COTTONSEED QUALITY

CROP OF 1983

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service Cotton Division
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CONTENTS

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
MARKET NEWS SECTION - COTTON DIVISION
4841 SUMMER AVE - MEMPHIS, TN 38122
Telephone (901) 521-2934

Cottonseed Quality - 1983 Crop

Cottonseed from the 1983 crop was lower in grade than the previous season, according to the Cotton Division, Agricultural Marketing Service, USDA. The average grade from the 1983 and 1981 crops was 96.0 and from the 1982 crop was 96.5. The quality index from the 1983 crop was 98.4, up from 98.0 in 1982 and 98.1 in 1981. Foreign matter content of 1983 cottonseed was 1.6 percent, up from 1.4 percent the previous year and down from 2.0 percent two years ago. Moisture content of cottonseed from the 1983 crop, at 11.0 percent, was the highest for any crop since 1974 and was up from 10.9 percent a year earlier and 10.1 percent two years ago. Free fatty acids content, at 0.7 percent, was the lowest since the 1976 crop and was down from 1.1 percent in 1982 and 0.8 percent in 1981. The quantity index of cottonseed from the 1983 crop was 97.12, the lowest since records were established in 1944. Quantity index of 1982 cottonseed was 98.22 and for the 1981 cottonseed was 97.69. Average oil content of 1983-crop seed was 17.0 percent, the lowest since 1980 and down from 17.5 percent in 1982 and 17.2 percent in 1981. Average ammonia content was 4.02 percent, the highest since 1980 and up from 3.89 percent a year earlier and 3.97 percent in 1981.

Indicated 1983 cottonseed production is 3.08 million tons compared with 4.74 million a year earlier and 6.40 million in 1981.

Data from grade certificates covering 24,549 samples of cottonseed were used to compile this report. Averages of cottonseed quality and quantity factors and grades are shown by states (when sufficient certificates were received), by months and by specified frequencies. Average grade factors of cottonseed are shown by states in Table 3. The averages in this table are arithmetic means of grade factors and indexes tabulated and averaged from the individual grade certificates issued by chemists licensed by the U. S. Department of Agriculture.

The summary of national averages appearing in Table 1 below and presented in other tables of this report is based on state quality and quantity and grades weighted by the number of certificates received.

Table 1. Cottonseed: Average quality and quantity factors, indexes and grades, United States 1956-1983

Year beginning August 1	Quality factors - percent			Quality index	Quantity factors - percent			Quantity index	Average grade	Number of samples
	Foreign matter	Moisture	Free fatty acids		Oil	Ammonia	Linters			
1956	0.8	9.1	0.5	99.5	18.9	4.12	10.2	103.51	103.0	79,071
1957	1.3	12.5	2.5	92.9	18.8	3.78	10.0	100.81	93.5	74,016
1958	1.0	11.5	1.4	97.0	19.0	3.76	10.4	102.09	99.0	72,076
1959	0.9	11.4	1.3	97.1	18.8	3.89	10.2	102.10	100.0	87,772
1960	1.1	11.7	1.6	95.7	18.6	3.98	9.7	100.70	96.0	83,410
1961	1.2	10.9	0.9	98.0	18.8	3.83	10.1	101.16	99.5	92,251
1962	1.1	11.1	1.4	97.6	18.2	3.96	10.1	98.54	96.5	98,390
1963	1.1	9.3	0.7	99.2	18.7	4.05	10.3	103.55	103.0	86,035
1964	1.1	10.6	0.9	98.5	18.4	3.98	10.4	102.07	100.5	91,881
1965	1.2	11.1	1.2	97.9	18.0	4.00	10.3	100.49	98.5	108,828
1966	1.3	10.7	0.9	98.8	18.2	3.97	10.8	101.84	101.0	71,072
1967	1.3	10.1	0.9	98.5	18.4	3.89	10.7	101.97	100.5	45,838
1968	1.2	10.6	0.7	98.9	18.0	3.91	11.2	100.91	100.0	67,254
1969	1.3	10.6	0.9	98.3	17.9	3.97	11.1	101.03	99.5	62,522
1970	1.3	10.8	1.6	97.1	17.8	3.92	11.3	100.52	98.0	60,118
1971	1.5	11.1	1.5	96.2	17.7	3.84	11.0	99.29	95.5	57,960
1972	1.6	11.9	1.6	95.7	17.3	3.92	1/	97.67	94.0	71,210
1973	1.4	11.0	1.3	96.7	18.0	3.94	T/	100.81	98.0	62,504
1974	1.6	11.0	1.6	96.5	17.7	3.82	T/	98.42	95.5	61,114
1975	1.6	10.6	1.4	97.0	18.0	3.75	T/	99.50	96.5	44,250
1976	1.8	10.6	0.7	98.4	17.7	3.88	1/	98.93	97.5	52,048
1977	1.4	10.8	1.8	95.6	17.5	3.99	T/	98.85	94.5	61,466
1978	1.5	10.5	0.9	98.5	17.4	4.08	T/	98.97	98.0	50,418
1979	1.7	10.3	1.0	97.7	17.6	3.92	T/	98.92	97.0	56,792
1980	1.7	10.4	0.9	98.0	16.9	4.08	T/	97.17	95.5	38,224
1981	2.0	10.1	0.8	98.1	17.2	3.97	1/	97.69	96.0	50,636
1982	1.4	10.9	1.1	98.0	17.5	3.89	T/	98.22	96.5	33,612
1983	1.6	11.0	0.7	98.4	17.0	4.02	T/	97.12	96.0	24,549

1/ The linters factor was eliminated from official grade standards effective September 4, 1972.

May 10, 1984

Standards for Grades of Cottonseed Sold or Offered for Sale
for Crushing Purposes Within the United States

Determination of grade. The grade of cottonseed shall be determined from the analysis of samples, and it shall be the result, stated in the nearest whole or half number, obtained by multiplying a quantity index by a quality index and dividing the result by 100. The quantity index and the quality index shall be determined as hereinafter provided.

(a) The basis grade of cottonseed shall be grade 100.
(b) High grades of cottonseed shall be those grades above 100.
(c) Low grades of cottonseed shall be those grades below 100.

Determination of quantity index. The quantity index of cottonseed shall be determined as follows:

(a) For upland cottonseed the quantity index shall equal 4 times the percentage of oil plus 6 times the percentage of ammonia plus 5.
(b) For American Pima cottonseed the quantity index shall equal 4 times the percentage of oil plus 6 times the percentage of ammonia minus 10.

Determination of quality index. The quality index of cottonseed shall be an index of purity and scundness, and shall be determined as follows:

(a) Prime quality cottonseed. Cottonseed that by analysis contain not more than 1.0 percent of foreign matter, not more than 12.0 percent of moisture, and not more than 1.8 percent free fatty acids in the oil in the seed, shall be known as prime quality cottonseed and shall have quality index of 100.

(b) Below prime quality cottonseed. The quality index of cottonseed that by analysis contain foreign matter, moisture, or free fatty acids in the oil in the seed, in excess of the percentage prescribed in (a) above shall be found by reducing the quality index of prime quality cottonseed as follows:
    (1) Four-tenths of a unit for each 0.1 percent of free fatty acids in the oil in the seed in excess of 1.8 percent.
    (2) One-tenth of a unit for each 0.1 percent of foreign matter in excess of 1.0 percent.
    (3) One-tenth of a unit for each 0.1 percent of moisture in excess of 12.0 percent.

(c) Off quality cottonseed. Cottonseed that has been treated by either mechanical or chemical process other than the usual cleaning, drying and ginning (except sterilization required by United States Department of Agriculture for quarantine purposes) or that are fermented or hot, or that upon analysis are found to contain 12.5 percent or more of free fatty acids in the oil in the seed, or more than 10.0 percent of foreign matter, or more than 20.0 percent of moisture, or more than 25.0 percent of moisture and foreign matter combined, shall be designated as "off quality cottonseed".

(d) Below Grade cottonseed. Cottonseed the grade of which when calculated according to the foregoing is below grade 40.0 shall be designated as "Below Grade cottonseed" and a numerical grade shall be indicated.

Table 2. Examples of the computation of cottonseed quality and quantity indexes and grades, by qualities, in accordance with the Official Standards of the United States 1/

Example 2/	Quality Factors								Quantity Factors							Grade
	FFA 3/		FM 4/		H_2O 5/		Total reduction 6/	Quality index	Oil		NH_3 8/		Sum of products	Adjustment factors	Quantity index	
	Total	Reduction	Total	Reduction	Total	Reduction			Total	Product 7/	Total	Product 7/				
	Pct.	Units	Pct.	Units	Pct.	Units	Units		Pct.		Pct.					
PRIME QUALITY SEED																
1	0.5	0.0	0.3	0.0	10.0	0.0	0.0	100.0	19.0	76.0	3.60	21.60	97.60	+5	102.60	102.5
2	1.8	0.0	1.0	0.0	12.0	0.0	0.0	100.0	17.8	71.2	4.10	24.60	95.80	+5	100.80	101.0
3	1.2	0.0	0.8	0.0	9.6	0.0	0.0	100.0	16.2	64.8	3.97	23.82	88.62	+5	93.62	93.5
BELOW PRIME QUALITY SEED																
4	1.9	0.4	1.0	0.0	12.0	0.0	0.4	99.6	18.5	74.0	3.50	21.00	95.00	+5	100.00	99.5
5	1.8	0.0	1.1	0.1	12.0	0.0	0.1	99.9	19.7	78.8	3.75	22.50	101.30	+5	106.30	106.0
6	1.8	0.0	1.0	0.0	12.1	0.1	0.1	99.9	17.3	69.2	4.23	25.38	94.58	+5	99.58	99.5
7	1.9	0.4	1.1	0.1	12.1	0.1	0.6	99.4	15.8	63.2	2.98	17.88	81.08	+5	86.08	85.5
8	2.5	2.8	3.2	2.2	7.4	0.0	5.0	95.0	24.7	98.8	4.15	24.90	123.70	-10	113.70	108.0 AP
OFF QUALITY SEED Treated (other than usual), Fermented, Hot																
9	12.5	42.8	0.7	0.0	12.0	0.0	42.8	57.2	20.1	80.4	3.67	22.02	102.42	+5	107.42	61.5
10	1.8	0.0	10.1	9.1	12.0	0.0	9.1	90.9	16.9	67.6	4.13	24.78	92.38	+5	97.38	88.5
11	1.8	0.0	1.0	0.0	20.1	8.1	8.1	91.9	18.8	75.2	3.80	22.80	98.00	+5	103.00	94.5
12	1.8	0.0	15.8	14.8	11.1	0.0	14.8	85.2	19.3	77.2	4.08	24.48	101.68	+5	106.68	91.0
13	4.6	11.2	11.5	10.5	9.2	0.0	21.7	78.3	16.4	65.6	4.32	25.92	91.52	+5	96.52	75.5
BELOW GRADE SEED																
14	10.5	34.8	20.8	19.8	15.6	3.6	58.2	41.8	17.0	68.0	3.41	20.46	88.46	+5	93.46	BG*
15	17.5	62.8	0.5	0.0	14.1	2.1	64.9	35.1	19.5	78.0	3.94	23.64	101.64	+5	106.64	BG*

1/ Important key figures that determine the range of various qualities of cottonseed are underscored.
2/ Example "8", demonstration of application of grading system on American Pima seed; all others relate to upland cottonseed.
3/ Free fatty acids in the oil in the seed.
4/ Foreign matter in the seed.
5/ Moisture in the seed.
6/ Reductions are the adjustments made in the quality index for excesses of free fatty acids, foreign matter, and moisture above or below tolerances.
7/ "Products" are percentages of oil and ammonia in the seed multiplied by the factor used in computing the quantity index.
8/ Ammonia in the seed.
* Below grade 40. No numerical grade is indicated.

Table 3. Cottonseed: Average quality and quantity factors, indexes and grades, by states and United States, 1982 and 1983

State	Quality factors - percent						Quality index		Quantity factors - percent				Quantity index		Average grade	
	Foreign matter		Moisture		Free fatty acids				Oil		Ammonia					
	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983
AL	1.3	1.3	10.6	12.4	1.1	1.0	98.1	98.0	17.9	16.5	3.80	4.04	99.32	95.21	97.5	93.5
AR	0.9	0.9	12.0	12.2	1.2	0.6	97.9	98.7	17.0	16.1	3.85	3.97	95.78	93.29	94.0	92.0
GA	0.9	1.0	10.4	11.5	1.3	2.4	98.9	96.3	18.7	17.4	3.82	4.14	103.02	99.12	102.0	96.0
LA	1.1	1.0	11.6	11.7	1.4	0.6	97.7	99.0	16.8	16.6	3.86	3.89	95.01	94.40	93.5	94.0
MS	1.2	1.1	11.7	11.8	1.6	0.5	97.2	98.9	17.1	16.3	3.89	3.95	96.56	93.70	94.0	93.0
MO	1.1	0.9	12.7	12.4	0.5	0.6	98.6	98.7	17.0	16.5	3.81	4.03	95.75	95.11	95.0	94.0
NM	1.6	1.8	9.3	9.3	0.5	0.5	99.2	98.9	18.2	19.3	3.99	4.05	101.76	106.45	101.0	105.5
NC	0.8	1.0	11.6	12.5	0.8	1.0	99.3	98.2	18.9	17.0	3.66	4.35	102.73	98.79	102.0	97.5
OK	2.4	2.3	9.5	10.4	0.6	0.7	98.3	98.4	17.7	17.3	4.06	4.07	100.32	98.35	99.0	97.0
SC	0.8	0.9	11.4	11.7	1.6	1.5	97.9	97.7	18.8	16.8	3.75	4.36	102.75	98.39	101.0	96.5
TN	1.6	1.5	12.2	11.9	0.7	0.7	98.2	98.4	17.4	16.6	3.78	4.00	97.37	95.09	96.0	94.0
TX	2.0	2.3	9.0	9.9	0.5	0.7	98.8	98.0	18.2	17.8	3.97	4.07	101.55	100.34	100.5	98.5
Other	0.8	1.1	11.9	12.6	1.7	0.9	98.3	98.6	18.1	16.8	3.62	3.70	99.16	94.01	98.0	93.5
U. S.	1.4	1.6	10.9	11.0	1.1	0.7	98.0	98.4	17.5	17.0	3.89	4.02	98.22	97.12	96.5	96.0

Table 4. Cottonseed: Average quality and quantity factors, indexes and grades, by specified periods and states, 1983

Month	Quality factors - percent			Quality index	Quantity factors - percent		Quantity index	Average grade	Number of samples
	Foreign matter	Moisture	Free fatty acids		Oil	Ammonia			
					ALABAMA				
Sept.	1.4	9.9	0.9	99.0	16.3	4.16	95.40	94.5	12
Oct.	0.9	11.9	0.9	98.6	16.4	4.11	95.52	94.5	394
Nov.	1.6	13.2	1.0	97.4	16.5	4.02	95.07	93.5	295
Dec.	1.6	12.6	0.9	98.4	16.7	3.89	95.09	93.5	96
Jan.	2.0	12.1	1.2	98.0	16.0	4.00	93.19	92.0	24
Feb.	1.5	12.1	2.1	95.6	16.5	3.96	94.40	90.5	27
Mar. & later	1.4	10.4	2.9	94.7	16.9	3.94	95.75	91.0	8
Season	1.3	12.4	1.0	98.0	16.5	4.04	95.21	93.5	856
					ARKANSAS				
Sept.	0.5	11.2	0.5	99.8	15.8	4.11	92.86	93.0	225
Oct.	0.6	11.7	0.6	99.1	16.2	4.00	93.68	93.5	1,247
Nov.	1.0	13.1	0.7	98.3	16.2	3.89	93.21	91.0	646
Dec.	2.3	14.3	0.9	96.2	15.8	3.80	90.88	87.0	122
Jan.	1.1	11.6	1.2	99.0	15.9	3.97	92.46	92.5	28
Feb.	2.1	13.4	1.6	95.6	16.1	3.96	93.16	88.5	29
Mar. & later	1.0	11.8	2.6	92.8	15.6	3.81	90.00	81.5	4
Season	0.9	12.2	0.6	98.7	16.1	3.97	93.29	92.0	2,301
					GEORGIA				
Sept.	0.6	10.6	2.2	97.3	17.5	4.45	101.46	98.0	6
Oct.	1.0	12.1	2.5	96.0	16.9	4.16	97.02	94.0	70
Nov.	1.0	11.4	2.5	96.0	17.3	4.11	99.02	95.0	77
Dec.	1.3	11.0	2.0	97.7	18.3	4.13	102.36	100.5	36
Jan.	2.1	10.8	2.4	94.7	18.2	4.10	102.70	97.0	5
Feb.	0.9	10.2	4.2	91.6	18.0	3.92	101.25	92.0	3
Mar. & later	-	-	-	-	-	-	-	-	-
Season	1.0	11.5	2.4	96.3	17.4	4.14	99.12	96.0	197

Table 4. Cottonseed: Average quality and quantity factors, indexes and grades, by specified periods and states, 1983 (Continued)

Month	Quality factors - percent			Quality index	Quantity factors - percent		Quantity index	Average grade	Number of samples
	Foreign matter	Moisture	Free fatty acids		Oil	Ammonia			
				LOUISIANA					
Sept.	1.4	10.3	1.7	96.3	15.9	4.12	93.32	88.0	47
Oct.	0.8	11.4	0.6	99.3	16.6	3.93	94.90	94.5	1,430
Nov.	1.1	12.1	0.5	99.0	16.6	3.81	94.21	93.5	828
Dec.	1.7	13.1	0.7	97.8	16.0	3.80	91.57	90.0	157
Jan.	1,3	11.6	0.8	99.0	16.4	3.93	93.29	93.0	95
Feb.	1.5	10.9	0.6	99.2	16.9	3.91	95.31	95.5	73
Mar. & later	2.4	10.3	1.7	96.4	16.6	3.79	94.02	91.0	37
Season	1.0	11.7	0.6	99.0	16.6	3.89	94.40	94.0	2,667
				MISSISSIPPI					
Sept.	0.9	10.5	0.9	99.0	15.8	4.12	93.20	92.5	151
Oct.	0.9	11.2	0.4	99.3	16.3	4.01	94.11	94.0	2,917
Nov.	1.4	13.1	0.5	98.2	16.3	3.84	93.25	92.0	1,230
Dec.	2.0	13.7	0.8	97.3	16.0	3.76	91.70	89.0	226
Jan.	1.5	11.3	1.0	98.7	16.1	4.03	93.82	92.5	68
Feb.	2.4	12.5	1.7	95.7	15.5	4.03	90.65	86.5	31
Mar. & later	2.3	11.7	1.8	95.5	16.2	3.93	92.54	89.0	25
Season	1.1	11.8	0.5	98.9	16.3	3.95	93.70	93.0	4,648
				MISSOURI					
Sept.	0.7	11.4	0.6	99.7	16.4	4.07	94.87	94.5	152
Oct.	0.8	11.8	0.4	99.4	16.7	4.07	96.17	96.0	315
Nov.	1.2	14.5	0.7	97.3	16.0	3.95	92.98	90.5	112
Dec.	1.4	15.0	0.7	96.2	16.6	3.81	94.51	89.5	33
Jan.	1.8	14.4	2.8	91.0	16.2	3.88	91.88	85.5	8
Feb.	2.2	13.9	3.1	90.5	16.2	3.90	93.59	84.5	8
Mar. & later	1.5	12.2	2.8	95.7	16.6	3.92	95.83	91.0	3
Season	0.9	12.4	0.6	98.7	16.5	4.03	95.11	94.0	631

Table 4. Cottonseed: Average quality and quantity factors, indexes and grades, by specified periods and states, 1983 (Continued)

Month	Quality factors - percent			Quality index	Quantity factors - percent		Quantity index	Average grade	Number of samples
	Foreign matter	Moisture	Free fatty acids		Oil	Ammonia			
				NEW MEXICO					
Oct.	2.0	11.6	0.3	98.4	19.3	3.90	105.57	105.0	7
Nov.	0.8	9.8	0.5	99.7	19.5	4.05	107.06	107.0	40
Dec.	1.3	8.6	0.4	99.6	19.2	3.98	106.03	105.0	37
Jan.	2.7	9.3	0.8	98.1	18.8	4.19	105.44	103.5	20
Feb.	6.0	7.9	0.8	94.0	19.6	4.13	108.59	103.0	8
Mar. & later	-	-	-	-	-	-	-	-	-
Season	1.8	9.3	0.5	98.9	19.3	4.05	106.45	105.5	112
				NORTH CAROLINA					
Sept.	0.1	10.6	0.4	100.0	18.2	4.37	104.50	104.5	1
Oct.	0.8	12.4	0.6	98.9	16.8	4.35	98.16	97.5	165
Nov.	1.1	12.9	1.5	97.4	17.1	4.35	98.97	96.5	92
Dec.	1.4	12.2	1.7	97.5	17.4	4.37	100.94	98.5	18
Jan.	2.4	11.9	2.6	94.7	18.0	4.43	104.00	99.0	8
Feb.	-	-	-	-	-	-	-	-	-
Mar. & later	-	-	-	-	-	-	-	-	-
Season	1.0	12.5	1.0	98.2	17.0	4.35	98.79	97.5	284
				OKLAHOMA					
Oct.	1.7	10.5	0.6	98.9	17.4	3.72	96.19	95.5	66
Nov.	2.3	10.2	0.6	98.2	17.2	4.02	98.06	96.5	163
Dec.	2.4	10.7	0.7	98.6	17.2	4.13	98.68	97.5	321
Jan.	2.2	10.2	0.9	98.3	17.4	4.12	99.03	98.5	123
Feb.	3.4	10.1	1.3	97.2	17.2	4.10	98.65	96.0	48
Mar. & later	2.8	10.2	1.2	97.9	16.7	4.01	96.00	94.5	5
Season	2.3	10.4	0.7	98.4	17.3	4.07	98.35	97.0	726
				SOUTH CAROLINA					
Sept.	0.2	10.3	0.5	100.0	17.5	4.49	102.52	102.5	13
Oct.	0.7	11.3	1.0	99.2	16.8	4.37	98.90	98.5	187
Nov.	1.5	12.9	2.1	95.4	16.6	4.31	96.97	92.5	76
Dec.	1.0	12.1	2.9	95.0	16.7	4.35	95.42	94.0	30
Jan.	1.0	11.4	2.4	96.1	17.3	4.28	99.55	96.0	5
Feb.	1.3	10.3	3.4	93.2	17.6	4.46	103.69	96.0	8
Mar. & later	-	-	-	-	-	-	-	-	-
Season	0.9	11.7	1.5	97.7	16.8	4.36	98.39	96.5	319

Table 4. Cottonseed: Average quality and quantity factors, indexes and grades, by specified periods and states, 1983 (Continued)

Month	Quality factors - percent			Quality index	Quantity factors - percent		Quantity index	Average grade	Number of samples
	Foreign matter	Moisture	Free fatty acids		Oil	Ammonia			
					TENNESSEE				
Sept.	0.6	11.1	0.7	99.4	16.7	4.03	95.14	95.5	158
Oct.	1.0	10.9	0.6	99.4	16.8	3.99	96.14	96.0	583
Nov.	2.1	13.5	0.7	97.2	16.5	3.91	93.88	92.0	325
Dec.	3.2	13.2	0.8	96.2	16.2	3.93	92.88	90.0	65
Jan.	3.4	14.2	1.6	94.0	16.3	3.81	93.08	87.5	26
Feb.	2.7	11.7	0.9	97.6	16.3	3.83	92.63	90.0	10
Mar. & later	3.0	12.6	1.3	95.5	16.0	3.92	93.25	89.5	5
Season	1.5	11.9	0.7	98.4	16.6	4.00	95.09	94.0	1,172
					TEXAS				
Aug.	1.0	10.3	1.0	99.4	18.0	3.92	100.61	100.5	1,132
Sept.	1.2	10.6	1.2	98.8	17.0	3.88	95.96	95.5	816
Oct.	1.8	10.1	1.1	96.7	17.3	4.07	98.61	96.0	1,258
Nov.	2.5	10.0	0.6	98.1	17.8	4.12	100.93	99.5	3,166
Dec.	2.7	9.6	0.6	98.2	17.9	4.10	101.03	99.5	2,971
Jan.	2.8	9.7	0.8	97.3	18.1	4.12	101.88	99.5	918
Feb.	3.6	9.1	0.9	95.1	17.7	4.11	100.75	97.5	276
Mar. & later	3.2	9.2	1.5	96.5	17.8	4.09	100.13	97.0	70
Season	2.3	9.9	0.7	98.0	17.8	4.07	100.34	98.5	10,607
					OTHER STATES				
Oct.	0.8	12.6	1.8	98.6	17.0	3.77	94.06	94.5	4
Nov.	1.0	12.9	0.7	98.4	17.0	3.71	94.71	93.5	17
Dec.	0.9	12.1	0.5	99.7	17.5	3.70	97.50	97.5	2
Jan.	1.7	12.1	0.8	98.5	15.6	3.62	90.00	89.5	4
Feb.	1.3	11.1	1.0	99.5	16.5	3.70	92.50	92.5	2
Mar. & later	-	-	-	-	-	-	-	-	-
Season	1.1	12.6	0.9	98.6	16.8	3.70	94.01	93.5	29

Table 5. Percentage distribution of foreign matter in cottonseed samples by specified frequencies, by states and United States, 1983

State	Foreign matter													
	Prime quality 0-1.0	Below prime quality 1.1-10.0	Off quality 10.1 and over	0 - 0.5	0.6 - 1.0	1.1 - 2.0	2.1 - 3.0	3.1 - 4.0	4.1 - 5.5	5.6 - 7.0	7.1 - 8.5	8.6 - 10.0	10.1 and over	Total
AL	55.5	44.6	-	30.1	25.4	29.2	8.6	3.0	2.6	1.2	-	-	-	100.0
AR	76.4	23.6	-	44.7	31.7	16.5	3.5	1.9	1.2	0.5	-	-	-	100.0
GA	54.8	45.1	-	20.8	34.0	44.1	0.5	-	-	0.5	-	-	-	100.0
LA	72.9	27.1	-	25.1	47.8	20.5	4.3	0.4	1.1	0.6	0.2	-	-	100.0
MS	67.3	32.7	*	20.5	46.8	23.1	5.9	1.6	1.5	0.4	0.1	0.1	*	100.0
MO	77.4	22.6	-	24.8	52.6	20.3	1.0	1.3	-	-	-	-	-	100.0
NM	45.5	52.7	1.8	16.1	29.4	34.8	8.9	1.8	2.7	2.7	-	1.8	1.8	100.0
NC	67.9	32.1	-	36.6	31.3	25.4	1.8	2.8	2.1	-	-	-	-	100.0
OK	18.6	81.4	-	4.8	13.8	35.0	23.3	12.5	7.7	1.0	1.5	0.4	-	100.0
SC	71.1	28.8	-	43.2	27.9	20.3	6.9	-	1.6	-	-	-	-	100.0
TN	55.8	44.2	-	27.2	28.6	20.7	9.3	9.2	4.2	0.4	0.2	0.2	-	100.0
TX	25.9	73.8	0.2	7.5	18.4	30.8	18.7	12.0	8.2	2.8	0.8	0.5	0.2	100.0
Other	65.5	34.3	-	20.7	44.8	27.5	3.4	-	3.4	-	-	-	-	100.0
U. S.	48.5	51.3	0.1	18.4	30.1	26.1	11.6	6.7	4.6	1.5	0.5	0.3	0.1	100.0

* Less than 0.05 percent.

Table 6. Percentage distribution of moisture in cottonseed samples by specified frequencies, by states and United States, 1983

State	Moisture														
	Prime quality 0-12.0	Below prime quality 12.1-20.0	Off quality 20.1 and over	0 - 5.0	5.1 - 7.0	7.1 - 9.0	9.1 - 10.0	10.1 - 11.0	11.1 - 12.0	12.1 - 14.0	14.1 - 16.0	16.1 - 18.0	18.1 - 20.0	20.1 and over	Total
AL	44.6	55.5	-	-	-	1.1	10.2	10.4	22.9	38.2	15.4	1.8	0.1	-	100.0
AR	53.4	46.3	0.2	-	-	1.5	10.3	19.9	21.7	27.7	15.7	2.0	0.9	0.2	100.0
GA	68.5	31.4	-	-	-	-	9.6	32.5	26.4	26.4	5.0	-	-	-	100.0
LA	61.8	38.2	-	-	0.2	2.1	12.1	23.7	23.7	30.4	7.1	0.7	-	-	100.0
MS	56.5	43.5	-	-	-	2.7	14.5	22.1	17.2	32.3	9.7	1.5	-	-	100.0
MO	52.2	47.9	-	-	-	0.8	4.8	22.5	24.1	26.7	18.7	2.5	-	-	100.0
NM	94.7	5.4	-	-	0.9	58.9	17.0	12.5	5.4	5.4	-	-	-	-	100.0
NC	38.0	62.1	-	-	-	-	3.5	13.7	20.8	43.4	16.9	1.8	-	-	100.0
OK	93.8	6.3	-	-	-	8.3	32.0	36.1	17.4	4.8	0.8	-	0.7	-	100.0
SC	59.9	40.2	-	-	-	2.2	12.9	18.8	26.0	33.6	6.6	-	-	-	100.0
TN	53.8	46.1	-	-	-	5.1	13.5	17.9	17.3	33.0	12.5	0.5	0.1	-	100.0
TX	90.8	8.7	0.4	-	0.4	32.0	31.3	19.1	8.0	6.7	1.5	0.4	0.1	0.4	100.0
Other	37.9	62.0	-	-	-	-	-	20.7	17.2	44.8	13.8	3.4	-	-	100.0
U. S.	72.2	27.8	0.2	-	0.2	15.6	21.0	20.5	14.9	19.9	6.8	0.9	0.2	0.2	100.0

Table 7. Percentage distribution of free fatty acids in cottonseed samples by specified frequencies, by states and United States, 1983

State	Free fatty acids														
	Prime quality 0-1.8	Below prime quality 1.9-12.4	Off quality 12.5 and over	0 - 0.4	0.5 - 0.9	1.0 - 1.4	1.5 - 1.8	1.9 - 2.9	3.0 - 4.9	5.0 - 6.9	7.0 - 8.9	9.0 - 10.9	11.0 - 12.4	12.5 and over	Total
AL	90.0	9.9	-	23.2	42.8	16.8	7.2	6.0	2.4	1.5	-	-	-	-	100.0
AR	98.7	1.3	-	32.8	57.7	7.2	1.0	1.0	*	0.1	*	-	0.2	-	100.0
GA	32.4	67.5	-	2.5	10.6	5.6	13.7	40.1	25.4	2.0	-	-	-	-	100.0
LA	96.9	3.2	-	44.8	43.1	6.0	3.0	1.7	1.1	-	0.4	-	-	-	100.0
MS	98.1	19.0	-	69.3	24.3	3.3	1.2	0.9	0.6	0.3	0.1	*	-	-	100.0
MO	96.5	3.6	-	52.6	38.3	5.4	0.2	2.1	1.3	-	-	0.2	-	-	100.0
NM	99.2	0.9	-	42.0	53.6	2.7	0.9	0.9	-	-	-	-	-	-	100.0
NC	90.5	9.6	-	12.7	54.2	19.0	4.6	4.6	3.2	1.8	-	-	-	-	100.0
OK	98.4	1.5	-	15.4	66.8	12.9	3.3	1.4	0.1	-	-	-	-	-	100.0
SC	73.7	26.4	-	13.5	35.7	13.2	11.3	15.7	8.5	0.3	1.6	0.3	-	-	100.0
TN	98.2	1.8	-	20.3	69.0	7.9	1.0	1.2	0.5	-	0.1	-	-	-	100.0
TX	95.8	4.0	0.1	31.7	53.4	7.7	3.0	2.0	1.3	0.3	0.1	0.3	-	0.1	100.0
Other	93.0	6.9	-	13.8	51.7	24.1	3.4	6.9	-	-	-	-	-	-	100.0
U. S.	95.7	4.1	0.1	39.0	46.9	7.2	2.6	2.2	1.3	0.3	0.2	0.1	*	0.1	100.0

* Less than 0.05 percent.

Table 8. Percentage distribution of quality index by specified frequencies, by states and United States, 1983

State	Quality index									
	Below Grade	Below prime quality							Prime quality 100	Total
		40.0-49.9	50.0-69.9	70.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9		
AL	-	-	-	0.1	1.2	1.6	3.4	70.4	23.4	100.0
AR	-	-	0.2	*	*	*	4.5	46.7	48.4	100.0
GA	-	-	-	-	-	4.6	23.3	64.5	7.6	100.0
LA	-	-	-	0.4	-	0.2	2.4	50.2	46.8	100.0
MS	-	-	*	0.1	0.2	0.2	2.5	54.2	42.8	100.0
MO	-	-	0.2	-	-	0.6	2.4	51.5	45.3	100.0
NM	-	-	-	-	-	1.8	5.4	51.8	41.1	100.0
NC	-	-	-	-	-	3.9	2.1	69.3	24.6	100.0
OK	-	-	-	-	-	1.4	3.1	77.4	18.2	100.0
SC	-	-	-	1.9	0.3	-	8.8	49.5	39.5	100.0
TN	-	-	-	0.1	0.1	0.5	7.0	49.9	42.4	100.0
TX	*	0.1	0.4	0.4	0.2	0.8	4.1	72.7	21.2	100.0
Other	-	-	-	-	-	-	3.4	72.3	24.1	100.0
U. S.	*	0.1	0.2	0.3	0.2	0.6	3.8	62.2	32.5	100.0

* Less than 0.05 percent.

Table 9. Percentage distribution of oil by specified frequencies, by states and United States, 1983

State	Oil											
	Under 15.0	15.0-15.9	16.0-16.4	16.5-16.9	17.0-17.4	17.5-17.9	18.0-18.4	18.5-18.9	19.0-19.9	20.0-20.9	21.0 and over	Total
AL	4.6	17.9	21.0	26.9	18.2	8.5	1.5	1.4	-	-	-	100.0
AR	8.9	33.3	22.2	16.5	10.5	5.7	2.0	0.9	*	-	-	100.0
GA	-	5.1	9.1	19.3	21.3	18.8	18.3	3.6	1.5	3.0	-	100.0
LA	3.7	17.9	20.7	22.6	19.8	10.3	2.6	1.1	1.1	-	-	100.0
MS	5.7	27.7	23.0	23.5	12.9	5.1	1.8	0.2	*	*	-	100.0
MO	2.5	21.9	24.1	24.4	16.6	4.9	4.8	-	0.8	-	-	100.0
NM	-	-	-	-	-	0.9	8.0	40.2	30.3	16.0	4.5	100.0
NC	-	5.6	15.8	16.9	41.5	15.1	4.2	0.4	0.4	-	-	100.0
OK	2.1	3.6	8.8	23.3	19.7	23.6	9.0	7.3	2.1	0.7	-	100.0
SC	-	7.8	24.1	32.0	16.3	16.0	1.6	0.6	1.6	-	-	100.0
TN	0.8	15.4	23.0	26.6	22.5	7.0	3.8	0.9	-	-	-	100.0
TX	1.5	4.2	5.9	8.9	14.2	18.8	20.5	14.3	10.6	1.0	*	100.0
Other	-	13.7	27.6	24.1	10.3	20.7	-	-	-	3.4	-	100.0
U. S.	3.3	14.4	14.6	16.6	15.3	12.8	10.6	6.9	5.0	0.5	*	100.0

* Less than 0.05 percent.

Table 10. Percentage distribution of ammonia by specified frequencies, by states and United States, 1983

State	Ammonia										
	Under 2.95	2.95-3.09	3.10-3.24	3.25-3.39	3.40-3.54	3.55-3.69	3.70-3.84	3.85-3.99	4.00-4.14	4.15 and over	Total
AL	-	-	-	-	0.6	2.5	11.2	18.6	39.6	27.6	100.0
AR	-	-	0.2	-	1.3	5.4	18.2	29.8	27.3	17.7	100.0
GA	-	-	-	0.5	-	2.5	3.0	20.8	24.9	48.2	100.0
LA	-	-	-	0.4	2.6	13.5	25.6	29.8	19.0	9.1	100.0
MS	-	-	-	-	0.5	6.0	22.2	31.1	25.0	15.2	100.0
M[illegible]	-	-	-	-	0.8	4.1	7.3	23.9	38.4	25.5	100.0
NM	-	-	-	-	-	4.5	8.0	28.6	30.4	28.6	100.0
NC	-	-	-	-	-	-	-	-	2.1	97.9	100.0
OK	-	-	0.7	-	0.7	3.6	10.2	18.2	27.7	39.0	100.0
SC	-	-	-	-	-	-	-	5.0	4.7	90.3	100.0
TN	-	-	-	-	0.2	4.1	15.8	37.3	32.6	10.0	100.0
TX	-	0.1	0.1	0.9	1.2	3.8	7.7	19.4	28.0	38.7	100.0
Other	-	-	-	-	13.8	31.0	41.4	13.8	-	-	100.0
U. S.	-	*	0.1	0.5	1.1	5.3	13.8	24.3	26.6	28.3	100.0

* Less than 0.05 percent.

Table 11. Percentage distribution of quantity index by specified frequencies, by states and United States, 1983

State	Quantity index										
	Under 65	65-69	70-74	75-79	80-84	85-89	90-94	95-99	100-104	105 and over	Total
AL	-	-	-	-	1.2	4.9	37.3	47.6	9.0	-	100.0
AR	-	-	0.2	0.2	2.0	14.4	48.4	31.0	3.7	*	100.0
GA	-	-	-	-	-	-	13.2	47.2	34.5	5.0	100.0
LA	-	-	-	-	0.7	10.0	41.3	42.3	4.9	0.7	100.0
MS	-	-	-	*	1.1	10.3	49.8	36.7	1.9	0.1	100.0
MO	-	-	-	-	-	6.3	37.4	48.3	7.2	0.8	100.0
NM	-	-	-	-	-	-	-	-	35.8	64.2	100.0
NC	-	-	-	-	-	-	7.4	60.9	30.0	1.8	100.0
OK	-	-	-	-	-	2.1	12.0	56.1	27.6	2.4	100.0
SC	-	-	-	-	-	-	13.2	57.4	27.8	1.5	100.0
TN	-	-	-	0.1	0.2	4.2	41.2	47.9	6.4	-	100.0
TX	-	-	*	0.2	0.6	1.7	9.9	29.5	43.0	15.1	100.0
Other	-	-	-	-	-	10.3	58.6	27.5	-	3.4	100.0
U. S.	-	-	*	0.1	0.8	5.7	27.7	35.9	22.7	7.1	100.0

* Less than 0.05 percent.

Table 12. Percentage distribution of grades by specified frequencies, by states and United States, 1983

State	Grade										
	Below Grade 00.0-39.9	40.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9	100.0 - 104.9	105.0 - 109.9	110.0 and over	Total
AL	-	0.7	1.4	2.3	13.0	35.2	42.7	4.7	-	-	100.0
AR	-	1.2	0.9	5.0	19.3	41.2	28.5	4.0	*	-	100.0
GA	-	-	-	3.0	6.1	49.2	37.6	14.1	3.5	-	100.0
LA	-	0.2	0.2	3.1	12.4	38.8	39.3	5.3	0.6	-	100.0
MS	-	0.2	0.7	3.9	14.9	45.4	32.7	2.2	*	*	100.0
MO	-	0.2	0.2	4.9	11.6	30.2	45.0	7.2	0.8	-	100.0
NM	-	-	-	-	-	-	35.4	42.1	42.9	9.8	100.0
NC	-	-	-	-	7.4	13.7	52.8	25.7	0.4	-	100.0
OK	-	-	0.7	1.4	3.4	18.4	48.2	26.3	1.0	0.7	100.0
SC	-	1.9	-	-	5.3	20.7	48.6	21.8	1.5	-	100.0
TN	-	0.3	0.2	2.0	11.4	40.8	38.1	7.3	-	-	100.0
TX	-	1.0	0.3	1.2	3.7	12.7	33.7	37.0	9.9	0.4	100.0
Other	-	-	-	3.4	17.2	48.3	27.6	-	3.4	-	100.0
U. S.	-	0.7	0.5	2.4	9.2	27.5	35.2	19.7	4.7	0.3	100.0

* Less than 0.05 percent.

Table 13. Number of cottonseed samples by specified groups, by qualities, and number reduced in grade for specified causes, by states and United States, 1982 and 1983

State	Quality						Total samples graded		Reduced due to excess					
	Prime		Below prime and off quality		Below Grade				Foreign matter		Moisture		Free fatty acids	
	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983
AL	619	200	878	656	-	-	1,497	856	740	382	173	475	158	85
AR	1,323	1,113	2,173	1,188	1	-	3,497	2,301	991	543	1,492	1,070	509	31
GA	126	15	85	182	-	-	211	197	51	89	12	62	36	133
LA	1,695	1,247	2,750	1,420	10	-	4,455	2,667	1,707	722	1,422	1,019	1,159	85
MS	2,656	1,989	6,214	2,659	-	-	8,870	4,648	3,660	1,519	3,075	2,021	2,839	87
MO	215	286	976	345	-	-	1,191	631	436	142	781	302	5	22
NM	12	46	33	66	-	-	45	112	32	61	2	6	-	1
NC	206	70	256	214	-	-	462	284	120	91	161	176	13	27
OK	215	132	716	594	-	-	931	726	711	591	35	46	14	11
SC	380	126	454	193	-	-	834	319	202	92	208	128	245	84
TN	317	497	1,744	675	-	-	2,061	1,172	1,018	518	1,166	541	71	21
TX	2,617	2,248	6,858	8,354	-	5	9,475	10,607	6,686	7,863	425	970	84	450
Other	15	7	68	22	-	-	83	29	17	10	40	18	13	2
U. S.	10,396	7,976	23,205	16,568	11	5	33,612	24,549	16,371	12,623	8,992	6,834	5,146	1,039