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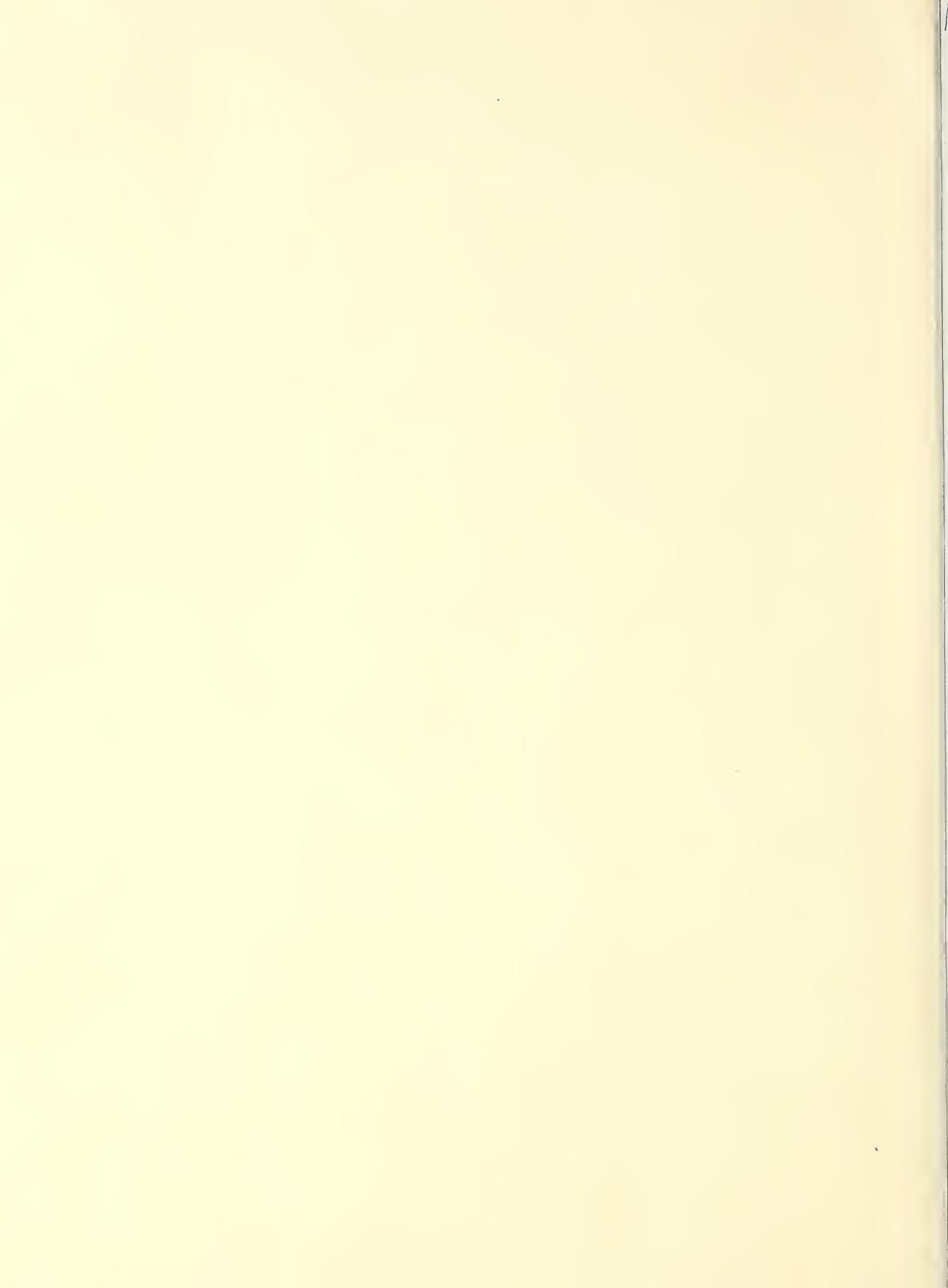
U.S. COTTONSEED INDUSTRY ADJUSTING TO SHORT 1966 CROP

by

George W. Kromer

COTTONSEED

MIL. ACRES — Harvested acreage — Production — MIL. TONS

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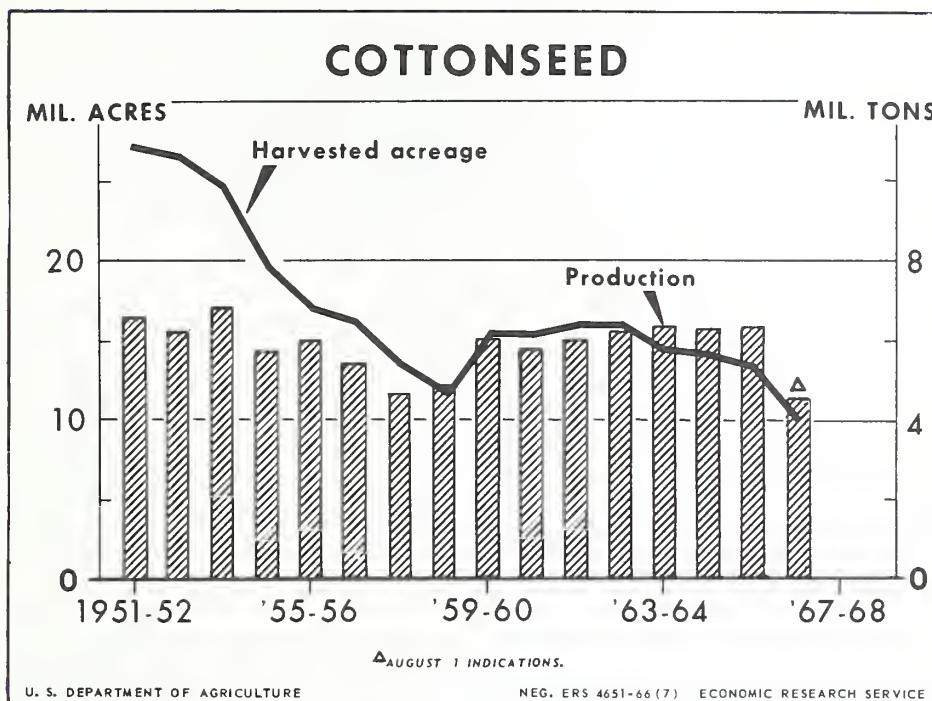
U. S. cotton acreage has dropped sharply from 26.9 million in 1951 to 9.8 million in 1966, a decline of 64 percent. Cottonseed production was reduced only 29 percent during this period because of the strong uptrend in yield per acre.

The 1966 cottonseed crop is estimated at 4.5 million tons, 27 percent less than in 1965 and the smallest since 1950. The sharp cutback reflects the heavy acreage diversion under the 1966 Upland Cotton Program. This year's short crop will result in (1) higher prices for cottonseed to farmers; (2) excess processing capacity; (3) a high price for cottonseed oil and wide premium over soybean oil, and (4) a decline in usage of cottonseed products both here and abroad. (See page 23).

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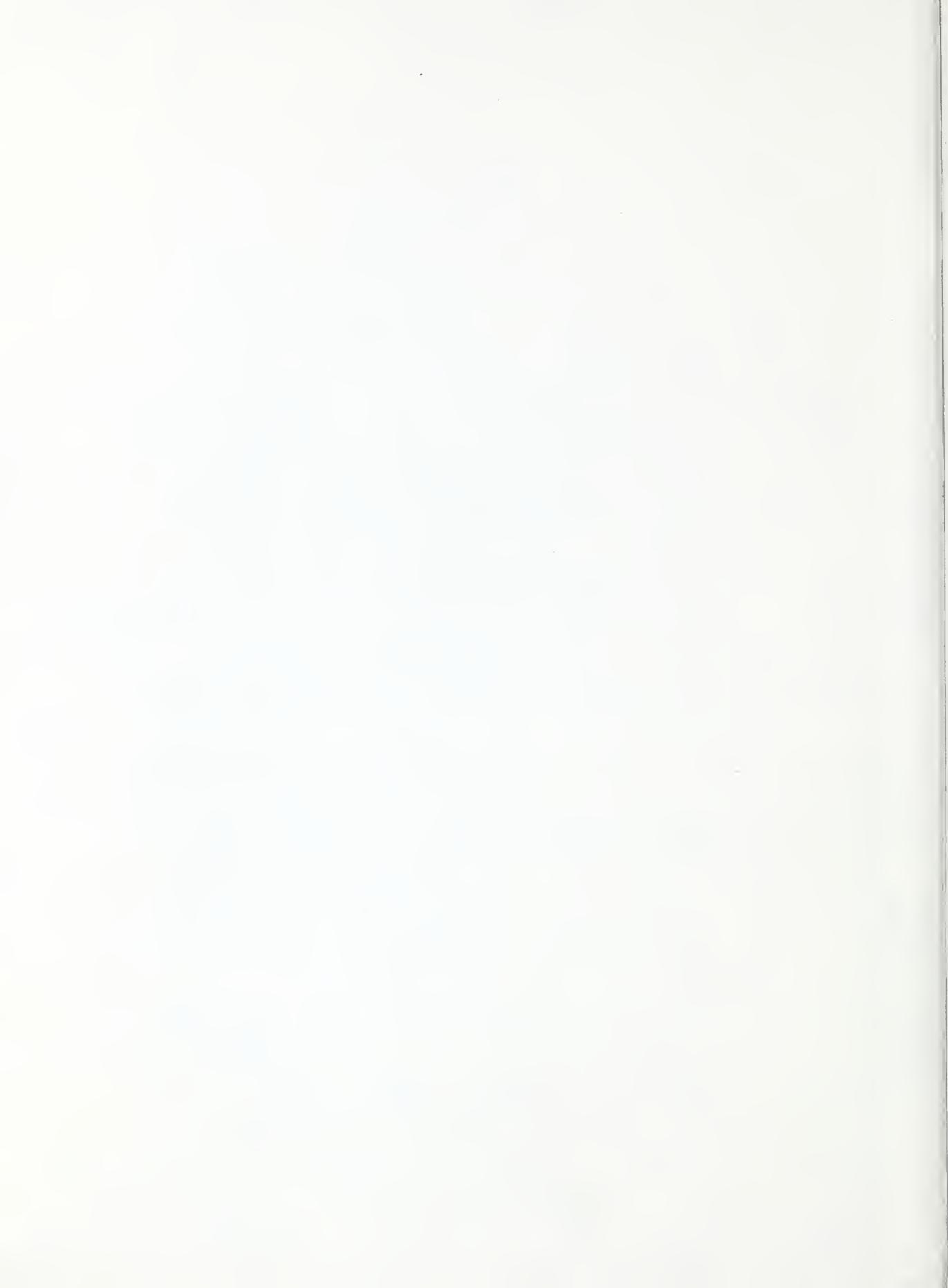
AUGUST 1966

U. S. COTTONSEED INDUSTRY ADJUSTING TO SHORT
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The 1966 cottonseed crop, as of August 1, was estimated at 4,454,000 tons, 27 percent below last year and the smallest since 1950. Cotton acreage is the smallest in a century, but yields per acre have increased sharply in recent years. Because cottonseed is a joint product in the production of lint cotton, its supply is determined primarily by the economic factors that affect cotton. Cottonseed output, therefore, does not adjust to changing demands and price levels for oilseeds, edible oils, and oilmeals. With each 100 pounds of cotton fiber, cotton plants yield approximately 175 pounds of cottonseed. Only about 5 percent of this seed is required to plant the following year's crop.

Cotton acreage to be harvested in 1966, estimated at 9.8 million, is 28 percent under 1965. The sharp cutback results from heavy grower participation in the new cotton program 1/ in effect for the 1966-69 crops. By participating in the Government's 1966 Upland Cotton Program, producers agreed to reduce plantings at least 12.5 percent. They could divert up to 35 percent and plant only their domestic allotment which was 65 percent of the effective acreage allotment. The actual diversion in 1966 was 4.6 million acres or 28 percent of the total acreage allotment. Many producers chose to divert the maximum acreage.

The marketing of cottonseed is simple and direct--from grower to ginner to oil mill (crusher). Cotton harvesting begins in south Texas in early July and moves northward, eastward, and westward as the season progresses. In the northern part of the Cotton Belt, picking usually begins by mid-September. The length of the harvesting season depends primarily on weather and on the availability of hand pickers and mechanical harvesters. Usually, harvesting is largely completed by December. Seed cotton moves from farm to gin where it is separated into lint and seed. Ginners ship seed to the oil mills about as rapidly as it is acquired. There are approximately 188 cottonseed oil mills in the United States located throughout the Southeast, Mississippi Valley, Southwest, and Far West States. According to trade sources, about one half the U. S. cottonseed crop is currently processed by the solvent extraction technique (prepress and direct). The other half is processed mainly through continuous mechanical screw presses doing a complete pressing.

Important economic factors affecting the domestic cottonseed industry as it adjusts to the short crop include:

(1) Aggressive competition for the supply of raw material as crushers bid up the price of cottonseed to farmers. At the same time, the lower volume of crush means higher milling costs per ton on account of fixed overhead. One USDA research study indicates that with a 20-percent decrease in cottonseed

1/ Title IV of the Food and Agriculture Act of 1965, approved November 3, 1965.

crushed, the average unit costs per ton would increase about 10 percent.
Obtaining the maximum supply of seed is a basic problem for most mills because
of the industry's excess crushing capacity.

(2) Surplus ginning ana crushing capacity. Many cottonseed crushers
will be looking for other domestic oilseeds to crush, mainly soybeans and
peanuts; others will remain dormant for the season or go out of business. The
4-year cotton program calling for less production will accentuate the downtrend
in the number of cottonseed mills and reduce processing capacity. It probably
will result in more integration of remaining mills with feed, fertilizer, or
other enterprises. In contrast, the soybean industry continues to expand its
processing capacity because of rapidly increasing production.

(3) A drop in domestic use and exports of cottonseed oil and meal as
users switch to lower priced substitutes insofar as possible.

(4) A relatively high price for cottonseed oil likely resulting in a
wide premium over soybean oil. When cottonseed oil was in short supply in past
years, the average differential widened to 3 cents per pound above soybean oil.

(5) A small price differential between cottonseed meal and soybean meal
(cottonseed meal normally sells at a discount to soybean meal as it is lower in
protein content). In spite of the increased use of urea, some soybean meal
will need to move into cattle-feeding areas to replace cottonseed meal since
cattle numbers, though declining, remain high. It is, therefore, possible that
in 1966-67 cottonseed meal prices may exceed those of soybean meal for the first
time in several years.

The remainder of this paper briefly examines the 1966 cottonseed sit-
uation and its market implications for cottonseed oil.

Increased Crusher Competition for Seed Means Higher Prices to Farmers

Total supplies of cottonseed in 1966-67 (carryover stocks on August 1
plus production) are currently estimated at 4,579,000 tons, about 27 percent
less than in 1965-66. Crushings for the 1966-67 season are forecast at
4,250,000 tons compared with 5,800,000 tons for the season just ended (table
13). A crush this size would produce around 1,400 million pounds of crude
cottonseed oil compared with 1,925 million estimated for 1965-66. Cake and
meal output .would be around 2.0 million tons compared with 2.7 million in 1965-
66.

Cottonseed crushing mills turn out 4 products: cottonseed oil, meal,
linters, and hulls. Each of these products enters markets that are highly
competitive with substitute products. Oil is the most valuable primary product,
accounting for over half the total value of cottonseed products. Oil cake and
meal ranks second. Cottonseed oil is used almost entirely as a food whereas
the meal is used principally as a feed for livestock.

Table 12.--Cottonseed: Acreage, yield and production, by States, crop years 1964-66

State	Cotton acreage			Cottonseed yield per acre harvested			Cottonseed production		
	Harvested		For harvest	1964	1965	1966 1/	1964	1965	1966 1/
	1964	1965	1966						
	1,000 acres	1,000 acres	1,000 acres	Lb.	Lb.	Lb.	1,000 tons	1,000 tons	1,000 tons
Texas	5,675	5,565	4,100	612	694	727	1,735	1,930	1,490
Mississippi	1,460	1,430	995	1,245	1,150	1,178	909	822	586
Arkansas	1,242	1,205	860	1,043	983	891	648	592	383
California	743	725	627	1,884	1,898	1,914	705	683	600
Alabama	831	809	575	862	843	807	358	341	232
Arizona	375	340	254	1,765	1,918	1,866	331	326	237
Georgia	632	577	405	782	787	765	247	227	155
Tennessee	502	499	365	1,084	1,022	942	272	255	172
South Carolina	538	489	305	829	818	774	223	200	118
Louisiana	520	498	355	923	916	935	240	228	166
Oklahoma	575	555	430	410	544	474	118	151	102
Missouri	347	334	190	963	958	789	167	160	75
North Carolina	381	368	160	782	484	562	149	89	45
New Mexico	185	175	141	1,157	1,120	1,177	107	97	83
Other States	51	48	31	706	625	645	18	15	10
United States	14,057	13,617	9,793	886	898	910	6,227	6,116	4,454

1/ Indicated August 1, based on average seed--lint ratio.

Table 13.--Cottonseed: Supply and disposition, crop years, 1959-1966

Item	Year beginning August							
	1959	1960	1961	1962	1963	1964	1965 1/	1966 2/
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Supply:								
Stocks August 1	100	105	188	280	234	168	156	125
Production	5,991	5,886	5,978	6,139	6,192	6,227	6,116	4,454
Total supply	6,091	5,991	6,166	6,419	6,426	6,395	6,272	4,579
Disposition:								
Crushed	5,491	5,352	5,539	5,833	5,886	5,926	5,800	4,250
Exports	8	5	7	10	8	7	10	
Seed	238	281	254	232	234	222	3/	
Residual 4/	249	165	86	110	130	84	337	
Total disposition	5,986	5,803	5,886	6,185	6,258	6,239	6,147	
Ending stocks:	105	188	280	234	168	156	125	
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Price per ton								
Support to farmers 5/	34.00	34.00	45.00	44.00	44.00	44.00	43.00	48.00
Received by farmers	38.80	42.60	51.10	47.90	50.70	47.10	46.70	60.00
Price and value of products:								
Meal, per ton 6/	55.64	55.12	59.25	65.60	63.35	59.90	68.80	
Hulls, per ton 7/	7.00	7.00	10.00	15.00	15.00	15.00	18.00	
	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	
Oil, per pound 8/	10.0	11.6	12.4	10.4	9.9	11.5	12.8	
Linter, per pound 9/	3.8	4.1	5.2	3.8	3.5	3.5	3.5	
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	
Combined value 10/	68.27	73.89	80.21	75.42	72.27	76.38	85.20	

1/ Preliminary and partly estimated. 2/ Forecast based on August 1 indications. 3/ Not available included in residual. 4/ Includes feed, fertilizer, and loss. 5/ Purchase price. 6/ 41-percent protein, bulk, carlots, Memphis. 7/ Carload lots, Valley. Estimated. 8/ Crude, f.o.b. Valley. 9/ Weighted average price for all grades and market points, f.o.b. mill. 10/ Combined value of product per ton crushed.

Because of the short supply of cottonseed, there will be more unused crushing capacity and processors will pay higher prices for seed this year than last. The season-average price received by farmers for the 1966 crop of cotton- seed probably will average at least $60 per ton compared with $46.70 last year.

Prices to farmers for the 1966 cottonseed crop are being supported at $48.00 per ton, basis (100) grade, an increase of $5.00 per ton over 1965. The cottonseed price support is carried out primarily by means of a product purchase program through oil mills which agree to pay not less than price support. Tenders of cottonseed products from participating oil mills will be received through July 1967 or a later date approved by CCC. The prospective 1966-67 supply and demand situation for cottonseed oil and meal indicates that no pur- chases of the product will be necessary during 1966-67. There have been no purchases of cottonseed oil since 1963.

Cottonseed Oil Supply Down More Than a Fourth

Total supply of cottonseed oil for the 1966-67 marketing year that started August 1 is estimated at 1.7 billion pounds compared with 2.3 billion for the year just ended. The decline from last year is mainly due to reduced output, but carryover stocks were also smaller (table 14). Domestic use of cottonseed oil is forecast at 1.3 billion pounds compared with 1.7 billion in 1965-66. This would leave around 0.4 billion pounds available for export or carryover stocks on July 1, 1967.

Cooking and salad oil is the major outlet, accounting for about two- thirds of domestic disappearance. Shortening, margarine, foots, and refining loss account for the other third (table 15). Use of cottonseed oil in the manufacture of shortening and margarine likely will be lower in 1966-67 than last year because of higher prices and the wide price differential that is expected to exist between cottonseed oil and its major competitor soybean oil. Processing costs for cottonseed oil are generally higher than those of soybean oil primarily because of differences in refining loss. The refining loss for cottonseed oil typically is 6 to 7 percent and 3 to 4 percent for soybean oil.

There is a traditional preference for cottonseed oil by some bulk users who specify that the product contain a certain proportion of cottonseed oil. These users have built up a market for their product over the years and do not want to change its characteristics. Manufacturers of cooking and salad oils, margarine, and shortening will pay a reasonable premium for cottonseed oil to meet certain quality standards, but any additional quantities used need to be priced near soybean oil. A sudden widening or narrowing of the price differ- ential will not affect oil usage substantially unless the change prevails over a period of time.

Under current cotton legislation, it appears that cottonseed oil supplies will remain relatively low at least through July 1, 1970. Therefore, the price premium of cottonseed oil over soybean oil will remain larger than normal during this period and consumption of cottonseed oil likely will drop. The sharpest drop in usage likely will be in the manufacture of shortening and margarine.

Table 14.--Cottonseed oil: Supply and disposition and oil equivalent
of exports of cottonseed, 1947-66

Year beginning August	Supply				Disposition		Cottonseed (oil equivalent of exports)
	Production	Imports	Stocks, August 1	Total	Exports	Domestic disappearance	
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1947	1,276	4	186	1,466	33	1,313	2
1948	1,704	1/	120	1,824	82	1,558	2
1949	1,847	---	185	2,032	147	1,670	3
1950	1,197	---	215	1,412	61	1,184	2
1951	1,751	---	167	1,918	120	1,396	3
1952	1,825	1/	402	2,227	55	1,202	4
1953	2,074	---	971	3,045	351	1,698	5
1954	1,735	---	996	2,731	684	1,650	7
1955	1,894	---	398	2,292	634	1,375	5
1956	1,685	---	284	1,969	434	1,333	4
1957	1,438	---	202	1,640	286	1,186	2
1958	1,518	---	168	1,686	342	1,132	2
1959	1,861	---	212	2,073	522	1,263	3
1960	1,808	---	287	2,095	2/390	1,455	2
1961	1,865	---	250	2,115	2/470	3/1,430	2
1962	1,942	---	324	2,266	2/374	1,379	3
1963	1,981	---	514	2,495	2/483	1,387	3
1964	1,999	---	624	2,624	2/701	3/1,573	2
1965 4/	1,925	---	421	2,346	370	1,700	3
1966 5/	1,400	---	275	1,675	100	1,300	

1/ Less than 500,000 pounds. 2/ Includes estimates of foreign donations not reported by Census; beginning January 1965 foreign donations reported by Census. 3/ Factory consumption figures used for years in which reported factory consumption exceeds domestic disappearance. 4/ Preliminary and partly estimated. 5/ Forecast.
Totals computed from unrounded numbers.

Table 15.--Cottonseed oil: Utilization, year beginning August, 1947-65

Year beginning August	Food uses					Nonfood uses				Total domestic disappearance
	Shortening	Margarine	Salad and cooking oils	Other	Total	Soap	Foots and loss	Other	Total	
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1947	312	434		477	1,224	1/	84	4	89	1,313
1948	470	448		507	1,425	1	127	5	133	1,558
1949	583	451		469	1,503	0	158	8	166	1,670
1950	356	322		399	1,077	1/	98	9	107	1,184
1951	412	392		463	1,267	1/	123	6	129	1,396
1952	329	283		459	1,071	1/	125	4	129	1,202
1953	573	354		629	1,556	1/	132	4	136	1,698
1954	547	328		669	1,544	1/	99	6	105	1,650
1955	354	286		611	1,251	0	115	9	124	1,375
1956	286	273		689	1,247	0	78	8	86	1,333
1957	247	163		665	1,075	0	105	7	112	1,186
1958	233	124	640	39	1,036	0	89	7	96	1,132
1959	332	122	670	20	1,144	0	115	4	119	1,263
1960	380	158	775	7	1,320	0	127	7	134	1,455
1961	356	110	847	10	1,323	0	101	7	108	2/1,430
1962	340	103	732	85	1,260	0	112	6	118	1,379
1963	351	103	808	19	1,281	0	95	11	106	1,387
1964	365	103	962	20	1,450	0	107	16	123	2/1,573
1965 3/	460	120	860	4/145	1,585	0	105	10	115	1,700

1/ Less than 500,000 pounds. 2/ Factory consumption figures used for years in which reported factory consumption exceeds domestic disappearance. 3/ Preliminary and partly estimated. 4/ Includes unreported disappearance.
Totals computed from unrounded numbers.

Manufacturers of cooking and salad oil, the most important market outlet for cottonseed oil, likely will turn more to blended oils or switch to lower priced soybean oil in order to remain competitive.

Cottonseed Oil Exports Will Drop Again

Cottonseed oil exports for the marketing year that ended July 31, 1966, are placed at 370 million pounds (July estimate) compared with 701 million in 1964-65 (table 14). Exports during the 1966-67 marketing year are expected to decline again because of reduced U.S. availabilities and high prices. U.S. cottonseed oil in Western Europe, the major U.S. dollar market, probably will not be competitive with foreign oils (such as peanut, sunflower, and coconut) and demand will fall off. Shipments of cottonseed oil under the Food-for-Peace Program (P.L. 480) will decline somewhat because of the short supply and wide prospective price differential between soybean oil and cottonseed oil.

Price Premium of Cottonseed Oil Over Soybean Oil May
Be Widest In Years

Wholesale prices of the major food fats--soybean oil, cottonseed oil, and lard--generally move together. Usually their relationships to each other tend to vary within a narrow range. This reflects primarily the high degree of substitution and interchangeability of the 3 fats in manufactured food products. When 1 of the 3 gets out of line with the other 2 in the general price structure, manufacturers who use that fat switch to a lower priced substitute fat as much as they can.

The price premium of cottonseed oil over soybean oil during 1947-65 averaged 1.4 cents per pound (table 16). It varied from zero in 1954 to 2.9 cents in 1948. Cottonseed oil, the supply of which is expected to be reduced by more than 600 million pounds, is expected to average around 3 cents per pound above soybean oil in the 1966-67 marketing year. The market price differential on August 1, 1966, was 2.8 cents. When cottonseed oil was in short supply in past years, the monthly differential widened to over 4 cents a pound but did not hold that level for the entire season. In some other countries, there is still some preference for cottonseed oil over soybean oil because of its desirable quality characteristics and historical use. Although this preference is disappearing in the United States, it nevertheless continues in some degree. Because of the nearly complete technical substitutability, the differential in the long run probably will narrow and may even disappear.

Number of Cottonseed Mills Continue Down But Average
Size Increases

The number of mills processing cottonseed declined from 346 in 1946 to 188 in 1963 (table 17), a decrease of 158 mills or approximately 46 percent. But at the same time, average annual processing volume per mill increased from 9,000 tons to over 31,000 or by about 250 percent. By operating on a large scale with more efficient extraction techniques, crushers are able to take advantage of savings arising from both the processing of the cottonseed and the marketing of the products.

Table 16.--Soybean and cottonseed: Comparison of oil and meal
prices, 1947 to date

Calendar year	Oil price per pound			Meal price per ton		
	Soybean oil 1/	Cottonseed oil 2/	Difference	Soybean meal 1/	Cottonseed meal 2/	Difference
	Cents	Cents	Cents	Dollars	Dollars	Dollars
1947	23.2	25.7	+2.5	74.85	73.85	-1.00
1948	22.3	25.2	+2.9	75.60	73.10	-2.50
1949	11.0	11.7	+0.7	65.15	56.60	-8.55
1950	14.0	15.7	+1.7	64.20	63.35	-0.85
1951	16.8	18.3	+1.5	67.90	72.00	+4.10
1952	11.0	12.7	+1.7	83.80	82.80	-1.00
1953	12.4	14.0	+1.6	64.30	60.70	-3.60
1954	13.3	13.3	0	79.70	66.20	-13.50
1955	11.6	12.4	+0.8	56.85	56.90	+0.05
1956	13.2	13.6	+0.4	51.30	51.80	+0.50
1957	12.2	13.3	+1.1	47.05	50.85	+3.80
1958	10.5	12.5	+2.0	55.95	58.55	+2.60
1959	9.0	11.0	+2.0	56.45	60.10	+3.65
1960	8.8	9.9	+1.1	53.10	54.25	+1.15
1961	11.5	12.9	+1.4	63.15	57.75	-5.40
1962	9.0	11.4	+2.4	66.50	61.10	-5.40
1963	8.9	10.2	+1.3	72.50	67.70	-4.80
1964	9.2	10.3	+1.1	69.15	60.25	-8.90
1965	11.2	11.6	+0.4	71.45	60.10	-11.35
Average (1947-65)	12.6	14.0	+1.4	65.20	62.50	-2.70
Months 1965						
January	11.6	12.4	+0.8	68.00	60.20	-7.80
February	12.1	12.9	+0.8	69.80	59.00	-10.80
March	12.2	12.9	+0.7	68.50	56.90	-11.60
April	12.1	12.6	+0.5	69.30	56.00	-13.30
May	10.4	11.3	+0.9	68.40	54.10	-14.30
June	10.2	10.8	+0.6	74.60	59.60	-15.00
July	10.0	10.5	+0.5	74.40	63.50	-10.90
August	10.5	10.5	0	69.60	64.40	-5.20
September	11.4	10.8	-0.6	76.80	59.90	-16.90
October	11.5	11.0	-0.5	70.80	59.10	-11.70
November	11.2	11.6	+0.4	75.70	61.90	-13.80
December	11.2	11.8	+0.6	71.40	66.60	-4.80
1966						
January	11.9	12.5	+0.6	78.80	69.50	-9.30
February	12.0	12.9	+0.9	77.30	71.70	-5.60
March	11.3	13.5	+2.2	71.50	68.60	-2.90
April	11.6	14.2	+2.6	75.50	69.90	-5.60
May	11.3	14.7	+3.4	80.30	71.00	-9.30
June	11.2	15.0	+3.8	92.70	72.70	-20.00
July	12.2	15.3	+3.1	97.20	90.00	-7.20
August (1-11)	13.6	16.3	+2.7	92.20	86.20	-6.00

1/ Soybean oil, crude, Decatur; soybean meal, bulk, 44% protein, Decatur.

2/ Cottonseed oil, crude, Valley; cottonseed meal, bulk, 41% protein, Memphis.

Table 17.--U. S. Cottonseed oil mills and volume of crush, selected years, 1925-63

Year beginning August	Number of mills	Cottonseed crushed		Cottonseed oil production		Cottonseed meal production	
		Total	Per mill	Total	Per mill	Total	Per mill
		1,000 tons	1,000 tons	Million pounds	Million pounds	Million pounds	Million pounds
1925	563	5,558	9.9	1,617	2.9	5,193	9.2
1930	510	4,715	9.2	1,442	2.8	4,330	8.5
1935	471	3,818	8.1	1,164	2.5	3,478	7.4
1940	446	4,398	9.9	1,425	3.2	3,907	8.8
1945	360	3,262	9.1	1,018	2.8	2,869	8.0
1946	346	3,090	8.9	973	2.8	2,725	7.9
1947	346	4,082	11.8	1,276	3.7	3,797	11.0
1948	346	5,332	15.4	1,704	4.9	4,782	13.8
1951	328	5,476	16.7	1,751	5.3	5,095	15.5
1952	303	5,563	18.4	1,825	6.0	5,345	17.6
1954	286	5,249	18.4	1,735	6.1	5,122	17.9
1957	222	4,247	19.1	1,438	6.5	3,916	17.6
1958	214	4,439	20.7	1,518	7.1	4,122	19.3
1963	188	5,886	31.3	1,981	10.5	5,580	29.7

Source: Compiled from Cotton Production and Distribution Bulletins, Bureau of the Census, Census of Manufactures, and USDA analysis.

Table 18.--Cottonseed cake and meal: Supply, disposition and price, 1950-66

Year beginning August	Supply				Disposition			Price per ton Bulk Memphis
	Production	Imports	Stocks, Aug. 1 1/	Total supply	Exports and shipments	Feed and other uses 2/	Total disposition	
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Dollars
1950	1,669	100	137	1,906	12	1,822	1,834	71.40
1951	2,548	147	72	2,767	44	2,678	2,722	77.35
1952	2,672	185	45	2,902	27	2,755	2,782	72.25
1953	2,961	78	336	3,375	59	3/2,892	2,951	61.20
1954	2,561	30	208	2,799	158	2,439	2,597	63.05
1955	2,631	51	203	2,885	196	2,525	2,721	51.30
1956	2,390	64	164	2,618	32	2,334	2,366	52.10
1957	1,958	52	252	2,262	10	2,140	2,150	55.60
1958	2,061	150	112	2,323	6	2,202	2,208	60.55
1959	2,547	32	116	2,696	147	2,359	2,506	55.65
1960	2,504	43	190	2,738	57	2,538	2,595	55.10
1961	2,506	72	143	2,721	7	2,580	2,587	59.25
1962	2,734	45	134	2,913	97	2,625	2,722	65.60
1963	2,790	33	190	3,013	55	2,709	2,764	63.35
1964	2,769	14	249	3,032	145	2,719	2,864	59.90
1965 4/	2,725	42	168	2,935	110	2,700	2,810	68.80
1966 5/	2,000	125	125	2,250	25	2,150	2,175	

1/ Stocks at processors mills. Includes stocks owned by CCC June 1953-July 1954. 2/ Includes small quantities of cottonseed meal used for fertilizer on farms of cotton growers, estimated at 30,000 tons annually. 3/ Adjusted for stocks owned by CCC. 4/ Preliminary. 5/ Forecast.

The cottonseed crushing industry has been improving its operating efficiency by shifting to new and improved extraction techniques--from hydraulic method of extracting oil to screw press (or expeller) and solvent extraction (both direct and prepress). In 1951, 57 percent of the cottonseed was crushed by hydraulic presses compared with 31 percent by screw presses and 12 percent by solvents. In 1963, about 9 percent was crushed by the hydraulic method; 48 percent by screw press; and 43 percent by solvent techniques. 1/ The U. S. average yield of oil per ton of cottonseed processed increased from 320 pounds to 336 pounds during the period. Another change in the cottonseed industry has been the shift in cotton growing from the South-east to the Mississippi Valley and the Southwest (including California). To be near the supply of cottonseed, some of the newer mills have become located in the Mississippi Valley and Southwestern areas.

1/ 1963 Census of Manufacturers.

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U. S. Fats and Oils Statistical Bulletin Available

USDA's Statistical Bulletin No. 376, U. S. Fats and Oils Statistics, 1909-65, is now available for distribution. A single free copy may be obtained by writing to Division of Information, Office of Management Services, U. S. Department of Agriculture, Washington, D.C. 20250. The bulletin incorporates a comprehensive series of longer term historical statistics on oilseeds and fats and oils in the United States. It serves to complement the current statistics appearing regularly in the Fats and Oils Situation, issued 5 times a year by the Economic Research Service.

The publication consists of 230 tables on supply, disposition, utiliza-tion, foreign trade, and prices of oilseeds and fats and oils and their products. It supersedes Statistical Bulletin No. 147, ilseeds, Fats and Oils, and Their Products, 1909-53, published in June 1954, and has been expanded to include additional information on foreign trade (P.L. 480), price support operations, and minor oilseed crops. Also, separate statistics dealing with end-products such as salad and cooking oils, salad dressings, mayonnaise, and related products have been added.