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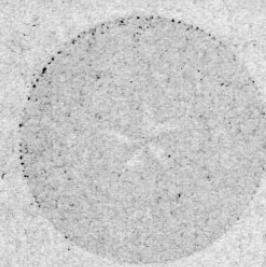
COMMERCIAL FERTILIZERS IN 1934-35



AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

T. O. WALTON, President

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This is the annual Fertilizer Control Bulletin. It contains statistics regarding fertilizers sold in Texas, information regarding the fertilizer law, and analyses of samples of the fertilizer sold by different manufacturers. The extent to which the various manufacturers are coming up to their guarantees is shown.

The total sales of fertilizer in Texas for 1934-35 were 59,480 tons. In 1933-34 the sales were 47,204 tons. In 1932-33 they were 30,843 tons. Cottonseed meal sold as a feed but used as a fertilizer was not included in these totals. Sales of fertilizer increased about 25 per cent over last year. Practically all the sales of mixed fertilizers were confined to about 20 analyses.

Definitions of terms and interpretations of results, as adopted by the Association of Official Agricultural Chemists, are given.

Tables are given showing the extent to which the various fertilizer manufacturers met or exceeded their guarantees. The cost of fertilizer was slightly more in 1934-35 than in 1933-34.

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COMMERCIAL FERTILIZERS IN 1934-35

G. S. FRAPS, STATE CHEMIST, AND S. E. ASBURY, ASSISTANT STATE CHEMIST

Fertilizer laws require fertilizer to be correctly labeled so that the purchaser can know what he is getting. The object of the fertilizer law is to protect the farmer or other users of fertilizer against misrepresentation of the composition or fertilizing value of the fertilizer and manufacturers and dealers against unfair competition due to such misrepresentation.

The first Texas fertilizer law was passed in 1899. It was revised and amended in 1911. The results of the fertilizer inspection have been published in bulletins of the Texas Agricultural Experiment Station regularly since 1906. This is the thirty-third Fertilizer Control Bulletin. It contains statistics, definitions of terms, and a report on the analyses made in enforcing the provisions of the fertilizer law.

EXPLANATION OF TERMS

Nitrogen refers to the total nitrogen in the fertilizer. It is necessary in proper amounts for the development of all parts of the plant, but an excess of nitrogen delays maturity and is likely to promote growth of stalk and leaves at the expense of fruit. Nitrogen is needed by many Texas soils, especially the sandy soils in the eastern and northern parts of the State. Since nitrogen is used in comparatively large quantities by plants and is to some extent washed from the soil, it is usually the first element to become depleted from a fertile soil.

Available phosphoric acid is the phosphoric acid in fertilizers which can be taken up quickly by plants. Phosphoric acid promotes the fruiting of plants, though it is also necessary for the development of all parts of the plant.

Total phosphoric acid is the entire quantity of the phosphoric acid present, whether highly available or not. A guarantee of total phosphoric acid in place of available is made in bone, tankage, rock phosphate, and basic slag.

Potash guaranteed in a fertilizer is required by the law to be soluble in water. Potash, like nitrogen, is needed by all parts of the plant, but especially by stalk and leaves. An excess of potash delays maturity and is likely to promote growth of the stalk and leaves at the expense of the fruit. When potash is abundantly supplied, plants may take up more than they need. Potash is present in soils more abundantly than phosphoric acid.

Valuation per ton represents the approximate average cost of the plant food in the unmixed fertilizer, at retail. It is usually less than the price at which the mixed fertilizer is sold, but since it is an average, it may

be more than the price of some of the unmixed fertilizer ingredients. The selling price includes cost of mixing, bags, transportation, the profit of the manufacturers if any, and the profit of the dealer. The valuations are decided on about September 1, and the prices often change before the chief active fertilizer season, which is February to April in Texas. The valuation sums up the value of the three plant foods shown in the analysis into a single figure and is convenient for this purpose. The fertilizer law permits a deficiency of less than ten per cent in one plant food to be compensated by an excess of another. The found valuation compared with the guaranteed valuation shows whether or not the fertilizer as a whole is better or poorer than the guarantee as a whole. The following valuations were used in 1934-35.

	Cents per pound
Nitrogen	12.0
Available phosphoric acid	5.5
Total phosphoric acid in Thomas phosphate, tantage, and bone meal	3.6
Total phosphoric acid in rock phosphate	1.3
Potash	5.5

Information on the Fertilizer Bag and Tag

A fertilizer tax tag is required to be placed on every bag of fertilizer before it is offered for sale or sold. The guaranteed analysis of the fertilizer is required by law to be printed on the bag or on the tag attached to the bag, so that the purchaser can see what he is buying. Total phosphoric acid instead of available phosphoric acid may be guaranteed for bone or tankage. A guarantee of total phosphoric acid is required in Thomas phosphate or rock phosphate. The information required on the package is as follows:

Net weight
 Name of fertilizer in full
 Name and address of manufacturer
 Guaranteed analysis:
 Nitrogen, per cent
 Available phosphoric acid, per cent
 Potash, per cent

When a fertilizer is named by figures in this Bulletin, the first figure stands for the percentage of nitrogen, the second for the percentage of available phosphoric acid, and the third for the percentage of water-soluble potash. For example, a 4-8-4 fertilizer contains 4 per cent of nitrogen, 8 per cent of available phosphoric acid, and 4 per cent of potash.

How to Calculate the Valuation

The valuation of a fertilizer is calculated by multiplying the composition by the valuation of each unit of plant food and adding the products. A unit is one per cent of a ton, or 20 pounds; so if the valuation of nitrogen is 12 cents a pound, the valuation of a unit is $12 \times 20 = \$2.40$. The valuation of a unit of available phosphoric acid at 5.5 cents a pound would be $5.5 \times 20 = \$1.10$; the valuation for a unit of potash at 5.5 cents

a pound would be \$1.10. The following is an example of a calculation at the prices given above:

Valuation of 4-8-4 fertilizer	
Nitrogen	4 x \$2.40 = \$9.60
Available phosphoric acid	8 x \$1.10 = \$8.80
Potash	4 x \$1.10 = \$4.40
Total valuation per ton	\$22.80

QUANTITY SOLD

Table I. Fertilizers sold in Texas, (not including cottonseed meal sold as feed but used as fertilizer).

1905-06	13,500
1910-11	52,985
1913-14	77,400
1914-15	17,500
1917-18	58,000
1918-19	46,000
1919-20	56,700
1920-21	14,850
1921-22	33,000
1922-23	73,300
1923-24	126,179
1924-25	97,719
1925-26	121,747
1926-27	79,863
1927-28	139,126
1928-29	187,215
1929-30	138,917
1930-31	64,424
1931-32	33,406
1932-33	30,843
1933-34	47,204
1934-35	59,480

The quantities of commercial fertilizers sold in Texas for several seasons, from September 1 to August 31, are given in Table 1. These are the actual sales as reported by the manufacturers, and not the tag sales. The tag sales are always a little larger than the actual sales. The sales in 1934-35 were about 25 per cent larger than those of last season. The largest sales so far made in Texas were during the season 1928-29. Fertilizer statistics for a number of years to August 31, 1926, have been published in Bulletin 350.

Quantity of Sales by Grades

Table 2 contains the sales of fertilizer by grades for four seasons, arranged in order according to sales in the season 1934-35. Sales of 4-8-4 fertilizer are highest of all in 1934-35, as in 1933-34. The 4-12-4 comes second, the 4-8-6 third, and the 6-10-7 fourth. The 18 per cent superphosphate instead of being fourth, as it was last season, now is seventh.

Quantity of Cottonseed Meal Used as a Fertilizer

The tonnage of cottonseed meal reported in Table 2 includes only that tagged with fertilizer tax tags and sold as a fertilizer. On account of the high price and the demand for feed, very little cottonseed meal was used as fertilizer this season.

COMPOSITION AND SELLING PRICES OF DIFFERENT GRADES OF FERTILIZER

Table 3 contains the average composition, the guaranteed valuation, the valuation found by analysis, and the average retail selling prices

per ton, of various grades of fertilizers. The average retail selling price is the average of the cash retail prices as furnished to the fertilizer inspector by the dealers. The prices of the same fertilizer may be different in different towns on account of differences in cost of transportation or for other causes. The retail price includes handling costs, carrying

Table 2. Fertilizer sales by grades in order of tonnage for 1934-35

	1934-35	1933-34	1932-33	1931-32
4-8-4.....	10,682	7,866	3,884	3,661
4-12-4.....	9,325	6,443	3,156	3,370
4-8-6.....	8,384	5,803	2,749	3,409
6-10-7.....	6,009	3,951	2,060	2,234
6-12-6.....	4,766	3,380	2,494	2,122
3-10-3.....	3,450	3,579	1,761	1,578
Superphosphate, 18%.....	3,249	4,858	4,373	6,505
5-15-5.....	1,420	868	606	1,091
Superphosphate, 20%.....	1,416	2,022	1,982	1,637
Bone meal.....	1,232	1,052	498	696
Nitrate of soda, 15% and 16%.....	1,146	1,116	624	726
Sulphate of ammonia.....	1,139	799	801	1,039
4-10-0.....	1,003	756	497	554
4-10-7.....	681	642	211	315
Tankage and activated sludge.....	679	695	1,680	3,362
11-48-0.....	670	265	104	155
6-9-3.....	598	258	148	152
16-20-0.....	570	220	445	261
Cyanamid.....	507	550	169	121
10-20-10.....	314	161	151	247
4-8-10.....	301	186	110	52
5-15-0.....	300	.....	.....	.....
Kainit, 20%.....	196	180	180	87
Miscellaneous mixed fertilizer (lawn and garden).....	183	105	94	292
6-18-6.....	172	180	39	53
10-10-0.....	169	53	.....	.....
8-24-8.....	134	65	46	127
Muriate of potash, 48%.....	122	198	178	284
Miscellaneous unmixed fertilizer.....	94	58	24	44
Kainit, 14%.....	80	122	130	67
9-18-18.....	76	197	200	392
Cottonseed meal.....	73	191	668	574
10-0-10.....	72	51	26	24
Soft phosphate with colloidal clay.....	65	40	42	.....
9-27-9.....	43	22	7	42
Superphosphate, 45%.....	35	56	34	12
0-15-6.....	34	25	23	107
0-12-4.....	29	4	0	196
Basic slag.....	22	.....	.....	.....
Calcium nitrate.....	20	80	93	50
Sulphate of potash, 48%.....	10	64	15	7
10-30-10.....	.....	25	2	8
3-10-8.....	.....	16	223	309
10-20-0.....	.....	2	6	.....
4-10-2.....	.....	.....	156	134
12-24-12.....	.....	.....	121	40
20-20-0.....	.....	.....	33	23
3-10-1.....	.....	.....	.....	118
10-20-20.....	.....	.....	.....	100
Kainit, 12%.....	.....	.....	.....	28
15-30-15.....	.....	.....	.....	1
Total.....	59,480	47,204	30,843	33,406

charges, and the dealer's profits, as well as the cost of the plant food used in the materials from which the fertilizer is made.

The average valuations in Table 3 exceed the valuations guaranteed in almost every case. The exceptions are 8-24-8, 9-18-18, 10-0-10, 10-20-

10, cyanamid, and sheep manure. In all of these, however, the valuations found are only slightly below the valuations guaranteed.

The high price of some fertilizers sold in small packages for household use is especially mentioned. Bone fertilizer, in 1 pound packages, sold for \$200 a ton, while some "plant food tablets" sold at the rate of \$6968 a ton.

Table 3. Average composition, valuation, and selling price of grades of fertilizer, 1934-35

Grade	Number Averaged	Nitrogen per cent	Available Phos. acid per cent	Potash per cent	Guaranteed valuation per cent	Valuation found per ton	Selling price per ton
0-12-4.....	1	....	11.82	4.98	17.60	18.48	25.90
3-10-3.....	85	3.21	10.24	3.27	21.50	22.56	28.87
4-8-4.....	204	3.99	8.31	4.12	22.80	23.23	29.61
4-8-6.....	145	4.02	8.32	6.11	25.00	25.52	31.47
4-8-10.....	7	3.99	8.20	9.86	29.40	29.45	34.89
4-10-0.....	22	4.06	10.12	....	20.60	20.88	27.91
4-10-7.....	13	4.06	10.44	7.26	28.30	29.21	34.05
4-12-4.....	158	4.13	12.18	4.20	27.20	27.92	32.86
5-10-4.....	2	4.92	11.34	4.30	27.40	28.99	....
5-15-5.....	14	5.17	14.98	5.23	34.00	34.64	39.34
6-9-3.....	19	5.95	9.20	3.30	27.60	27.92	33.15
6-10-7.....	88	5.98	10.23	7.17	33.10	33.49	37.13
6-12-6.....	83	5.99	12.23	6.21	34.20	34.66	38.54
6-18-6.....	2	5.88	18.62	5.88	40.80	41.05	45.20
8-24-8.....	3	8.01	23.21	8.35	54.40	53.95	57.20
9-18-18.....	4	9.03	17.73	16.07	61.20	58.56	62.00
10-0-10.....	7	9.48	....	9.87	35.00	33.61	42.37
10-10-0.....	1	9.92	10.50	....	35.00	35.36	38.25
10-20-20.....	6	9.83	19.98	10.25	57.00	56.84	58.15
11-48-0.....	6	11.03	48.80	....	79.20	80.15	63.00
16-20-0.....	6	16.13	21.92	....	60.40	62.84	50.50
18% Basic Slag.....	1	....	18.61	....	12.96	13.40	25.30
Bat Guano.....	1	8.33	7.17	....	23.20	27.88	....
Bone Fertilizer (pound packages).....	2	2.96	26.87	....	23.21	26.46	200.00
Calcium Nitrate (Nitrate of Lime).....	1	15.19	....	....	36.00	36.46	45.00
Cotton Seed Meal.....	1	6.93	2.05	1.32	18.54	20.34	42.00
Cyanamid.....	5	21.84	....	....	52.80	52.42	39.48
Ammonium Sulphate.....	4	20.86	....	....	49.92	50.06	46.23
Activated sludge.....	4	5.16	2.83	....	15.40	15.49	21.40
20% Kainit.....	6	....	....	20.64	22.00	22.70	25.55
Muriate of Potash—48%.....	3	....	....	49.90	52.80	54.89	40.57
15% Nitrate of Soda.....	8	15.94	....	....	36.00	38.25	42.93
16% Nitrate of Soda.....	16	16.12	....	....	38.40	38.70	39.52
Odorless Plant Food Tablets.....	1	10.91	19.06	25.57	....	75.28	6968.00
Raw Bone Meal.....	8	4.25	21.51*	....	24.72	25.69	29.00
Sheep Manure.....	1	1.32	.55	2.17	6.30	6.17	40.00
Sulphate of Ammonia.....	25	20.55	....	....	48.00	49.32	39.57
18% Superphosphate.....	49	....	18.79	....	19.80	20.67	24.98
20% Superphosphate.....	18	....	20.28	....	22.00	22.31	26.72

*Total phosphoric acid.

COST OF PLANT FOOD

Table 4 contains the retail cost of nitrogen, of available phosphoric acid, and of potash, in cents per pound, as calculated from the cash selling prices per ton given in Table 3 and from the guaranteed composi-

tion. For the purpose of this calculation it was assumed that the prices were in the same ratio as the valuations. As the prices of the same fertilizer in different places vary, these figures are not correct for any particular locality, but represent averages only, and are for purposes of

Table 4. Approximate average cost of plant food in cents per pound arranged in order of increasing costs 1934-35

Grade	Nitrogen	Available phosphoric acid	Potash
Cyanamid 22-0-0.....	8.98	.....	4.22
Muriate of Potash 0-0-48%.....	9.54	4.37	.....
11-48-0.....	9.89	.....	.....
Sulphate of Ammonia 20-0-0.....	10.03	4.60	.....
16-20-0.....	11.11	.....	.....
Ammonium Sulphate 20.8-0-0.....	12.16	5.57	5.57
9-18-18.....	12.24	5.61	5.61
10-20-10.....	12.35	.....	.....
16% Nitrate of Soda 16-0-0.....	12.61	5.78	5.78
8-24-8.....	13.12	6.01	.....
10-10-0.....	13.30	6.09	6.09
6-18-6.....	13.46	6.17	6.17
6-10-7.....	13.52	6.20	6.20
6-12-6.....	13.88	6.36	6.36
5-15-5.....	.....	.....	6.39
20% Kainit 0-0-20.....	14.08	4.22	.....
Raw Bone Meal.....	14.24	6.53	6.53
4-8-10.....	14.32	.....	.....
15% Nitrate of Soda 15-0-0.....	14.41	6.61	6.61
6-9-3.....	14.44	6.62	6.62
4-10-7.....	14.50	6.64	6.64
4-12-4.....	14.53	.....	6.66
10-0-10.....	15.00	6.68	.....
20% Superphosphate 0-20-0.....	15.11	6.93	6.93
Calcium Nitrate (Nitrate of Lime).....	.....	6.94	.....
4-8-6.....	15.59	7.15	7.15
18% Superphosphate 0-18-0.....	16.12	7.39	7.39
4-8-4.....	16.26	7.45	.....
3-10-3.....	16.68	7.65	.....
4-10-0.....	.....	8.10	8.10
Activated Sludge.....	27.18	12.46	12.46
0-12-4.....	76.19	34.92	34.92
18% Basic Slag.....	103.40	31.02	.....
Cotton Seed Meal.....	1110.73	509.09	509.09
Sheep Manure.....	.....	.....	.....
Bone Fertilizer (in pound packages).....	.....	.....	.....
Odorless Plant Food Tablets.....	.....	.....	.....

comparison. The prices were collected by the inspectors from retail merchants handling fertilizer. Grades used extensively near the factories would average a lower price than those used at a distance, on account of lower transportation costs. The fertilizers with the lowest prices of plant food are given first.

Cost of nitrogen. Cyanamid was the cheapest source of nitrogen; 11-48-0 was next, sulphate of ammonia third, and 16-20-0 fourth. Excluding the fertilizer in small packages for home use, sheep manure was the most expensive source of nitrogen, with cottonseed meal next, followed by activated sludge and 4-10-0. Nitrogen in nitrate of soda (15%) cost about 14.32 cents a pound compared with 9.89 cents a pound for that in sulphate of ammonia or cyanamid because mixing adds to the cost of

the fertilizers. Nitrogen in a number of the mixed fertilizers cost less than in nitrate of soda. The lowest-priced nitrogen in the mixed fertilizer was in the 11-48-0, followed in order by the 16-20-0, 9-18-18 and 10-20-10. Nitrogen was lower in price than last season in some fertilizers and higher in others. The difference averaged 0.43 cents a pound less for nitrogen in sulphate of ammonia, .02 cents more for nitrogen in 16% nitrate of soda, 0.58 cents more for that in 3-10-3, and 0.14 cents less for that in 4-12-4. Nitrogen in 16 per cent nitrate of soda averaged 1.96 cents a pound cheaper than in 15 per cent nitrate of soda.

Cost of phosphoric acid. The cheapest source of phosphoric acid was 11-48-0, then 16-20-0, followed by 9-18-18 and 10-20-10. The cost of available phosphoric acid was about 0.26 cents less per pound in 20 per cent superphosphate than in 18 per cent. Omitting the household fertilizers, phosphoric acid was most expensive in sheep manure, next in cottonseed meal, then in activated sludge, and then in 0-12-4. Available phosphoric acid was 0.07 cents a pound lower in 4-12-4 than it was last season, and 0.26 cents a pound higher in 3-10-3, than last year.

Cost of Potash. Muriate of potash was the cheapest form of potash, and 0-12-4 the most expensive, in mixed fertilizers. Potash cost 1.03 cents a pound less in muriate of potash than it did last season, but 0.26 cents a pound more in 3-10-3, and 0.07 cents a pound less in 4-12-4.

Relation of Cost to Concentration of Fertilizers

Certain fertilizers are sold which contain the plant food in the same proportions, so that so far as the nitrogen, phosphoric acid and potash are concerned they are the same fertilizer except in concentration, or strength.

The ratios of plant food in the 3-10-3, 4-12-4, 5-15-5, and 6-18-6 fertilizers are nearly the same, as the proportions are about three parts phosphoric acid to one of nitrogen and one of potash. Table 5 shows the approximate cost of nearly equal quantities of plant food in these fertilizers at the average prices given in Table 3. The plant food in 1.5 tons of 4-12-4 costs \$2.09 more than an equal quantity in 5-15-5. The two tons of 3-10-3 cost \$8.45 more than the one and one-half tons of 4-12-4,

Table 5. Relative cost of approximately the same amount of plant food in different grades of fertilizer (1934-35)

Grade	Available phosphoric acid	Nitrogen	Potash	Cost
Group 1				
1.2 tons—5-15-5.....	pounds 360	pounds 120	pounds 120	\$47.21
1.5 tons—4-12-4.....	360	120	120	49.29
2 tons—3-10-3.....	400	120	120	57.74
Group 2				
1 ton—6-12-6.....	240	120	120	38.54
1½ tons—4-8-4.....	240	120	120	44.42

but when allowance of \$2.20 is made for the 40 pounds more phosphoric acid it contains, the plant food in 3-10-3 costs about \$6.25 more. Similar differences are to be seen with the other grades. The most concentrated mixed fertilizer was the cheapest per pound of plant food, or to put it another way, the highest-priced fertilizer per ton may be the lowest-priced per pound of plant food. This difference is caused partly by freight charges, partly by the cost of bagging, etc. The higher cost of manufacture of the more concentrated fertilizers is frequently more than offset by the cost of freight, bags, etc. The cost of phosphoric acid averaged slightly less in 20 per cent superphosphate than in 18 per cent.

Comparing Costs of Fertilizer

The relative money value of two or more kinds of fertilizer may be roughly compared by dividing the price at which the fertilizer is sold per ton by the valuation per ton of the fertilizer. Guaranteed valuations for many grades for the season of 1934-35 are given in Table 3, and while the valuations for 1935-36 may be somewhat different, these valuations may be used for comparative purposes. For example, if a 4-8-4 fertilizer sells for \$29.00 a ton and a 6-12-6 fertilizer for \$34.00, which is cheaper? Using the valuations from Table 3, for 4-8-4, the selling price \$25.00 divided by the valuation \$22.80 gives 1.27; for 6-12-6, the selling price \$34.00 divided by the valuation \$34.20 gives 0.99. Thus one dollar of valuation costs \$1.27 in 4-8-4, and 0.99 in 6-12-6; therefore the 6-12-6 is cheaper. Similar calculations may be made for other grades and other prices.

Of course the suitability of the fertilizer to the soil and crop must be considered in addition to the relative cheapness of the plant food.

FREE ANALYSIS

Purchasers of commercial fertilizers for their own use (but not for sale), can secure a free analysis of a sample. Those who desire the free analysis of a sample of commercial fertilizer should write for a blank, "Application for Free Fertilizer Analysis," to the State Chemist, College Station, Texas, before taking any sample. The proper sampling of a fertilizer requires care and the law requires it to be taken in a certain way so that a fair sample is taken. If the sample is not properly taken, it does not represent the lot of fertilizer sampled, and the analysis may be better or poorer than the goods actually are. This privilege of a free analysis applies only to fertilizers tagged and sold under the fertilizer law and to samples properly taken so that they represent the goods sampled.

FERTILIZER ANALYSES TO BE SOLD IN 1935-36

The grades of fertilizer sold in Texas are limited in number. This standardization aids the farmer to become familiar with the different kinds of fertilizer, enables him to decide more readily on the proper kind to be used, enables the agricultural worker to make definite recommendations, and reduces the cost of manufacture and handling, thereby also reducing the cost to the consumer. At a conference with fertilizer manufacturers doing business in Texas, Louisiana, Mississippi, Arkansas, and Oklahoma in July, 1935, grades of mixed fertilizer were adopted for the four states. This was the eleventh such conference for Texas manufacturers, and the third joint conference.

The following grades were adopted for Texas for 1935-6:

0-12-4	4-12-4	9-27-9
0-15-6	5-15-5	10-10-0
3-10-3	6-9-3	10-20-10
4-8-4	6-10-7	11-48-0
4-8-6	6-12-6	16-20-0
4-8-10	6-18-6	10-0-10
4-10-0	8-24-8	15-30-15
4-10-7	9-18-18	10-20-20
	3-10-0	5-15-0

MATERIALS

Superphosphate 18%	Cottonseed meal
Superphosphate 20%	Nitrate of soda and
Superphosphate 32%	potash 14-0-13
Superphosphate 45%	Bone meal
Sulphate of ammonia 20%	Cyanamid 21%
Nitrate of soda 15%	Cyanamid 22%
Nitrate of soda 16%	Dicalcium phosphate 42%
Muriate of potash 50%	" " 36%
Sulphate of potash 48%	" " 30%
Manure salts 30%	" " 24%
Calcium nitrate	Basic slag
Cal-nitro 16%	Sheep manure
Kainit 20%	Tankage

ANALYSIS OF FERTILIZERS, 1934-35.

Table 7, near the end of this Bulletin, contains a list of the samples of fertilizer subjected to analysis in the season ending September 1, 1935. Analyses below guarantee are brought out in heavy type. Practically all samples of fertilizer were collected by our inspectors. Analyses and inspection were made by S. E. Asbury, T. L. Ogier, Waldo Walker, W. H. Garman, C. D. Marrs, and Russell Smith.

Relation of Valuation Guaranteed to Valuation Delivered

Table 6 contains the average guaranteed valuation, and the average valuation found by our analyses, for all manufacturers doing business in Texas. In the preparation of this table, all analyses made were averaged, even though several were made of each brand, and fertilizer materials are included as well as mixed fertilizers.

Averages Below Guarantee

Whenever any lot of fertilizer is 4 per cent or more below guarantee, the law requires all persons who have sold this lot of fertilizer to make good the deficiency to all purchasers. The rebate is paid by the manufacturer to the dealer and by the dealer to the customer. The number of lots on which rebates were paid by each manufacturer is shown in Table 6.

Table 6. Average valuation of all fertilizers guaranteed and found in dollars a ton 1934-35

	Number averaged	No. of samples more than 4 per cent below guarantee	Valuation	
			Guaranteed	Found
American Cyanamid Company.....	17	0	\$64.80	\$65.88
Arkansas Fertilizer Company.....	4	0	25.60	26.45
Armour Fertilizer Works.....	95	2	29.21	29.82
Barrett Company.....	4	0	38.40	39.08
Bryan Cotton Oil & Fertilizer Company.....	9	0	25.70	27.63
Campbell Fertilizer Company.....	16	0	23.22	26.56
Chilean Nitrate Sales Corporation.....	5	0	38.40	38.63
David Hardie Seed Company.....	1	0	27.20	27.23
Davison-Pick Fertilizers, Inc.....	27	1	26.08	26.56
East Texas Cotton Oil Company.....	16	2	27.43	27.90
Farmers Cotton Oil Company.....	5	0	25.00	25.73
Federal Chemical Company.....	69	0	25.66	26.16
Fidelity Chemical Corporation.....	67	2	28.44	28.90
Ford Motor Company.....	4	0	49.92	50.06
Gilmer Cotton Oil & Fertilizer Company.....	18	0	24.93	27.25
City of Houston.....	4	0	15.40	15.49
International Agricultural Corporation.....	42	0	26.48	26.88
Kelly-Weber & Company, Inc.....	15	0	23.86	24.62
La-Tex Fertilizer Company.....	5	0	33.22	35.07
Longview Cotton Oil Company.....	9	0	28.24	28.93
Marshall Cotton Oil Company.....	33	2	24.57	24.87
Mixson Brothers.....	9	0	27.26	27.57
Newhouse Chemical & Supply Company.....	3	1	31.20	30.69
New Jersey Fertilizer Company.....	1	0	23.21	26.82
Oil Mill & Fertilizer Works.....	9	0	24.58	25.56
Palestine Manure & Fertilizer Company.....	1	0	6.30	6.17
Palestine Oil Mill & Fertilizer Works.....	65	9	27.76	28.04
Pate Brothers Fertilizer Works.....	25	0	24.15	25.17
Pittsburg Cotton Oil Company.....	25	3	25.84	26.10
Shreveport Fertilizer Works.....	43	3	26.22	26.85
Smith County Cotton Oil & Fertilizer Co., Works, Inc.....	10	1	31.44	32.13
Standard Wholesale Phosphate & Acid Swift & Company Fertilizer Works.....	1	0	34.20	35.63
Stumpf & Walter Company.....	1	0	23.21	26.09
Texas Chemical Company.....	146	4	30.36	30.69
Texas Farm Products Company.....	8	0	24.72	25.69
Synthetic Nitrogen Products Corporation.....	56	0	26.80	27.36
Temple Cotton Oil Company.....	1	0	36.00	36.46
Tennessee Corporation.....	14	9	25.25	24.16
Tri-State Fertilizer & Lumber Company.....	2	0	27.40	28.99
Tyler Fertilizer Company.....	24	0	27.35	28.94
United Chemical Company.....	23	1	26.80	27.34
Virginia-Carolina Chemical Corporation.....	63	3	25.88	26.21
Volpe Brothers.....	37	0	26.03	26.58
	1	0	23.20	27.88

INVESTIGATIONS UNDER THE FERTILIZER LAW

The State Chemist is required by the fertilizer law to investigate the composition, properties, and agricultural values of fertilizers or fertilizer

materials, or ingredients of fertilizer sold or offered for sale within the State of Texas, and to publish his results.

Relation to Experiment Station Work

The work of the State Chemist is closely related to the chemical work of the Experiment Station. In his capacity as Chief of the Division of Chemistry of the Experiment Station, the State Chemist is carrying out extensive investigations into the fundamental properties of soils, especially with respect to their content of plant food. This work is related closely to the use of fertilizers and is connected with investigations as to the agricultural values of fertilizers required by the Fertilizer Control, for fertilizers vary in effect upon the different soils.

Colloidal Mineral Phosphate

Colloidal mineral phosphate is a natural phosphate of lime containing 20 per cent of total phosphoric acid or more. The phosphate of lime is so finely divided that some of it is termed colloidal. The availability to plants of the phosphoric acid of colloidal mineral phosphate is on an average about 40 per cent of that of the available phosphoric acid in 20 per cent superphosphate, (see Bulletin No. 509).

Sulphur, Gypsum, and Manganese

We are unable to recommend the use of sulphur or gypsum as a fertilizer in Texas or for application to Texas soils. The experiments which have been carried out do not give results which justify the use of such materials on soils (see Bulletins 408 and 414).

Investigations on the use of manganese sulphate for Texas soils are given in Bulletin 432. The results of the experimental work do not justify recommendation of the use of manganese sulphate on Texas soils.

Greensand

A report of investigations regarding the value of greensand as a fertilizer was published in Bulletin 428. The availability of the potash and phosphoric acid in greensand was found to be low. Greensand has a little fertilizing value and can be used in quantities of 5 to 40 tons to an acre where it can be mixed and applied at a cost closely related to its value. It does not contain sufficient fertilizer value to justify attempting to market it.

Polyhalite and Sewage Sludge

Polyhalite, a mineral found in deep deposits in western Texas and in New Mexico, contains about 12 per cent potash, which is only partly

soluble in water, but which is readily available to plants (see Bulletin 449).

Digested sewage sludge is low in plant food, and the nitrogen has a low availability. Dried activated sludge contains about 5 per cent nitrogen and 2 per cent available phosphoric acid and the nitrogen has a good availability to plants (see Bulletin 445).

Information Regarding the Use of Fertilizers

Information regarding the use of fertilizers is given in Bulletin 498, which will be sent free on application.

DEFINITIONS OF FERTILIZER TERMS

The Association of Official Agricultural Chemists has adopted a number of definitions of terms and interpretations of results for fertilizers and liming materials. The proposed definitions and interpretations were considered by the committee appointed for that purpose for three or more years and three or more public hearings held on them before a definition or interpretation was finally adopted. There has therefore been opportunity for careful consideration, and for the trade to recommend changes or improvements before final adoption.

The definitions adopted to date are as follows:

Acidulated fish tankage is the rendered product derived from fish and treated with sulfuric acid.

Activated sewage products are made from sewage freed from grit and coarse solids and aerated after being inoculated with microorganisms. The resulting flocculated organic matter is withdrawn from the tanks, filtered with or without the aid of coagulants, dried, ground, and screened.

Ammoniated superphosphate is a product containing superphosphate and/or dissolved bone and nitrogenous compounds, but without the addition of potash.

Analysis, as applied to fertilizers, designates the percentage composition of the product expressed in terms of nitrogen, phosphoric acid, and potash in their various forms.

Ashes from leached wood are unleached ashes resulting from the burning of wood that has been exposed to or digested in water or other liquid solvent, as in the extraction of dyes, so that a part of the plant food has been dissolved and removed.

Available phosphoric acid is the sum of the water-soluble and the citrate-soluble phosphoric acid.

"Basic" lime phosphate is a superphosphate to which liming materials have been added in a quantity at least six per cent (6 %) calcium car-

bonate equivalents in excess of the quantity required to convert all water-soluble phosphate to the citrate-soluble form.

Basic phosphate slag is a by-product in the manufacture of steel from phosphatic iron ores. The product shall be finely ground and shall contain no admixture of materials other than what results in the original process of manufacture. It shall contain not less than twelve per cent (12%) of total phosphoric acid (P_2O_5), not less than eighty per cent (80%) of which shall be soluble in two per cent (2%) citric acid solution according to the Wagner Method of analysis. Any other phosphate slag not conforming to this definition shall be designated low grade. Finely ground in the definition of basic phosphate slag shall refer to actual size of particles as determined by the use of standard sieves, as follows: seventy per cent (70%) or more shall pass a 100-, and ninety per cent (90%) or more shall pass a 50-mesh sieve.

A brand is a term, design, or trade mark used in connection with one or several grades of fertilizers.

A brand name is a specific designation applied to an individual fertilizer.

The analysis or grade of a fertilizer should be included with its brand name, and so used by the manufacturer on sacks and in printed literature and by the control official in his reports and publications.

The order of terms in mixed fertilizers shall be nitrogen first, phosphoric acid second, and potash third.

When the name of a material is used as a part of the brand name of a mixed fertilizer, as for example blood, bone or fish, the nitrogen or phosphoric acid shall be derived from or supplied entirely by the material named. When the name of a material is used as a brand or as part of a brand and the nitrogen and phosphoric acid is not supplied by the material named, the word "brand" shall follow the name of the material. Example: "Fish Brand Fertilizer."

Dissolved bone is ground bone or bone meal that has been treated with sulfuric acid.

Ground raw bone is dried ground animal bones that have not been previously steamed under pressure.

Ground steamed bone is ground animal bones that have been previously steamed under pressure.

Dried blood is the collected blood of slaughtered animals, dried and ground and containing not less than twelve per cent (12%) of nitrogen in organic forms.

Charred peat is peat artificially dried at a temperature that causes partial decomposition.

Cyanamid and urea nitrogen is synthetic non-proteid organic nitrogen.

The nitrogen in calcium cyanamid shall be considered as being of organic nature.

Dicalcium phosphate is a manufactured product consisting chiefly of a dicalcic salt of phosphoric acid.

Fertilizer grade shall represent only the minimum guarantee of its plant food expressed in terms of nitrogen (not ammonia), available phosphoric acid, and water-soluble potash.

The statement of guarantees of mixed fertilizers shall be given in whole numbers.

A fertilizer formula shall express the quantity and grade of the crude stock materials used in making a fertilizer mixture. For example: 800 pounds of 16 per cent superphosphate, 800 pounds of tankage (7.40 nitrogen and 9.15 total phosphoric acid), and 400 pounds of sulfate of potash-magnesia (twenty-six (26%), potash).

Fish tankage, fish scrap, dry ground fish, fish meal, fertilizer grade is the dried ground product derived from rendered or unrendered fish.

Gypsum, land plaster or crude calcium sulfate are products consisting chiefly of calcium sulfate. They may contain twenty per cent (20%) of combined water. (They do not neutralize acid soils.)

Hoof and horn meal is processed, dried, and ground hoofs and horns.

Kainit is a potash salt containing potassium and sodium chlorides and sometimes sulfate of magnesia with not less than twelve per cent (12%) of potash (K_2O).

Leached wood ashes are ashes from burned unleached wood with part of their plant food removed by artificial means or by exposure to rains, snows, or other solvent.

The word **lime** when applied to liming materials means either calcium oxide or calcium and magnesium oxides.

Hydrated or slaked lime is the product obtained by treating quicklime with sufficient water or steam to combine with its oxides.

Air-slaked lime is the product obtained by exposing quicklime or hydrated lime to the atmosphere until partially carbonated.

Quicklime, burned lime, caustic lime, lump lime, unslaked lime are liming materials that have a high content of calcium oxide (with magnesium oxide) produced by heating suitable carbonates until substantially all the carbon dioxide has been eliminated.

Waste lime, by-product lime, is any industrial waste or by-product containing calcium or calcium and magnesium in forms that will neutralize acids. It may be designated by the prefixation of the name of the industry or process by which it is produced, i. e., gas-house lime, tanner's lime, acetylene lime-waste, lime-kiln ashes, calcium silicate, etc.

Ground limestone is the product obtained by grinding calcareous or dolomitic limestone. Not less than seventy-five per cent (75%) shall pass a 100-mesh sieve. It shall contain calcium and magnesium carbonates equivalent to not less than ninety per cent (90%) of calcium carbonate.

Ground shell lime is the product obtained by grinding the shells of mollusks. Not less than seventy-five per cent (75%) shall pass a 100-mesh sieve. It shall contain calcium and magnesium carbonates equivalent to not less than eighty per cent (80%) of calcium carbonate.

The term "lime" shall not be used in the registration, labeling, or guaranteeing of fertilizers or fertilizer materials unless the lime is in a form to neutralize soil acidity (the oxide, hydroxide or carbonate, or equivalent magnesia compounds.)

Marl, ground shell marl is the product obtained by grinding natural deposits of shell marl. Not less than seventy-five per cent (75%) shall pass a 100-mesh sieve. It shall contain calcium and magnesium carbonates equivalent to not less than eighty per cent (80%) of calcium carbonate.

Manure salts are potash salts containing high percentages of chloride and from twenty per cent (20%) to thirty per cent (30%) of potash (K_2O). The term double manure salts is discontinued.

Mono-ammonium phosphate (fertilizer grade) is a commercial salt made by combining phosphoric acid with ammonia. It shall contain not less than ten per cent (10%) of nitrogen and not less than forty-six per cent (46%) of available phosphoric acid.

Muriate of potash (commercial potassium chloride) is a potash salt containing not less than forty-eight per cent (48%) of potash (K_2O), chiefly as chloride.

Dried, pulverized, or shredded manures are what the name indicates, and not mixtures of manures and other materials.

Sheep manure-wool waste is the by-product from wool-carding establishments consisting chiefly of sheep manure, seeds, and wool fiber.

Nitrate of potash (commercial potassium nitrate) is a salt containing not less than twelve per cent (12%) of nitrogen and forty-four per cent (44%) of potash (K_2O).

Nitrate of soda (commercial sodium nitrate) is commercial sodium nitrate containing not less than fifteen per cent (15%) of nitrogen, chiefly as sodium nitrate.

Peat is partly decayed vegetable matter of natural occurrence. It is composed chiefly of organic matter which contains some nitrogen of low activity.

Phosphate rock is a natural rock containing one or more calcium phosphate minerals of sufficient purity and quantity as to permit its use, either directly or after concentration, in the manufacture of commercial products.

Precipitated bone phosphate is a by-product from the manufacture of glue from bones and is obtained by neutralizing the hydrochloric acid solution of processed bone with calcium hydroxide. The phosphoric acid is chiefly present as dicalcium phosphate.

Precipitated phosphate is a product consisting mainly of dicalcium phosphate obtained by neutralizing with calcium hydroxide the acid solution of either phosphate rock or processed bone.

Products secured by heating calcium phosphate with alkali salts containing potash are non-acid phosphates with potash. They are not potassium phosphate.

Soft phosphate with colloidal clay is a very finely divided low-analysis by-product from mining Florida rock phosphate by a hydraulic process in which the colloidal material settles at points in artificial ponds and basins farthest from the washer, and is later removed after the natural evaporation of the water.

Sulphate of ammonia is a commercial product composed chiefly of ammonium sulfate. It shall contain not less than twenty and five-tenths per cent (20.5%) of nitrogen.

Sulphate of potash (commercial potassium sulfate) is a potash salt containing not less than forty-eight per cent (48%) of potash (K_2O), chiefly as sulfate, and not more than two and one-half per cent (2.5%) of chlorine.

Chlorine in mixed fertilizers in which the potash is claimed as sulfate shall not exceed one-half of one per cent (0.5%) more than what is called for in the minimum potash content based on the definition for sulfate of potash formulated by the committee. Calculate as follows: 0.05 times the percentage of potash found plus 0.5.

The term phosphoric acid designates P_2O_5 .

The term potash designates potassium oxide (K_2O).

As the terms phosphoric acid and potash are used universally in guaranteeing and in reporting the analyses of fertilizers it is recommended that the same terms also be used in reporting and discussing the results of analyses of related materials.

Sulfate of potash-magnesia is a potash salt containing not less than twenty-five per cent (25%) of potash (K_2O), nor less than twenty-five per cent (25%) of sulfate of magnesia, and not more than two and one-half per cent (2.5%) of chlorine.

Superphosphate is a cured mixture of rock phosphate and sulfuric acid and/or phosphoric acid. The grade shall always be used as a prefix to the name. Example: 16% Superphosphate. The use of the term Acid Phosphate is discontinued.

Tankage (without qualification) is the rendered, dried, and ground by-product, largely meat and bone from animals (slaughtered or that have died otherwise.)

Process tankages are products made under steam pressure from crude inert nitrogenous materials, with or without the use of acids, for the purpose of increasing the activity of the nitrogen. These products shall be called "Process Tankages" with or without further qualification. The water-insoluble nitrogen in these products shall test at least fifty per cent (50%) active by the alkaline, or eighty per cent (80%) by the neutral permanganate method.

Garbage tankage is the rendered, dried, and ground product derived from waste household food materials.

Crude, inert, or slow-acting nitrogenous materials are unprocessed organic substances relatively high in nitrogen but having a very low value as plant food and showing a low activity by both the alkaline and

neutral permanganate methods (below fifty per cent (50%) and eighty per cent (80%) respectively).

Activity of water-insoluble nitrogen in fertilizers. The alkaline and neutral permanganate methods distinguish between the better and the poorer sources of water-insoluble nitrogen; they do not show the percentage of availability of the material. The available nitrogen of any product is measured only by carefully conducted vegetation experiments. (a) The methods shall be used on mixed fertilizers containing water-insoluble nitrogen amounting to three-tenths of one per cent (0.3%) or more of the weight of the material. If a total nitrogen exceeds the minimum guarantee and is accompanied by a low activity of the insoluble nitrogen, the over-run shall be taken into consideration in determining the classification of the water-insoluble nitrogen. (b) The water-insoluble nitrogen in mixed fertilizers showing an activity below fifty per cent (50%) by the alkaline method and also below eighty per cent (80%) by the neutral method shall be classed as inferior. This necessitates the use of both methods, also the provision as to over-run in (a), before classifying as inferior.

A unit of plant food is twenty (20) pounds, or one per cent (1%) of a ton.

Unleached wood ashes are ashes from burned unleached wood that have had no part of their plant food removed and that contain four per cent (4%) or more of water-soluble potash (K_2O).

SUMMARY

This Bulletin contains a report of the Texas Fertilizer Control for 1934-35 and information regarding the use of fertilizer.

An explanation of terms is given.

Sales of fertilizer in Texas were 59,480 tons in 1934-35. They were 47,204 tons in 1933-34. The average for other years is given. The tons reported do not include cottonseed meal sold as a feed but used as a fertilizer.

The average selling prices and composition of the different kinds of fertilizer are given.

Available phosphoric acid costs less in 20 per cent superphosphate than in 18 per cent, though the difference was small. Kainit is an expensive source of potash, muriate of potash being much cheaper.

Nitrogen costs much less in sulphate of ammonia than in nitrate of soda. Plant food costs less per pound in the more concentrated fertilizers than in less concentrated fertilizer, though the former costs more per ton.

The grades of fertilizer to be sold next season are given.

A table is given showing the relation of the guaranteed valuation to the valuation delivered by the various manufacturers.

Definitions of fertilizer terms, as adopted by the Association of Official Agricultural Chemists, is given.

Analyses of samples collected by the inspector are given.

Table 7. Analysis of commercial fertilizer, season 1934-35

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	American Cyanamid Company, New York, New York.				
49271	Aero Cyanamid 22%—Guarantee.....	22.00	.....	.....	52.80
49515	Analysis.....	21.83	.....	.....	52.39
49801	Analysis.....	21.66	.....	.....	51.98
49916	Analysis.....	21.68	.....	.....	52.03
50226	Analysis.....	22.00	.....	.....	52.80
	'Ammo-Phos' 11-48-0 Guarantee.....	22.04	.....	.....	52.90
49270	Analysis.....	11.00	48.00	.....	79.20
50091	Analysis.....	11.04	48.88	.....	80.27
50096	Analysis.....	11.04	49.01	.....	80.41
50250	Analysis.....	11.04	48.80	.....	80.18
50253	Analysis.....	10.92	48.22	.....	79.25
50254	Analysis.....	11.05	49.26	.....	80.71
	'Ammo-Phos' 16-20-0 Guarantee.....	11.08	48.64	.....	80.09
49267	Analysis.....	16.00	20.00	.....	60.40
50090	Analysis.....	16.20	21.47	.....	62.50
50095	Analysis.....	16.14	22.33	.....	63.30
50249	Analysis.....	15.94	22.13	.....	62.60
50251	Analysis.....	16.07	22.28	.....	63.08
50252	Analysis.....	16.20	21.24	.....	62.24
	Analysis.....	16.25	22.09	.....	63.30
	Arkansas Fertilizer Company, Little Rock, Arkansas.				
49480	White Diamond Early Boll—Guarantee.....	3.00	10.00	3.00	21.50
	Analysis.....	3.16	9.86	3.32	22.08
49478	White Diamond Jack Rabbit—Guarantee.....	4.00	8.00	6.00	25.00
	Analysis.....	4.39	7.49	6.41	25.83
49964	White Diamond Old Reliable—Guarantee.....	4.00	8.00	4.00	22.80
	Analysis.....	4.21	8.24	4.27	23.86
49479	White Diamond Pioneer—Guarnatee.....	6.00	10.00	7.00	33.10
	Analysis.....	6.28	10.22	7.02	34.03
	Armours, Fertilizer Works, Houston, Fort Worth, Texas & New Orleans, Louisiana.				
49363	Armour's Big Crop Fertilizer No. 3103—Guarantee.....	3.00	10.00	3.00	21.50
49419	Analysis.....	3.16	10.08	3.30	22.30
49856	Analysis.....	3.22	10.09	2.96	22.09
	Armour's Big Crop Fertilizer No. 484—Guarantee.....	3.13	10.55	2.68	22.07
49302	Analysis.....	4.00	8.00	4.00	22.80
49418	Analysis.....	3.96	9.02	4.00	23.82
49475	Analysis.....	3.94	8.63	4.02	23.37
49488	Analysis.....	4.00	8.30	3.74	22.84
49537	Analysis.....	4.02	8.07	3.66	22.56
49760	Analysis.....	3.96	8.24	3.70	22.63
49810	Analysis.....	4.06	8.25	3.86	23.07
49821	Analysis.....	4.02	7.87	4.04	22.75
49974	Analysis.....	4.01	8.04	3.90	22.75
50040	Analysis.....	4.21	8.65	3.90	23.91
50117	Analysis.....	4.09	8.52	3.77	23.34
50142	Analysis.....	3.73	8.52	3.71	22.40
50159	Analysis.....	3.96	8.50	4.04	23.29
50181	Analysis.....	3.80	8.06	3.73	22.09
50195	Analysis.....	3.78	7.90	3.76	21.90
	Armour Big Crop Fertilizer No. 486—Guarantee.....	4.08	8.36	4.05	23.45
49378	Analysis.....	4.00	8.00	6.00	25.00
49493	Analysis.....	4.05	8.19	6.11	25.45
49265	Analysis.....	4.18	8.26	6.72	26.51
49610	Analysis.....	4.08	8.71	5.80	25.75
49733	Analysis.....	4.39	8.33	6.07	26.38
49736	Analysis.....	4.01	8.53	6.18	25.80
49746	Analysis.....	4.01	8.44	6.17	25.69
49809	Analysis.....	4.24	8.37	6.11	26.11
49935	Analysis.....	4.01	8.11	6.59	25.79
49938	Analysis.....	4.06	8.17	6.30	25.66
49973	Analysis.....	4.07	8.46	6.14	25.83
49975	Analysis.....	4.07	8.35	6.02	25.58
50190	Analysis.....	3.84	9.09	5.36	25.12
50200	Analysis.....	3.95	8.38	6.04	25.34
	Analysis.....	3.96	8.54	6.02	25.51

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Armour Fertilizer Works, Houston, Fort Worth, Texas & New Orleans, Louisiana—Continued.				
49374	Armour's Big Crop Fertilizer No. 4100—Guarantee.....	4.00	10.00	....	20.60
49414	Analysis.....	3.94	9.89	....	20.34
50077	Analysis.....	4.01	9.75	....	20.35
49286	Armour's Big Crop Fertilizer No. 4107—Guarantee.....	4.00	10.00	7.00	28.30
49303	Analysis.....	4.02	10.15	6.70	28.19
49332	Armour's Big Crop Fertilizer No. 4124—Guarantee.....	4.00	12.00	4.00	27.20
49383	Analysis.....	4.19	12.29	4.01	27.99
49415	Analysis.....	4.08	12.08	4.04	27.52
49492	Analysis.....	4.13	12.16	4.12	27.82
49589	Analysis.....	4.17	11.62	4.13	27.33
49640	Analysis.....	4.16	12.35	4.04	28.01
49774	Analysis.....	4.14	12.08	4.02	27.65
49820	Analysis.....	4.03	12.36	4.20	27.89
49860	Analysis.....	4.13	12.01	4.28	27.83
49872	Analysis.....	4.17	11.92	4.22	27.76
49894	Analysis.....	3.75	12.53	3.77	26.93
49950	Analysis.....	4.21	12.75	4.02	28.55
50038	Analysis.....	4.15	12.20	4.06	27.85
50052	Analysis.....	4.20	12.02	4.10	27.81
50098	Analysis.....	4.10	12.13	4.42	28.04
50104	Analysis.....	3.86	12.62	3.90	27.43
50127	Analysis.....	4.22	12.29	4.30	28.38
50143	Analysis.....	3.89	12.57	3.79	27.34
50218	Analysis.....	3.93	12.53	4.02	27.63
49245	Armour's Big Crop Fertilizer No. 5155—Guarantee.....	4.33	12.95	4.32	29.39
49248	Analysis.....	4.03	12.78	4.05	28.19
49298	Analysis.....	5.00	15.00	5.00	34.00
50058	Analysis.....	5.56	14.85	5.14	35.33
50097	Analysis.....	5.39	15.01	5.44	35.43
49465	Armour's Big Crop Fertilizer No. 693—Guarantee.....	5.16	15.37	5.11	34.91
49239	Analysis.....	5.37	15.18	5.15	35.26
49244	Analysis.....	5.50	15.00	5.48	35.73
49466	Armour's Big Crop Fertilizer No. 6107—Guarantee.....	6.00	9.00	3.00	27.60
49489	Analysis.....	5.73	9.11	3.49	27.61
49538	Armour's Big Crop Fertilizer No. 6107—Guarantee.....	6.00	10.00	7.00	33.10
49958	Analysis.....	6.30	10.32	7.64	34.87
50039	Analysis.....	6.04	10.03	6.83	33.03
50101	Analysis.....	6.04	10.11	7.66	34.05
50105	Analysis.....	5.86	10.56	6.58	32.92
50138	Analysis.....	5.96	10.31	7.00	33.34
	Armour's Big Crop Fertilizer No. 6126—Guarantee.....	6.01	10.24	7.62	34.06
49264	Analysis.....	6.24	9.74	7.78	34.25
49629	Analysis.....	6.03	10.12	7.54	33.89
49636	Analysis.....	6.31	10.19	7.40	34.49
49803	Analysis.....	6.02	10.34	7.01	33.53
49840	Analysis.....	6.00	12.00	6.00	34.20
49920	Analysis.....	6.00	12.58	6.02	34.86
49988	Analysis.....	6.01	12.10	6.78	35.19
50053	Analysis.....	6.20	12.33	6.56	35.66
50139	Analysis.....	6.28	12.43	6.59	35.99
	Armour's Big Crop Fertilizer No. 8248—Guarantee.....	6.05	12.78	6.24	35.44
49243	Analysis.....	6.22	12.31	6.06	35.14
49236	Armour's Big Crop N. P. K. No. 91818—Guarantee.....	5.92	12.00	7.01	35.12
49291	Analysis.....	5.97	12.32	6.32	34.83
	Armour's Big Crop Fertilizer No. 102010—Guarantee.....	6.18	12.46	6.11	35.26
49249	Analysis.....	8.00	24.00	8.00	54.40
50057	Analysis.....	7.70	23.57	8.07	53.29
	Armour's Big Crop 20 Per Cent Kainit—Guarantee.....	9.00	18.00	18.00	61.20
49619	Analysis.....	8.97	17.56	14.64	56.95
49238	Armour's Big Crop 15 Per Cent Nitrate of Soda—Guarantee.....	8.78	17.17	15.67	57.20
49590	Analysis.....	9.16	22.28	10.17	57.68
49709	Analysis.....	9.82	19.52	9.71	55.71
		....	....	20.00	22.00
		....	....	21.39	23.53
		15.00	....	....	36.00
		16.29	....	....	39.10
		16.33	....	....	39.19
		16.13	....	....	38.71

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Armour Fertilizer Works, Houston, Fort Worth, Texas, & New Orleans, Louisiana—Continued.				
49282	Armour's Big Crop Sulphate of Ammonia—Guarantee.....	20.00			48.00
	Analysis.....	20.90			50.16
49237	Armour's Big Crop 18% Superphosphate—Guarantee.....		18.00		19.80
49323	Analysis.....		18.28		20.11
49594	Analysis.....		17.59		19.35
49605	Analysis.....		18.90		20.79
			18.64		20.50
	Barrett Company, New York, New York.				
49224	Arcadian Nitrate of Soda—Guarantee.....	16.00			38.40
49227	Analysis.....	16.43			39.43
49275	Analysis.....	16.36			39.26
49281	Analysis.....	16.20			38.88
		16.14			38.74
	Bryan Cotton Oil & Fertilizer Company, Bryan, Texas.				
49630	Star Brand Cotton & Corn Fertilizer—Guarantee.....	3.00	10.00	3.00	21.50
49651	Analysis.....	3.56	11.06	3.49	24.55
49914	Analysis.....	3.04	10.91	3.78	23.46
	Star Brand Special Fertilizer—Guarantee.....	3.34	10.39	3.62	23.43
49631	Analysis.....	4.00	12.00	4.00	27.20
49912	Analysis.....	4.10	13.11	4.28	28.97
49632	Star Brand 20% Superphosphate—Guarantee.....	4.84	12.14	5.56	31.09
49915	Analysis.....		20.00		22.00
			20.89		22.98
49650	Star Brand Tomato Fertilizer—Guarantee.....	6.00	12.00	6.00	34.20
49913	Analysis.....	5.51	13.90	6.65	35.83
		6.11	11.74	7.95	36.32
	Campbell Fertilizer Company, Houston, Texas.				
49319	3-10-3 All-Weather Organic Base—Guarantee.....	3.00	10.00	3.00	21.50
49628	Analysis.....	3.76	11.71	5.10	27.51
		3.57	10.56	4.33	24.95
49385	4-8-4 All-Weather Organic Base Fertilizer—Guarantee.....	4.00	8.00	4.00	22.80
50072	Analysis.....	3.74	9.08	9.39	29.30
		3.54	10.06	6.13	26.31
49627	4-8-6 All-Weather Organic Base—Guarantee.....	4.00	8.00	6.00	25.00
49314	Analysis.....	3.05	10.29	8.82	28.34
49318	Analysis.....	3.86	8.40	9.23	28.65
50079	Analysis.....	3.44	10.68	9.96	30.97
		3.68	9.44	9.41	29.56
50087	5-10-7 All-Weather Organic Base Fertilizer—Guarantee.....	4.00	10.00	7.00	28.30
	Analysis.....	3.62	12.50	10.14	33.59
49386	4-12-4 All-Weather Organic Base—Guarantee.....	4.00	12.00	4.00	27.20
	Analysis.....	3.65	15.19	6.92	33.08
49608	6-10-7 All-Weather Organic Base—Guarantee.....	6.00	10.00	7.00	33.10
	Analysis.....	5.22	10.49	7.15	31.94
50061	Rice Special—Guarantee.....	2.70	10.00		17.48
50074	Analysis.....	2.34	12.27		19.12
		2.45	11.61		18.65
49316	All-Weather 18% Superphosphate—Guarantee.....		18.00		19.80
49609	Analysis.....		18.36		20.20
50075	Analysis.....		19.05		20.96
			19.80		21.78
	Chilean Nitrate Sales Corporation, 120 Broadway, New York New York.				
49230	Champion Brand Chilean Nitrate of Soda—Guarantee.....	16.00			38.40
49278	Analysis.....	16.22			38.93
49768	Analysis.....	16.01			38.42
49773	Analysis.....	16.10			38.64
49798	Analysis.....	16.00			38.40
		16.15			38.76
	David Hardie Seed Company, Dallas, Texas.				
49710	Hardie's All-Purpose Fertilizer—Guarantee.....	4.00	12.00	4.00	27.20
	Analysis.....	3.69	12.68	4.02	27.23

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Davison-Pick Fertilizers, Inc., New Orleans, Louisiana.				
49573	Bull Dog Special No. 3103—Guarantee.....	3.00	10.00	3.00	21.50
50222	Analysis.....	3.02	10.65	3.28	22.58
	Analysis.....	3.09	10.80	3.25	22.88
	Bull Dog Special No. 484—Guarantee.....	4.00	8.00	4.00	22.80
49508	Analysis.....	4.00	8.82	4.02	23.72
49547	Analysis.....	4.10	8.04	4.32	23.43
49785	Analysis.....	3.58	8.30	3.73	21.82
49924	Analysis.....	4.04	8.37	4.35	23.70
49929	Analysis.....	3.83	8.20	4.10	22.72
49931	Analysis.....	3.81	8.17	4.08	22.62
49990	Analysis.....	4.03	8.42	4.09	23.43
50033	Analysis.....	4.08	7.74	4.02	22.72
50054	Analysis.....	4.03	7.77	4.04	22.66
	Bull Dog Special No. 486—Guarantee.....	4.00	8.00	6.00	25.00
49509	Analysis.....	4.00	7.76	5.76	24.48
49529	Analysis.....	4.06	8.07	6.14	25.37
49548	Analysis.....	3.76	8.47	6.08	25.03
49558	Analysis.....	4.13	8.26	6.21	25.83
49947	Analysis.....	4.09	8.09	6.28	25.63
49989	Analysis.....	4.02	8.35	8.08	27.73
	Bull Dog Special No. 4124—Guarantee.....	4.00	12.00	4.00	27.20
49388	Analysis.....	4.12	12.03	4.07	27.60
49527	Analysis.....	4.09	12.32	4.21	28.00
49591	Analysis.....	4.22	12.01	4.10	27.95
49786	Analysis.....	4.12	12.39	4.02	27.94
49846	Analysis.....	4.08	11.44	4.05	26.83
	Bull Dog Special No. 6107—Guarantee.....	6.00	10.00	7.00	33.10
49389	Analysis.....	5.94	10.08	6.18	32.15
50109	Analysis.....	5.80	10.15	7.04	32.83
	Nitrate of Soda—Guarantee.....	15.00	.....	.....	36.00
49507	Analysis.....	16.10	.....	.....	38.64
	Sulphate of Ammonia—Guarantee.....	20.00	.....	.....	48.00
50221	Analysis.....	20.18	.....	.....	48.43
	Bull Dog Superphosphate No. 18—Guarantee.....	.....	18.00	.....	19.80
49528	Analysis.....	.....	18.57	.....	20.43
	East Texas Cotton Oil Company, Wills Point, Texas.				
49349	ETCO 4-8-4 Fertilizer—Guarantee.....	4.00	8.00	4.00	22.80
49858	Analysis.....	4.07	7.18	4.06	22.14
49875	Analysis.....	4.04	7.92	4.54	23.40
	ETCO 4-12-4 Fertilizer—Guarantee.....	4.00	12.00	4.00	27.20
49350	Analysis.....	3.77	10.65	3.62	24.75
49707	Analysis.....	4.09	12.28	4.35	28.12
49859	Analysis.....	4.02	11.84	4.08	27.16
50121	Analysis.....	3.88	11.84	4.01	26.74
	ETCO 6-9-3 Fertilizer—Guarantee.....	6.00	9.00	3.00	27.60
49679	Analysis.....	5.68	8.53	3.70	27.08
	ETCO 6-10-7 Fertilizer—Guarantee.....	6.00	10.00	7.00	33.10
50137	Analysis.....	6.03	9.68	6.89	32.70
	ETCO Meal Formula—Guarantee.....	3.00	10.00	3.00	21.50
49704	Analysis.....	4.89	9.73	3.04	25.78
	ETCO Muriate of Potash—Guarantee.....	.....	.....	48.00	52.80
49706	Analysis.....	.....	.....	50.13	55.14
	ETCO Nitrate of Soda—Guarantee.....	15.00	.....	.....	36.00
49698	Analysis.....	14.77	.....	.....	35.45
	ETCO Potato Producer—Guarantee.....	4.00	8.00	4.00	22.80
49464	Analysis.....	4.43	8.23	4.38	24.50
	ETCO 18 Per Cent Superphosphates—Guarantee.....	18.00	.....	.....	19.80
49850	Analysis.....	20.24	.....	.....	22.26
50120	Analysis.....	18.76	.....	.....	20.64
	ETCO Sweet Potato Special—Guarantee.....	4.00	10.00	7.00	28.30
49705	Analysis.....	3.65	10.49	5.88	26.77
	Farmers Cotton Oil Company, Winnsboro, Texas.				
49940	Farmers Fertilizer No. 484—Guarantee.....	4.00	8.00	4.00	22.80
50186	Analysis.....	3.79	8.55	4.47	23.43
	Analysis.....	4.12	8.19	4.22	23.54

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Farmers Cotton Oil Company, Winnsboro, Texas, —Continued				
49939	Farmers Fertilizer No. 486—Guarantee.....	4.00	8.00	6.00	25.00
	Analysis.....	4.05	8.43	6.31	25.93
49941	Farmers Fertilizer No. 4124—Guarantee.....	4.00	12.00	4.00	27.20
50187	Analysis.....	4.11	12.44	4.02	27.96
	Analysis.....	3.85	12.45	4.39	27.77
	Federal Chemical Company, Inc., Shreveport, Louisiana.				
49463	Daybreak Dixie Special—Guarantee.....	4.00	8.00	4.00	22.80
49524	Analysis.....	4.43	8.56	4.08	24.54
49696	Analysis.....	4.08	7.94	4.04	22.96
49962	Analysis.....	3.77	8.69	4.01	23.02
	Analysis.....	3.71	8.06	4.11	22.29
49462	Daybreak Double Duty—Guarantee.....	4.00	12.00	4.00	27.20
49523	Analysis.....	4.26	12.70	4.10	28.70
49904	Analysis.....	4.31	12.71	4.04	28.76
	Analysis.....	4.07	10.62	4.29	26.17
50099	Daybreak Favorite Fertilizer—Guarantee.....	3.00	10.00	3.00	21.50
	Analysis.....	3.04	10.03	3.54	22.22
49522	Daybreak Special Mixture—Guarantee.....	6.00	10.00	7.00	33.10
49526	Analysis.....	6.16	10.65	6.78	33.93
49690	Analysis.....	6.20	10.56	6.68	33.85
	Analysis.....	6.35	10.15	6.76	33.85
49905	Daybreak 18% Superphosphate—Guarantee.....		18.00		19.80
	Analysis.....		19.32		21.25
	Daybreak Truckers Special—Guarantee.....	4.00	8.00	6.00	25.00
49525	Analysis.....	4.14	7.72	6.31	25.37
49777	Analysis.....	4.03	8.18	5.89	25.15
49896	Analysis.....	4.04	8.02	6.01	25.13
	Meridian Home Mixture—Guarantee.....	3.00	10.00	3.00	21.50
49554	Analysis.....	3.15	10.27	3.46	22.67
49770	Analysis.....	3.06	9.69	3.16	21.48
49776	Analysis.....	3.00	9.37	3.09	20.91
49865	Analysis.....	3.00	10.03	3.40	21.97
	Meridian Magnolia State Formula—Guarantee.....	4.00	8.00	4.00	22.80
49407	Analysis.....	4.01	8.51	4.04	23.42
49456	Analysis.....	3.91	8.41	4.19	23.24
49633	Analysis.....	3.78	8.76	4.30	23.44
49752	Analysis.....	3.91	8.49	4.06	23.19
49775	Analysis.....	3.73	7.83	4.12	22.09
49782	Analysis.....	3.79	7.81	4.20	22.31
49787	Analysis.....	3.91	7.87	4.21	22.67
49794	Analysis.....	4.12	8.64	4.01	23.80
49805	Analysis.....	4.09	7.55	3.84	22.35
49819	Analysis.....	4.20	8.42	4.02	23.76
49866	Analysis.....	4.04	8.13	4.03	23.07
49899	Analysis.....	3.83	7.89	4.07	22.35
49949	Analysis.....	3.97	8.43	4.13	23.34
49977	Analysis.....	3.99	7.55	4.04	22.33
49986	Analysis.....	3.78	8.39	4.25	22.98
50004	Analysis.....	4.00	8.36	4.37	23.61
50118	Analysis.....	3.59	8.14	4.13	22.11
50201	Analysis.....	3.97	8.32	4.14	23.23
	Meridian Majestic Mixture—Guarantee.....	5.00	15.00	5.00	34.00
49648	Analysis.....	5.25	15.38	5.61	35.69
	Meridian Perfect Guano—Guarantee.....	6.00	12.00	6.00	34.20
49455	Analysis.....	6.05	12.10	5.83	34.24
49647	Analysis.....	6.62	12.00	6.18	35.89
49892	Analysis.....	6.30	12.19	5.85	34.97
	Nitrate of Soda—Guarantee.....	16.00			38.40
49691	Analysis.....	16.18			38.83
	Meridian Perfection Compound—Guarantee.....	4.00	12.00	4.00	27.20
49355	Analysis.....	4.21	12.57	4.09	28.43
49519	Analysis.....	4.32	12.96	3.90	28.92
49544	Analysis.....	4.17	12.53	4.16	28.37

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Federal Chemical Company, Inc., Shreveport, Louisiana				
	—Continued.				
49634	Meridian Perfection Compound—Guarantee.	4.00	12.00	4.00	27.20
49735	Analysis.	4.20	12.69	4.22	28.68
49771	Analysis.	4.20	12.59	4.16	28.51
50019	Analysis.	4.05	11.01	4.16	26.41
50103	Analysis.	4.23	12.19	4.17	28.15
50119	Analysis.	4.13	12.85	4.18	28.65
50232	Analysis.	4.18	11.65	4.09	27.35
49356	Meridian Southern Mixture—Guarantee.	3.85	11.72	4.21	26.75
50020	Analysis.	4.00	10.00	.....	20.60
50146	Meridian Special Mixture—Guarantee.	4.23	10.12	.....	21.28
49543	Meridian Union Special Superphosphate—Guarantee.	6.00	10.00	7.00	33.10
49553	Analysis.	6.40	10.75	6.56	34.41
49987	Analysis.	6.13	10.33	7.05	33.83
49997	Meridian Truckers' Special—Guarantee.	18.00	.....	.....	19.80
49406	Analysis.	18.46	.....	.....	20.31
49562	Analysis.	18.39	.....	.....	20.23
49622	Analysis.	19.29	.....	.....	21.22
49747	Analysis.	18.55	.....	.....	20.41
49804	Meridian Truckers' Special—Guarantee.	4.00	8.00	6.00	25.00
49898	Analysis.	3.82	8.17	6.04	24.80
49976	Analysis.	4.06	7.96	5.93	25.02
50179	Analysis.	4.24	7.85	6.08	25.51
49804	Analysis.	4.12	8.13	6.01	25.44
49898	Analysis.	4.11	7.81	6.41	25.50
49976	Analysis.	4.03	8.28	5.67	25.02
50179	Analysis.	3.80	8.14	5.76	24.41
49815	Sulphate of Ammonia—Guarantee.	3.72	9.46	5.32	25.19
	Analysis.	20.00	.....	.....	48.00
		20.84	.....	.....	50.02
	Fidelity Chemical Corporation, Houston, Texas.				
49551	Fidelity 3-10-3 Fertilizer—Guarantee.	3.00	10.00	3.00	21.50
49559	Analysis.	3.35	10.16	3.09	22.62
49626	Analysis.	3.24	9.67	3.18	21.92
50063	Analysis.	3.19	9.75	3.22	21.93
49257	Fidelity 4-8-4 Fertilizer—Guarantee.	3.28	10.02	3.51	22.75
49258	Analysis.	4.00	8.00	4.00	22.80
49289	Analysis.	4.23	7.77	4.00	23.10
49337	Analysis.	4.07	7.43	4.03	22.37
49396	Analysis.	4.10	8.07	4.37	23.53
49841	Analysis.	4.17	8.05	4.30	23.60
49857	Analysis.	4.16	8.15	4.06	23.42
50007	Analysis.	3.86	7.93	4.55	22.99
50082	Analysis.	4.32	8.25	4.03	23.88
49611	Fidelity 4-8-6 Fertilizer—Guarantee.	4.03	7.75	4.41	23.05
49614	Analysis.	3.92	7.81	3.59	21.95
49625	Analysis.	4.00	8.00	6.00	25.00
50081	Analysis.	4.02	8.01	5.64	24.66
		4.05	8.30	5.43	24.82
49288	Fidelity 4-10-0 Fertilizer—Guarantee.	4.11	8.53	5.58	25.38
49387	Analysis.	3.64	9.43	5.18	24.81
50046	Analysis.	4.00	10.00	.....	20.60
		4.27	9.54	.....	20.74
		4.46	10.49	.....	22.24
49288	Fidelity 4-10-7 Fertilizer—Guarantee.	4.00	10.00	7.00	28.30
49250	Analysis.	4.47	10.01	7.02	29.46
49312	Fidelity 4-12-4 Fertilizer—Guarantee.	4.00	12.00	4.00	27.20
49330	Analysis.	4.48	12.01	4.00	28.36
49336	Analysis.	4.82	11.57	4.44	29.18
49373	Analysis.	4.45	12.70	4.09	29.15
49624	Analysis.	3.79	12.04	3.98	26.72
49864	Analysis.	4.12	9.66	4.40	25.36
50015	Analysis.	4.21	12.11	4.42	28.28
50017	Analysis.	3.96	11.64	4.42	27.16
50084	Analysis.	4.04	11.95	4.55	27.86
50107	Analysis.	3.92	11.78	4.54	27.36
50125	Analysis.	4.10	11.86	4.14	27.44
		4.17	12.81	4.29	28.82
		4.04	11.68	4.18	27.15

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Fidelity Chemical Corporation, Houston, Texas—Continued.					
49266	Fidelity 5-15-5 Fertilizer—Guarantee.....	5.00	15.00	5.00	34.00
49273	Analysis.....	5.10	14.38	5.10	33.67
49301	Analysis.....	5.09	15.34	4.90	34.48
49326	Analysis.....	5.12	15.42	5.38	35.17
49313	Fidelity 6-9-3 Fertilizer—Guarantee.....	4.52	13.41	4.95	31.12
49261	Analysis.....	6.00	9.00	3.00	27.60
49560	Fidelity 6-10-7 Fertilizer—Guarantee.....	6.00	10.00	7.00	33.10
49615	Analysis.....	5.72	10.06	6.70	32.17
49842	Analysis.....	6.05	10.12	7.78	34.21
49848	Analysis.....	6.06	10.20	7.41	33.77
50108	Analysis.....	6.09	10.54	6.89	33.79
49240	Fidelity 6-12-6 Fertilizer—Guarantee.....	6.82	9.73	6.47	34.19
49262	Analysis.....	6.04	10.55	7.31	34.15
49300	Analysis.....	6.00	12.00	6.00	34.20
49379	Analysis.....	6.00	11.65	6.62	34.50
49637	Analysis.....	6.05	12.06	5.80	34.17
49649	Analysis.....	5.83	11.88	5.37	32.97
50047	Analysis.....	6.09	11.79	6.40	34.63
49639	Fidelity 6-18-6 Fertilizer—Guarantee.....	6.46	11.83	5.63	34.70
50014	Analysis.....	6.06	12.15	6.17	34.70
50113	Fidelity 20% Kainit—Guarantee.....	6.07	12.04	6.60	35.07
50089	Analysis.....	6.00	18.00	6.00	40.80
49256	Fidelity 18% Superphosphate—Guarantee.....	5.96	18.71	5.64	41.08
49380	Analysis.....	.....	20.00	22.00	
49612	Analysis.....	.....	20.86	22.95	
50018	Analysis.....	.....	21.98	24.18	
50085	Analysis.....	.....	48.00	52.80	
49274	Fidelity 20% Superphosphate—Guarantee.....	49.60	54.56		
49325	Analysis.....	18.00	19.80		
49613	Analysis.....	18.18	20.00		
49638	Analysis.....	18.50	20.35		
49255	Sulphate of Ammonia—Guarantee.....	18.30	20.13		
49272	Analysis.....	18.41	20.25		
49616	Analysis.....	18.70	20.57		
50083	Analysis.....	20.00	22.00		
		20.15	22.17		
		20.27	22.30		
		20.25	22.28		
		20.28	22.31		
		20.00	48.00		
		20.42	49.01		
		20.08	48.19		
		20.80	49.92		
		20.32	48.77		
Ford Motor Company, Dearborn, Michigan.					
49309	Ford Ammonium Sulphate—Guarantee.....	20.80	.....	49.92	
49708	Analysis.....	20.49	.....	49.18	
50080	Analysis.....	21.27	.....	51.05	
50086	Analysis.....	20.82	.....	49.97	
		20.84	.....	50.02	
Gilmer Cotton Oil & Fertilizer Company, Gilmer, Texas.					
49961	G. C. O. & F. Co's 4-8-10—Guarantee.....	4.00	8.00	10.00	29.40
	Analysis.....	4.30	9.65	9.43	31.31
49531	G. C. O. & F. Co's 4-12-4—Guarantee.....	4.00	12.00	4.00	27.20
49806	Analysis.....	4.11	12.15	4.15	27.80
50171	Analysis.....	4.13	12.04	4.12	27.74
49807	G. C. O. & F. Co's Cotton Grower 4-8-4—Guarantee.....	4.41	12.41	4.30	28.96
49926	Analysis.....	4.00	8.00	4.00	22.80
49960	Analysis.....	3.90	11.65	4.08	26.67
49992	Analysis.....	4.30	10.58	2.68	24.91
50168	Analysis.....	4.11	11.66	4.04	27.13
		3.75	9.11	4.38	23.84
		4.02	12.95	3.42	27.66

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Gilmer Cotton Oil & Fertilizer Company, Gilmer, Texas				
49533	G. C. O. & F. Co's Special Cotton Grower—Guarantee.....	6.00	12.00	6.00	34.20
	Analysis.....	6.01	12.12	6.65	35.07
49928	G. C. O. & F. Co's Superior Meal Compound—Guarantee.....	3.00	10.00	3.00	21.50
49959	Analysis.....	3.43	10.82	3.06	23.50
50170	Analysis.....	3.09	11.27	2.76	22.86
	G. C. O. & F. Co's Tomato Special—Guarantee.....	3.21	12.33	3.30	24.89
49532	Analysis.....	4.00	8.00	6.00	25.00
49927	Analysis.....	4.42	8.46	6.83	27.43
49991	Analysis.....	4.21	9.32	4.81	25.64
50166	Analysis.....	3.98	8.11	6.16	25.25
50169	Analysis.....	4.39	11.46	6.32	30.10
		4.41	12.63	4.82	29.77
	City of Houston, Houston, Texas.				
49310	Hu-Actinite 5.5-2.0-0—Guarantee.....	5.50	2.00	.....	15.40
50062	Analysis.....	5.01	2.70	.....	14.99
50071	Analysis.....	5.08	2.85	.....	15.33
50076	Analysis.....	5.20	2.90	.....	15.67
		5.33	2.87	.....	15.95
	International Agricultural Corporation, Texarkana, Ark., Texas.				
49517	International 3-10-3 Fertilizer—Guarantee.....	3.00	10.00	3.00	21.50
50202	Analysis.....	3.14	10.39	3.09	22.37
	Analysis.....	3.19	9.93	3.01	21.89
49664	International 4-8-4 Fertilizer—Guarantee.....	4.00	8.00	4.00	22.80
49739	Analysis.....	4.07	8.11	4.29	23.41
49769	Analysis.....	4.01	8.16	4.18	23.20
50003	Analysis.....	4.02	7.84	4.31	23.01
50178	Analysis.....	4.14	8.26	4.27	23.73
50183	Analysis.....	4.07	7.76	4.14	22.86
50227	Analysis.....	4.06	8.08	4.32	23.38
50244	Analysis.....	4.02	7.64	4.10	22.56
	International 4-8-6 Truck Fertilizer—Guarantee.....	4.20	7.92	4.04	23.23
49472	Analysis.....	4.00	8.00	6.00	25.00
49499	Analysis.....	4.04	7.86	6.07	25.03
49662	Analysis.....	4.19	7.84	6.02	25.30
49744	Analysis.....	4.04	8.08	6.45	25.69
49751	Analysis.....	4.15	8.18	6.04	25.60
49763	Analysis.....	4.11	8.14	6.19	25.62
49970	Analysis.....	4.12	8.10	6.30	25.73
50126	Analysis.....	4.13	8.04	6.20	25.57
50210	Analysis.....	4.10	8.21	6.37	25.88
	International 4-10-0 Ammoniated Compound—Guarantee.....	4.02	8.00	5.85	24.89
49438	Analysis.....	4.04	7.86	6.07	25.03
49473	International 4-10-7 Tomato Fertilizer—Guarantee.....	4.02	9.79	.....	20.42
	Analysis.....	4.00	10.00	7.00	28.30
	Analysis.....	3.99	9.73	7.16	28.16
49458	International 4-12-4 Fertilizer—Guarantee.....	4.00	12.00	4.00	27.20
49516	Analysis.....	4.06	11.76	4.47	27.60
49726	Analysis.....	4.13	12.01	4.28	27.83
49874	Analysis.....	4.02	11.13	4.01	26.30
49946	Analysis.....	4.10	11.42	4.36	27.20
50217	Analysis.....	4.13	11.00	4.24	26.67
	International 6-10-7 Fertilizer—Guarantee.....	4.15	11.01	4.23	26.72
49437	Analysis.....	6.00	10.00	7.00	33.10
49663	Analysis.....	6.16	10.20	7.49	34.24
49738	Analysis.....	5.84	9.61	7.64	32.99
49755	Analysis.....	5.75	10.74	7.14	33.41
49816	Analysis.....	6.19	9.82	7.17	33.55
49934	Analysis.....	6.13	9.46	7.56	33.44
50207	Analysis.....	6.04	9.64	7.46	33.31
	International 6-12-6 Fertilizer—Guarantee.....	5.69	9.75	7.95	33.14
49673	Analysis.....	6.00	12.00	6.00	34.20
	Analysis.....	6.14	12.18	6.27	35.04
49893	International Rainbow Cotton Fertilizer—Guarantee.....	4.00	12.00	4.00	27.20
50216	Analysis.....	4.09	12.01	4.10	27.54
	Analysis.....	3.91	11.18	4.43	26.55

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	International Agricultural Corporation, Texarkana, Ark-Texas—Continued.				
49501	International 18% Superphosphate—Guarantee	18.00			19.80
	Analysis.....	18.86			20.75
49727	Analysis.....	19.02			20.92
50206	Analysis.....	19.08			20.99
	International 20% Superphosphate—Guarantee	20.00			22.00
49500	Analysis.....	20.81			22.89
50002	Sulphate of Ammonia—Guarantee	20.00			48.00
	Analysis.....	21.01			50.42
	Kelly-Weber & Company, Inc., Lake Charles, Louisiana.				
50067	18% Basic Slag—Guarantee	18.00			12.96
	Analysis.....	18.61			13.40
	Weber-King 18% Superphosphate—Guarantee	18.00			19.80
49582	Analysis.....	19.47			21.42
50068	Analysis.....	19.08			20.99
50070	Analysis.....	19.12			21.03
50092	Analysis.....	19.47			21.42
	Weber-King Brand 20% Superphosphate—Guarantee	20.00			22.00
50029	Analysis.....	20.55			22.61
50093	Weber-King Brand Fertilizer Special No. 0124—Guarantee	12.00	4.00		17.60
	Analysis.....	11.82	4.98		18.48
49603	Weber-King Brand Fertilizer Special No. 484—Guarantee	4.00	8.00	4.00	22.80
50028	Analysis.....	4.30	8.09	4.11	23.74
	Weber-King Brand Fertilizer Special No. 4810—Guarantee	4.16	8.06	4.14	23.40
49604	Analysis.....	4.00	8.00	10.00	29.40
	Weber-King Brand Fertilizer Special No. 4107—Guarantee	4.12	8.00	10.17	29.88
49593	Analysis.....	4.00	10.00	7.00	28.30
49581	Weber-King Brand Fertilizer Special No. 4124—Guarantee	3.96	10.37	7.07	28.69
50056	Analysis.....	4.00	12.00	4.00	27.20
49602	Weber-King Brand Fertilizer Special No. 6126—Guarantee	4.03	12.12	4.21	27.63
50055	Analysis.....	4.17	11.95	4.53	28.14
	Weber-King Brand Fertilizer Special No. 6126—Guarantee	6.00	12.00	6.00	34.20
	Analysis.....	6.13	11.47	6.17	34.12
	Analysis.....	5.88	12.36	6.04	34.35
	La-Tex Fertilizer Company, Shreveport, Louisiana.				
49675	La-Tex 4-8-6 Fertilizer—Guarantee	4.00	8.00	6.00	25.00
49876	Analysis.....	4.54	8.50	6.28	27.16
	Analysis.....	4.01	7.76	5.85	24.60
49674	La-Tex 6-10-7 Fertilizer—Guarantee	6.00	10.00	7.00	33.10
	Analysis.....	6.16	10.80	7.34	34.73
49877	La-Tex 10-0-10 Fertilizer—Guarantee	10.00		10.00	35.00
	Analysis.....	9.52		15.19	39.56
49772	Sulphate of Ammonia—Guarantee	20.00			48.00
	Analysis.....	20.54			49.30
	Longview Cotton Oil Company, Longview, Texas.				
50162	Longview Cotton & Corn Special—Guarantee	4.00	12.00	4.00	27.20
	Analysis.....	4.11	11.99	4.00	27.45
49416	Longview Cotton Special—Guarantee	3.00	10.00	3.00	21.50
50163	Analysis.....	3.43	10.27	3.04	22.87
	Longview Gregg County Special—Guarantee	3.45	10.59	3.13	23.37
49417	Analysis.....	4.00	8.00	4.00	22.80
49802	Longview Prize Fertilizer—Guarantee	4.23	8.47	4.38	24.29
50161	Analysis.....	6.00	12.00	6.00	34.20
	Longview Sulphate of Ammonia—Guarantee	5.46	13.26	6.26	34.58
49800	Analysis.....	5.83	12.16	6.45	34.47
49799	Longview Superphosphate—Guarantee	20.00			48.00
	Analysis.....	20.10			48.24
	Longview Truck Special—Guarantee	4.00	8.00	6.00	25.00
50160	Analysis.....	4.01	8.28	5.78	25.09

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Marshall Cotton Oil Company, Marshall, Texas.				
49579	Cotton Seed Meal Fertilizer—Guarantee	6.58	1.50	1.00	18.54
	Analysis	6.93	2.05	1.32	20.34
49542	Marshall Eclipse Fertilizer 3-10-3—Guarantee	3.00	10.00	3.00	21.50
49796	Analysis	3.28	10.75	3.48	23.53
	Analysis	3.24	11.48	3.01	23.72
49413	Marshall Fertilizer 4-10-7—Guarantee	4.00	10.00	7.00	28.30
	Analysis	3.91	10.75	6.78	28.67
49410	Marshall Fertilizer 6-10-7—Guarantee	6.00	10.00	7.00	33.10
49982	Analysis	5.99	10.92	6.79	33.86
49541	Marshall Fertilizer 6-12-6—Guarantee	5.97	10.58	6.29	32.89
49792	Analysis	6.00	12.00	6.00	34.20
	Analysis	6.00	12.33	6.18	34.76
	Analysis	5.53	12.43	4.95	32.39
49566	Marshall Nut Producer 6-9-3—Guarantee	6.00	9.00	3.00	27.60
49981	Analysis	5.73	9.22	2.75	26.92
50234	Analysis	6.15	9.25	2.91	28.14
	Marshall Plain Mixture 4-10-0—Guarantee	4.00	10.00	—	20.60
49411	Analysis	3.91	10.53	—	20.96
49790	Analysis	3.96	10.89	—	21.48
49979	Analysis	4.16	9.91	—	20.88
49513	Marshall Superphosphate—Guarantee	—	18.00	—	19.80
	Analysis	—	18.47	—	20.32
49578	Marshall Wonder Fertilizer No. 4-12-4—Guarantee	4.00	12.00	4.00	27.20
49972	Analysis	4.20	12.16	4.01	27.87
50235	Analysis	3.86	12.51	3.80	27.20
	Analysis	4.22	12.76	3.75	28.30
	Supreme Superphosphate—Guarantee	—	20.00	—	22.00
49412	Analysis	—	20.80	—	22.88
49567	Analysis	—	20.20	—	22.22
	Truckers Delight 4-8-4—Guarantee	4.00	8.00	4.00	22.80
49409	Analysis	4.26	8.13	4.04	23.60
49514	Analysis	4.13	8.01	4.18	23.32
49780	Analysis	4.20	8.05	4.14	23.49
49781	Analysis	3.94	8.22	3.86	22.75
49793	Analysis	3.81	8.15	4.13	22.65
49795	Analysis	3.84	8.13	3.67	22.20
49967	Analysis	3.96	8.50	4.07	23.33
49971	Analysis	3.69	8.33	3.64	22.02
49978	Analysis	4.07	8.33	3.88	23.20
49983	Analysis	3.97	8.53	4.01	23.32
49984	Analysis	3.74	7.98	4.02	22.18
50228	Analysis	3.92	8.14	3.71	22.44
50233	Analysis	4.03	8.74	3.84	23.50
	Mixson Brothers, Kirbyville, Texas.				
49577	Jasco Brand Special No. 3103—Guarantee	3.00	10.00	3.00	21.50
49585	Analysis	2.94	9.62	3.52	21.51
	Analysis	2.98	10.01	3.16	21.64
50034	Jasco Brand Special No. 484—Guarantee	4.00	8.00	4.00	22.80
	Analysis	4.00	8.24	5.24	24.42
49586	Jasco Brand Special No. 4107—Guarantee	4.00	10.00	7.00	28.30
	Analysis	3.78	10.22	8.04	29.15
50035	Jasco Brand Special No. 4124—Guarantee	4.00	12.00	4.00	27.20
	Analysis	3.89	11.83	4.40	27.19
49584	Jasco Brand Special No. 6126—Guarantee	6.00	12.00	6.00	34.20
	Analysis	4.85	12.72	6.77	33.08
50037	Sulphate of Ammonia—Guarantee	20.00	—	—	48.00
	Analysis	20.46	—	—	49.10
50036	18 Per Cent Superphosphate—Guarantee	—	18.00	—	19.80
	Analysis	—	18.07	—	19.88
49576	20 Per Cent Superphosphate—Guarantee	—	20.00	—	22.00
	Analysis	—	20.16	—	22.18

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Newhouse Chemical & Supply Company, Little Rock, Arkansas.				
49783	Triangle Brand Four State Cotton—Guarantee.....	4.00	8.00	4.00	22.80
50243	Analysis.....	3.88	7.41	3.96	21.82
	Analysis.....	3.72	7.65	3.49	21.19
49784	Triangle Brand Sulphate of Ammonia—Guarantee.....	20.00			48.00
	Analysis.....	20.44			49.06
	New Jersey Fertilizer Company, 375 Tonnel Avenue, Jersey City, New Jersey.				
49598	N. J. Brand Bone Fertilizer—Guarantee.....	2.47	24.00		23.21
	Analysis.....	3.07	27.01		26.82
	Oil Mill & Fertilizer Works, Henderson, Texas.				
49399	Wolf Brand 3-10-3—Guarantee.....	3.00	10.00	3.00	21.50
49813	Analysis.....	3.35	11.14	3.07	23.67
	Analysis.....	3.19	10.53	3.32	22.89
49400	Wolf Brand 4-8-4—Guarantee.....	4.00	8.00	4.00	22.80
	Analysis.....	3.90	9.87	4.03	24.65
49814	Wolf Brand 4-8-6—Guarantee.....	4.00	8.00	4.00	25.00
	Analysis.....	3.93	8.41	4.06	25.35
49401	Wolf Brand 4-12-4—Guarantee.....	4.00	12.00	4.00	27.20
49812	Analysis.....	4.10	11.64	4.48	27.57
	Analysis.....	4.04	12.51	4.07	27.94
50006	Wolf Brand 6-12-6—Guarantee.....	6.00	12.00	6.00	34.20
	Analysis.....	6.00	11.62	6.18	33.98
50005	Wolf Brand 18% Superphosphate—Guarantee.....		18.00		19.80
	Analysis.....		20.30		22.33
49811	Wolf Brand Superphosphate 20%—Guarantee.....		20.00		22.00
	Analysis.....		19.67		21.64
	Pacific Manure & Fertilizer Company, 108 Davis Street, San Francisco, California.				
49711	Groz-It Pulverized Sheep Manure—Guarantee.....	1.25	1.00	2.00	6.30
	Analysis.....	1.32	.55	2.17	6.17
	Palestine Oil Mill & Fertilizer Works, Palestine, Texas.				
49339	Palestine Blue Star 4-10-0 Fertilizer—Guarantee.....	4.00	10.00		20.60
49368	Analysis.....	3.89	9.75		20.07
	Analysis.....	4.00	9.86		20.45
49341	Palestine Blue Star 4-12-4—Guarantee.....	4.00	12.00	4.00	27.20
49395	Analysis.....	4.15	11.80	3.28	26.55
59459	Analysis.....	4.64	12.33	4.54	29.69
49545	Analysis.....	4.06	12.01	4.06	27.42
49583	Analysis.....	5.15	12.02	4.09	30.08
49641	Analysis.....	3.79	12.33	4.62	27.74
49653	Analysis.....	4.03	11.92	4.36	27.58
49843	Analysis.....	4.03	11.67	4.07	26.99
49852	Analysis.....	4.88	12.50	4.07	29.94
49863	Analysis.....	4.67	11.81	4.01	28.61
50022	Analysis.....	4.02	11.79	4.32	27.37
50110	Analysis.....	4.95	11.83	4.28	29.60
50124	Analysis.....	4.01	12.06	4.18	27.49
50148	Analysis.....	4.03	12.12	4.05	27.46
	Palestine Blue Star 6-10-7—Guarantee.....	4.02	11.95	4.34	27.57
49394	Analysis.....	6.00	10.00	7.00	33.10
49439	Analysis.....	5.59	10.45	7.44	33.10
49452	Analysis.....	5.80	9.84	7.37	32.85
49546	Analysis.....	6.19	10.10	7.61	34.34
49660	Analysis.....	5.89	10.23	6.88	32.96
49688	Analysis.....	5.72	9.65	7.33	32.41
49871	Analysis.....	5.64	9.15	7.28	31.62
50021	Analysis.....	5.73	10.64	6.29	32.37
	Palestine Blue Star 6-12-6—Guarantee.....	6.02	10.35	6.48	32.97
49440	Analysis.....	6.00	12.00	6.00	34.20
49658	Analysis.....	5.56	11.54	5.36	31.93
49838	Analysis.....	6.04	11.79	6.02	34.09
		5.72	13.92	6.08	35.73

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COMMERCIAL FERTILIZER SALES IN 1934-35

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Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Palestine Oil Mill & Fertilizer Works, Palestine, Texas—Continued.					
49375	Palestine Blue Star 10-0-10—Guarantee	10.00	10.00	3.00	35.00
50130	Analysis	9.14	9.18	3.24	32.04
	Analysis	10.09	9.16	33.20	
49659	Palestine Blue Star 10-20-10—Guarantee	10.00	20.00	10.00	57.00
	Analysis	10.05	19.57	9.65	56.27
49338	Palestine Blue Star Nitrate Soda—Guarantee	15.00			36.00
	Analysis	16.27			39.05
49451	Palestine Blue Star Sulphate of Ammonia—Guarantee	20.00			48.00
50131	Analysis	20.22			48.53
	Analysis	20.78			49.87
49450	Palestine Cotton Producer—Guarantee	3.00	10.00	3.00	21.50
49561	Analysis	3.01	7.47	3.91	19.74
49571	Analysis	3.26	8.27	3.61	20.89
49870	Analysis	3.04	13.35	3.51	25.85
50023	Analysis	3.03	9.95	3.57	22.15
50116	Analysis	3.40	10.80	3.33	23.70
	Palestine Perfection—Guarantee	2.94	9.36	3.40	21.10
49657	Analysis	6.00	9.00	3.00	27.60
	Palestine Rust Proof—Guarantee	5.48	8.58	3.58	26.53
49340	Analysis	4.00	10.00	7.00	28.30
49402	Analysis	4.36	10.81	6.62	29.63
	Palestine Eighteen Per Cent Superphosphate—Guarantee	4.35	10.50	7.00	29.69
49902	Analysis	18.00			19.80
	Palestine Twenty Per Cent Superphosphate—Guarantee	16.73			18.40
49376	Analysis	20.00			22.00
	Palestine Tomato Special—Guarantee	20.01			22.01
49357	Analysis	4.00	8.00	6.00	25.00
49460	Analysis	4.35	8.39	6.04	26.27
49670	Analysis	3.93	7.63	6.16	24.60
49839	Analysis	4.06	8.23	5.62	24.97
49851	Analysis	4.17	8.75	6.90	27.23
49867	Analysis	3.68	7.92	5.59	23.69
49903	Analysis	4.02	7.56	5.63	24.16
49942	Analysis	3.89	7.77	5.46	23.90
50128	Analysis	3.96	8.01	5.85	24.75
50149	Analysis	3.83	8.13	6.21	24.96
	Palestine Upland Cotton—Guarantee	4.03	8.66	6.06	25.87
49358	Analysis	4.00	8.00	4.00	22.80
49403	Analysis	4.18	8.10	3.89	23.22
49408	Analysis	4.07	7.86	4.10	22.93
49642	Analysis	4.03	8.42	4.05	23.39
49652	Analysis	4.06	7.47	4.23	22.61
49661	Analysis	4.02	7.76	4.01	22.60
49827	Analysis	4.06	7.79	4.05	22.77
49943	Analysis	4.07	7.59	3.27	21.72
49993	Analysis	4.19	9.01	4.16	24.55
50016	Analysis	4.07	8.37	5.05	24.54
50129	Analysis	3.95	8.26	4.30	23.30
		3.59	8.56	4.24	22.70
Pate Brothers Fertilizer Works, Sulphur Spring, Texas					
49483	Pate's 18% Superphosphate—Guarantee		18.00		19.80
49721	Analysis		18.08		19.89
	Analysis		18.38		20.22
49724	Pate's 20% Superphosphate—Guarantee		20.00		22.00
	Analysis		20.79		22.87
49536	Pate's 3-10-3—Guarantee	3.00	10.00	3.00	21.50
49720	Analysis	3.13	10.04	3.26	22.14
50247	Analysis	3.07	10.26	3.24	22.22
	Analysis	3.04	10.44	3.48	22.61
49481	Pate's 4-8-4—Guarantee	4.00	8.00	4.00	22.80
49534	Analysis	4.45	7.07	4.21	23.09
49723	Analysis	4.06	8.05	3.68	22.65
49930	Analysis	5.08	6.25	5.39	25.00
50167	Analysis	4.41	8.32	4.02	24.15
50248	Analysis	4.27	8.33	3.87	23.67
		4.25	9.24	4.43	25.23

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Pate Brothers Fertilizer Works, Sulphur Springs, Texas—Continued.				
49484	Pate's 4-8-6—Guarantee.	4.00	8.00	6.00	25.00
49511	Analysis.	4.00	9.68	6.78	27.71
49718	Analysis.	4.35	7.87	5.68	25.79
49737	Analysis.	4.40	8.36	6.05	26.42
49762	Analysis.	4.45	8.46	6.02	26.61
50219	Analysis.	4.04	8.54	5.53	25.17
50245	Analysis.	3.97	8.28	6.66	25.95
	Pate's 4-8-10—Guarantee.	4.20	8.15	5.75	25.38
49535	Analysis.	4.00	8.00	10.00	29.40
49482	Pate's 4-12-4—Guarantee.	4.19	8.23	10.03	30.14
49712	Analysis.	4.06	12.12	4.38	27.89
49725	Analysis.	4.34	12.26	4.36	28.71
50246	Analysis.	4.32	12.12	4.12	28.23
	Pate's 6-9-3—Guarantee.	4.51	11.81	4.38	28.63
49719	Analysis.	6.00	9.00	3.00	27.60
		6.06	9.72	3.38	28.95
	Pittsburg Cotton Oil Company, Pittsburg, Texas.				
49469	Double Circle Fertilizer No. 3-10-3—Guarantee.	3.00	10.00	3.00	21.50
50196	Analysis.	3.08	11.11	3.26	23.20
	Analysis.	3.02	9.20	2.38	19.99
	Eighteen Per Cent Superphosphate—Guarantee.		18.00		19.80
49468	Analysis.		18.65		20.52
49700	Analysis.		19.28		21.21
	Double Circle Fertilizer No. 4-8-4—Guarantee.				
49471	Analysis.	4.00	8.00	4.00	22.80
49936	Analysis.	3.72	8.29	4.17	22.64
50180	Analysis.	4.26	8.84	4.10	24.45
50197	Analysis.	3.92	8.61	3.66	22.91
50240	Analysis.	3.65	9.48	3.70	23.26
	Double Circle Fertilizer No. 4-8-6—Guarantee.				
49474	Analysis.	3.82	8.70	3.69	22.80
49669	Analysis.	4.00	8.00	6.00	25.00
49730	Analysis.	3.92	8.68	6.00	25.56
49932	Analysis.	4.03	8.88	6.03	26.07
50198	Analysis.	3.98	8.67	5.61	25.26
50225	Analysis.	3.89	8.75	5.80	25.35
	Double Circle Fertilizer No. 4-8-10—Guarantee.				
50173	Analysis.	4.03	8.64	6.19	25.98
	Double Circle Fertilizer No. 4-10-0—Guarantee.				
49429	Analysis.	3.98	8.37	6.15	25.53
	Double Circle Fertilizer No. 4-12-4—Guarantee.				
49430	Analysis.	4.00	8.00	10.00	29.40
49470	Analysis.	3.74	8.33	8.97	28.01
50174	Analysis.	4.00	10.00		20.60
	Double Circle Fertilizer No. 6-10-7—Guarantee.				
49937	Analysis.	3.94	10.27		20.76
49951	Analysis.	4.00	12.00	4.00	27.20
50172	Analysis.	4.76	10.64	4.26	27.81
	Double Circle Fertilizer No. 6-12-6—Guarantee.				
49969	Analysis.	4.02	12.83	4.01	28.17
50229	Analysis.	3.85	12.78	4.03	27.73
		6.00	10.00	7.00	33.10
		5.70	11.25	6.56	33.28
		5.83	11.04	6.50	33.28
		5.57	10.77	6.52	32.39
		6.00	12.00	6.00	34.20
		5.30	12.26	5.31	32.05
		5.40	13.56	5.85	34.32
	Plantabbs's Corporation, 20 W. Biddle St., Baltimore, Md.				
49713	Fulton's Plantabbs Odorless Plantfood Table—Guarantee	11.00	15.00	20.00	...
	Analysis.	10.91	19.06	25.57	75.28
	Shreveport Fertilizer Works, Shreveport, Louisiana.				
49382	20% Kainit—Guarnatee.			20.00	22.00
	Analysis.			20.50	22.55
49779	Sulphate of Ammonia—Guarantee.	20.00			48.00
	Analysis.	20.24			48.58
49552	Lion 3-10-3 Meal Formula—Guarantee.	3.00	10.00	3.00	21.56
49703	Analysis.	2.88	10.64	2.68	21.56
50220	Analysis.	3.03	10.12	3.41	22.15
	Analysis.	3.10	10.22	2.71	21.66

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Shreveport Fertilizer Works, Shreveport, Louisiana					
—Continued.					
49449	Lion 4-8-4 Cotton Producer—Guarantee	4.00	8.00	4.00	22.80
49467	Analysis	4.22	9.27	4.09	24.83
49587	Analysis	3.81	9.21	4.51	24.23
49702	Analysis	3.97	8.09	4.44	23.31
49742	Analysis	4.08	8.84	4.31	24.25
49750	Analysis	3.87	8.57	4.09	23.22
49985	Analysis	4.12	8.42	4.84	24.47
50049	Analysis	3.81	7.88	3.82	22.01
50185	Analysis	3.77	7.69	3.81	21.70
49361	Lion 4-8-6 Special Truck—Guarantee	4.00	8.00	6.00	25.00
49512	Analysis	4.07	8.45	6.34	26.04
49563	Analysis	4.02	8.29	6.08	25.46
49588	Analysis	4.41	8.26	7.15	27.54
49692	Analysis	4.00	8.05	6.09	25.16
49743	Analysis	4.02	8.14	6.08	25.29
49761	Analysis	3.92	8.20	6.53	25.61
50145	Analysis	3.91	8.04	5.40	24.16
50205	Analysis	4.07	8.57	5.63	25.39
49381	Lion 4-12-4 Superior Cotton Grower—Guarantee	3.77	8.29	6.01	24.78
49701	Analysis	4.00	12.00	4.00	27.20
49740	Analysis	4.11	12.18	4.84	28.58
50044	Analysis	4.03	11.90	4.94	28.19
49360	Lion 6-10-7 La-Tex Special—Guarantee	4.44	11.67	4.85	28.84
49693	Analysis	4.34	11.18	4.57	27.75
50045	Analysis	6.00	10.00	7.00	33.10
49592	Lion 6-12-6 Gold Coin Guano—Guarantee	6.08	11.15	7.88	35.53
50050	Analysis	5.97	9.37	8.73	34.24
50212	Analysis	6.30	9.97	6.69	33.45
50136	Lion 10-0-10 Fertilizer—Guarantee	6.00	12.00	6.00	34.20
50211	Analysis	6.81	10.02	6.02	33.98
49551	Lion 18% Superphosphate—Guarantee	6.05	12.50	6.04	34.91
49371	Analysis	10.00	.....	10.00	35.00
49510	Analysis	10.04	.....	9.63	34.69
49963	Longhorn 3-10-3 Fertilizer—Guarantee	8.89	.....	10.04	32.38
49372	Analysis	.....	18.00	.....	19.80
49741	Analysis	.....	18.06	.....	19.87
50024	Longhorn 4-8-6 Fertilizer—Guarantee	3.00	10.00	3.00	21.50
49919	Analysis	4.33	12.02	3.78	27.77
49372	Longhorn 4-12-4 Fertilizer—Guarantee	4.13	10.45	4.71	26.59
49741	Analysis	3.36	10.14	3.25	22.79
50024	Longhorn 10-0-10—Guarantee	4.00	8.00	6.00	25.00
49919	Analysis	3.81	8.06	6.56	25.23
49919	Longhorn 10-0-10—Guarantee	3.77	8.18	6.22	24.89
49919	Analysis	4.00	12.00	4.00	27.20
49919	Longhorn 10-0-10—Guarantee	4.05	11.64	4.29	27.24
49919	Analysis	10.00	.....	10.00	35.00
49919	Longhorn 10-0-10—Guarantee	8.69	.....	7.70	29.33
Smith County Cotton Oil & Fertilizer Company, Tyler, Texas.					
49431	Smico 484 Fertilizer—Guarantee	4.00	8.00	4.00	22.80
49907	Analysis	4.01	8.25	4.27	23.40
49907	Smico 486 Fertilizer—Guarantee	4.00	8.00	6.00	25.00
49683	Analysis	3.82	8.54	5.43	24.53
49432	Smico 4100 Fertilizer—Guarantee	4.00	10.00	.....	20.60
49906	Analysis	3.69	9.08	.....	18.85
50150	Smico 4124 Fertilizer—Guarantee	4.00	12.00	4.00	27.20
49684	Analysis	3.67	12.49	5.38	28.47
49933	Smico Muriate of Potash—Guarantee	4.07	12.41	4.05	27.88
49685	Analysis	3.88	12.47	4.13	27.57
50151	Smico 693 Fertilizer—Guarantee	6.00	9.00	3.00	27.60
49684	Analysis	5.79	8.92	3.42	27.47
49433	Smico Nitrate of Soda—Guarantee	.....	.....	48.00	52.80
49433	Analysis	15.00	.....	49.96	54.96
49685	Smico Sulphate of Ammonia—Guarantee	15.94	.....	.....	36.00
50151	Analysis	20.00	.....	.....	38.26
50151	Smico Sulphate of Ammonia—Guarantee	20.78	.....	.....	48.00
50151	Analysis	.....	.....	.....	49.87

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Standard Wholesale Phosphate & Acid Works, Baltimore, Maryland.				
50064	Standard United States 6-12-6—Guarantee Analysis.....	6.00 6.39	12.00 12.39	6.00 6.05	34.20 35.63
	Stumpf & Walter Company, New York, New York.				
49617	Sawco Bone Fertilizer—Guarantee Analysis.....	2.47 2.85	•24.00 •26.73	.....	23.21 26.09
	Swift & Company Fertilizer Works, Harvey & Shreveport, Louisiana, and Houston, Texas				
49317	20% Kainit—Guarantee Analysis.....	.....	20.00	22.00	
49855	Analysis.....	.....	20.39	22.43	
49345	15% Nitrate of Soda—Guarantee Analysis.....	15.00 15.66	.....	18.69	20.56
49600	16% Nitrate of Soda—Guarantee Analysis.....	16.00 15.04	.....	36.00	37.58
50106	Analysis.....	16.18	.....	38.40	36.10
50140	Analysis.....	16.05	.....	38.52	38.83
49678	Pioneer 4-8-4—Guarantee Analysis.....	4.00 3.89	8.00 7.61	4.00 4.30	22.80 22.44
49895	Pioneer 4-8-10—Guarantee Analysis.....	4.00 3.52	8.00 7.48	10.00 10.07	29.40 27.76
49251	Pioneer 4-10-0—Guarantee Analysis.....	4.00 4.02	10.00 10.11	.....	20.60 20.77
49362	Analysis.....	4.04	9.35	.....	19.99
49285	Pioneer 6-10-7—Guarantee Analysis.....	6.00 5.97	10.00 10.27	7.00 7.12	33.10 33.46
49252	Pioneer 6-12-6—Guarantee Analysis.....	6.00 6.03	12.00 12.17	6.00 5.93	34.20 34.38
49359	Analysis.....	6.09	11.92	6.07	34.41
49677	Analysis.....	6.19	11.89	6.09	34.64
50132	Analysis.....	6.19	12.26	6.25	35.23
49223	Sulphate of Ammonia—Guarantee Analysis.....	20.00 20.65	.....	.....	48.00 49.56
49226	Analysis.....	20.83	.....	.....	49.99
49231	Analysis.....	20.58	.....	.....	49.39
49254	Analysis.....	20.40	.....	.....	48.96
49277	Analysis.....	20.59	.....	.....	49.42
49917	Analysis.....	20.67	.....	.....	49.61
49306	Swift's Red Steer 3-10-3—Guarantee Analysis.....	3.00 3.03	10.00 9.93	3.00 2.80	21.50 21.27
49315	Analysis.....	3.19	10.54	3.10	22.66
49457	Analysis.....	3.11	10.59	2.59	21.96
49618	Analysis.....	3.01	10.15	3.10	21.80
49764	Analysis.....	3.11	9.86	3.49	22.15
49833	Analysis.....	3.16	10.58	2.90	22.41
49853	Analysis.....	3.08	10.08	3.04	21.82
49290	Swift's Red Steer 4-8-4—Guarantee Analysis.....	4.00 3.99	8.00 7.82	4.00 3.68	22.80 22.23
49307	Analysis.....	3.64	8.62	3.42	21.98
49320	Analysis.....	3.95	8.80	3.41	22.91
49334	Analysis.....	4.09	7.88	3.87	22.75
49364	Analysis.....	3.74	7.84	4.32	22.35
49530	Analysis.....	3.95	7.99	4.01	22.68
49601	Analysis.....	4.22	8.11	4.16	23.63
49620	Analysis.....	3.83	8.09	4.95	23.54
49686	Analysis.....	4.11	8.43	3.89	23.41
49729	Analysis.....	4.04	8.02	4.21	23.15
49745	Analysis.....	4.09	7.86	4.04	22.91
49765	Analysis.....	4.02	7.58	3.87	22.25
49778	Analysis.....	3.94	7.69	4.13	22.46
49854	Analysis.....	4.36	8.52	3.51	23.69
49878	Analysis.....	3.95	8.02	4.08	22.79
49897	Analysis.....	4.00	8.29	4.16	23.30

•Total phosphoric acid.

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Swift & Company Fertilizer Works, Harvey & Shreveport, Louisiana, and Houston, Texas—Continued.				
49948	Swift's Red Steer 4-8-4—Guarantee.	4.00	8.00	4.00	22.80
50042	Analysis.	4.02	8.19	4.04	23.10
50066	Analysis.	4.12	8.14	4.15	23.41
50112	Analysis.	3.92	8.58	4.49	23.79
50153	Analysis.	4.16	8.56	3.46	23.21
50165	Analysis.	3.96	8.05	4.03	22.79
50188	Analysis.	3.96	7.93	3.66	22.25
	Swift's Red Steer 4-8-6—Guarantee.	3.82	7.96	3.89	22.21
49287	Analysis.	4.00	8.00	6.00	25.00
49304	Analysis.	3.77	7.84	5.88	24.14
49342	Analysis.	3.71	7.55	7.14	25.06
49404	Analysis.	4.01	8.13	6.01	25.17
49442	Analysis.	4.03	7.96	6.04	25.07
49714	Analysis.	4.09	8.38	5.54	25.13
49891	Analysis.	4.30	8.43	6.14	26.34
49952	Analysis.	4.20	8.31	6.22	26.06
50154	Analysis.	4.03	8.14	5.74	24.93
50164	Analysis.	3.83	7.86	5.85	24.28
50176	Analysis.	3.95	8.11	6.05	25.06
50184	Analysis.	3.93	8.02	5.83	24.66
50189	Analysis.	3.84	8.10	5.86	24.58
50209	Analysis.	3.97	7.94	5.77	24.61
	Swift's Red Steer 4-10-0—Guarantee.	4.02	8.50	6.04	25.64
49422	Analysis.	4.00	10.00	.....	20.60
	Swift's Red Steer 4-10-7—Guarantee.	3.19	9.57	.....	18.19
50041	Analysis.	4.00	10.00	7.00	28.30
50177	Analysis.	4.17	9.82	7.24	28.77
	Swift's Red Steer 4-12-4—Guarantee.	3.95	10.06	7.25	28.53
49259	Analysis.	4.00	12.00	4.00	27.20
49296	Analysis.	4.14	12.25	4.00	27.82
49305	Analysis.	4.02	12.17	4.04	27.48
49441	Analysis.	4.15	11.86	3.79	27.18
49495	Analysis.	4.05	12.00	3.69	26.98
49518	Analysis.	3.95	12.79	4.30	28.28
49572	Analysis.	4.14	12.36	4.14	28.09
49655	Analysis.	4.05	12.78	3.79	27.95
49715	Analysis.	3.95	12.11	4.14	27.35
49797	Analysis.	4.24	12.87	4.24	29.00
49834	Analysis.	4.03	12.25	4.27	27.85
50065	Analysis.	4.03	11.77	3.93	26.94
50088	Analysis.	3.80	12.57	3.66	26.98
50144	Analysis.	3.87	12.34	4.23	27.51
50213	Analysis.	4.09	12.65	4.04	28.18
50231	Analysis.	4.03	12.53	4.34	28.22
	Swift's Red Steer 5-15-5—Guarantee.	4.08	12.32	4.45	28.24
49247	Analysis.	5.00	15.00	5.00	34.00
49283	Analysis.	5.24	14.99	5.19	34.78
49297	Analysis.	5.05	15.01	5.31	34.47
50100	Analysis.	5.12	15.23	5.35	34.93
	Swift's Red Steer 6-9-3—Guarantee.	4.88	15.08	5.14	33.95
49421	Analysis.	6.00	9.00	3.00	27.60
49687	Analysis.	6.25	9.31	3.13	28.68
49873	Analysis.	6.02	8.81	3.26	27.73
50152	Analysis.	6.15	9.29	2.73	27.98
	Swift's Red Steer 6-10-7—Guarantee.	5.94	9.05	5.05	27.58
49260	Analysis.	6.00	10.00	7.00	33.10
49285	Analysis.	6.00	9.72	7.41	33.24
49324	Analysis.	5.97	10.27	7.12	33.46
49331	Analysis.	5.85	9.57	7.28	32.58
49333	Analysis.	5.79	9.59	7.98	33.23
49343	Analysis.	5.88	9.81	7.12	32.73
49405	Analysis.	5.64	10.19	7.01	32.46
49420	Analysis.	5.80	9.90	7.25	33.78
49728	Analysis.	6.10	10.15	7.28	33.82
49879	Analysis.	6.01	10.22	7.21	33.59
	Analysis.	6.02	10.31	7.56	34.11

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Swift & Company Fertilizer Works, Harvey & Shreveport, Louisiana and Houston, Texas—Continued.				
49222	Swift's Red Steer 6-12-6—Guarantee.	6.00	12.00	6.00	34.20
49225	Analysis.	6.04	12.14	6.05	34.51
49228	Analysis.	6.34	11.78	6.53	35.36
49229	Analysis.	5.50	12.81	6.24	34.15
49232	Analysis.	6.07	12.20	6.10	34.70
49233	Analysis.	6.16	12.54	6.01	35.18
49234	Analysis.	5.85	11.57	8.01	35.58
49241	Analysis.	6.02	12.03	5.79	34.05
49263	Analysis.	6.13	12.07	6.02	34.61
49276	Analysis.	6.16	12.03	6.01	34.62
49279	Analysis.	6.06	11.89	6.20	34.44
49280	Analysis.	6.19	11.80	6.12	34.57
49284	Analysis.	5.56	13.10	6.33	34.71
49292	Analysis.	5.95	12.24	6.03	34.37
49299	Analysis.	6.03	11.78	6.21	34.26
49344	Analysis.	6.02	12.21	6.02	34.50
49434	Analysis.	6.36	11.97	6.18	35.23
49494	Analysis.	6.01	11.75	6.58	34.59
49607	Analysis.	6.10	11.84	6.14	34.19
49918	Analysis.	6.14	12.06	6.03	34.64
49933	Analysis.	6.02	12.20	6.11	34.59
49996	Analysis.	6.04	11.93	6.17	34.41
50032	Analysis.	5.96	12.45	6.32	34.92
50043	Analysis.	5.68	12.33	6.04	33.83
50141	Analysis.	6.18	12.10	6.05	34.82
50230	Analysis.	6.03	12.22	6.02	34.53
	Swift's Red Steer 6-18-6—Guarantee.	6.20	10.42	6.44	33.42
49635	Analysis.	6.00	18.00	6.00	40.80
	Swift's Red Steer 8-24-8—Guarantee.	5.80	18.52	6.12	41.02
49242	Analysis.	8.00	24.00	8.00	54.40
49656	Analysis.	8.26	22.88	8.59	54.44
	Swift's Red Steer 9-18-18—Guarantee.	8.08	23.19	8.39	54.13
49308	Analysis.	9.00	18.00	18.00	61.20
50102	Analysis.	9.11	17.64	16.90	59.85
	Swift's Red Steer 10-20-10—Guarantee.	9.27	18.55	17.06	61.43
49246	Analysis.	10.00	20.00	10.00	57.00
49423	Analysis.	9.86	19.21	10.34	56.16
49908	Analysis.	10.00	19.78	10.59	57.41
	Swift's Red Steer 18% Superphosphate—Guarantee.	10.11	19.49	11.03	57.83
49606	Analysis.	18.00	.....	19.80	
50059	Analysis.	18.92	.....	20.81	
50073	Analysis.	19.27	.....	21.20	
	Swift's Red Steer 20% Superphosphate—Guarantee.	18.06	.....	19.87	
49253	Analysis.	20.00	.....	22.00	
49293	Analysis.	19.72	.....	21.69	
	Vigoro—Guarantee.	20.06	.....	22.07	
49295	Analysis.	4.00	12.00	4.00	27.20
49346	Analysis.	4.26	13.11	4.59	29.69
49485	Analysis.	4.46	11.22	4.16	27.62
49486	Analysis.	3.91	13.30	3.88	28.28
49487	Analysis.	4.59	12.71	4.04	29.44
	Analysis.	4.67	12.37	4.98	30.30
	Synthetic Nitrogen Products Corporation, 285 Madison Ave., New York, New York.				
49268	Calcium Nitrate (Nitrate of Lime)—Guarantee.	15.00	.....	.....	36.00
	Analysis.	15.19	.....	.....	36.46
	Temple Cotton Oil Company, North Little Rock, Arkansas.				
49497	Quapaw 3-10-3—Guarantee.	3.00	10.00	3.00	21.50
49734	Analysis.	3.05	9.74	2.85	21.17
50214	Analysis.	3.00	8.88	2.87	20.13
	Quapaw 4-8-4—Guarantee.	2.72	9.13	3.10	19.99
49491	Analysis.	4.00	8.00	4.00	22.80
	Analysis.	3.95	7.13	3.78	21.48

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Temple Cotton Oil Company, North Little Rock, Arkansas—Continued.				
49490	Quapaw 4-8-6—Guarantee.	4.00	8.00	6.00	25.00
	Analysis.	3.54	7.14	6.46	23.46
49496	Analysis.	3.76	7.42	6.22	24.02
49753	Analysis.	3.73	7.34	6.02	23.64
49756	Analysis.	3.90	7.22	5.58	23.44
49957	Analysis.	3.80	6.74	6.64	23.83
50203	Analysis.	4.08	7.38	6.01	24.52
50204	Analysis.	3.89	7.33	5.77	23.75
50215	Analysis.	3.68	7.33	6.05	23.55
	Quapaw 6-10-7—Guarantee.	6.00	10.00	7.00	33.10
49498	Analysis.	5.53	7.72	10.68	33.51
49754	Analysis.	5.76	9.86	6.49	31.81
	Tennessee Corporation, Lockland, Ohio				
49294	Loma—Guarantee.	5.00	10.00	4.00	27.40
49599	Analysis.	5.08	11.34	4.28	29.37
	Analysis.	4.75	11.33	4.32	28.61
	Texas Chemical Company, 811 Petroleum Building, Houston, Texas.				
49311	"T. C. C." Brand Raw Bone Meal—Guarantee.	3.70	•22.00		24.72
49596	Analysis.	4.21	•19.92		24.44
49597	Analysis.	4.37	•22.54		26.72
50048	Analysis.	4.23	•21.67		25.75
50060	Analysis.	4.10	•20.55		24.64
50069	Analysis.	4.37	•22.13		26.42
50078	Analysis.	4.20	•20.23		24.64
50094	Analysis.	4.37	•22.05		26.37
	Analysis.	4.15	•22.98		26.51
	Texas Farm Products Company, Nacogdoches, Texas.				
49370	Lone Star Brand 3-10-3 Fertilizer—Guarantee.	3.00	10.00	3.00	21.50
49393	Analysis.	3.30	10.06	3.21	22.52
49453	Analysis.	3.20	9.90	3.03	21.90
49550	Analysis.	3.27	9.98	3.41	22.58
49569	Analysis.	3.11	10.26	3.03	22.08
49830	Analysis.	3.34	10.05	3.33	22.74
50031	Analysis.	3.23	9.87	2.69	21.57
	Lone Star Brand 4-8-4 Fertilizer—Guarantee.	3.07	10.02	3.03	21.72
49351	Analysis.	4.00	8.00	4.00	22.80
49367	Analysis.	4.04	8.05	4.04	23.00
49377	Analysis.	4.01	8.28	4.01	23.14
49392	Analysis.	4.07	8.06	3.84	22.86
49435	Analysis.	4.05	8.16	4.04	23.14
49557	Analysis.	3.97	8.15	4.01	22.91
49564	Analysis.	4.04	7.89	4.04	22.82
49666	Analysis.	3.91	7.88	4.31	22.79
49822	Analysis.	4.12	8.07	4.10	23.28
49844	Analysis.	3.76	9.34	3.70	23.36
49849	Analysis.	4.05	8.03	3.83	22.76
49868	Analysis.	3.77	8.98	3.72	23.02
50012	Analysis.	4.06	8.24	3.84	23.02
50030	Analysis.	3.48	9.21	3.65	22.50
	Lone Star Brand 4-8-6 Fertilizer—Guarantee.	3.96	8.50	4.06	23.32
49328	Analysis.	4.00	8.00	6.00	25.00
49454	Analysis.	4.00	8.25	5.67	24.92
49570	Analysis.	4.03	8.38	5.75	25.22
49667	Analysis.	4.10	8.79	5.65	25.73
49882	Analysis.	4.02	8.00	6.21	25.28
	Analysis.	4.15	8.39	5.57	25.32

•—Total phosphoric acid.

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Texas Farm Products Company, Nacogdoches, Texas					
—Continued.					
49327	Lone Star Brand 4-10-0 Fertilizer—Guarantee.....	4.00	10.00	....	20.60
	Analysis.....	4.08	10.28	....	21.10
49329	Lone Star Brand 4-12-4 Fertilizer—Guarantee.....	4.00	12.00	4.00	27.20
49384	Analysis.....	4.10	12.43	4.03	27.94
49565	Analysis.....	4.10	12.31	3.89	27.66
49568	Analysis.....	4.05	12.06	4.22	27.63
49575	Analysis.....	4.10	12.25	4.03	27.75
49665	Analysis.....	4.15	12.40	4.26	28.29
49829	Analysis.....	4.17	12.49	4.31	28.50
49845	Analysis.....	4.22	12.46	4.01	28.25
49890	Analysis.....	4.18	12.17	4.05	27.88
50026	Analysis.....	4.24	12.34	4.03	28.18
50122	Analysis.....	3.90	12.75	3.73	27.49
49391	Lone Star Brand 6-9-3 Fertilizer—Guarantee.....	4.05	12.38	3.85	27.58
	Analysis.....	6.00	9.00	3.00	27.60
49352	Lone Star Brand 6-10-7 Fertilizer—Guarantee.....	6.01	9.80	3.21	28.73
49549	Analysis.....	6.00	10.00	7.00	33.10
49823	Analysis.....	6.08	10.18	6.63	33.08
49831	Analysis.....	6.16	10.43	7.11	34.07
49869	Analysis.....	6.02	10.19	6.91	33.26
50111	Analysis.....	6.02	10.14	6.74	33.01
50133	Analysis.....	5.93	10.55	7.18	33.74
	Lone Star Brand 6-12-6 Fertilizer—Guarantee.....	5.94	10.24	6.88	33.09
49443	Analysis.....	5.96	10.72	7.00	33.79
49574	Analysis.....	6.00	12.00	6.00	34.20
49580	Analysis.....	6.15	12.34	5.58	34.47
49824	Analysis.....	6.07	12.45	6.20	35.09
	Lone Star Brand 10-10-0—Guarantee.....	6.07	12.58	6.02	35.03
50013	Analysis.....	5.91	12.43	5.79	34.22
49889	Lone Star Brand Sulphate of Ammonia—Guarantee.....	10.00	10.00	....	35.00
50011	Analysis.....	9.92	10.50	....	35.36
49369	Lone Star Brand 18% Superphosphate—Guarantee.....	20.00	....	....	48.00
49922	Analysis.....	20.49	....	....	49.18
50025	Analysis.....	20.64	....	....	49.54
Tri-State Fertilizer & Lumber Company, Shreveport, Louisiana.					
49446	Red Diamond 3-10-3 Fertilizer—Guarantee.....	3.00	10.00	3.00	21.50
49883	Analysis.....	3.02	11.32	3.13	23.14
49995	Analysis.....	3.73	10.48	3.56	24.40
	Red Diamond 4-8-4 Fertilizer—Guarantee.....	3.51	10.52	3.29	23.61
49353	Analysis.....	4.00	8.00	4.00	22.80
49555	Analysis.....	4.14	8.44	4.24	23.88
49828	Analysis.....	4.34	8.70	4.41	24.84
49886	Analysis.....	4.02	8.05	4.03	22.94
49994	Analysis.....	4.30	8.16	4.43	24.17
49998	Analysis.....	4.78	8.43	4.06	25.21
50134	Analysis.....	4.46	8.73	3.57	24.23
	Red Diamond 4-8-6 Fertilizer—Guarantee.....	4.13	9.18	5.00	25.51
49682	Analysis.....	4.00	8.00	6.00	25.00
49923	Analysis.....	4.30	8.01	6.24	25.99
50242	Analysis.....	4.34	8.42	5.58	25.82
	Red Diamond 4-10-7 Fertilizer—Guarantee.....	3.86	9.12	6.02	25.91
49884	Analysis.....	4.00	10.00	7.00	28.30
	Red Diamond 4-12-4 Fertilizer—Guarantee.....	4.52	10.32	7.48	30.43
49354	Analysis.....	4.00	12.00	4.00	27.20
49671	Analysis.....	3.63	12.75	4.33	27.50
	Red Diamond 6-10-7 Fertilizer—Guarantee.....	3.90	13.15	4.39	28.66
49366	Analysis.....	6.00	10.00	7.00	33.10
49444	Analysis.....	6.11	10.88	7.46	34.84
49672	Analysis.....	6.11	10.91	7.01	34.37

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Tri-State Fertilizer & Lumber Company, Shreveport, Louisiana—Continued.				
49445	Red Diamond 6-12-6 Fertilizer—Guarantee..	6.00	12.00	6.00	34.20
49556	Analysis.....	6.35	12.63	6.56	36.35
49885	Analysis.....	6.50	11.90	5.57	34.82
49888	Analysis.....	6.43	12.32	6.88	36.55
50135	Red Diamond Nitrate of Soda—Guarantee.....	6.67	12.32	6.73	36.96
	Analysis.....	16.00	.....	.....	38.40
		16.46	.....	.....	39.50
	Tyler Fertilizer Company, Tyler, Texas.				
49695	Heart Brand Fertilizer No. 3-10-3—Guarantee.....	3.00	10.00	3.00	21.50
	Analysis.....	3.04	9.47	3.47	21.54
49694	Heart Brand Fertilizer No. 4-8-4—Guarantee.....	4.00	8.00	4.00	22.80
49880	Analysis.....	4.23	8.46	4.39	24.29
50194	Analysis.....	4.08	8.43	4.18	23.66
	Heart Brand Fertilizer No. 4-8-6—Guarantee.....	3.80	9.09	3.79	23.29
49427	Analysis.....	4.00	8.00	6.00	25.00
49461	Analysis.....	4.15	8.04	6.03	25.43
49697	Analysis.....	4.22	8.35	5.25	25.10
49808	Analysis.....	4.52	8.64	6.01	26.96
49911	Analysis.....	4.50	9.08	5.59	26.94
50175	Analysis.....	3.82	8.97	5.58	25.18
	Hear Brand Fertilizer No. 4-10-0—Guarantee.....	4.02	8.77	6.14	26.05
49347	Analysis.....	4.00	10.00	.....	20.60
49944	Heart Brand Fertilizer No. 4-12-4—Guarantee.....	4.62	10.55	.....	22.70
50147	Analysis.....	4.00	12.00	4.00	27.20
50182	Analysis.....	3.96	12.56	4.12	27.85
	Heart Brand Fertilizer No. 6-9-3—Guarantee.....	4.13	12.47	4.23	28.28
49428	Analysis.....	4.63	11.09	4.02	27.73
49901	Analysis.....	6.00	9.00	3.00	27.60
	Heart Brand Fertilizer No. 6-10-7—Guarantee.....	6.12	9.02	3.29	28.23
49348	Analysis.....	6.14	9.27	3.12	28.37
49676	Analysis.....	6.00	10.00	7.00	33.10
49881	Analysis.....	6.00	10.06	6.29	32.39
50157	Analysis.....	5.89	10.70	7.28	33.92
	Heart Brand Fertilizer No. 6-12-6—Guarantee.....	6.21	10.46	7.03	34.14
49945	Analysis.....	6.03	10.76	6.36	33.31
	Heart Brand Fertilizer No. 6-12-6—Guarantee.....	6.00	12.00	6.00	34.20
50158	Analysis.....	2.68	15.60	7.41	31.74
	Heart Brand Fertilizer No. 10-0-10—Guarantee.....	10.00	.....	10.00	35.00
49900	Analysis.....	9.97	.....	9.20	34.05
	Twenty Per Cent Superphosphate—Guarantee.....	20.00	.....	.....	22.00
	Analysis.....	19.94	.....	.....	21.93
	United Chemical Company, Dallas, Texas.				
50114	United Plantfood-Nitrate of Soda—Guarantee.....	16.00	.....	.....	38.40
	Analysis.....	16.36	.....	.....	39.26
49269	United Plantfood 0-20-0 Superphosphate—Guarantee.....	.....	20.00	.....	22.00
	Analysis.....	.....	20.41	.....	22.45
49643	United Plantfood 3-10-3—Guarantee.....	3.00	10.00	3.00	21.50
49789	Analysis.....	3.22	10.49	3.19	22.78
49965	Analysis.....	3.19	9.81	3.02	21.77
50239	Analysis.....	3.18	10.15	3.01	22.11
50008	Analysis.....	2.86	9.82	2.72	20.65
50236	Analysis.....	3.11	10.30	2.90	21.98
	United Plantfood 4-8-4—Guarantee.....	3.12	9.62	3.19	21.58
49390	Analysis.....	4.00	8.00	4.00	22.80
49398	Analysis.....	4.08	8.34	4.03	23.39
49503	Analysis.....	4.05	8.20	4.03	23.17
49540	Analysis.....	4.17	8.55	4.02	23.84
49646	Analysis.....	3.77	8.93	3.76	23.01
49716	Analysis.....	1.19	11.96	4.03	18.05
49758	Analysis.....	4.01	8.45	4.34	23.69
49788	Analysis.....	3.95	8.22	4.25	23.20
49955	Analysis.....	4.09	8.43	3.89	23.37
	Analysis.....	4.07	8.11	4.03	23.12

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	United Chemical Company, Dallas, Texas—Continued.				
49966	United Plantfood 4-8-4—Guarantee—Continued.....	4.00	8.00	4.00	22.80
49980	Analysis.....	4.09	8.17	4.02	23.23
49999	Analysis.....	4.09	8.42	4.52	24.05
50193	Analysis.....	3.88	7.77	4.04	22.30
50199	Analysis.....	3.69	7.23	3.69	20.87
50238	Analysis.....	3.92	8.13	4.08	22.84
49436	United Plantfood 4-8-6—Guarantee.....	4.08	8.63	4.02	23.70
49502	Analysis.....	4.00	8.00	6.00	25.00
49668	Analysis.....	3.75	9.20	5.89	25.60
49681	Analysis.....	4.00	8.48	5.69	25.19
49732	Analysis.....	3.48	6.42	5.51	21.47
49748	Analysis.....	4.16	8.91	6.30	26.71
49749	Analysis.....	4.20	8.72	5.42	25.63
49757	Analysis.....	4.06	8.27	6.48	25.97
50010	Analysis.....	4.09	8.69	5.83	25.79
50123	Analysis.....	4.02	8.16	6.06	25.30
50208	Analysis.....	3.82	8.28	6.11	25.00
50155	United Plantfood 4-8-10—Guarantee.....	4.04	8.86	5.68	25.70
49426	Analysis.....	4.10	8.66	5.71	25.65
49731	United Plantfood 4-10-0—Guarantee.....	4.00	8.00	10.00	29.40
49397	Analysis.....	4.15	8.02	9.78	29.54
49425	United Plantfood 4-12-4—Guarantee.....	4.00	10.00	.....	20.60
49504	Analysis.....	4.16	10.50	.....	21.53
49669	Analysis.....	4.01	10.76	.....	21.46
49759	United Plantfood 4-12-4—Guarantee.....	4.00	12.00	4.00	27.20
49791	Analysis.....	3.93	12.87	4.01	28.00
49847	Analysis.....	3.95	12.41	3.60	27.09
49861	Analysis.....	4.04	12.37	3.70	27.38
49956	Analysis.....	4.22	11.67	4.22	27.61
49910	United Plantfood 6-9-3—Guarantee.....	3.86	12.51	4.03	27.45
49539	Analysis.....	4.16	12.31	4.25	28.20
49644	Analysis.....	4.18	12.04	4.03	27.70
49689	Analysis.....	3.73	12.54	3.54	26.63
49862	Analysis.....	4.70	11.64	4.43	28.95
49887	United Plantfood 6-10-7—Guarantee.....	6.00	9.00	3.00	27.60
49909	Analysis.....	6.32	9.79	3.02	29.26
49925	Analysis.....	6.00	10.00	7.00	33.10
50009	United Plantfood 6-12-6—Guarantee.....	5.74	10.65	6.67	32.84
49680	Analysis.....	5.84	10.38	7.08	33.23
49717	Analysis.....	5.71	10.11	7.60	33.18
50000	Analysis.....	5.94	10.93	6.01	32.89
50115	Analysis.....	5.93	10.61	6.69	33.26
49424	United Plantfood 0-18-0 Superphosphate—Guarantee.....	5.90	10.21	7.50	33.64
49595	Analysis.....	5.91	10.91	7.04	33.92
49645	Analysis.....	5.93	10.34	7.25	33.58
49832	Analysis.....	6.00	12.00	6.00	34.20
	Virginia-Carolina Chemical Corporation, Shreveport, Louisiana.				
50192	Nitrate of Soda 16%—Guarantee.....	16.00	.....	.....	38.40
	Analysis.....	16.10	.....	.....	38.64
49448	Sulphate of Ammonia—Guarantee.....	20.00	.....	.....	48.00
	Analysis.....	20.78	.....	.....	49.87
49447	V-C Big Giant Crop Grower—Guarantee.....	6.00	12.00	6.00	34.20
	Analysis.....	6.19	12.01	6.65	35.39
49623	V-C Blood, Bone and Potash—Guarantee.....	3.00	10.00	3.00	21.50
	Analysis.....	3.10	10.08	3.33	22.19
49817	Analysis.....	3.16	9.81	3.65	22.39

Table 7. Analysis of commercial fertilizer, season 1934-35—Continued

Laboratory Number	Manufacturer, place of business and brand	Nitrogen, per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Virginia-Carolina Chemical Corporation, Shreveport, Louisiana—Continued.				
49321	V-C Fruit & Truck Special—Guarantee.	6.00	10.00	7.00	33.10
	Analysis.	5.98	10.02	7.13	33.21
49335	Analysis.	6.06	10.03	7.17	33.46
49767	Analysis.	6.10	9.78	8.01	34.21
49954	Analysis.	6.20	10.75	7.64	35.11
	V-C Good Luck Fertilizer—Guarantee.	4.00	8.00	4.00	22.80
49476	Analysis.	4.01	7.68	4.37	22.88
49654	Analysis.	4.02	8.04	4.32	23.24
49825	Analysis.	3.67	8.04	4.22	22.29
49953	Analysis.	3.74	7.72	4.39	22.30
50001	Analysis.	3.80	8.02	4.22	22.58
50027	Analysis.	3.83	7.83	4.46	22.71
50156	Analysis.	3.94	8.05	4.28	23.03
50191	Analysis.	3.66	7.84	4.21	22.03
50237	Analysis.	3.80	8.22	4.01	22.57
50241	Analysis.	3.82	8.06	4.19	22.65
	V-C Indian Brand Fertilizer—Guarantee.	4.00	12.00	4.00	27.20
49322	Analysis.	4.16	12.49	4.44	28.60
49818	Analysis.	4.10	12.28	4.70	28.52
49836	Analysis.	3.93	12.53	4.16	27.79
	V-C Potato Special—Guarantee.	4.00	8.00	10.00	29.40
49621	Analysis.	3.91	7.69	10.60	29.50
	V-C Prolific Cotton Grower—Guarantee.	3.00	10.00	3.00	21.50
49477	Analysis.	3.00	10.19	3.26	22.00
49506	Analysis.	3.14	10.15	3.44	22.49
49766	Analysis.	3.14	10.14	3.53	22.57
49826	Analysis.	3.07	10.12	3.19	22.01
50223	Analysis.	3.30	9.97	3.95	23.24
	V-C Special 4-10-0 Fertilizer—Guarantee.	4.00	10.00	.....	20.60
49365	Analysis.	4.26	10.50	.....	21.77
	V-C 18% Superphosphate—Guarantee.	.....	18.00	.....	19.80
49837	Analysis.	.....	18.85	.....	20.74
	V-C Truckers Special—Guarantee.	4.00	8.00	6.00	25.00
49505	Analysis.	4.00	8.27	6.23	25.55
49520	Analysis.	4.00	7.15	6.73	24.87
49835	Analysis.	4.02	7.50	7.01	25.61
49968	Analysis.	3.73	8.43	6.22	25.06
50224	Analysis.	3.82	8.01	6.03	24.61
	V-C Victor High Grade Fertilizer—Guarantee.	6.00	9.00	3.00	27.60
49521	Analysis.	6.23	9.11	3.49	28.81
49921	Analysis.	6.29	9.12	3.38	28.85
	Vope Brothers, Laredo, Texas.				
49235	Bat Guano No. 2.6-8-0—Guarantee.	6.00	8.00	.....	23.20
	Analysis.	8.33	7.17	.....	27.88