COTTONSEED QUALITY

CROP OF 1984

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service Cotton Division
Memphis, Tennessee
May 1985

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 - 1984 Crop

Cottonseed from the 1984 crop averaged 90.5 in grade, according to the Cotton Division, Agricultural Marketing Service, USDA. This was the lowest average grade for any crop since cottonseed quality data became available in 1944 and was down from 96.0 for the 1983 crop and 96.5 for the 1982 crop. Average quality index of 93.8 was the lowest since the 1957 crop and was down from 98.4 a year earlier and 98.0 two years ago. Foreign matter content at 1.7 percent was up from 1.6 percent the previous season and 1.4 percent in 1982. Average moisture content was 11.4 percent, up from 11.0 percent and 10.9 percent in 1983 and 1982, respectively, and was the highest since the 1972 crop. Cottonseed from the 1984 crop averaged 2.1 percent free fatty acids content, the highest since the 1957 crop and up from 0.7 percent a year ago and 1.1 percent two years ago. Quantity index averaged 96.63 and was the lowest since records began in 1944 and was down from 97.12 in 1983 and 98.22 in 1982. Average oil content of 1984-crop cottonseed was 17.0 percent, the same as a year earlier and down from 17.5 percent two years ago. Ammonia content averaged 3.94 percent, down from 4.02 percent a year earlier and up from 3.89 percent in the 1982 crop.

Indicated 1984-crop cottonseed production is 5.15 million tons compared with 3.08 million a year earlier and 4.74 million in 1982.

Data from grade certificates covering 39,970 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, 1966-1984

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			
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	1/	100.81	98.0	62,504
1974	1.6	11.0	1.6	96.5	17.7	3.82	1/	98.42	95.5	61,114
1975	1.6	10.6	1.4	97.0	18.0	3.75	1/	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	1/	98.85	94.5	61,466
1978	1.5	10.5	0.9	98.5	17.4	4.08	1/	98.97	98.0	50,418
1979	1.7	10.3	1.0	97.7	17.6	3.92	1/	98.92	97.0	56,792
1980	1.7	10.4	0.9	98.0	16.9	4.08	1/	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	1/	98.22	96.5	33,612
1983	1.6	11.0	0.7	98.4	17.0	4.02	1/	97.12	96.0	24,549
1984	1.7	11.4	2.1	93.8	17.0	3.94	1/	96.63	90.5	39,970

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

May 31, 1985

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 soundness, 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 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 not 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, 1983 and 1984

State	Quality factors - percent						Quality index		Quantity factors - percent				Quantity index		Average grade	
	Foreign matter		Moisture		Free fatty acids				Oil		Ammonia					
	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984
AL	1.3	1.2	12.4	10.9	1.0	1.3	98.0	97.7	16.5	17.1	4.04	3.99	95.21	97.10	93.5	95.0
AR	0.9	1.0	12.2	13.4	0.6	3.9	98.7	88.7	16.1	16.5	3.97	3.85	93.29	94.07	92.0	82.5
GA	1.0	0.7	11.5	9.5	2.4	0.6	96.3	99.3	17.4	18.8	4.14	3.89	99.12	103.32	96.0	102.5
LA	1.0	0.9	11.7	12.8	0.6	4.6	99.0	84.8	16.6	17.0	3.89	3.89	94.40	96.01	94.0	81.0
MS	1.1	1.1	11.8	12.7	0.5	3.7	98.9	90.1	16.3	16.7	3.95	3.95	93.70	95.24	93.0	85.5
MO	0.9	1.2	12.4	13.8	0.6	2.3	98.7	93.9	16.5	16.4	4.03	3.89	95.11	94.18	94.0	88.5
NM	1.8	2.1	9.3	9.1	0.5	0.4	98.9	98.8	19.3	17.6	4.05	3.97	106.45	99.05	105.5	98.5
NC	1.0	0.9	12.5	11.5	1.0	0.5	98.2	99.3	17.0	18.9	4.35	3.68	98.79	102.68	97.5	102.0
OK	2.3	2.5	10.4	10.3	0.7	0.5	98.4	98.3	17.3	16.5	4.07	3.99	98.35	94.59	97.0	93.5
SC	0.9	0.9	11.7	10.6	1.5	0.5	97.7	99.4	16.8	18.2	4.36	3.97	98.39	101.77	96.5	101.5
TN	1.5	1.7	11.9	13.8	0.7	2.5	98.4	93.8	16.6	16.7	4.00	3.87	95.09	95.09	94.0	89.0
TX	2.3	2.6	9.9	9.6	0.7	0.5	98.0	97.9	17.8	17.3	4.07	3.97	100.34	97.82	98.5	96.0
Other	1.1	1.0	12.6	11.8	0.9	1.2	98.6	98.8	16.8	16.7	3.70	3.75	94.01	94.19	93.5	93.5
U. S.	1.6	1.7	11.0	11.4	0.7	2.1	98.4	93.8	17.0	17.0	4.02	3.94	97.12	96.63	96.0	90.5

Table 4. Cottonseed: Average quality and quantity factors, indexes and grades, by specified periods and states, 1984

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.	0.9	8.6	0.6	99.8	17.0	4.13	97.61	97.5	88
Oct.	0.9	9.8	0.5	99.6	17.4	4.00	98.45	98.5	636
Nov.	1.3	11.9	1.3	97.6	17.0	3.94	96.40	94.5	735
Dec.	1.6	11.5	2.2	96.1	16.7	4.00	95.60	92.0	288
Jan.	1.2	11.6	3.3	92.4	16.7	3.94	95.38	86.5	50
Feb.	1.3	10.9	3.4	92.7	17.1	4.05	97.11	89.0	31
Mar. & later	1.2	10.1	4.5	88.5	17.6	4.07	99.76	88.5	46
Season	1.2	10.9	1.3	97.7	17.1	3.99	97.10	95.0	1,874
					ARKANSAS				
Sept.	0.7	13.6	0.6	98.1	16.5	3.91	93.89	93.0	71
Oct.	0.6	13.5	0.5	98.1	16.4	3.87	94.02	92.5	647
Nov.	0.9	13.5	4.1	89.0	16.8	3.86	95.24	84.5	1,964
Dec.	1.3	13.2	5.4	84.3	16.1	3.82	91.75	74.5	735
Jan.	1.5	14.8	6.6	76.7	15.8	3.68	89.99	65.5	127
Feb.	3.0	13.0	8.7	68.7	15.9	3.83	90.98	60.5	41
Mar. & later	1.8	12.1	8.2	71.4	16.7	3.94	95.37	68.0	91
Season	1.0	13.4	3.9	88.7	16.5	3.85	94.07	82.5	3,676
					GEORGIA				
Sept.	0.8	9.1	1.1	99.1	18.9	3.73	103.18	102.0	11
Oct.	0.6	8.7	0.5	100.0	19.0	3.90	104.45	104.5	271
Nov.	0.8	10.3	0.6	99.0	18.5	3.86	108.68	101.5	192
Dec.	1.4	10.8	1.5	95.8	18.1	4.00	100.91	95.5	37
Jan.	1.2	10.2	0.7	99.8	18.6	3.86	102.45	102.0	5
Feb.	1.8	10.6	1.4	99.5	17.7	3.92	98.75	96.0	1
Mar. & later	0.9	8.6	0.8	100.0	18.7	3.92	104.50	104.5	1
Season	0.7	9.5	0.6	99.3	18.8	3.89	103.32	102.5	518

Table 4. Cottonseed: Average quality and quantity factors, indexes and grades, by specified periods and states, 1984 (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.	0.6	11.2	0.6	99.4	17.3	3.89	97.58	97.5	435
Oct.	0.6	12.3	0.6	98.7	17.0	3.88	96.25	95.5	1,520
Nov.	0.9	13.7	7.3	75.3	17.0	3.88	95.87	71.0	1,884
Dec.	1.6	12.6	8.5	70.1	16.5	3.88	93.65	64.0	355
Jan.	2.2	12.9	9.4	62.7	16.4	3.95	94.11	56.5	141
Feb.	1.0	11.7	7.4	73.2	17.3	3.94	97.54	73.0	70
Mar. & later	1.1	11.5	6.3	82.3	17.1	3.90	97.10	77.5	177
Season	0.9	12.8	4.6	84.8	17.0	3.89	96.01	81.0	4,582
					MISSISSIPPI				
Sept.	0.8	10.2	0.6	99.3	17.1	4.13	97.84	97.5	275
Oct.	0.8	11.5	0.7	98.8	16.8	4.01	96.14	95.5	1,650
Nov.	1.1	13.2	4.0	90.0	16.7	3.93	95.18	85.5	4,256
Dec.	1.5	13.0	5.8	82.8	16.5	3.89	94.21	76.0	1,489
Jan.	2.0	13.6	6.2	78.9	16.0	3.87	92.04	67.5	172
Feb.	2.0	13.3	8.1	72.0	16.2	3.91	93.06	63.5	87
Mar. & later	1.1	10.8	8.1	74.4	17.3	3.98	97.80	70.0	120
Season	1.1	12.7	3.7	90.1	16.7	3.95	95.24	85.5	8,049
					MISSOURI				
Sept.	1.1	13.2	0.6	98.4	16.9	4.00	96.33	95.0	36
Oct.	0.8	14.1	0.7	96.8	16.5	3.86	94.39	91.5	256
Nov.	1.1	13.6	2.4	94.9	16.3	3.91	94.04	89.5	570
Dec.	1.6	14.1	3.7	89.4	16.3	3.89	93.63	83.5	140
Jan.	2.2	14.7	5.5	81.3	16.2	3.83	92.16	73.0	24
Feb.	2.3	13.7	6.0	80.1	17.1	3.82	95.78	73.0	9
Mar. & later	2.4	12.5	6.5	79.7	16.9	3.90	96.43	73.0	27
Season	1.2	13.8	2.3	93.9	16.4	3.89	94.18	88.5	1,062

Table 4. Cottonseed: Average quality and quantity factors, indexes and grades, by specified periods and states, 1984 (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.	0.4	10.0	0.2	100.0	19.9	3.89	108.10	108.0	5
Nov.	1.6	8.4	0.4	99.3	18.4	4.09	102.88	102.5	29
Dec.	2.3	9.6	0.5	98.8	17.3	4.00	98.01	97.5	32
Jan.	2.5	9.4	0.4	98.4	17.0	3.87	96.46	95.5	31
Feb.	2.5	8.7	0.4	98.5	16.6	3.94	94.08	93.5	10
Mar. & later	4.8	7.6	0.4	95.5	19.2	4.07	106.25	101.5	1
Season	2.1	9.1	0.4	98.8	17.6	3.97	99.05	98.5	108
				NORTH CAROLINA					
Oct.	0.5	11.0	0.5	99.0	19.2	3.87	104.12	104.5	85
Nov.	1.0	11.8	0.5	99.0	18.9	3.65	102.41	101.5	295
Dec.	1.0	10.7	0.6	99.8	18.4	3.74	101.51	101.0	78
Jan.	1.3	11.9	1.0	98.8	19.2	3.65	103.86	102.5	26
Feb.	0.9	10.3	1.1	99.1	19.4	3.75	105.57	105.0	7
Mar. & later	0.9	9.6	0.8	99.7	19.0	3.70	102.81	103.0	4
Season	0.9	11.5	0.5	99.3	18.9	3.68	102.68	102.0	495
				OKLAHOMA					
Sept.	0.4	9.1	0.4	100.0	19.5	4.00	106.25	106.0	2
Oct.	0.9	9.8	0.4	99.8	16.6	3.88	95.09	95.0	40
Nov.	1.8	9.6	0.4	99.1	16.3	4.08	94.12	94.0	234
Dec.	2.4	10.6	0.4	98.5	16.2	3.96	93.62	92.5	240
Jan.	3.2	11.2	0.5	97.2	16.7	3.93	94.54	92.5	151
Feb.	3.5	10.3	0.6	97.4	17.1	4.01	97.38	95.5	119
Mar. & later	4.0	10.5	1.0	96.9	16.5	3.86	93.34	90.5	19
Season	2.5	10.3	0.5	98.3	16.5	3.99	94.59	93.5	805
				SOUTH CAROLINA					
Sept.	0.4	9.8	0.4	99.9	18.7	3.93	103.29	103.5	29
Oct.	1.0	9.9	0.4	99.7	18.5	3.97	102.72	102.5	294
Nov.	1.0	11.3	0.4	99.4	18.1	3.95	101.13	101.0	355
Dec.	1.2	10.4	1.1	97.8	17.6	4.07	99.58	96.5	74
Jan.	0.7	10.7	0.7	99.8	18.1	4.03	101.35	101.5	34
Feb.	0.8	10.2	0.6	99.9	18.5	3.99	102.76	103.0	25
Mar. & later	0.7	10.4	0.6	99.9	18.5	3.91	102.69	102.5	58
Season	0.9	10.6	0.5	99.4	18.2	3.97	101.77	101.5	869

Table 4. Cottonseed: Average quality and quantity factors, indexes and grades, by specified periods and states, 1984 (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.	2.0	12.3	2.8	91.7	16.4	3.92	92.81	82.5	4
Oct.	1.0	14.7	0.8	96.7	16.4	3.86	93.85	91.0	362
Nov.	1.4	14.0	2.3	95.1	16.9	3.86	95.55	91.0	1,037
Dec.	2.4	12.8	3.0	92.6	16.7	3.89	95.35	88.5	509
Jan.	1.8	13.8	4.6	86.7	16.5	3.86	94.04	82.0	57
Feb.	3.9	13.6	6.0	79.2	16.2	3.82	92.33	68.0	36
Mar. & later	3.4	12.2	8.1	70.8	16.8	3.91	95.35	64.5	39
Season	1.7	13.8	2.5	93.8	16.7	3.87	95.09	89.0	2,044
				TEXAS					
Aug.	0.9	9.6	0.4	99.7	17.1	4.03	97.52	97.5	2,444
Sept.	1.0	9.3	0.5	99.6	16.9	4.08	97.16	97.0	685
Oct.	1.9	10.2	0.5	98.7	17.1	4.04	97.50	96.5	289
Nov.	2.3	9.6	0.8	97.5	17.5	4.12	99.85	97.5	2,630
Dec.	2.9	9.8	0.5	97.8	17.4	3.96	98.09	96.5	4,025
Jan.	3.4	9.6	0.5	97.4	17.2	3.88	97.06	95.0	4,338
Feb.	4.0	9.3	0.5	97.0	17.2	3.89	96.72	94.0	1,208
Mar. & later	4.6	10.3	1.2	95.5	16.7	3.91	95.14	90.5	193
Season	2.6	9.6	0.5	97.9	17.3	3.97	97.82	96.0	15,812
				OTHER STATES					
Oct.	0.6	11.0	0.5	99.8	17.3	3.67	95.39	95.5	19
Nov.	0.9	12.0	1.1	99.1	16.7	3.79	94.54	94.5	40
Dec.	1.3	12.6	1.6	98.5	16.1	3.75	92.00	91.0	14
Jan.	2.3	12.2	4.2	89.5	16.1	3.87	92.08	76.0	3
Feb.	-	-	-	-	-	-	-	-	-
Mar. & later	-	-	-	-	-	-	-	-	-
Season	1.0	11.8	1.2	98.8	16.7	3.75	94.19	93.5	76

Table 5. Percentage distribution of foreign matter in cottonseed samples by specified frequencies, by states and United States, 1984

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	54.3	45.8	-	27.0	27.3	30.9	11.5	1.9	0.9	0.3	0.3	-	-	100.0
AR	70.3	29.6	-	32.7	37.6	21.4	4.8	1.4	1.3	0.5	0.1	0.1	-	100.0
GA	81.2	18.9	-	49.1	32.1	16.0	1.9	1.0	-	-	-	-	-	100.0
LA	76.1	23.9	-	32.0	44.1	18.8	2.9	1.1	1.0	0.1	-	-	-	100.0
MS	56.3	43.7	0.1	13.1	43.2	35.6	5.5	1.9	0.4	0.2	0.1	-	0.1	100.0
MO	57.1	43.0	-	11.2	45.9	32.7	7.2	2.4	0.4	0.3	-	-	-	100.0
NM	13.1	87.0	-	3.8	9.3	42.6	29.6	12.0	1.9	-	-	0.9	-	100.0
NC	73.9	26.1	-	22.0	51.9	21.5	4.4	-	0.2	-	-	-	-	100.0
OK	15.2	84.8	-	4.0	11.2	33.3	18.9	16.5	12.0	3.4	0.6	0.1	-	100.0
SC	68.8	31.2	-	32.1	36.7	25.2	5.4	0.6	-	-	-	-	-	100.0
TN	42.5	57.1	0.3	10.4	32.1	34.6	13.0	4.0	2.7	1.1	1.1	0.6	0.3	100.0
TX	20.5	79.2	0.3	7.2	13.3	25.7	19.9	14.8	12.3	4.0	1.8	0.7	0.3	100.0
Other	67.1	32.9	-	27.6	39.5	26.3	5.3	1.3	-	-	-	-	-	100.0
U. S.	44.8	54.9	0.2	16.0	28.8	27.4	11.8	7.2	5.6	1.8	0.8	0.3	0.2	100.0

Table 6. Percentage distribution of moisture in cottonseed samples by specified frequencies, by states and United States, 1984

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	73.8	26.2	-	-	-	19.0	15.1	21.0	18.7	20.6	5.1	0.5	-	-	100.0
AR	18.7	81.2	-	-	-	-	1.2	4.4	13.1	50.2	22.6	6.9	1.5	-	100.0
GA	95.2	4.9	-	-	-	47.1	25.3	17.6	5.2	3.9	-	-	1.0	-	100.0
LA	36.3	63.0	0.7	-	-	3.0	6.9	9.3	17.1	38.6	19.6	4.0	0.8	0.7	100.0
MS	30.2	69.5	0.2	-	-	4.0	6.2	5.3	14.7	51.1	15.5	2.7	0.2	0.2	100.0
MO	15.1	84.4	0.5	-	-	-	0.2	3.2	11.7	46.5	28.4	7.5	2.0	0.5	100.0
NM	98.2	1.9	-	-	0.9	53.7	26.9	10.2	6.5	1.9	-	-	-	-	100.0
NC	61.3	38.7	-	-	-	7.9	19.4	15.2	18.8	32.5	5.2	1.0	-	-	100.0
OK	93.1	6.4	0.6	-	-	15.3	30.6	29.6	17.6	6.4	-	-	-	0.6	100.0
SC	85.2	14.8	-	-	0.2	8.6	33.4	27.8	15.2	12.4	2.4	-	-	-	100.0
TN	17.9	82.2	-	-	-	0.7	0.9	3.1	13.2	45.7	23.2	10.1	3.2	-	100.0
TX	91.9	8.0	*	-	1.0	39.8	27.4	14.8	8.9	6.6	1.1	0.3	-	*	100.0
Other	55.2	44.6	-	-	-	5.2	6.6	17.1	26.3	36.8	6.5	1.3	-	-	100.0
U. S.	59.2	40.7	0.2	-	0.4	19.2	15.7	11.3	12.6	27.4	10.3	2.5	0.5	0.2	100.0

* Less than 0.05 percent.

Table 7. Percentage distribution of free fatty acids in cottonseed samples by specified frequencies, by states and United States, 1984

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	81.4	18.6	0.1	28.8	31.4	14.7	6.5	7.9	7.2	1.7	1.4	0.3	0.1	0.1	100.0
AR	21.8	77.8	0.5	10.1	8.5	2.1	1.1	10.2	41.0	16.7	6.9	1.9	1.1	0.5	100.0
GA	97.9	2.2	-	30.5	66.4	0.6	0.4	-	0.2	1.0	1.0	-	-	-	100.0
LA	44.5	49.5	6.0	21.1	17.4	3.9	2.1	2.6	9.3	12.5	11.1	9.9	4.1	6.0	100.0
MS	25.4	74.3	0.2	16.0	4.6	1.9	2.9	12.4	35.9	17.2	6.4	1.7	0.7	0.2	100.0
MO	45.9	53.8	0.3	17.7	12.3	7.4	8.5	22.5	24.6	5.2	0.8	0.5	0.2	0.3	100.0
NM	100.0	-	-	84.3	11.1	4.6	-	-	-	-	-	-	-	-	100.0
NC	99.6	0.4	-	57.0	38.4	2.6	1.6	0.2	0.2	-	-	-	-	-	100.0
OK	100.0	-	-	57.2	40.4	2.0	0.4	-	-	-	-	-	-	-	100.0
SC	99.5	0.6	-	59.2	39.3	0.8	0.2	-	-	-	-	0.6	-	-	100.0
TN	35.7	64.2	0.1	4.7	9.2	7.9	13.9	38.1	21.9	2.1	1.7	0.3	0.1	0.1	100.0
TX	98.0	2.1	*	61.0	34.0	2.3	0.7	0.7	0.4	0.5	0.3	0.1	0.1	*	100.0
Other	85.5	14.4	-	23.7	21.1	28.9	11.8	11.8	1.3	1.3	-	-	-	-	100.0
U. S.	64.8	34.3	0.8	36.5	22.4	3.4	2.5	7.0	14.3	6.9	3.5	1.8	0.8	0.8	100.0

* Less than 0.05 percent.

Table 8. Percentage distribution of quality index by specified frequencies, by states and United States, 1984

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	-	-	0.4	1.2	1.3	3.3	5.2	52.8	35.9	100.0
AR	0.3	0.1	3.5	8.6	11.0	25.7	24.5	21.2	5.1	100.0
GA	-	-	-	2.0	-	-	1.2	17.6	79.3	100.0
LA	1.5	2.2	15.5	14.4	9.4	6.8	4.9	24.0	21.4	100.0
MS	-	-	2.6	8.6	11.0	21.7	21.4	21.6	13.0	100.0
MO	-	0.1	0.8	2.0	4.0	10.5	26.3	53.7	2.7	100.0
NM	-	-	-	-	-	-	0.9	86.1	13.0	100.0
NC	-	-	-	-	0.2	-	1.0	50.2	48.7	100.0
OK	-	-	-	-	-	0.6	4.1	82.0	13.3	100.0
SC	-	-	-	0.6	-	-	-	39.5	60.0	100.0
TN	-	0.1	1.0	2.0	2.5	8.7	34.5	47.6	3.7	100.0
TX	*	-	0.1	0.3	0.3	0.5	5.3	75.0	18.4	100.0
Other	-	-	-	-	1.3	1.3	-	59.2	38.2	100.0
U. S.	0.2	0.3	2.8	4.5	4.7	8.6	12.0	48.9	18.1	100.0

* Less than 0.05 percent.

Table 9. Percentage distribution of oil by specified frequencies, by states and United States, 1984

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	0.9	7.4	16.7	21.2	21.0	15.8	8.2	5.3	2.7	0.8	-	100.0
AR	8.0	18.4	16.2	21.2	18.2	10.4	5.6	1.5	0.5	-	-	100.0
GA	-	-	-	3.9	7.9	8.7	12.4	19.1	40.0	7.0	1.2	100.0
LA	2.1	8.9	12.4	21.9	25.4	17.6	8.5	2.0	1.0	0.1	-	100.0
MS	2.5	14.8	20.1	24.9	21.6	10.9	3.9	0.9	0.3	-	-	100.0
MO	2.1	22.5	23.5	25.8	18.9	6.2	0.8	-	0.2	-	-	100.0
NM	-	5.6	8.3	24.1	17.6	13.0	2.8	12.0	12.9	1.8	1.9	100.0
NC	-	-	1.0	2.0	3.4	9.1	12.3	18.4	43.9	8.5	1.4	100.0
OK	6.6	19.9	18.6	22.9	16.9	9.1	4.0	1.9	0.2	-	-	100.0
SC	-	0.6	1.3	2.5	8.3	18.0	26.8	28.7	13.6	0.3	-	100.0
TN	2.9	12.2	15.2	27.8	22.8	14.1	3.8	1.0	0.1	-	-	100.0
TX	1.1	5.3	7.8	17.3	25.9	23.2	13.4	4.4	1.3	0.1	-	100.0
Other	2.6	17.1	9.2	31.6	18.4	14.5	5.3	-	1.3	-	-	100.0
U. S.	2.3	9.8	12.7	20.2	22.6	16.8	9.2	3.8	2.4	0.3	*	100.0

* Less than 0.05 percent.

Table 10. Percentage distribution of ammonia by specified frequencies, by states and United States, 1984

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	-	-	0.3	0.3	1.6	5.1	18.2	23.8	26.9	23.9	100.0
AR	-	-	-	0.5	2.5	14.6	29.4	32.9	17.1	2.8	100.0
GA	-	0.2	-	-	5.4	10.8	22.2	31.9	22.6	7.0	100.0
LA	-	0.1	-	0.3	2.1	11.8	25.0	34.5	18.5	7.8	100.0
MS	-	-	0.1	-	0.4	3.4	19.5	40.4	28.2	8.0	100.0
MO	-	0.5	-	-	1.1	4.9	29.8	39.5	20.2	4.1	100.0
NM	-	0.9	-	-	-	1.9	17.6	25.9	46.3	7.5	100.0
NC	-	-	-	5.3	17.4	29.5	26.3	20.4	1.2	-	100.0
OK	-	-	-	0.6	0.7	3.2	12.7	30.6	35.8	16.4	100.0
SC	-	0.1	-	-	-	2.1	17.6	36.2	35.2	8.7	100.0
TN	-	-	-	0.5	0.8	11.2	31.1	36.9	16.7	2.8	100.0
TX	-	*	0.1	0.3	1.4	7.7	19.4	25.7	24.0	21.5	100.0
Other	-	-	-	1.3	2.6	25.0	51.3	15.8	3.9	-	100.0
U. S.	-	*	0.1	0.3	1.5	8.1	21.8	31.5	23.5	13.3	100.0

* Less than 0.05 percent.

Table 11. Percentage distribution of quantity index by specified frequencies, by states and United States, 1984

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	-	-	-	-	0.1	3.4	21.3	53.0	19.3	3.0	100.0
AR	-	-	0.4	0.5	1.8	14.0	34.8	40.5	7.9	0.1	100.0
GA	-	-	-	-	-	-	-	18.7	47.2	34.0	100.0
LA	0.2	-	-	0.2	0.5	4.1	27.0	55.4	12.0	0.5	100.0
MS	-	-	-	-	0.7	5.4	36.4	49.4	8.1	0.2	100.0
MO	-	-	-	-	0.6	7.3	48.7	40.7	2.6	0.1	100.0
NM	-	-	-	-	-	1.9	19.4	42.6	18.6	17.6	100.0
NC	-	-	-	-	-	-	2.0	18.6	55.7	23.6	100.0
OK	-	-	0.7	-	0.1	11.9	37.4	37.5	12.1	0.2	100.0
SC	-	-	-	-	-	-	2.0	25.6	62.3	10.2	100.0
TN	-	-	-	0.1	0.5	5.3	37.1	51.2	5.6	*	100.0
TX	-	*	-	0.1	0.3	2.1	16.6	52.6	26.0	2.4	100.0
Other	-	-	-	-	1.3	10.5	39.5	44.8	3.9	-	100.0
U. S.	*	*	0.1	0.1	0.5	4.6	25.3	48.9	18.3	2.2	100.0

* Less than 0.05 percent.

Table 12. Percentage distribution of grades by specified frequencies, by states and United States, 1984

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	-	1.4	0.6	3.5	8.9	25.3	42.3	14.8	3.3	-	100.0
AR	0.3	15.0	10.4	20.1	25.1	20.6	7.7	0.9	-	-	100.0
GA	-	1.0	1.0	-	1.0	1.9	13.3	48.1	31.8	1.9	100.0
LA	1.9	27.8	9.3	7.9	9.6	13.2	22.8	7.1	0.5	-	100.0
MS	-	10.5	10.8	18.9	20.9	19.4	15.8	3.6	0.1	-	100.0
MO	-	3.5	4.8	12.7	31.6	33.4	12.8	1.1	0.1	-	100.0
NM	-	-	-	-	2.8	30.6	31.5	24.0	8.3	2.8	100.0
NC	-	-	-	-	0.2	4.6	22.2	47.5	24.1	1.4	100.0
OK	-	0.7	-	3.4	15.3	42.7	31.4	6.1	0.2	-	100.0
SC	-	0.6	-	-	0.6	2.8	24.6	60.0	11.4	-	100.0
TN	-	3.6	4.1	9.9	26.4	35.7	17.4	2.9	-	-	100.0
TX	*	0.5	0.4	1.3	5.7	26.7	44.8	18.6	1.9	-	100.0
Other	-	1.3	1.3	1.3	13.2	36.9	42.1	3.9	-	-	100.0
U. S.	0.3	7.3	4.8	8.2	12.9	23.1	29.3	12.7	1.7	0.1	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, 1983 and 1984

State	Quality						Total samples graded		Reduced due to excess					
	Prime		Below prime and off quality		Below Grade				Foreign matter		Moisture		Free fatty acids	
	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984
AL	200	672	656	1,202	-	-	856	1,874	382	856	475	492	85	349
AR	1,113	187	1,188	3,479	-	10	2,301	3,676	543	1,089	1,070	2,986	31	2,860
GA	15	411	182	107	-	-	197	518	89	98	62	25	133	11
LA	1,247	980	1,420	3,532	-	70	2,667	4,582	722	1,096	1,019	2,889	85	2,271
MS	1,989	1,045	2,659	7,004	-	-	4,648	8,049	1,519	3,518	2,021	5,599	87	5,984
MO	286	29	345	1,033	-	-	631	1,062	142	455	302	897	22	571
NM	46	14	66	94	-	-	112	108	61	94	6	2	1	-
NC	70	241	214	254	-	-	284	495	91	129	176	192	27	2
OK	132	107	594	698	-	-	726	805	591	683	46	51	11	-
SC	126	521	193	348	-	-	319	869	92	271	128	128	84	5
TN	497	75	675	1,969	-	-	1,172	2,044	518	1,167	541	1,678	21	1,312
TX	2,248	2,906	8,354	12,901	5	5	10,607	15,812	7,863	12,508	970	1,265	450	295
Other	7	29	22	47	-	-	29	76	10	25	18	34	2	11
U. S.	7,976	7,217	16,568	32,668	5	85	24,549	39,970	12,623	21,989	6,834	16,238	1,039	13,671