Cargill's sunflower project manager, predicts that by 1980 the United States will have a million acres in oil-bearing, hybrid sunflowers.

A second factor is the probability of higher oil content in seed. We expect to see still higher oil content in the Russian sunflowers, which has 50 per cent oil on a dry basis in 1968 and about 49 per cent in 1969. Her plant scientists believe they can get 55 to 60 per cent oil content. This could be another 10 to 20 per cent increase in oil.

Breeding more disease resistance into sunflowers by wide genetic crosses also could be a significant factor that could bring another 10 to 20 per cent increase in yield.

So consider this: If hybrids come to realize increases in yields of 15 to 20 per cent; if new disease resistance increases yields by 10 to 15 per cent and if new high-oil varieties are developed to contain 10 to 20 per cent more oil per pound of seed, the cumulative increase in sunflower oil production, especially in the Soviet Union, could be dramatic -- maybe 800,000 to 1,000,000 tons more oil on the same acreage! Such a development would produce real oil surpluses, even in Russia, and certainly in the world market.

Another factor that might influence the market is the seeming correlation between heart disease and the composition of fats in the diet. If there is renewed emphasis on use of polyunsaturated oil, this could turn the public to demanding more sunflower oil.

As for major breakthrough in research, our people doubt if there will be a discovery for sunflower oil alone. Since most oils are interchangeable, a new use for one oil should affect them all.

As we begin the new ten-year span, the future of the market is uncertain because we don't know what the Soviet Union will do. If she continues to keep her oil off the market the world price of vegetable oils should remain firm, which will encourage planting of more sunflowers, soybeans, peanuts, rapeseed and palm trees. We see this happening all over the world today -- sunflowers in the Red River Valley of the United States, Rumania, and Argentina; rapeseed in Canada and Northern Europe; and palm trees in Africa and the Far East.

If, on the other hand, the Russians decide to sell a billion more pounds of oil, we would have another pressure on the market, and possibly a return to the days when oil was selling for seven cents a pound.

It appears that soybeans will continue to be the leading source of vegetable oil because of the strong demand for soybean protein meal to feed poultry and swine. Sunflowers, on the other hand, are raised principally for the high-premium oil, and not for meal. So, the world's hunger for protein will demand more soybean meal, resulting in more soybean oil.

In summary, it is obvious from our experience of the 1960's that sunflower oil seed and meal had a strong impact on the vegetable oil economy. We can expect sunflowers to grow in economic importance to strengthen their hold on second place as a source of vegetable oil in the 1970's.

It is clear that the Soviet Union alone, which produces more than half the world sunflower crop, will greatly influence the future of this crop and the price of all vegetable oils. The Soviet Union's planned economy allows her to increase her exports on short notice. She doesn't need a surplus of oil to bring about increased exports.

At this moment it appears that the Soviet Union is responding to pressures to feed more vegetable oil to her people, even in the face of high oil prices and strong demand. Political winds do shift quickly and it is quite possible that she could repeat her performance of 1967, 68 and 69.

The evidence seems to suggest that the Soviet Union will boost her production of sunflower oil, and periodic exports are a real possibility in the immediate years ahead.

It all adds up to a decade in which the influence of sunflowers on oil markets will keep the world vegetable oil industry very much on its toes.

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