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Sunflower Situation in Russia and the United States

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ABSTRACT

The world's largest producers and exporters of sunflower seed are the USSR, Argentina, Bulgaria, United States, Australia, and Turkey. The Soviet Union's 1976-80 five-year plan projects annual production of 7.6 million metric tons, up from 6 million tons annually in the previous five-year plan. Soviet oilseed crushing capacity is projected at 10 million tons by 1980, which means the Soviets would still have a shortfall of domestic oilseed production. In the U.S., rapid expansion of acreage is expected. Currently, most U.S. oil-type sunflowers are exported to meet European demand. Domestic U.S. consumption is expected to rise, however, with three food companies having test-marketed sunflower cooking oils and margarines. With proper management, and as hybrid sunflowers become available for commercial production, sunflower can be a profitable U.S. crop, with gains relative to soybeans.

SUNFLOWER SITUATION IN RUSSIA

An understanding of the background information on overall Russian agriculture must be presented to better suggest the situation for the oilseed sunflower.

Unusually good weather probably would be required in 1978 for Soviet agricultural production to increase by about 5% as planned. Soviet agricultural production in 1976 and 1977 was aided by relatively favorable growing conditions, providing a rather high production level from which to achieve a further sizeable gain. Soviet production gains are usually less than 5%. Between 1961-65 and 1971-75, Soviet agricultural production increases averaged a little over 3% a year. Unfavorable 1978 weather conditions would likely result in a decrease in agricultural output. The record Soviet agricultural production of 1973 was not surpassed until 1977, and then only by 2.5%.

Weather conditions in 1977 were relatively favorable for fall field work. Soil moisture supplies generally were good in the winter grain regions. A late fall permitted good development of the winter grain and facilitated fall plowing. Winter grains were sown on 36.9 million hectares, an area equal to that seeded in the fall of 1976, which was a record winter grain area in recent years. At dormancy, the conditions of the winter grains were described as generally good. Several cold snaps in December, together with little or no snow cover, probably caused some damage to the winter grains in parts of the Ukraine and North Caucasus.

Fall plowing for seeding of spring crops in 1978 was completed on 112 million hectares, largely fulfilling the planned target. The 112 million hectares was 14 million hectares larger than the area plowed in fall 1976 when plowing was impeded by a late harvest season and by the early onset of winter weather. Successful completion of fall plowing eases the spring workload, as well as reportedly enhancing crop yield prospects somewhat.

Planned production of 220 million tons of grain during 1978 appears optimistic unless yields are boosted by relatively favorable weather during the growing season. Past trends in yields and production in the major grain growing republics suggest a harvest of around 210 million tons from 128 million hectares, a million hectares less than in 1977 but about equal to that in 1975 and 1976.

Prospects for attaining 1978 production goals for the major industrial crops are mixed. Unless weather conditions are unfavorable, the cotton harvest target of 8.5 million tons should be exceeded. That figure was surpassed in 1977. On the other hand, the sugar beet and *sunflower seed goals probably are too optimistic unless weather is unusually favorable in the major growing regions.* The 1978 goal of 96.2 million tons of sugar beets has been equaled or exceeded only in 1976. *The planned target of 7.5 million tons of sunflower seeds, if achieved, would be a new record, slightly larger than the excellent 1973 crop.*

Prospects for Soviet livestock raising in 1978 generally are favorable. Cattle, cow, and poultry numbers on January 1, 1978, probably were at record levels. However, hog numbers apparently were 4 million head below the record 72.3 million head present on January 1, 1975. On the other hand, poultry numbers had more than fully recovered from the distress slaughtering necessitated by the effects of the 1975 drought.

Soviet livestock production goals, except for meat, probably will be met. Meat production in 1978 is expected to equal or somewhat exceed the previous record of 15.0 million tons in 1975, but probably will fall roughly half a million short of the 15.6 million tons planned. Compared with production in 1975, increases in beef and veal, as well as poultry meat, will be largely offset by decreases in pork, as well as mutton, lamb, and goatmeat production. The 1978 milk production goal of 95.4 million tons and egg production target of 62.6 billion eggs appear to be attainable unless adverse weather interferes.

The Soviets in 1978 are giving a relatively high priority to agriculture allocating resources to attempt to achieve the planned levels of food and fiber production. Agricultural capital investments during 1978 are to total 33.5 billion rubles, an increase of 800 million rubles of planned 1977 investments. Of the 1978 investments, 22.7 billion rubles are to be provided from the state budget and 10.8 billion by the collective farms. (Currently, at the official Soviet

[1]Deceased.

rate, 1 ruble equals $1.42. However, when traded on West European exchanges, the ruble is discounted considerably.)

Almost a third of 1978 state capital investments in agriculture (7.3 billion rubles) is to be used for land reclamation. These investments are expected to result in 821,500 hectares of newly irrigated land and 942,000 hectares of newly drained land being brought into use in 1978, and 7.2 million hectares of pasture land provided with water for livestock. The corresponding plan figures for 1977 were 822,000 hectares of irrigated land, 882,000 hectares of drained land, and 7.9 million hectares of pastures supplied with water. An additional 15% (3.4 billion rubles) of state capital investments in agriculture in 1978 is to be used to construct poultry and livestock complexes, including facilities for an additional 37 million broilers and 5.3 million layers as well as livestock complexes to handle 70,000 cattle and 437,000 head of swine. These goals for poultry and livestock facilities appear to be scaled-down somewhat from the results achieved for such construction work during 1976.

Agriculture is scheduled to receive 80.2 million tons of mineral fertilizers during 1978, somewhat less than originally planned but about 7% more than the 75.0 million delivered in 1976. Planned mineral fertilizer deliveries to agriculture in 1978 represent 79% of planned mineral fertilizer production, a slightly smaller proportion than the 81% in 1976.

Agriculture is to continue to receive large amounts of new equipment in 1978. Tractor deliveries are scheduled at 361,500 units, trucks at 270,000 vehicles, and grain combines at 110,200. Truck deliveries seem about on target in relation to Tenth Five-Year Plan goals. Planned tractor deliveries are somewhat less than the number delivered in 1976 but this probably is compensated for by increased horsepower, i.e., between 1976 and 1977 the average horsepower of tractors delivered to agriculture increased from 77 to 79. Planned grain combine deliveries are about an eighth more than the number delivered in 1976. (The information on Soviet agricultural plans for 1978 was provided by Dr. Fletcher Pope, Jr., Project Leader, Soviet Union Situation and Outlook – Centrally Planned Countries Program area, Foreign Demand and Competition Division USDA Economics, Statistics and Cooperative Service, FMD-FAS.)

The 1978 production goal for sunflowers is unchanged from last year – 7.5 million tons. As this level has never been accomplished, and as recent years' production has been stagnant at best, this appears to be the most unrealistic of all the commodity goals. There is little scope for increased seeding. Any sizable gains will be brought about by increased yields, which are strongly affected by moisture conditions, insects and disease problems.

SUNFLOWER SITUATION IN THE UNITED STATES

Each year we see this same report: "In the United States a record crop is expected this year. Lower grain prices coupled with strong oilseed prices at planting time encouraged expanded sunflower seed plantings" (*Foreign Agriculture Circular,* Dec. 1977, USDA, FAS). Harvested area for the 1977 U.S. crop was estimated at 830,000 hectares, compared with 378,000 hectares harvested the previous year. Production, however, is expected to reach an estimated 1,225 million tons compared with 463,000 tons in 1976.

The big increase in U.S. sunflower seed yield was made possible by an almost complete shift from open pollinated varieties to hybrids. This switch has resulted in disease-resistant crops, which are also higher in oil content. Sunflower hybrids produced by the cytoplasmic male sterility and fertility restorer system were introduced for commercial production in the U.S. in 1972. This past season, hybrids accounted for over 95% of the total sunflower acreage. It has been suggested that direct substitution of adopted and tested hybrids has resulted in yield increases of more than 25% over open pollinated varieties and marked improvements in disease resistance, self-fertility, and uniformity for flowering, height, and maturity.

According to the USDA outlook, "It would appear that U.S. sunflower plantings may have a long term expansion potential of 3.0 million hectares, drawing on marginal land without disturbing basic soybean and corn crop patterns." In January, the USDA included sunflower for the first time in its survey of farmer's intentions. South Dakota estimated a 25% increase; Minnesota, 13%; North Dakota, 8%; and Texas reported an expected decrease to 42% of last year. "Joe Smith's Agricomments" agrees with the latter figure (although a lesser acreage could easily produce the same tonnage as 1977), also we would expect plantings in the traditional northern sunflower states of North Dakota, Minnesota, and South Dakota to increase over 25%. The unknown at this time is the acreage to be planted in the far Northwest, Midwest (corn and soybean belt), and the traditional cotton belt states. The acreage to be planted after small grain as a late planting could be very significant. The lateness of spring in the Midwest could suggest a swing to sunflowers. All reliable sources indicate a planting of more than 3,300,000 acres in the U.S. for 1978, with a possible potential 20% higher figure when the late plantings are completed.

Sunflower oil should be considered as a specific oil for particular premium application – not as a substitute for soybean oil. Sunflower seed is unusual in that the fatty acids that make up the oil vary depending upon the temperature during seed development. Northern (cooler climates) produced oils contain 68-72% linoleic and approximately 20% oleic acid. Northern oils probably will find more usages in margarines, salad dressings, and salad oils. Southern (warmer climates) produced oils, with a higher oleic content of about 50%, are more stable when heated and find more acceptance for use in snacks, potato chips, and other fried foods. Differences in oil compositions make usage in a wide range of food applications possible and desirable.

Sunflower seeds contain more than twice as much oil as soybeans – 42-46% compared with 18-20%. Newer hybrid varieties contain up to 50% oil. Thus, sunflowers must be considered a premier oilseed crop for the world. When oil prices are strong, sunflowers return more per acre than soybeans. When protein prices are strong, soybeans are a better cash crop. The superiority of sunflowers over soybeans as an oilseed crop will increase dramatically in the next few years as more improved hybrid varieties with substantially higher yields are grown and given more management by a new generation of sunflower producers in the U.S.

Several years ago the major food companies suggested that when one million acres of sunflowers were planted in the U.S., they would be ready to go nationwide with a marketing program of products from sunflower oil. Three major food companies, Hunt-Wesson (Sunlite Sunflower Oil), Procter and Gamble, (Puritan Sunflower Oil), and Lever Bros. (Promise Margarine), are still test marketing or selling in certain areas of the U.S. With 3 million acres planted in 1978, several other food companies and private label groups will be marketing sunflower products. It has been reported from reliable sources that if the domestic market does not absorb the increasing acreage producing sunflower oil, producers will consider long term contracts for the export markets they have enjoyed over the past few years.

There is sufficient commercial acreage in the traditional cotton belt, Midwest (traditional corn and soybean), and far Northwest areas to prove the viability of sunflowers as an alternate cash crop in these new areas. Hopefully we will see sunflowers on the futures market in the near future. ●