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THE U.S. SUNFLOWER SEED SITUATION

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THE U.S. SUNFLOWER SEED SITUATION*

by

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ABSTRACT: The sunflower appears to have established itself firmly as an oilseed crop in the United States. The confectioner's, or birdseed, variety has been produced in increasingly larger quantities for several decades. In 1967 large-scale production of oilseed varieties began in the Red River Valley areas of North Dakota and Minnesota, in response to the growing demand for edible oils, both domestic and foreign. This demand for the Northern sunflower oil centers in its high ratio of polyunsaturated fatty acids to saturated fatty acids, which makes it a premium oil for use in food fat products such as margarine, mayonnaise, and salad oils. More recently, a strong interest has been expressed by food processors for Southern sunflower oil, which contains an unusually high percentage of oleic acid, and a high degree of cooking stability when used for deep fat frying. About 7,000 acres of sunflowers were planted in 1974 in the High Plains of Texas. With current demand in excess of supply, and with sunflower seed prices at 2 to 3 times the level of past seasons, expansion in plantings is expected in both the northern and southern production areas after 1974.

KEY WORDS: Sunflowers, oil varieties, confectioners' varieties, vegetable oil.

1974 Crop Off a Fifth

Lower acreage and yield reduced the 1974 crop. This year's sunflower seed output is estimated at 641 million pounds, compared with 778 million pounds in 1973. Changes in the feed grain and wheat programs in 1974 eliminated the set-aside acres previously available for sunflower planting. This, plus strong competition from other crops resulted in reduced acreage for 1974. The largest reduction occurred in the oilseed varieties, which declined about 20 percent from the 578,000 acres planted in 1973.

Yield will be lower for 1974, as crop conditions have been poor. Whenever sunflower plantings are late, yields tend to be low. Plantings this year were late in almost all areas except South Dakota. As indicated in table 29, plantings were reportedly late also in 1972 and 1970. On the other hand, adverse crop conditions this year may have been at least partially offset by the increased planting of new-type hybrid seeds in the Red River Valley areas of Minnesota and the Dakotas.

Types of Sunflower Seeds

Sunflower seeds are either crushed for oil, or used for birdseed, confectioners' or other non-oil uses. There are currently three major types being cultivated in the United States. They are as follows:

1. Confectioner's sunflower seed, birdseed, and sunflower seed for other non-oil usage.
2. Northern sunflower seed for crushing, and
3. Southern sunflower seed for crushing.

The first category of sunflower seed traditionally commands a higher price to the farmer, and little of it is crushed for oil. The crushing varieties have been broken into 2 categories, delineated by area of production in the United States, each category distinctly different from the other, and each being produced for distinctly different edible usages. The oilseed varieties are high in

* This study updates an earlier one prepared by the author for the report of the Eighth International Sunflower Conference, held July 22-24, 1974, in Bucharest, Romania. Because this is an initial attempt to compile comprehensive data on U.S. sunflower seed production and distribution, the figures remain subject to revision.

Table 29.--Sunflower seed and oil: U.S. production and distribution, 1969-74

Item	Crop of					
	1969	1970	1971	1972	1973	1974
			PRODUCTION FACTORS			
			Seed for oil			
Planted acres	56,050	78,000	184,100	644,200	578,000	455,000
Harvested acres	52,813	73,800	175,870	606,160	566,800	445,600
Yield (lb./ac.)	1,082	945	1,100	922	1,085	957
Production (1,000 lb)	57,150	69,735	193,420	558,690	614,960	426,570
			Seed for Non-Oil Uses			
Planted acres	145,500	144,000	244,000	217,000	188,000	240,000
Harvested acres	138,622	135,800	235,730	206,040	184,700	234,600
Yield (lb./ac.)	868	879	1,010	858	886	914
Production (1,000 lb)	120,335	119,390	238,350	176,780	163,620	214,500
			Total Seed Production			
Planted acres	201,550	222,000	428,100	861,200	766,000	695,000
Harvested acres	191,435	209,600	411,600	812,200	751,500	680,200
Yield (lb./ac.)	927	902	1,049	905	1,036	942
Production (1,000 lb)	177,485	189,125	431,770	735,470	778,580	641,070
			SUPPLY AND DISPOSITION			
			--1,000 pounds--			
			Seed Production			
Minnesota	74,230	74,210	168,260	264,850	288,060	202,100
North Dakota	97,200	112,460	243,420	368,710	409,350	363,120
South Dakota	80	285	13,200	40,000	75,050	56,950
Other States	5,975	2,170	6,890	61,910	6,120	18,900
Total production	177,485	189,125	431,770	735,470	778,580	641,070
Imports	5,253	9,109	5,278	5,209	4,995	5,000
Total supply	182,738	198,234	437,048	740,679	783,575	646,070
			Seed Distribution			
Non-oil seed usage 1/	122,865	119,634	234,637	173,257	198,079	213,500
Exports	2,130	6,954	88,386	2/394,000	457,340	199,020
Crush 3/	43,480	61,520	114,770	162,845	164,522	230,000
Seed for planting 4/	890	1,712	3,445	3,064	2,780	3,550
Stocks change and other	+13,373	+8,414	(-4,190)	+7,513	(-39,146)	---
Total	182,738	198,234	437,048	740,679	783,575	646,070
			Sunflower Seed Oil			
Exports	8,905	12,395	28,910	2/57,880	17,000	9,000
Domestic	8,485	12,205	17,000	2/7,260	2/48,810	83,000
Total production 5/	17,390	24,600	45,910	2/65,140	2/65,810	92,000
Imports	27	45	10	29	70	50

1/Production less calculated seed for planting, plus estimated imports.

2/ASCS estimates.

3/Crusher reports, plus estimated crush not reported.

4/Seed calculated at 4 pounds per acre.

5/Crushed at 40 percent oil per weight of seed crushed.

NOTE: Seed year for crush imports and exports: October 1-September 30, beginning in the year shown. Oil year: November 1-October 31, beginning in the year shown.

Table 30.--Sunflower seed: Plantings on set-aside (or diverted) acres, 1961-73

State	1961	1962	1963	1964	1965	1966	1967-1970 1/	1971	1972	1973
	--Acres--									
California	55	22	630	848	512	290	0	1,786	3,831	1,149
Illinois	---	---	225	168	382	---	0	739	36,315	217
Indiana	---	---	37	18	21	---	0	3	4,505	88
Iowa	---	---	---	---	---	---	0	124	20,595	144
Kansas	150	15	---	---	---	---	0	---	2,131	---
Michigan	---	12	8	5	3	18	0	53	261	15
Minnesota	---	7	7,275	4,187	3,745	414	0	11,177	130,223	42,710
Missouri	---	---	34	1	---	---	0	15	4,006	---
Nebraska	---	---	---	---	---	---	0	66	17,840	77
North Dakota	---	132	6,382	2,568	4,042	309	0	12,918	189,658	85,127
Ohio	---	---	64	21	10	3	0	1,407	6,283	274
Pennsylvania	---	---	---	4	---	---	0	11	---	---
South Dakota	---	---	---	---	---	---	0	669	18,055	21,441
Texas	35	---	---	9	---	---	0	207	426	7
Other States	100	---	9	14	22	4	0	207	1,040	56
Total acres	340	188	14,664	7,843	8,737	1,038	0	29,383	435,172	151,303

1/None. Source: Agricultural Stabilization and Conservation Service.

oil content, with the extraction rates averaging about 40 percent.

The Northern sunflower oil is reported to contain between 68 and 72 percent linoleic acid, with a 20-23 percent oleic acid content. The high ratio of polyunsaturated fatty acids to saturated fatty acids makes the Northern oil a premium commodity for use in such finished products as salad oils, margarine, and mayonnaise.

The Southern sunflower oil is reported to contain up to 55 percent oleic acids, with an inversely low percentage of linoleic acid. Texas reports an average 46 percent oleic acid content in its sunflower oil thus far this season. Commercial users have found many advantages in this high oleic oil including its excellent cooking stability, particularly for use as a deep fat frying medium for potato chips, fritos, and other like products. At least 3 large food processors are strongly interested in this type of sunflower seed oil, and its production is being actively promoted.

Red River Valley Important Producing Area

Sunflower seed for oil crushing and export has been planted commercially in the United States since 1967. The greatest boost in the production of oil varieties came after 1970, when non-U.S. output declined and world consumers turned to the Red River Valley and adjacent counties of Minnesota and North Dakota for additional supplies. This area produces the bulk of sunflower seeds in the U.S.

Texas and California have produced varying quantities of sunflowers during past decades. This year the Plains Cooperative Oil Mill in Texas,[1] contracted with its constituent farmers for 7,000 acres of sunflower; the total might have been higher but for difficult planting conditions because of adverse weather. California plantings each year range from 1,000 to 5,000 acres, reportedly for confectionery or birdseed usage.

Set-Aside Acreage Stimulated Sunflower Production

Sunflower plantings on set-aside (or diverted) acres under the wheat, feed grain, and cotton support programs are shown in table 30 for 1961-73. Under these programs, a participating farmer set aside a specified number of acres from the production of a basic crop (feed grains, wheat or cotton) to an approved conservation use, receiving a payment per acre for each acre set aside. However, the participating farmer had the option of devoting set-aside acreages to approved alternate crops, such as sunflower, castor, safflower, sesame, and others. In 1971-73, if he elected to plant an alternate crop on set asides, a reduction was made in the set-aside payments computed for the farm.

Set-asides in 1972 were at peak levels, providing a peak number of acres for alternate crops. Oilseed prices had begun to strengthen and a strong boost was provided sunflower seed for oil by the demand from Japan and Europe. The farmers responded to such demand in almost every State which had grown sunflower in the past. This expansion of sunflower production in the United States could not have been accomplished but for the limitations on wheat and feed grain acres in 1971 and 1972.

The number of acres set-aside in 1973 was cut sharply as programs were changed to encourage increased plantings of the basic crops. Only the 3 major producing sunflower seed States and California maintained significant acres of sunflowers on set-aside acres under the 1973 support program. The incentive for planting on set-asides has been replaced in 1974 by that of increased prices for sunflower seed. Now established on its own, sunflower plantings may expand to the west in the Dakotas. The temporary limiting factor in the westward expansion will be the specialized equipment needed.

Crop Distribution Altered

The decline of total U.S. sunflower seed production from an estimated 778 million pounds in 1973 to 641 million in 1974 follows a recovery of output in the USSR from the declines of 1971 and 1972. The 1974 sunflower seed crop of the USSR, down 9 percent from the 7.5 million short tons of 1973, is nevertheless the second largest crop of record. At the same time, East European output has declined. Distribution patterns of the past 2 years will be altered as a result. U.S. domestic users of edible vegetable oils are now more willing to pay prices for sunflower oil at levels equivalent to world prices, even at a premium over soybean oil. As a consequence, the domestic crush is expected to expand significantly in the year ahead; U.S. exports of sunflower seed will decline from the peak 457 million pounds of 1973-74 as European users, both exporters and importers, look to the East for additional supplies of sunflower seed and oil, or of alternative oilseeds and edible oils from other sources.

Non-Oil Seed Usage Fluctuates

Non-oil seed usage (shown in table 29) presents an erratic pattern since 1970. Production far exceeded requirements in the year beginning October 1971. Consequently, production was adjusted downward in 1972 and 1973 to dissipate carryovers. As a result, actual usage was probably larger than the distribution shown for 1972 and 1973. The 1974 estimate of usage may reflect the actual consumption level—which has been increasing sharply since 1970.

About 50 percent of a normal supply of non-oil sunflower seed is used for confectionery purposes, and the balance for birdseed and other non-oil usages. A

[1] Referring to firms or trade names in this report is for identification only and does not imply endorsement by USDA.

Table 31.—Sunflower seed: U.S. acreage, production, price and crop value, by states, 1959 (Census) and 1962-74

Item	1959 (Census)	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Acreage planted														
Minnesota	3,200	NA	29,000	23,000	24,000	27,000	94,000	68,000	85,000	92,000	162,000	301,000	260,000	1/210,000
North Dakota	14,580	13,000	31,000	18,500	25,500	49,000	127,000	88,000	110,000	127,000	243,000	418,000	418,000	1/402,000
South Dakota	20	NA	NA	2/	NA	NA	NA	2/	1/100	1/400	1/15,000	1/42,000	1/81,000	1/70,000
California	5,100	NA	NA	3/4,700	NA	NA	NA	2/	3/3,500	4/1,100	1/2,000	4/4,000	4/2,000	4/2,000
Texas	900	NA	NA	2/	NA	NA	NA	2/	3/750	2/	2/	4/500	4/1,000	4/7,000
Other States	3,200	NA	NA	3/2,500	NA	NA	NA	5/36,500	*3/2,200	*4/1,500	6,100	4/95,700	4/4,000	4/4,000
Total U.S.	27,000	4/40,000	4/67,000	48,700	4/56,000	4/82,500	227,000	192,500	201,550	222,000	428,100	861,200	766,000	695,000
Acreage harvested														
Minnesota	2,978	NA	28,000	22,000	21,000	25,000	91,000	64,000	77,000	86,000	155,000	285,000	255,000	1/205,000
North Dakota	13,640	12,500	30,000	18,000	25,000	48,000	125,000	87,000	108,000	121,000	237,000	407,000	411,000	1/396,000
South Dakota	16	NA	NA	2/	NA	NA	NA	2/	1/100	1/300	1/12,000	1/39,000	1/79,000	1/67,000
California	5,070	NA	NA	3/4,562	NA	NA	NA	2/	3/3,449	4/1,000	4/1,900	4/3,800	4/1,800	4/1,800
Texas	861	NA	NA	2/	NA	NA	NA	2/	3/713	2/	2/	4/400	4/900	4/6,700
Other States	3,167	NA	NA	3/2,338	NA	NA	NA	5/31,000	*3/2,173	*3/1,300	4/5,700	4/77,000	4/3,800	4/3,700
Total U.S.	25,732	4/38,000	4/65,000	46,900	4/53,000	4/79,000	221,500	182,000	191,435	209,600	411,600	812,200	751,500	680,200
Yield (lb./ac.)														
Minnesota	942	NA	1,100	680	800	920	1,005	1,032	964	863	1,086	929	1,130	971
North Dakota	731	980	970	600	850	880	1,060	1,030	900	929	1,027	906	996	910
South Dakota	——	NA	NA	2/	NA	NA	NA	NA	4/800	4/950	4/1,100	1,025	950	850
California	935	NA	NA	3/1,633	NA	NA	NA	NA	4/1,000	4/1,000	4/1,100	4/1,000	4/1,000	4/1,000
Texas	826	NA	NA	2/	NA	NA	NA	NA	4/800	NA	NA	4/900	4/1,000	4/2,000
Other States	538	NA	NA	3/543	NA	NA	NA	922	4/900	4/935	4/842	4/750	4/912	4/1,000
Total U.S.	774	4/950	4/990	735	4/850	4/900	1,036	1,012	927	902	1,049	905	1,036	942
Production (1,000 lb.)														
Minnesota	2,806	NA	30,800	14,960	16,800	23,000	91,460	66,060	74,230	74,210	168,260	264,850	288,060	202,100
North Dakota	9,966	12,250	29,100	10,800	21,250	42,240	132,500	89,610	97,200	112,460	243,420	368,710	409,350	363,120
South Dakota	4	NA	NA	2/	NA	NA	NA	2/	4/80	4/285	4/13,200	1/40,000	1/75,050	1/56,950
California	4,742	NA	NA	3/7,448	NA	NA	NA	2/	4/3,450	4/1,000	4/2,090	4/3,800	4/1,800	4/1,800
Texas	711	NA	NA	2/	NA	NA	NA	2/	4/570	2/	2/	4/360	4/855	4/13,400
Other States	1,703	NA	NA	3/1,270	NA	NA	NA	5/28,575	*3/1,955	*4/1,270	4/4,800	4/57,750	4/3,465	4/3,700
Total U.S.	19,932	4/36,100	4/64,350	34,478	4/45,050	4/71,100	229,460	184,245	177,485	189,125	431,770	735,470	778,580	641,070
Price received by farmers				—Cents per pound—										
Minnesota	NA	NA	4.20	4.10	4.70	5.50	4.93	4.24	4.41	4.61	5.13	4.63	9.00	17.18
North Dakota	NA	5.50	4.35	4.15	5.00	5.70	4.75	4.41	4.75	5.10	5.04	5.05	9.00	16.72
Texas	——	——	——	——	——	——	——	——	——	——	——	——	——	15.00
Crop value				—1,000 dollars—										
Minnesota	NA	NA	1,278	613	790	1,265	4,509	2,800	3,274	3,423	8,629	12,271	25,925	34,725
North Dakota	NA	674	1,266	448	1,062	2,408	6,296	3,954	4,594	5,734	12,267	18,498	36,841	60,720
Texas	——	——	——	——	——	——	——	——	——	——	——	——	——	2,010

1/Trade estimate.

2/If any, included in "Other States."

3/Based on Census data.

4/ASCS estimate.

5/Primarily test plots in southern states.

*Excludes test plots in southern states.

NA--Not available.

Table 32.--Sunflower seed (oil varieties): U.S. acreage, production, price, and crop value, 1967-74

Item	1967	1968	1969	1970	1971	1972	1973	1974
Acreage planted								
Minnesota	43,000	34,000	33,000	37,000	69,000	236,000	190,000	150,000
North Dakota	52,800	20,000	22,200	40,000	95,000	274,000	305,000	227,000
South Dakota	NA	NA	1/100	1/400	1/15,000	1/42,000	1/81,000	1/70,000
Texas	---	2/	2/	2/	2/	3/500	3/1,000	3/7,000
Other States	NA	4/30,500	5/750	5/600	3/5,100	3/91,700	3/1,000	3/1,000
Total U.S.	96,300	84,500	56,050	78,000	184,100	644,200	578,000	455,000
Acreage harvested								
Minnesota	41,000	33,000	30,000	35,000	66,000	226,000	186,000	147,000
North Dakota	51,800	19,800	22,000	38,000	93,000	267,000	300,000	224,000
South Dakota	NA	NA	1/100	1/300	1/12,000	1/39,000	1/79,000	1/67,000
Texas	---	2/	2/	2/	2/	3/400	3/900	3/6,700
Other States	NA	4/25,500	5/713	5/500	3/4,870	3/73,760	3/900	3/900
Total U.S.	92,300	78,300	52,813	73,800	175,870	606,160	566,800	445,600
Yield (pounds per acre)								
Minnesota	1,060	1,100	1,080	940	1,120	950	1,200	1,000
North Dakota	1,125	1,132	1,095	950	1,100	930	1,050	930
South Dakota	NA	NA	3/800	3/950	3/1,100	1/1,025	1/950	1/850
Texas	---	---	---	---	---	3/900	3/950	3/2,000
Other States	NA	900	3/800	3/900	3/820	3/750	3/950	3/1,000
Total U.S.	1,106	1,043	1,082	945	1,100	922	1,085	957
Production (1,000 pounds)								
Minnesota	43,460	36,300	32,400	32,900	73,920	214,700	223,200	147,000
North Dakota	58,275	22,410	24,100	36,100	102,300	248,310	315,000	208,320
South Dakota	NA	NA	4/80	3/285	3/13,200	1/40,000	1/75,050	1/56,950
Texas	---	2/	2/	2/	2/	3/360	3/855	3/13,400
Other States	NA	22,950	4/570	3/450	3/4,000	3/55,320	3/855	3/900
Total U.S.	102,085	81,660	57,150	69,735	193,420	558,690	614,960	426,570
Price received by farmers per pound (cents)								
Minnesota	4.85	3.90	3.85	4.00	4.40	4.65	NA	18.00
North Dakota	4.50	3.85	4.05	4.25	4.40	4.55	NA	18.00
Crop value (1,000 dollars)								
Minnesota	2,108	1,416	1,250	1,316	3,252	9,963	NA	26,460
North Dakota	2,622	863	976	1,534	4,501	11,298	NA	37,500

1/Trade estimate.
2/Included in "Other States."
3/ASCS estimate.
4/Primarily test plots in Southern States.
5/Excludes test plot acres in Southern States.
N.A.--Not available.

process of screening separates out the "jumbos" which are packaged in-shell for human consumption. A second screening segregates the larger sizes for dehulling, the meats being used for confectionery and other edible purposes. The remaining small seeds are used for birdseed and miscellaneous uses, either in-shell or dehulled. Consumption of non-oil varieties has almost doubled during the past 4 years. With little likelihood of a decline of demand in 1975, production should continue to increase, although seed for crushing may preempt some of the acreages available and limit the expansion of output for non-oil purposes.

Sunflower Oil Production and Distribution

U.S. production of sunflower oil has increased steadily since the commercial crush of sunflower seed began in 1967. Such production reached 66 million pounds from the 1973 crop and is forecast to increase sharply to nearly 100 million this crop year. Exports, primarily to Japan and Europe, were the motivating force behind the increases; the increase of domestic sunflower oil usage was much less spectacular until 1974. For the year ending September 30, 1974, exports of sunflower oil were 17 million pounds, compared with the 58 million of 1972/73. This decline is coincidental with, or is a result of, the rapid rise in domestic requirements since 1971.

The Texas Situation

This is worthy of review because of its sudden emergence. Sunflower research has been conducted at Texas A&M, and at some Central Texas mills for more than a decade,[2] implementation of such research by the Plains' Cooperative Oil Mill did not take place until the advent of 2 factors: (1) A strong food processor interest had been expressed in the high oleic content of sun oil, particularly for the oil of the Plains and Central areas of Texas, which has an oleic content above the average, and (2) the demise of castor production in the United States (only 800 acres in 1974) left an oil mill in Plainview with little or no seed for crushing. While this plant may not crush all the sunflower seed expected to be produced in future years, the immediate economics of an unused mill played a part in the decision of the Cooperative to contract with farmers for sunflower acreages.

Annual yields for sunflowers appear to be affected by 2 major factors—the time of planting and the timing of rainfall before blooming. The Plains farmer who plants on irrigated acres has an advantage over the Red River Valley farmer relative to the second factor. Only one irrigation is needed and this watering of the crop can be made at the optimum time of growth.

Actual yields for early 1974 harvestings in Texas have ranged as high as 3,300 pounds per acre. This year crop conditions, including primarily the lateness of plantings, will hold down the average yields in Texas to about 2,000 pounds per acre. If these yields (above average for the United States) are realized, and the farmer receives 15 cents per pound for his seed as contracted; the resulting revenues per acre may match or exceed that of any other competing crop in the area, and at less cost (with only one watering).

The Cooperative estimates that in 1975 it will need to produce a minimum of 300 tank cars of oil to meet commitments. This will equal at least 18 million pounds of oil requiring between 20,000 and 22,000 acres. This increase over 1974 will be small relative to a potential demand reported at 7 times the expected output. However, hybrid seed for the 1975 planting season is presently available for only 30,000 acres.

Northern Situation

The Red River Valley situation is uncertain. Until recently, with only 3 major companies contracting for sunflower seed for crushing in the area, and with almost all production contracted for, total U.S. output was easy to estimate. Now, more than 15 companies are contracting with the Red River Valley farmers. In addition, many farmers are not contracting at a specific price level, and are depending on market conditions at harvest time to determine the price received. As a result, the 1974 planted acreage is not known and official estimates may exclude some of the acres planted to crushing varieties.

Drought and other adverse crop conditions struck the southern part of the area (South Dakota) harder than it did North Dakota and Minnesota. For the most part, however, sunflower proved hardier than the basic crops under such conditions. The farmer will remember this as he prepares for 1975. Net revenues for sunflowers have compared very favorably with late-planted wheat and barley. The seasonal range of farmer prices for oilseeds has been 18-21 cents per pound. The oilseed varieties were bringing 22 cents per pound, Minneapolis, in mid-October (21 cents on the farm).

Non-oil varieties of sunflower seed were contracted early in the season at about 15 cents per pound. While the acreages devoted to the confectioner's and birdseed varieties are trending upward, no substantial acreage increases are expected in 1975 over 1974.

Future Prospects

The outlook for sunflower seed in 1975 and thereafter appears to be unusually bright. Domestic demand is expanding rapidly, with production the

[2] Numerous test plots were planted throughout the Southern States in 1968-1970 (30,000 in 1968). To date implementation of such tests with commercial plantings has been reported only from Texas.

Table 33.--Sunflower seed (confectioner's varieties): U.S. acreage, production, price, and crop value, 1967-74

Item	1967	1968	1969	1970	1971	1972	1973	1974
Acreage planted								
Minnesota	51,000	34,000	52,000	55,000	93,000	65,000	70,000	60,000
North Dakota	74,200	68,000	87,800	87,000	148,000	144,000	113,000	175,000
California	NA	NA	1/3,500	2/1,100	2/2,000	2/4,000	2/2,000	2/2,000
Other States	NA	NA	1/2,200	2/900	2/1,000	2/4,000	2/3,000	2/3,000
Total U.S.	130,700	108,000	145,500	144,000	244,000	217,000	188,000	240,000
Acreage harvested								
Minnesota	50,000	31,000	47,000	51,000	89,000	59,000	69,000	58,000
North Dakota	73,200	67,200	86,000	83,000	144,000	140,000	111,000	172,000
California	NA	NA	1/3,449	2/1,000	2/1,900	2/3,800	2/1,800	2/1,800
Other States	NA	NA	1/2,173	2/800	2/830	2/3,240	2/2,900	2/2,800
Total U.S.	128,200	103,700	138,622	135,800	235,730	206,040	184,700	234,600
Yield (pounds per acre)								
Minnesota	960	960	890	810	1,060	850	940	950
North Dakota	1,014	1,000	850	920	980	860	850	900
California	NA	NA	1/1,000	2/1,000	2/1,100	2/1,000	2/1,000	2/1,000
Other States	NA	NA	1/900	2/900	2/960	2/750	2/900	2/1,000
Total U.S.	994	990	868	879	1,010	858	886	914
Production (1,000 pounds)								
Minnesota	48,000	29,760	41,830	41,310	94,340	50,150	64,860	55,100
North Dakota	74,225	67,200	73,100	76,360	141,120	120,400	94,350	154,800
California	NA	NA	1/3,450	2/1,000	2/2,090	3,800	1,800	1,800
Other States	NA	NA	1/1,955	2/720	2/800	2/2,430	2/2,610	2/2,800
Total U.S.	127,375	102,585	120,335	119,390	238,350	176,780	163,620	214,500
Price received by farmers (cents per pound)								
Minnesota	5.03	4.65	4.85	5.10	5.70	5.20	NA	15.00
North Dakota	4.95	4.60	4.95	5.50	5.50	5.15	NA	15.00
Crop Value (thousand dollars)								
Minnesota	2,401	1,384	2,024	2,107	5,377	2,308	NA	8,265
North Dakota	3,674	3,091	3,618	4,200	7,766	7,200	NA	23,220

1/Census-based estimate.

2/ASCS estimate.

NA--Not available.

Table 34.--Sunflower Seed and Oil: U.S. Imports, by country of origin, calendar years, 1969-74

Country of Origin and Total	Calendar Year					
	1969	1970	1971	1972	1973 1/	1974 1/ 2/
	1,000 pounds					
SUNFLOWER SEED						
Canada	2,890.9	5,626.4	3,999.6	3,561.7	3,562	2,652
Kenya	546.9	469.5	554.3	409.8	226	
South Africa, Rep. of	677.6	1,654.6	904.0	1,051.0	750	365
Israel		304.0	844.9		146	140
Belgium/Luxembourg			92.1			
France			1.1	1.1		
Romania			22.7	15.4		39
Japan			54.4			
Malawi				222.6		
Other		0.5			140	187
TOTAL SEED	4,115.4	8,055.0	6,473.1	5,261.6	4,824	3,383
SUNFLOWER OIL						
Canada	13.1	20.1	14.4		1.3	23
West Germany	1.0	1.8	3.5	1.7	0.5	5
Netherlands		13.2	6.6			
Denmark					10.5	13
U.S.S.R.	5.5	6.6	4.3	5.0	29.5	
Japan						15
TOTAL OIL	19.6	41.7	28.8	6.7	41.8	56.0

1/ Preliminary
2/ January 1 - September 30, 1974

Table 35.--Sunflower Seed Oil, crude 1/: U.S. Exports, by country of destination, Calendar years, 1969-73 and Jan. 1-September 30, 1974

Country of Destination	Calendar Year					
	1969	1970	1971	1972	1973 2/	1974 2/ 3/
	--1,000 pounds--					
Belgium	882.7	746.8	9,991.0	3,395.3	931.6	1,346.5
Canada		3,880.4	7,831.6	2,190.1	265.2	22.1
France					1,118.6	657.0
West Germany				775.9		4,697.0
Japan				1,256.8	10,325.2	518.8
Mexico	10.8	91.5	19.0			
Netherlands	3.0	2,450.5	1,930.0	15,358.3	26,595.3	7,058.3
United Kingdom				2,801.4	7,787.1	830.0
Other	11.3	20.0	113.1	28.2	134.7	263.1
TOTAL	907.8	7,189.2	19,884.7	25,806.0	47,157.7	15,392.8

1/ Census category 421.8010: Olive, sunflower seed, rape, colza, and mustard oils, crude; believed to be almost entirely sunflower seed oil.
2/ Preliminary
3/ January 1- September 30, 1974

limiting factor at this time. The consensus in the trade is that next year's plantings could exceed 870,000 acres, without too great an increase in Texas. At the same time, the optimism out of Texas suggests that a much greater increase could occur, bringing the total to at least 900,000 acres. Words of caution, however, have been received from others who have tried sunflower in Texas, only to see a beautiful-appearing crop yield only minor quantities per acre at harvesttime. Nevertheless, with record prices for seed, and demand in the United States for sun oil greatly in excess of current production, the planted acres could expand rapidly next year and thereafter.

Farm prices for sunflower seed of any kind rarely exceeded 5 cents per pound until 1973. The current level of prices will enhance the farmer's willingness to respond to the prospective gain in domestic requirements ahead. Two factors tend to increase the requirements for sunflower seed oil, in addition to the new interest by food processors in this oil:

1. Safflower acreages appear to be declining in California, the major producing State. While high oil prices might place safflower in a better competitive position for acreages with other crops, no such possible increases have been reported to date.

2. Future expansion of oilseeds' plantings in the United States may necessarily be west and south of the corn-soybean belt. The response of the Corn Belt farmers during the past decade to the increased demand for soybeans may not be matched in future years unless soybeans are priced more favorably relative to feed grains. There is strong competition for available land between the individual field crops, as well as between field crops and livestock. Thus, the soybean industry cannot expect U.S. soybeans to capture any large blocks of land from other crops (or cropland pastures from livestock) unless oilseed prices become high relative to feed grain prices after 1974. Then, sizable extra plantings of oilseeds may be necessary in those regions west of Iowa, from Texas to North Dakota, where feed grains, soybeans, and cotton do not dominate available croplands. While soybean acreages may continue to increase each year after 1974, particularly in the Southern States, the major potential for the oilseed expansion necessary in the United States may be found in future sunflower plantings.

1974 Speeches and Articles Available Pertaining to Fats and Oils

A free copy of the following releases may be obtained from the ERS Division of Information, Rm. 0054 South Building, U.S. Department of Agriculture, Washington, D.C. 20250:

"U.S. Food Fat Consumption Trends" by George W. Kromer. Reprint from Fats and Oils Situation, FOS-272, April 1974, ERS-522.

"Regional Soybean Acreage Response Analysis and Projections for 1974" by R. Samuel Evans and David E. Kenyon. Reprint from Fats and Oils Situation, FOS-272, April 1974, ERS-553.

"Economic Aspects of the Vegetable Oils and Fats Industry in the United States" by George W. Kromer. Paper presented at the International Trade and Development Conference, United Nations Economic Commission for Asia and the Far East (ECAFE) at the Battelle Seattle Research Center, Seattle, Washington, June 10, 1974. Thirty-three pages including Statistical Appendix.

"Margarine Consumption and Prices," by Stanley A. Gazelle and Paul D. Velde. Reprint from Fats and Oils Situation, FOS-273, June 1974, ERS-560.

"Palm Oil in the World's Fats and Oils Economy," by George W. Kromer. Paper presented at the Palm Oil Symposium, 48th Annual Fall Meeting of the American Oil Chemists' Society at the Sheraton Hotel, Philadelphia, Pennsylvania, September 30, 1974. Twenty-six pages including statistical appendix.

"U.S. Food Fats and Oils Outlook" by George W. Kromer. Speech before the 1974 Convention of the Milk Industry Foundation and the International Association of Ice Cream Manufacturers at the Sheraton Hotel, Dallas, Texas, October 23, 1974.

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