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TEXAS AGRICULTURAL EXPERIMENT STATION

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

W. B. BIZZELL, President

BULLETIN NO. 265

AUGUST, 1920

DIVISION OF CHEMISTRY

Commercial Fertilizers in 1919-1920



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COLLEGE STATION, BRAZOS COUNTY, TEXAS

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†As of August 31, 1920.

*In cooperation with the School of Veterinary Medicine, A. & M. College of Texas.

**In cooperation with the United States Department of Agriculture.

COMMERCIAL FERTILIZERS IN 1919-1920.

G. S. FRAPS AND S. E. ASBURY.

This bulletin deals with the State control of commercial fertilizers. Information concerning the nature and use of fertilizers is to be found in Bulletin 167, copies of which will be sent free on application.

The quantities of commercial fertilizers sold in Texas for several seasons are as follows:

1905-06	13,500 tons.
1910-11	52,985 tons.
1911-12	46,000 tons.
1912-13	75,500 tons.
1913-14	77,400 tons.
1914-15	17,500 tons.
1915-16	21,500 tons.
1916-17	42,000 tons.
1917-18	58,000 tons.
1918-19	46,000 tons.
1919-20	56,700 tons.

FERTILIZER LAW

The present fertilizer law went into effect September 1, 1911. Copies of the law, and information as to how to comply with it will be sent on application.

INFORMATION ON THE BAG

The manufacturer must print the guaranteed analysis of the fertilizer either on the bag or on a tag attached to the bag. The information required to be printed on the bag, or tag, is as follows:

Net weight.

Name of fertilizer in full.

Name and address of manufacturer.

Guaranteed analysis:

Available phosphoric acid, per cent.

Nitrogen, per cent.

Potash, per cent.

Total phosphoric acid may be guaranteed in place of available in bone or tankage.

FREE ANALYSIS

Fertilizer samples, if taken in accordance with the requirements of the law, will be analyzed free of charge. Those who desire a free analysis of a fertilizer should write for a blank "Application for Free Fertilizer Analysis" to the State Chemist, College Station, Texas. Samples not taken as required by the law cannot be accepted for analysis.

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 of fertilizer materials, or ingredients of fertilizers, sold or offered for sale within the State of Texas, and shall publish his results as he may find." The results of such investigations will be published from time to time as the experiments are completed.

RELATION TO STATION WORK

The work of the State Chemist is closely related to the chemical work of the Experiment Station. In his capacity as chemist to 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 the fertilizers, and is connected with the investigations as to the agricultural values of fertilizers required by the fertilizer control, for fertilizers vary in effect upon the different soils.

POTASH IN FERTILIZERS

Texas soils are, as a general rule, well supplied with potash and are much more likely to be deficient in phosphoric acid or in nitrogen than they are to be deficient in potash. This fact is clearly established by numerous analyses of soils and by pot experiments made at the Texas Experiment Station, as well as by cooperative field experiments.

A number of cooperative fertilizer experiments have been conducted by the chemical division of the Experiment Station, and it has been found that phosphoric acid and nitrogen are much more likely to give results than potash. In 68 out of 114 experiments described in Bulletin 184, potash had no effect. The chances are, therefore, against the potash having any effect if generally used in complete fertilizers on Texas soils. Other cooperative fertilizer experiments are reported in Bulletin 235.

The quantity of potash in ordinary corn and cotton fertilizer is so small that it is very doubtful if the quantity is sufficient to be of advantage even where potash is needed. It would be better to increase the quantity of phosphoric acid or nitrogen, and leave out the potash. Of course there are soils and crops on which potash is of advantage. Light sandy soils may be deficient in potash, but it is a question if corn or cotton should be grown at all on such soils, as often the yield is not sufficient to pay. Tobacco, cabbages, potatoes, onions, and certain other truck crops, grown on light sandy soils, may give favorable returns for potash. On heavier soils they may, or may not give returns for the potash. A great deal depends upon the possible yield, as the greater the possible yield permitted by soil and climatic conditions (including soil moisture) the greater the possibility of returns for potash.

From these considerations it is evident that Texas farmers can well afford to eliminate potash from general fertilizers, especially for cotton and corn. Potash should be used only in exceptional cases, where soil conditions and special crops promise returns on the investment. The haphazard use of potash in fertilizer under all conditions should be dis-

continued. In the majority of cases, potash is not needed, being supplied by the soil in sufficient quantity, and no returns are secured on the investment. Potash should be used only when it is known to be needed for the soil, and for the crops to be grown on it. If potash is not known to be needed, then the chances are there will be no return on the money expended for it. Texas soils can get on much better without fertilizer potash than without phosphoric acid or nitrogen. There has been in the past much waste of potash.

There is no doubt that the advertisements of potash have given many people an exaggerated idea of the importance of potash.

HOME MIXING

It is often possible for consumers of fertilizers to save money by purchasing acid phosphate, cottonseed meal, or other fertilizer ingredients, and make their own mixtures. Information concerning this topic is given in bulletins of the Texas Experiment Station, free on application (see especially Bulletin 167).

BULK SALES

Fertilizers may be sold in bulk by manufacturers direct to consumers for their own use; the tax must, in such case, be paid by the manufacturer. Fertilizer purchased in bulk and then sold or distributed, must be bagged, and must have a tax tag attached to each sack, also a tag showing the guaranteed analysis of the fertilizer. Considerable saving, both in freight and in purchase price, may be made by purchasing fertilizer in bulk. For further instructions as to the law concerning bulk sales, address the State Chemist at College Station.

LOW GRADE FERTILIZERS

Purchasers are advised not to buy low grade fertilizers. The words "low grade" appear on the sack. The plant food in such fertilizers usually costs much more per pound than in standard grade or high grade goods, although the price per ton or sack may be a little lower.

Freight, cost of handling and other expenses, are high in proportion to the plant food present.

COTTONSEED PRODUCTS

Cottonseed meal sold for fertilizer purposes comes under the fertilizer law. A cottonseed product containing less than 6.88 per cent. nitrogen may not be sold as cottonseed meal, but must be termed cottonseed fertilizer, cottonseed meal and hulls, or given some other name to indicate that it is below the requirement for cottonseed meal. It is an economic error to use cottonseed hulls as a fertilizer. Their feed value is greater than their fertilizer value. Better returns may also be secured with cottonseed meal by feeding it to animals on the land to be fertilized.

ANALYSIS BELOW GUARANTEE

Whenever any lot of fertilizer is four per cent. or more below guarantee, all persons who have sold this lot of fertilizer must make good the deficiency to all purchasers. The rebate is paid by the manufacturer to the dealer and by the dealer to the consumer.

LIMESTONE FILLER

Some manufacturers of acid phosphate make a high grade phosphate and reduce it to sixteen or fourteen per cent. grade by means of limestone or carbonate of lime. The use of limestone dries out the fertilizer and permits it to be drilled very easily, but the use of more than small amounts is likely to cause reversion of the acid phosphate and throw it below the guaranteed analysis. The reversion does not occur all at once, so that an early analysis may show the goods up to guarantee and a later analysis show them below guarantee. This matter is discussed in Bulletin 223.

In the fertilizer bulletin for 1915-16 are printed two analyses of acid phosphate guaranteed as sixteen per cent., but found to contain thirteen per cent. available phosphoric acid associated with over five per cent. insoluble and eighteen per cent. total phosphoric acid. Examination showed the samples to contain carbonate of lime. The deficiency was clearly due to the reversion of the acid phosphate due to the use of a quantity of limestone as a filler. A number of analyses of complete fertilizers are printed in Bulletin 248, which are below guarantee probably on account of the presence of limestone.

One manufacturer in 1919-20 has had trouble largely on account of the use of a limestone filler.

EXPLANATION OF TERMS

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

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

Nitrogen refers to the total nitrogen in the fertilizer. It is necessary for the development of all parts of the plant, but an excess of nitrogen delays maturity and is liable to promote the growth of stalk and leaves at expense of fruit. Nitrogen is needed by many Texas soils.

Potash is required to be soluble in water. A great many Texas soils contain a sufficient quantity of potash, so that its use in fertilizer on such soils is a useless expense. Potash, like nitrogen, is needed by all parts of the plants, but especially by stalk and leaves. An excess of potash delays maturity and is liable to promote growth of the stalk and leaves at the expense of fruit.

Valuation per ton represents the cost of the plant food in the unmixed raw material, at retail, in large markets. It is not the price at which the fertilizer is sold. The selling price includes also cost of mix-

COMMERCIAL FERTILIZERS IN 1919-1920.

ing sacks, transportation, and manufacturers' and dealers' profits. On account of the variations in prices which have occurred since war broke out, valuations given in this bulletin do not represent closely the cost of the plant food.

FERTILIZER CALCULATIONS, 1919-1920

	Cents per Pound.
Available Phosphoric Acid.....	$7\frac{1}{2}$
Total Phosphoric Acid in Thomas Phosphate, Tankage and Bone.....	5
Nitrogen	30
Potash	20

The valuations are not closely related to the prices of the fertilizer, on account of the decided variations and changes due to the war. The relation between the valuation and the retail selling price by merchants is given in Table 1.

The valuations are decided on about September 1, and the prices may change before the active fertilizer season, from February to April.

Table 1—Relation of valuation and selling price, 1919-1920.

	Number Averaged.	Average Valuation.	Average Selling Price.
Acid Phosphate 16 Per Cent.....	72	\$ 24.00	\$ 29.82
Basic Phosphate.....	2	18.00	28.00
Nitrate of Soda.....	6	89.23	102.50
Standard Grade Phosphate and Nitrogen.....	118	25.50	43.38
High Grade Phosphate and Nitrogen.....	43	31.11	47.06
Standard Grade Complete Fertilizer.....	84	29.48	46.79
High Grade Complete Fertilizer.....	58	38.74	53.81

GUARANTEED AND DELIVERED FERTILIZER

Table 2 contains the averaged guaranteed valuation, and the average valuation found by our analyses, for all manufacturers doing business in Texas. In preparing the table, all analyses made are averaged, even though several were made of each brand.

TEXAS AGRICULTURAL EXPERIMENT STATION.

Table 2—Guaranteed and delivered fertilizer.

Manufacturers.	Number Averaged.	Average Valuation.	Average Selling Price.
Arkansas Fertilizer Company.....	4	\$ 25.20	\$ 25.56
Armour Fertilizer Works.....	54	33.27	33.27
Bryan Cotton Oil and Fertilizer Company.....	2	28.28	31.85
East Texas Fertilizer Company.....	8	26.82	27.75
Fidelity Chemical Corporation.....	21	30.00	30.78
Henderson Cotton Oil and Gin Company.....	2	30.83	32.12
Hope Fertilizer Company.....	27	31.04	29.42
Houston Cotton Oil Mill and Manufacturing Company.....	3	29.63	31.43
Longview Cotton Oil Company.....	3	31.75	34.16
Marshall Fertilizer Factory.....	5	24.72	25.49
Meridian Fertilizer Factory.....	65	27.86	30.57
Nitrate Agencies Company.....	1	90.00	91.98
Palestine Oil and Manufacturing Company.....	2	31.70	34.09
Pelican Fertilizer Works.....	4	27.90	29.63
Peoples Cotton Oil Company.....	1	42.00	42.60
Planters Fertilizer and Chemical Company.....	16	27.93	28.14
Shreveport Fertilizer Works.....	6	24.70	26.77
Sulphur Springs Acid and Fertilizer Company.....	5	27.96	32.73
Swift & Company.....	95	30.10	30.57
Tennessee Coal, Iron and Railroad Company.....	3	18.00	19.33
Union Seed and Fertilizer Company.....	14	26.64	28.02
Virginia-Carolina Chemical Company.....	73	28.02	29.17
Wills Point Cotton Oil Company.....	4	36.70	37.61

ANALYSIS OF FERTILIZERS, 1919-1920

Table 3 contains a list of all samples of fertilizer subjected to analysis in the season beginning September 1, 1919, to date. The table gives the name and address of the manufacturer, and name of the brand, the guaranteed analysis, and the analysis. Analyses below guarantee are brought out in heavy type. Practically all the samples were collected by our inspectors. Analyses and inspection were made by S. E. Asbury, S. Lomanitz, J. B. Smith, H. B. Smith, and Dona Newland.

REGISTRATIONS, 1919-1920

A list of brands registered for sale in the season of 1919-1920 is given in Table 4. Many of the brands so registered were sold only in lots of a few sacks, or were not sold at all in the State..

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Table 3—Analysis of commercial fertilizers, season 1919-1920.

Laboratory Number.	Manufacturer, Place of Business and Brand.	Phosphoric Acid Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
27942	C. Amsler's Estate, Hempstead, Texas.— Cotton Seed Fertilizer—Guarantee. Analysis.	6.00 6.68			\$36.00 40.08
28201	Arkansas Fertilizer Co., Little Rock, Ark.— White Diamond New South—Guarantee. Analysis.	10.00 11.38	1.65 1.34		24.90 25.11
28298	White Diamond Queen of the South—Guarantee. Analysis.	12.00	1.65		27.90 27.03
28200	White Diamond Special Acid Phosphate—Guarantee. Analysis.	16.00 16.71	1.48		24.00 25.07
28315	Analysis.	16.70			25.05
	Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, La.—				
28135	Armour's Blood and Bone Special Without Potash— Guarantee.	10.00	1.65		24.90
28237	Analysis.	9.12	1.09		20.22
	Analysis.	10.27	1.67		25.43
	Armour's Champion Meal Mixture With Potash— Guarantee.	10.00	1.65	2.00	32.90
28156	Analysis.	10.27	1.81	1.78	33.39
28112	Armour's Corn King—Guarantee. Analysis.	8.00 7.83	2.47 2.53	2.00 1.99	34.82 34.93
27913	Armour's Delta Special—Guarantee. Analysis.	6.00 6.02	4.11 3.81	2.00 1.91	41.66 39.53
27949	Armour's King Cotton—Guarantee. Analysis.	8.00 8.21	1.65 1.62	2.00	29.90 29.00
28075	Analysis.	8.67	1.60	1.84	29.97
28110	Analysis.	9.13	1.78	1.83	31.70
28155	Analysis.	8.16	1.74	2.05	30.88
28199	Analysis.	8.71	1.63	1.58	29.17
27924	Armour's King Cotton Without Potash—Guarantee. Analysis.	10.00 9.96	1.65 1.81		24.90 25.80
27928	Analysis.	9.79	1.76		25.25
28076	Analysis.	10.46	1.63		25.47
28174	Analysis.	10.56	1.73		26.22
27915	Armour's Nitrate of Soda—Guarantee. Analysis.		14.81 14.87		88.86 89.22
28277	Analysis.		15.26		91.56
28278	Analysis.		15.79		94.74
28117	Armour's Onion Fertilizer No. 3—Guarantee. Analysis.	8.00 7.69	3.29 2.95	6.00 5.40	55.74 50.84
28120	Analysis.	7.93	3.04	6.10	54.54
27917	Armour's Onion Fertilizer No. 7—Guarantee. Analysis.	6.00 5.60	3.29 2.91	3.00 2.85	40.74 37.26
27914	Analysis.	6.02	2.76	2.67	36.27
28124	Analysis.	5.23	2.69	2.44	33.75
28114	Armour's Onion Fertilizer No. 13—Guarantee. Analysis.	1.00 1.81	4.94 4.34	1.00 1.03	35.14 32.28
28116	Armour's Onion Fertilizer No. 15—Guarantee. Analysis.	10.00 9.78	2.47 2.28	1.00 1.15	33.82 32.95
28122	Armour's Onion Fertilizer No. 18—Guarantee. Analysis.	4.00 4.03	4.94 4.57		35.64 33.47
28123	Armour's Onion Fertilizer No. 20—Guarantee. Analysis.	7.00 6.92	4.11 3.46		35.16 31.14
28072	Armour's Royal Mixture With Potash—Guarantee. Analysis.	10.00 10.56	1.65 1.54	1.00 1.16	28.90 29.72
28109	Analysis.	10.56	1.53	1.01	29.06
28238	Armour's Special Blood and Bone Mixture—Guarantee. Analysis.	9.50 9.77	1.65 1.51	1.50 1.62	30.15 30.20
	Armour's Special Blood Mixture Without Potash— Guarantee.	11.00	1.65		26.40
28029	Analysis.	11.66	1.80		28.29
28241	Analysis.	11.33	1.70		27.20
	Armour's Special Farm Mixture Without Potash— Guarantee.	10.00	1.65		24.90
28078	Analysis.	9.98	1.70		25.17
27950	Armour's Special Formula No. 84—Guarantee. Analysis.	8.00 9.63	3.29 2.79		31.74 31.19
27911	Armour's Star Phosphate—Guarantee. Analysis.	16.00 16.64			24.00 24.96
27916	Analysis.	16.08			24.12
27933	Analysis.	16.68			25.02
27951	Analysis.	17.56			26.34

Table 3.—Analysis of commercial fertilizers, season 1919-1920.

Laboratory Number.	Manufacturer, Place of Business and Brand.	Phosphoric Acid Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, La.—Continued.					
28020	Armour's Star Phosphate—Continued.				
28077	Analysis.....	18.08			\$27.12
28134	Analysis.....	16.01			24.02
28239	Analysis.....	17.06			25.59
28240	Analysis.....	16.73			25.10
28242	Analysis.....	16.81			25.22
28243	Analysis.....	19.19			28.79
28244	Analysis.....	18.78			28.17
28280	Analysis.....	16.75			25.13
28316	Analysis.....	16.61			24.92
28322	Analysis.....	16.43			24.65
		19.85			29.78
28281	Armour's Texas Trucker—Guarantee.....	10.00	2.47		29.82
	Analysis.....	9.53	1.98		26.18
28004	Armour's Texas Vegetable Grower—Guarantee.....	9.00	2.05	3.00	37.80
	Analysis.....	8.32	1.80	2.91	34.92
27931	Armour's Tomato Grower—Guarantee.....	10.00	2.47		29.82
28198	Analysis.....	9.71	2.05		26.87
28279	Analysis.....	10.73	2.40		30.50
		10.44	2.33		29.64
27932	Armour's Truck Special No. 2—Guarantee.....	8.00	1.65	3.00	33.90
	Analysis.....	7.77	1.69	2.94	33.56
Bryan Cotton Oil and Fertilizer Co., Bryan, Texas.—					
28008	Star Brand Cotton and Corn Fertilizer—Guarantee.....	11.50	1.80		28.05
	Analysis.....	14.28	1.63		31.20
28009	Star Brand Phospho Special Fertilizer—Guarantee.....	11.00	2.00		28.50
	Analysis.....	13.26	2.10		32.49
East Texas Fertilizer Co., Tyler, Texas.—					
27926	16 Per Cent Acid Phosphate—Guarantee.....	16.00			24.00
28069	Analysis.....	16.52			24.78
	Analysis.....	17.92			26.88
27930	Tomato Grower—Guarantee.....	10.00	2.47		29.82
	Analysis.....	10.29	2.31		29.30
28084	Wiley's 11-1.65 Farm Mixture—Guarantee.....	11.00	1.65		26.40
	Analysis.....	12.13	1.83		29.18
28021	Wiley's Farm Mixture—Guarantee.....	10.00	1.65		24.90
27982	Analysis.....	11.17	1.50		25.76
	Analysis.....	10.35	1.74		25.97
27925	Wiley's Tomato Special—Guarantee.....	9.00	2.80		30.30
	Analysis.....	9.36	2.63		29.82
27983	Analysis.....	9.93	2.57		30.32
Fidelity Chemical Corporation, Houston, Texas.—					
	Fidelity Ammoniated Superphosphate With Potash Fertilizer—Guarantee.....	10.00	1.65	1.00	28.90
28307	Analysis.....	9.94	2.07	1.26	32.37
28067	Analysis.....	10.00	1.76	1.49	31.52
28274	Analysis.....	11.14	1.55	1.20	30.81
28162	Analysis.....	8.69	1.89	1.37	29.86
28141	Fidelity Cotton Special Fertilizer—Guarantee.....	10.00	1.65	2.00	32.90
	Analysis.....	7.98	1.42	1.72	27.37
28149	Fidelity Cotton Standard Fertilizer—Guarantee.....	8.00	2.06	1.50	30.36
	Analysis.....	10.04	2.26	1.72	35.50
	Fidelity Non-Potassic Meal and Phosphate Fertilizer—Guarantee.....	10.00	1.65		24.90
28163	Analysis.....	8.77	2.04		25.40
28139	Analysis.....	9.12	1.88		24.96
	Fidelity Non-Potassic Meal Special Fertilizer—Guarantee.....	11.00	1.65		26.40
28136	Analysis.....	10.41	1.68		25.70
28137	Fidelity Non-Potassic Vegetable Fertilizer—Guarantee.....	12.00	2.47		32.82
	Analysis.....	12.74	2.03		31.29
28138	Fidelity Peerless Trucker Fertilizer—Guarantee.....	8.00	2.47	5.00	46.82
	Analysis.....	6.72	2.56	5.67	48.12
28148	Fidelity Potato Special Fertilizer—Guarantee.....	7.00	2.06	3.00	34.86
	Analysis.....	7.41	2.06	2.56	33.72
28146	Fidelity Regal Compound Fertilizer—Guarantee.....	10.00		4.00	31.00
	Analysis.....	10.01		4.57	33.30
28132	Fidelity 16 Per Cent Acid Phosphate—Guarantee.....	16.00			24.00
	Analysis.....	16.69			25.04
28293	Analysis.....	17.13			25.70

Table 3.—Analysis of commercial fertilizers, season 1919-1920.

Laboratory Number.	Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
	Fidelity Chemical Corporation, Houston, Texas—Continued.—				
28068	Analysis.....	16.89	.....	.....	\$25.34
28096	Analysis.....	16.96	.....	.....	25.44
28154	Analysis.....	16.23	.....	.....	24.35
28140	Fidelity Special Fertilizer—Guarantee.....	8.00	1.65	2.00	29.90
	Analysis.....	9.01	1.75	1.27	29.10
28147	Fidelity Strawberry Special Fertilizer—Guarantee.....	6.00	2.47	5.00	43.82
	Analysis.....	6.16	2.41	4.74	42.66
28150	Fidelity Tomato Special Fertilizer—Guarantee.....	10.00	2.47	1.50	35.82
	Analysis.....	8.19	2.82	2.21	39.05
	Henderson Cotton Oil and Gin Co., Henderson, Texas.—				
28022	Henderson Half and Half—Guarantee.....	8.70	3.50	.....	34.05
	Analysis.....	10.06	3.07	.....	33.51
28023	Henderson Staple—Guarantee.....	10.00	2.00	.....	27.00
	Analysis.....	11.72	2.19	.....	30.72
	Hope Fertilizer Co., Hope, Arkansas—				
28191	Blood and Bone Hope Standard—Guarantee.....	11.00	1.65	.....	26.40
	Analysis.....	11.15	1.80	.....	27.53
28049	Analysis.....	9.34	1.40	.....	22.41
28002	Blood and Bone Texas Special—Guarantee.....	10.00	2.50	.....	30.00
28038	Analysis.....	7.67	1.83	.....	22.49
28216	Blood and Bone No. 12 Without Potash—Guarantee.....	10.00	1.65	.....	24.90
	Analysis.....	6.54	2.04	.....	22.05
28031	Cotto Phos.—Guarantee.....	8.50	3.30	1.00	36.55
28051	Analysis.....	8.84	2.74	1.00	33.70
28098	Analysis.....	6.91	3.08	.98	32.77
28217	Analysis.....	7.43	3.36	.97	35.19
28048	Hope Fertilizer No. 10—Guarantee.....	11.00	1.65	.....	26.40
28283	Analysis.....	12.08	1.03	.....	24.30
28032	Hope Hustler Without Potash—Guarantee.....	11.52	1.70	.....	27.48
28202	Analysis.....	10.00	1.65	.....	24.90
28218	Analysis.....	10.37	1.62	.....	25.28
28282	Analysis.....	9.41	1.78	.....	24.80
28001	Hope Meal Mixture—Guarantee.....	9.09	1.74	.....	24.08
28036	Analysis.....	8.77	1.81	.....	24.02
28035	Our Cotton Grower—Guarantee.....	10.00	2.50	.....	30.00
28153	Analysis.....	11.27	1.66	.....	26.87
28203	Our Extra Cotton Grower—Guarantee.....	6.97	2.68	.....	26.54
28000	Ozan Trucker—Guarantee.....	10.00	1.65	1.00	28.90
28028	Analysis.....	10.50	1.94	.91	31.03
28003	Stork Brand Acid Phosphate 16 Per Cent—Guarantee.....	7.50	1.90	.81	25.89
28040	Analysis.....	10.00	1.65	2.00	32.90
28204	Analysis.....	9.42	1.77	1.79	31.91
28037	Stork Brand Acid Phosphate 18 Per Cent—Guarantee.....	8.00	2.50	1.00	31.00
28212	Analysis.....	5.84	1.55	1.04	22.22
	Stork Brand Nitrate of Soda—Guarantee.....	7.41	2.62	1.14	31.40
	Analysis.....	16.00	.....	.....	24.00
28024	Analysis.....	16.11	.....	.....	24.17
28025	Analysis.....	16.44	.....	.....	24.66
28206	Analysis.....	17.23	.....	.....	25.85
28037	Stork Brand Acid Phosphate 18 Per Cent—Guarantee.....	18.00	.....	.....	27.00
	Analysis.....	17.88	.....	.....	26.82
28212	Stork Brand Nitrate of Soda—Guarantee.....	15.00	.....	.....	90.00
	Analysis.....	15.18	.....	.....	91.08
	Houston County Oil Mill and Manufacturing Co., Crockett, Texas—				
28060	Crockett Compound—Guarantee.....	9.00	3.50	1.00	38.50
	Analysis.....	11.08	3.23	.71	38.94
28061	Crockett Phosphate Meal Mixture—Guarantee.....	11.00	1.65	.....	26.40
	Analysis.....	12.27	1.82	.....	29.33
28062	Crockett 16 Per Cent Acid Phosphate—Guarantee.....	16.00	.....	.....	24.00
	Analysis.....	17.35	.....	.....	26.03
	Longview Cotton Oil Co., Longview, Texas—				
28024	Longview Corn and Potato Special—Guarantee.....	10.00	3.00	.....	33.00
	Analysis.....	10.90	3.02	.....	34.47
28025	Analysis.....	10.96	3.08	.....	34.92
28026	Longview Cotton Grower—Guarantee.....	11.50	2.00	.....	29.25
	Analysis.....	13.49	2.14	.....	33.08

Table 3.—Analysis of commercial fertilizers, season 1919-1920.

Laboratory Number	Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
28039	Marshall Fertilizer Factory, Marshall, Texas. High Grade Acid Phosphate—Guarantee. Analysis.....	16.00 17.95			\$24.00 26.93
28299	Standard Grade Cotton and Corn—Guarantee. Analysis.....	10.00 8.75	1.65 2.10		24.90 25.73
28030	Standard Grade Cotton and Corn Special—Guarantee. Analysis.....	10.00 9.38	1.65 1.91		24.90 25.33
28161	Analysis.....	9.17	1.67		23.78
28300	Analysis.....	8.35	2.23		25.91
28301	Analysis.....	9.45	1.89		25.52
27977	Meridian Fertilizer Factory, Shreveport, La. Caddo Cotton—Guarantee. Analysis.....	9.35 10.35	1.90 1.57	1.00 1.01	29.43 28.99
27976	Caddo Cotton Non-Potassic—Guarantee. Analysis.....	10.35 11.00	1.90 1.83		26.93 27.48
28074	Analysis.....	12.24	1.59		27.90
28081	Analysis.....	11.51	1.70		27.47
27979	Meridian Blood and Bone—Guarantee. Analysis.....	10.00 10.96	1.65 1.44	1.00 1.39	28.90 30.64
28272	Analysis.....	13.20	1.86	.36	32.40
27935	Meridian Blood and Bone Non-Potassic—Guarantee. Analysis.....	11.00 11.43	1.65 1.68		26.40 27.23
27943	Analysis.....	10.66	1.56		25.35
28180	Analysis.....	14.91	2.31		36.23
28226	Analysis.....	14.00	2.09		33.54
28271	Analysis.....	11.65	2.04		29.72
28209	Meridian Corn Club Special Non-Potassic—Guarantee. Analysis.....	8.50 9.46	2.47 2.62		27.57 29.91
28205	Meridian Easy Driller Phosphate—Guarantee. Analysis.....	16.00 17.70			24.00 26.55
28222	Analysis.....	17.81			26.72
28259	Meridian Golden West—Guarantee. Analysis.....	10.00 11.29	2.00 1.27	0.00 1.98	35.00 32.48
27922	Meridian Home Mixture. Analysis.....	10.00 11.25	1.65 1.74	1.00 1.07	28.90 31.60
28016	Analysis.....	10.23	1.74	.66	28.42
28046	Analysis.....	13.65	1.58	.89	33.52
28070	Analysis.....	11.50	1.72	.55	29.77
28073	Analysis.....	10.49	1.89	1.12	31.56
28088	Analysis.....	12.30	1.87	.90	33.27
28158	Analysis.....	9.95	1.81	1.36	31.23
28188	Analysis.....	13.46	1.70	.62	32.87
28292	Analysis.....	13.51	1.38	.89	32.11
	Meridian Home Mixture Non-Potassic—Guarantee. Analysis.....	11.00 10.12	1.65 1.49		26.40 24.12
27923	Analysis.....	11.66	1.52		26.61
27984	Analysis.....	13.69	1.42		29.06
28047	Analysis.....	13.51	1.59		29.81
28192	Analysis.....	13.75	1.74		31.07
28223	Analysis.....	11.01	1.93		28.10
28227	Analysis.....	10.61	2.10		28.52
28270	Meridian Meal Mixture—Guarantee. Analysis.....	10.00 11.02	1.65 1.40	1.00 1.22	28.90 29.81
28181	Analysis.....	13.63	1.38	1.01	32.77
28276	Meridian Nitrated Bone and Potash—Guarantee. Analysis.....	10.00 10.56	1.65 1.90	2.00 2.14	32.90 35.80
28086	Meridian Perfection Acid Phosphate—Guarantee. Analysis.....	18.00 18.59			27.00 27.89
27948	Meridian Southern Standard—Guarantee. Analysis.....	10.00 12.76	2.00 2.04		31.38
28187	Meridian Tomato Special—Guarantee. Analysis.....	10.00 9.81	2.47 2.64	1.00 1.19	33.82 35.32
27927	Analysis.....	10.32	2.52	1.03	34.72
27934	Analysis.....	10.21	2.67	1.10	35.73
27936	Analysis.....	10.96	2.67	1.01	36.50
27985	Analysis.....	11.23	1.76	1.28	32.53
28166	Meridian Tomato Special Non-Potassic—Guarantee. Analysis.....	11.00 11.67	2.47 2.35		31.32 31.61
27978	Analysis.....	9.00	1.65	2.00	31.40
27920	Meridian Truckers Special—Guarantee. Analysis.....	10.40	1.59	1.45	30.94
28087	Nitrate of Soda—Guarantee. Analysis.....	15.00 15.39			90.00 92.34
28080	Special Cotton Formula—Guarantee. Analysis.....	10.00 11.79	1.65 1.53		24.90 26.87
28175	Analysis.....	11.49	1.36		25.40

Table 3.—Analysis of commercial fertilizers, season 1919-1920.

Laboratory
Number.

	Manufacturer, Place of Business and Brand.	Phosphoric Acid— Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
28182	Meridian Fertilizer Factory, Shreveport, La.—Continued.				
28186	Analysis.....	11.71	1.50		\$26.57
28189	Analysis.....	12.80	1.20		26.40
28208	Analysis.....	14.16	1.70		31.44
28260	Analysis.....	11.53	1.87		28.52
28165	Star—Guarantee.....	11.30	1.59	1.00	26.49
28184	Analysis.....	10.00	1.65	1.03	28.90
		10.87	1.71	1.03	30.69
		12.42	1.74	.91	32.71
		16.00			24.00
27921	Analysis.....	15.93			23.70
27980	Analysis.....	16.40			24.60
28027	Analysis.....	18.00			27.00
28045	Analysis.....	18.05			27.08
28071	Analysis.....	16.92			25.38
28079	Analysis.....	18.09			27.14
28177	Analysis.....	18.82			28.23
28185	Analysis.....	18.10			27.15
28190	Analysis.....	18.48			27.72
28228	Analysis.....	16.95			25.43
28273	Analysis.....	19.33			29.00
28275	Analysis.....	18.86			29.29
27910	Nitrate Agencies Co., New Orleans, La.—				
	Nitrate of Soda—Guarantee.....	15.00			90.00
	Analysis.....	15.33			91.98
28059	Palestine Oil and Manufacturing Company, Palestine, Texas.—				
	Palestine Corn and Vegetable Fertilizer—Guarantee.....	8.00	3.50	1.00	37.00
	Analysis.....	9.11	3.54	1.00	38.91
28058	Palestine Cotton Grower—Guarantee.....	11.00	1.65		26.40
	Analysis.....	12.23	1.82		29.27
28010	Pelican Fertilizer Works, Shreveport, La.—				
	Pelican Meal Compound—Guarantee.....	10.00	1.65	1.00	28.90
28011	Analysis.....	10.24	2.07	1.15	32.38
28012	Analysis.....	10.44	1.65	.98	29.48
28284	Pelican Special Formula—Guarantee.....	10.69	1.70	.97	30.12
	Analysis.....	10.00	1.65		24.90
		9.90	1.95		26.55
28097	Peoples Cotton Oil Company, Winnsboro, Texas.—				
	Cotton Seed Feed.....		7.00		42.00
	Analysis.....		7.10		42.60
28304	Planters Fertilizer and Chemical Co., Houston, Fort Worth, Texas, and New Orleans, La.—				
	Planters' Plow Brand Blood and Bone With Potash—Guarantee.....	10.00	1.65	1.00	28.90
	Analysis.....	9.35	1.71	1.10	28.69
	Planters' Plow Brand Farmers Champion With Potash—Guarantee.....	10.00	1.65	1.00	28.90
28105	Analysis.....	10.84	1.77	1.35	32.28
28106	Planters' Plow Brand Farm Special—Guarantee.....	8.00	1.65	2.00	29.90
	Analysis.....	6.91	1.38	1.51	25.19
	Planters' Plow Brand Farm Special Without Potash—Guarantee.....	10.00	1.65		24.90
28017	Analysis.....	9.90	1.72		25.17
28101	Analysis.....	10.76	1.81		27.00
28103	Analysis.....	10.71	1.79		26.81
	Planters' Plow Brand Fruit and Truck Special—Guarantee.....	8.00	2.47	4.00	42.82
28254	Analysis.....	8.29	2.27	3.81	41.30
	Planters' Plow Brand Imperial Cotton Mixture—Guarantee.....	8.00	1.65	2.00	29.90
28107	Analysis.....	7.56	1.68	1.86	28.86
	Planters' Plow Brand Imperial Cotton Mixture Without Potash—Guarantee.....	10.00	1.65		24.90
28018	Analysis.....	10.06	1.68		25.17
28102	Analysis.....	10.31	1.82		26.39
28104	Analysis.....	9.77	1.45		23.36
28108	Analysis.....	9.90	1.63		24.63
28167	Analysis.....	10.63	1.00		26.15

Table 3.—Analysis of commercial fertilizers, season 1919-1920.

Laboratory Number.	Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
	Planters Fertilizer and Chemical Co., Houston, Fort Worth, Texas, and New Orleans, La.—Continued.				
27995	Planters' Plow Brand 16 Per Cent Acid Phosphate—Guarantee.....	16.00			\$24.00
28133	Analysis.....	17.35			26.03
	Analysis.....	19.16			28.74
27996	Planters' Plow Brand Vegetable Grower—Guarantee.....	7.00	2.47	3.50	39.32
	Analysis.....	6.58	2.18	2.86	34.39
	Shreveport Fertilizer Works, Shreveport, La.—				
28235	Lion Double B—Guarantee.....	10.00	1.65		24.90
	Analysis.....	9.69	1.60		24.14
28179	Lion Meal Formula—Guarantee.....	10.00	1.65		24.90
	Analysis.....	11.17	2.36		30.92
28234	Lion Success Mixture—Guarantee.....	11.00	1.65		26.40
	Analysis.....	11.63	1.72		27.77
28178	Lion Xtra Good Acid Phosphate—Guarantee.....	16.00			24.00
28261	Analysis.....	16.56			24.84
28095	Analysis.....	19.34			29.01
	Analysis.....	15.96			23.94
	Sulphur Springs Acid and Fertilizer Co., Sulphur Springs, Texas.—				
28082	Plantation Fertilizer—Guarantee.....	11.00	1.65		26.40
	Analysis.....	13.89	1.80		31.64
28170	Analysis.....	12.59	1.78		29.57
28083	Planter's Special Fertilizer—Guarantee.....	8.00	3.00		30.00
28168	Analysis.....	10.30	3.53		36.63
	Analysis.....	9.43	3.44		34.79
28169	Plantation Special Grower—Guarantee.....	10.00	2.00		27.00
	Analysis.....	11.76	2.23		31.02
	Swift & Co., Fort Worth, Texas, Harvey and Shreveport, La.—				
	Swift's Ammoniated Raw Bone Superphosphate—				
27961	Guarantee.....	9.50	1.65	1.50	30.15
27967	Analysis.....	11.59	1.54	1.62	33.11
27993	Analysis.....	8.61	1.63	1.45	28.50
	Analysis.....	9.22	1.66	1.41	29.43
27962	Swift's Blood and Bone—Guarantee.....	12.00	1.65		27.90
27991	Analysis.....	14.31	1.66		31.43
28005	Analysis.....	11.70	1.69		27.69
28043	Analysis.....	12.16	1.66		28.20
28145	Analysis.....	12.50	1.66		28.71
28214	Analysis.....	13.10	1.53		28.83
28269	Analysis.....	13.31	1.31		27.83
28291	Analysis.....	12.62	1.37		27.15
	Swift's Blood and Bone Special—Guarantee.....	12.64	1.44		27.60
27929	Analysis.....	10.00	2.47		29.82
27944	Analysis.....	9.23	2.34		27.89
27986	Analysis.....	12.83	1.69		29.39
28296	Analysis.....	11.21	2.17		29.84
27992	Swift's Cotton and Corn Grower—Guarantee.....	10.91	1.85		27.47
	Analysis.....	9.00	1.65	2.00	31.40
28113	Swift's Diamond "C" Onion Grower—Guarantee.....	8.75	1.74	1.80	30.77
	Analysis.....	8.00	2.47	2.00	34.82
28142	Swift's Early Vegetable and Fruit Fertilizer—Guarantee.....	8.46	2.36	1.55	33.05
	Analysis.....	10.00	3.29		34.74
27918	Swift's East Texas Trucker—Guarantee.....	9.51	3.29		31.01
	Analysis.....	8.00	2.47	3.00	38.82
27994	Swift's General Crop Producer—Guarantee.....	8.55	2.10	2.94	37.18
28053	Analysis.....	11.00	1.65		26.40
28055	Analysis.....	10.84	1.77		26.88
28215	Analysis.....	12.80	1.63		28.98
28224	Analysis.....	11.37	1.49		26.00
28265	Analysis.....	10.87	1.57		25.73
	Swift's High Grade Acid Phosphate 16 Per Cent—	12.07	1.64		27.95
27902	Guarantee.....	12.30	1.67		28.47
27946	Analysis.....	16.00			24.00
27963	Analysis.....	17.15			25.73
	Analysis.....	16.63			24.94
27972	Analysis.....	15.97			23.96
	Analysis.....	16.33			24.50

Table 3.—Analysis of commercial fertilizers, season 1919-1920.

Laboratory Number.	Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Swift & Co., Fort Worth, Texas, Harvey and Shreveport, La.—Continued.					
27987	Analysis.....	16.08	.....	.....	\$24.12
28007	Analysis.....	16.68	.....	.....	25.02
28034	Analysis.....	16.21	.....	.....	24.31
28054	Analysis.....	18.06	.....	.....	27.09
28056	Analysis.....	16.58	.....	.....	24.87
28225	Analysis.....	16.30	.....	.....	24.45
28232	Analysis.....	17.79	.....	.....	26.69
28267	Analysis.....	17.99	.....	.....	26.98
28268	Analysis.....	18.29	.....	.....	27.44
28295	Analysis.....	17.60	.....	.....	26.40
28317	Analysis.....	17.25	.....	.....	25.88
28318	Analysis.....	17.00	.....	.....	25.50
28319	Analysis.....	16.81	.....	.....	25.22
28044	Analysis.....	16.18	.....	.....	24.27
28213	Swift's Nitrate of Soda—Guarantee.....	14.80	.....	.....	88.80
	Analysis.....	14.90	.....	.....	89.40
27912	Swift's Onion Grower—Guarantee.....	7.00	3.70	3.00	44.70
27919	Analysis.....	7.33	3.45	1.87	39.18
28121	Analysis.....	6.78	3.49	2.09	39.47
	Swift's Palmetto Guano—Guarantee.....	7.82	3.54	2.68	43.69
27988	Analysis.....	8.00	2.47	3.00	38.82
28306	Analysis.....	8.37	2.36	2.94	38.47
	Swift's Red Steer Guano—Guarantee.....	11.43	2.10	2.22	38.63
27947	Analysis.....	10.00	2.47	3.00	41.82
28144	Analysis.....	10.91	1.93	2.69	38.71
28196	Analysis.....	10.10	2.23	2.49	38.49
	Swift's Special Cotton and Corn Grower—Guarantee.....	12.30	1.96	2.54	40.37
28152	Analysis.....	10.00	1.65	1.00	28.90
28197	Analysis.....	10.24	1.66	1.03	29.44
28289	Analysis.....	11.20	1.37	1.75	32.02
28305	Analysis.....	10.59	1.31	1.47	29.63
	Swift's Special Mixture.....	11.28	1.38	1.96	33.04
27945	Analysis.....	10.00	1.65	.....	24.90
27952	Analysis.....	10.30	1.70	.....	25.65
28006	Analysis.....	10.83	1.65	.....	26.15
28013	Analysis.....	9.90	1.64	.....	24.69
28019	Analysis.....	10.27	1.42	.....	23.93
28033	Analysis.....	10.36	1.53	.....	24.72
28042	Analysis.....	10.39	1.48	.....	24.47
28099	Analysis.....	10.34	1.70	.....	25.71
28100	Analysis.....	10.83	1.61	.....	25.91
28160	Analysis.....	10.25	2.15	.....	28.28
28210	Analysis.....	10.93	1.65	.....	26.30
28233	Analysis.....	13.45	1.72	.....	30.50
28266	Analysis.....	10.57	1.52	.....	24.98
28286	Analysis.....	11.28	1.61	.....	26.58
28287	Analysis.....	10.92	1.52	.....	25.50
28288	Analysis.....	10.11	1.52	.....	24.29
28290	Analysis.....	11.26	1.64	.....	26.73
28294	Analysis.....	10.40	1.76	.....	26.16
28297	Analysis.....	12.12	1.45	.....	26.88
28310	Analysis.....	12.81	1.16	.....	26.18
	Swift's Special Onion Grower—Guarantee.....	11.53	1.46	.....	26.06
28115	Analysis.....	6.00	3.29	.....	28.74
28118	Analysis.....	6.08	2.94	.....	26.76
28119	Analysis.....	6.68	3.24	.....	29.46
	Swift's Special Tankage Fertilizer—Guarantee.....	6.89	3.22	.....	29.66
27903	Analysis.....	4.80	5.27	.....	38.82
27904	Analysis.....	5.09	4.94	.....	37.28
27905	Analysis.....	4.41	4.84	.....	35.66
27906	Analysis.....	4.55	4.75	.....	35.33
27907	Analysis.....	5.82	4.89	.....	38.07
27908	Analysis.....	4.47	5.10	.....	37.31
27909	Analysis.....	4.80	5.05	.....	37.50
	Swift's Standard Tankage Mixture—Guarantee.....	4.72	5.12	.....	37.80
28125	Analysis.....	6.00	3.29	3.00	40.74
28126	Analysis.....	5.75	2.92	2.85	37.55
28127	Analysis.....	5.99	2.76	2.70	36.35
	Swift's Truckers' Favorite—Guarantee.....	6.77	2.92	2.77	38.76
27989	Analysis.....	8.00	2.47	1.00	30.82
28041	Analysis.....	11.24	2.28	1.33	35.86
		9.45	2.07	.90	30.20

Table 3.—Analysis of commercial fertilizers, season 1919-1920.

Laboratory Number.	Manufacturer, Place of Business and Brand	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
	Swift & Co., Fort Worth, Texas, Harvey and Shreveport, La.—Continued.				
28143	Swift's Truckee's Favorite—Continued.				
	Analysis.....	9.11	2.17	.90	\$30.29
28195	Analysis.....	10.10	2.50	1.36	35.59
28151	Swift's Vegetable Special—Guarantee.....	8.00	3.29	2.00	39.74
28219	Analysis.....	9.27	2.86	2.32	40.35
	Analysis.....	11.87	1.64	1.51	33.69
	Tennessee Coal, Iron and Railroad Co., Birmingham, Ala.—				
28249	Duples Basic Phosphate—Guarantee.....	18.00			18.00
28253	Analysis.....	19.60			19.60
28231	Analysis.....	19.22			19.22
	Analysis.....	19.18			19.18
	Union Seed and Fertilizer Co., New Orleans, La.—				
28173	Blood and Bone—Guarantee.....	11.00	1.65		26.40
	Analysis.....	12.48	1.37		26.94
28236	Analysis.....	12.29	1.73		28.82
28229	Blood, Bone and Potash—Guarantee.....	10.00	1.65	1.00	28.90
	Analysis.....	10.36	2.05	.65	30.44
27997	Bull Dog Acid Phosphate—Guarantee.....	16.00			24.00
28052	Analysis.....	16.59			24.89
28321	Analysis.....	17.61			26.42
	Analysis.....	18.15			27.23
28176	Creole Sugar Cane Fertilizer No. 38—Guarantee.....	8.00	2.50		27.00
	Analysis.....	8.49	2.50		27.74
28050	Economizer—Guarantee.....	10.00	1.65	2.00	32.90
	Analysis.....	11.33	1.78	1.82	34.96
28171	Goldsmith's Improved Mixture—Guarantee.....	10.00	1.65	1.00	28.90
	Analysis.....	9.21	1.84	1.12	29.34
	Goldsmith Improved Mixture Without Potash—Guarantee.....	11.00	1.65		26.40
27999	Analysis.....	12.60	1.18		25.98
28172	Analysis.....	11.60	1.83		28.38
28230	Analysis.....	11.56	1.71		27.60
28257	Analysis.....	10.19	2.01		27.35
27998	Texas Guano—Guarantee.....	10.00	1.65		24.90
	Analysis.....	10.48	1.74		26.16
	Virginia-Carolina Chemical Co. of Delaware, Shreveport, La.—				
27958	B. B. Beef, Blood and Bone—Guarantee.....	10.00	1.65	1.00	28.90
27964	Analysis.....	10.43	1.37	1.11	28.31
27969	Analysis.....	11.49	1.31	1.38	30.62
27973	Analysis.....	10.01	1.54	1.02	28.34
27981	Analysis.....	11.13	1.26	.89	27.82
28264	Analysis.....	10.21	1.47	1.32	29.42
28302	Analysis.....	12.66	1.91	1.58	36.77
	Georgia State Grange—Guarantee.....	10.29	1.64	1.82	32.56
27960	Analysis.....	10.00	1.65	1.00	28.90
27974	Analysis.....	10.05	1.79	.99	29.78
27990	Analysis.....	10.64	1.74	1.03	30.52
28014	Analysis.....	11.38	1.54	.99	30.27
28064	Analysis.....	11.09	1.71	1.02	30.98
28091	Analysis.....	11.10	1.72	.95	30.77
28157	Analysis.....	10.79	1.57	.97	29.49
28159	Analysis.....	10.32	1.64	.90	28.92
28220	Analysis.....	10.18	1.72	.88	29.11
28285	Analysis.....	11.03	1.71	.66	29.45
28255	Analysis.....	10.87	1.99	1.44	34.01
28303	Analysis.....	11.28	1.60	1.21	31.36
	Georgia State Grange Non-Potassic—Guarantee.....	12.00	1.83	1.30	34.18
28015	Analysis.....	11.00	1.65		26.40
28057	Analysis.....	11.93	1.78		28.58
	Mobile Raw Bone Ammoniated Superphosphate—Guarantee.....	11.95	1.63		27.71
27940	Analysis.....	10.00	1.65	1.50	30.90
28129	Analysis.....	10.25	1.48	1.51	30.30
	Royal Blood, Bone and Potash—Guarantee.....	10.16	1.57	1.31	29.90
27965	Analysis.....	10.95	1.27	1.62	30.53
28093	Royal Cotton Boll Guano—Guarantee.....	10.00	1.65		24.90
	Analysis.....	10.81	1.66		26.18
28206	Royal Cotton Boll Guano Non-Potassic—Guarantee.....	10.00	1.65		24.90
	Analysis.....	10.50	1.44		24.39

COMMERCIAL FERTILIZERS IN 1919-1920.

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Table 3.—Analysis of commercial fertilizers, season 1919-1920.

Laboratory Number.

Manufacturer, Place of Business and Brand.

		Phosphoric Acid— Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Virginia-Carolina Chemical Co. of Delaware, Shreveport, La.—Continued.					
28256	Royal Tomato Formula Non-Potassic—Guarantee.	11.00	2.47	.....	\$31.32
	Analysis.	12.15	1.89	.....	29.57
27938	Scott's Gossypium Phospho—Guarantee.	10.00	1.65	1.50	30.90
28128	Analysis.	11.18	1.86	1.50	33.93
27968	Scott's Gossypium Phospho Special—Guarantee.	10.43	1.66	1.39	31.17
	Analysis.	10.00	1.65	2.00	32.90
27957	Scott's State Standard Guano—Guarantee.	10.91	1.59	1.71	32.75
	Analysis.	8.00	1.65	2.00	29.90
28066	Scott's State Standard Guano Non-Potassic—Guarantee	10.00	1.65	.....	24.90
28089	Analysis.	10.71	1.59	.....	25.61
28193	Analysis.	10.95	1.53	.....	25.61
28211	Analysis.	11.74	1.43	.....	26.19
28263	Analysis.	10.76	1.56	.....	25.50
28312	Analysis.	13.17	1.86	.....	30.92
V. C. High Grade Guano—Guarantee.		11.20	1.50	.....	25.80
27955	Analysis.	10.00	1.65	2.00	32.90
28251	Analysis.	11.33	1.33	2.18	33.70
V. C. Meal Formula Non-Potassic—Guarantee.		10.45	1.44	1.63	30.84
27959	Analysis.	10.00	1.65	.....	24.90
27971	Analysis.	10.11	1.94	.....	26.81
28092	Analysis.	10.25	1.87	.....	26.60
28221	Analysis.	11.11	1.52	.....	25.79
V. C. G. Co.'s 16 Per Cent Acid Phosphate—Guarantee.		11.72	1.49	.....	26.52
27937	Analysis.	16.00	.....	.....	24.00
27966	Analysis.	17.82	.....	.....	26.73
27970	Analysis.	18.86	.....	.....	28.29
27956	Analysis.	17.04	.....	.....	25.56
27975	Analysis.	17.05	.....	.....	25.58
28063	Analysis.	16.88	.....	.....	25.32
28090	Analysis.	17.75	.....	.....	26.63
28094	Analysis.	17.54	.....	.....	26.31
28065	Analysis.	17.44	.....	.....	26.16
28131	Analysis.	17.54	.....	.....	26.31
28183	Analysis.	17.50	.....	.....	26.25
28247	Analysis.	17.61	.....	.....	26.42
28252	Analysis.	18.61	.....	.....	27.92
27954	Analysis.	17.82	.....	.....	26.73
28258	Analysis.	17.63	.....	.....	26.45
28262	Analysis.	17.60	.....	.....	26.40
28314	Analysis.	18.71	.....	.....	28.07
28320	Analysis.	17.68	.....	.....	26.52
28250	Analysis.	17.13	.....	.....	25.70
28245	Analysis.	18.12	.....	.....	27.18
28246	Analysis.	17.28	.....	.....	25.92
28248	Analysis.	16.65	.....	.....	24.95
V. C. Tomato Special—Guarantee.		17.18	.....	.....	25.77
27939	Analysis.	10.00	2.47	1.50	35.82
28085	Analysis.	10.33	2.48	1.66	37.02
C. C. C. Co.'s Truck Grower—Guarantee.		9.64	2.26	1.05	32.22
27941	Analysis.	8.00	2.06	6.00	48.36
27953	Analysis.	8.00	1.76	5.65	45.16
28130	Analysis.	8.50	1.48	5.76	44.67
V. C. XXX Special—Guarantee.		9.20	1.79	2.06	32.78
28207	Analysis.	8.00	2.47	1.00	30.82
28313	Analysis.	8.69	2.08	1.27	30.60
V. C. XXX Special Non-Potassic—Guarantee.		7.55	2.54	.94	30.33
28194	Analysis.	9.00	2.47	.....	28.32
	Analysis.	9.42	2.38	.....	28.41
Wills Point Cotton Oil Co., Wills Point, Texas.—					
28111	Fertilizer Cotton Seed Meal—Guarantee.	1.00	7.00	1.00	47.50
	Analysis.	2.17	6.46	1.57	48.30
28309	Semper-Fidelis Phospho Meal—Guarantee.	9.00	3.50	1.00	38.50
	Analysis.	9.46	3.46	.92	38.63
28308	Semper-Fidelis Special Fertilizer—Guarantee.	11.00	1.65	1.00	30.40
28311	Analysis.	10.78	1.66	1.31	31.37
	Analysis.	9.78	2.13	1.17	32.13

Table 4.—Registration of commercial fertilizers, season 1919-1920.

Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
C. Amsler's Estate, Hempstead, Texas.— Cotton Seed Fertilizer.....	6.00	.....	.....	\$36.00
Arkansas Fertilizer Co., Little Rock, Ark.—				
White Diamond Ammoniated Bone Superphosphate.....	9.00	1.65	2.00	31.40
White Diamond Arkansas Standard.....	10.00	1.65	1.00	28.90
White Diamond Blood, Bone and Potash.....	12.00	2.00	1.50	36.00
White Diamond Corn Grower, Without Potash.....	11.00	1.65	.....	26.40
White Diamond Early Potato and Truck.....	8.00	2.50	4.00	43.00
White Diamond Early Potato and Truck Without Potash.....	12.00	2.50	.....	33.00
White Diamond "Gro-Fast" Fertilizer.....	8.00	1.65	2.00	30.90
White Diamond Kali Superphosphate.....	11.00	.....	3.00	28.50
White Diamond New South.....	10.00	1.65	.....	24.90
White Diamond Queen of the South.....	12.00	1.65	.....	27.90
White Diamond Southern King.....	12.00	2.00	2.00	38.00
White Diamond Southern Queen.....	10.00	1.65	2.00	32.90
White Diamond Southern Standard.....	10.00	1.65	1.50	30.90
White Diamond Special Acid Phosphate.....	16.00	.....	.....	24.00
White Diamond 20th Century Fertilizer.....	9.00	1.65	2.00	31.40
Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, La.—				
Armour's African Cotton Grower.....	9.00	2.47	3.00	40.32
Armour's Best Phosphate.....	18.00	1.65	.....	27.00
Armour's Blood and Bone Special Without Potash.....	10.00	1.65	.....	24.90
Armour's Champion Meal Mixture With Potash.....	10.00	1.65	2.00	32.90
Armour's Champion Meal Mixture Without Potash.....	12.00	1.65	.....	27.90
Armour's Corn King.....	8.00	2.47	2.00	34.82
Armour's Cottonseed Meal Special.....	10.00	1.65	1.50	30.90
Armour's Delta Special.....	6.00	4.11	2.00	41.66
Armour's Dried Blood.....	13.16	.....	.....	78.96
Armour's Farmers' Choice With Potash.....	10.00	1.65	1.00	28.90
Armour's Farmers' Choice Without Potash.....	10.00	1.95	.....	26.70
Armour's Farmers' Favorite With Potash.....	10.00	1.65	2.00	32.90
Armour's Farmers' Favorite Without Potash.....	12.00	1.65	.....	27.90
Armour's Gold Medal.....	9.50	1.65	1.50	30.15
Armour's Gold Medal Without Potash.....	11.00	1.65	.....	25.40
Armour's Grain Grower.....	8.00	1.65	2.00	29.90
Armour's Grain Grower Without Potash.....	10.00	1.65	.....	24.90
Armour's Ground Bone Meal.....	*22.00	1.65	.....	31.90
Armour's Helmet Phosphate.....	12.00	.....	.....	18.00
Armour's King Cotton.....	8.00	1.65	2.00	29.90
Armour's King Cotton Without Potash.....	10.00	1.65	.....	24.90
Armour's Meal and Potash Mixture.....	10.00	1.65	3.00	36.90
Armour's Nitrate of Soda.....	14.81	.....	.....	88.86
Armour's Onion Fertilizer No. 1.....	8.00	3.29	8.00	63.74
Armour's Onion Fertilizer No. 2.....	8.00	2.47	4.00	42.82
Armour's Onion Fertilizer No. 3.....	8.00	3.29	6.00	55.74
Armour's Onion Fertilizer No. 4.....	3.00	4.01	5.00	49.16
Armour's Onion Fertilizer No. 5.....	5.00	4.94	3.00	49.14
Armour's Onion Fertilizer No. 6.....	4.00	4.94	7.00	63.64
Armour's Onion Fertilizer No. 7.....	6.00	3.29	3.00	40.74
Armour's Onion Fertilizer No. 8.....	6.00	3.29	6.00	52.74
Armour's Onion Fertilizer No. 9.....	10.00	2.47	6.00	53.82
Armour's Onion Fertilizer No. 10.....	3.00	4.94	5.00	54.14
Armour's Onion Fertilizer No. 11.....	5.00	4.11	3.00	44.16
Armour's Onion Fertilizer No. 12.....	6.00	3.29	4.00	44.74
Armour's Onion Fertilizer No. 13.....	1.00	4.94	1.00	35.14
Armour's Onion Fertilizer No. 14.....	7.00	4.94	.....	40.14
Armour's Onion Fertilizer No. 15.....	10.00	2.47	1.00	33.82
Armour's Onion Fertilizer No. 16.....	8.00	2.47	.....	26.82
Armour's Onion Fertilizer No. 17.....	10.00	3.29	.....	34.74
Armour's Onion Fertilizer No. 18.....	4.00	4.94	.....	35.64
Armour's Onion Fertilizer No. 19.....	6.00	3.29	.....	28.74
Armour's Onion Fertilizer No. 20.....	7.00	4.11	.....	35.16
Armour's Onion Fertilizer No. 21.....	8.00	4.11	2.00	36.66
Armour's Onion Fertilizer No. 22.....	6.00	2.47	2.00	31.82
Armour's Phosphate and Potash Special.....	12.00	.....	4.00	34.00
Armour's Raw Bone Meal.....	*22.00	3.70	.....	44.20
Armour's Rice King.....	8.00	1.65	2.00	29.90
Armour's Rice King Without Potash.....	10.00	1.65	.....	24.90
Armour's Royal Mixture With Potash.....	10.00	1.65	1.00	28.90
Armour's Royal Mixture Without Potash.....	10.00	1.95	.....	26.70

*Total Phosphoric Acid.

Table 4.—Registration of commercial fertilizers, season 1919-1920.

Manufacturer, Place of Business and Brand.	Phosphoric Acid Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, La.—Continued.				
Armour's Sandy-Highland Special.....	10.00	1.65	1.50	\$30.90
Armour's Shield Phosphate.....	14.00	1.65	.....	21.00
Armour's Special Blood Mixture Without Potash.....	11.00	1.65	.....	26.40
Armour's Special Blood and Bone Mixture.....	9.50	1.65	1.50	30.15
Armour's Special Farm Mixture.....	8.00	1.65	2.00	29.90
Armour's Special Farm Mixture Without Potash.....	10.00	1.65	.....	24.90
Armour's Special Formula No. 84.....	8.00	3.29	.....	31.74
Armour's Star Phosphate.....	16.00	.....	.....	24.00
Armour's Strawberry Grower.....	8.00	1.65	3.00	33.90
Armour's Strawberry King.....	10.00	2.47	4.00	45.82
Armour's Sulphate of Ammonia.....	.....	20.58	.....	123.48
Armour's Tankage No. 1.....	* 6.87	6.58	.....	46.35
Armour's Tankage No. 2.....	* 6.87	7.40	.....	51.27
Armour's Tankage No. 3.....	* 4.58	8.23	.....	56.25
Armour's Texas Berry King.....	8.00	2.47	4.00	42.82
Armour's Texas Trucker.....	10.00	2.47	.....	29.82
Armour's Texas Vegetable Grower.....	9.00	2.05	3.00	37.80
Armour's Tomato Grower.....	10.00	2.47	.....	29.82
Armour's Truck and Berry Special.....	10.00	1.65	3.00	36.90
Armour's Truck Special No. 1.....	7.00	4.11	6.00	59.16
Armour's Truck Special No. 2.....	8.00	1.65	3.00	33.90
Barrett Company, 17 Battery, P. I., New York City, N. Y.—				
Arcadian Sulphate of Ammonia.....	.....	20.75	.....	124.50
Bryan Cotton Oil and Fertilizer Co., Bryan, Texas.—				
Star Brand Acid Phosphate.....	16.00	.....	.....	24.00
Star Brand Cotton and Corn Fertilizer.....	11.50	1.80	.....	28.05
Star Brand Phospho Special Fertilizer.....	11.00	2.00	.....	28.50
Star Brand Potato Fertilizer.....	8.00	3.50	.....	33.00
The Cudahy Packing Co., Chicago, Ill.—				
Blue Ribbon Fertilizer (Steamed Bone Meal).....	*24.00	2.47	.....	38.82
Chas. H. R. Campbell, M. D., San Antonio, Texas.—				
Bat Roost Guano.....	3.00	12.00	.....	76.50
Dallas Fertilizer and Reduction Co., Dallas, Texas.—				
Cotton and Corn Grower Non-Potassic.....	10.00	2.47	.....	29.82
Tomato Grower.....	10.00	2.47	.....	29.82
Vegetable Grower.....	9.00	2.47	3.00	40.32
Earp-Thomas Cultures Corporation, New York City, N. Y.—				
Farmogerm.....	.....	.....	.....	.....
East Texas Fertilizer Co., Tyler, Texas.—				
16 Per Cent Acid Phosphate.....	16.00	.....	.....	24.00
Tomato Grower.....	10.00	2.47	.....	29.82
Wileyed 11-1.65 Farm Mixture.....	11.00	1.65	.....	26.40
Wileyed Farm Mixture.....	10.00	1.65	.....	24.90
Wileyed 10.35-1.90 Farm Mixture.....	10.35	1.90	.....	26.93
Wileyed Tomato Special.....	9.00	2.80	.....	30.30
Wileyed 12-1.65 Farm Mixture.....	12.00	1.65	.....	27.90
Farmers Cotton Oil Co., Winnsboro, Texas.—				
Cotton Seed Meal.....	1.50	7.00	1.00	48.25
Fidelity Chemical Corporation, Houston, Texas.—				
Fidelity Ammoniated Superphosphate With Potash Fertilizer.....	10.00	1.65	1.00	28.90
Fidelity Bat Guano Fertilizer.....	2.00	10.25	6.00	88.50
Fidelity Citrus Fertilizer.....	4.00	2.47	6.00	44.82
Fidelity Cotton Special Fertilizer.....	10.00	1.65	2.00	32.90
Fidelity Cotton Special No. 2 Fertilizer.....	10.00	1.65	1.50	30.90
Fidelity Cotton Standard Fertilizer.....	8.00	2.06	1.50	30.36
Fidelity 14 Per Cent Phosphate.....	14.00	.....	.....	21.00
Fidelity Nitrate of Soda.....	.....	15.00	.....	90.00
Fidelity Non-Potassic Cotton Grower Fertilizer.....	10.00	2.00	.....	27.00
Fidelity Non-Potassic Meal and Phosphate Fertilizer.....	10.00	1.65	.....	24.90
Fidelity Non-Potassic Meal Special Fertilizer.....	11.00	1.65	.....	26.40
Fidelity Non-Potassic Vegetable Fertilizer.....	12.00	2.47	.....	32.82
Fidelity Peerless Trucker Fertilizer.....	8.00	2.47	5.00	46.82
Fidelity Potato Special Fertilizer.....	7.00	2.06	3.00	34.86
Fidelity Regal Compound Fertilizer.....	10.00	.....	4.00	31.00

*Total Phosphoric Acid.

Table 4.—Registration of commercial fertilizers, season 1919-1920.

Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Fidelity Chemical Corporation, Houston, Texas.—Continued.—				
Fidelity Rice Planter Fertilizer.....	12.00	.....	2.00	\$26.00
Fidelity 16 Per Cent Phosphate.....	16.00	.....	.....	24.00
Fidelity Special Fertilizer.....	8.00	1.65	2.00	29.90
Fidelity Strawberry Special Fertilizer.....	6.00	2.47	5.00	43.82
Fidelity Tomato Special Fertilizer.....	10.00	2.47	1.50	35.82
Gate City Fertilizer Co., Texarkana, Ark.—				
Red Ball Ammoniated Superphosphate.....	12.00	1.65	.....	27.90
Red Ball Arkahoma Special.....	9.00	1.65	2.00	31.40
Red Ball Blood and Bone.....	11.00	.....	1.50	31.50
Red Ball Blood, Bone and Potash.....	12.00	2.00	1.50	36.00
Red Ball Complete Fertilizer.....	10.00	1.65	1.00	28.90
Red Ball Cotton Grower.....	9.00	1.65	2.00	31.40
Red Ball Diversified Croppers.....	10.00	1.65	2.00	32.90
Red Ball Early Potato and Truck.....	8.00	2.50	4.00	43.00
Red Ball Early Potato and Truck Without Potash.....	12.00	2.50	.....	37.00
Red Ball Extra Acid Phosphate.....	16.00	.....	.....	24.00
Red Ball Four States Standard Without Potash.....	11.00	1.65	.....	26.40
Red Ball Old Reliable Fertilizer.....	8.00	1.65	2.00	29.90
Red Ball Old Time Vegetable Grower.....	7.50	2.00	3.00	35.25
Red Ball Phosphate and Potash.....	11.00	.....	3.00	28.50
Red Ball Prize Winner.....	10.00	2.47	.....	29.82
Red Ball Soluble Bone Fertilizer Without Potash.....	10.00	1.65	.....	24.90
Henderson Cotton Oil and Gin Co., Henderson, Texas.—				
Henderson Acid Phosphate.....	16.00	.....	.....	24.00
Henderson Half and Half.....	8.70	3.50	.....	34.05
Henderson Staple.....	10.00	2.00	.....	27.00
Hope Fertilizer Co., Hope, Ark.—				
Blood and Bone No. 8.....	9.00	1.65	2.00	31.40
Blood and Bone No. 9.....	9.00	1.65	3.00	35.40
Blood and Bone No. 12.....	10.00	1.65	.....	24.90
Blood and Bone No. 14.....	8.00	3.00	4.00	46.00
Blood and Bone No. 17.....	10.00	3.00	4.00	49.00
Blood and Bone Cantaloupe Fertilizer.....	8.00	3.00	1.00	34.00
Blood and Bone Cotton Grower.....	10.00	1.65	1.00	28.90
Blood and Bone Corn Grower.....	12.00	1.65	.....	27.90
Blood and Bone Early Fruiter.....	10.00	1.00	1.00	25.00
Blood and Bone Extra Cotton Grower.....	10.00	1.65	2.00	32.90
Blood and Bone Hempstead Trucker.....	8.00	3.00	.....	30.00
Blood and Bone Hope Standard.....	11.00	1.65	.....	26.40
Blood and Bone Pride of Dallas.....	10.00	4.00	4.00	55.00
Blood and Bone Texas Special.....	10.00	2.50	.....	30.00
Blood and Bone Trucker.....	8.00	2.50	1.00	31.00
Blood and Bone Wheat Fertilizer No. 1.....	8.00	1.00	1.00	22.00
Cotto Phos.....	8.50	3.30	1.00	36.55
Day's Special.....	10.00	2.50	1.00	34.00
Foster's Favorite Formula.....	8.00	4.00	6.00	60.00
Hempstead Trucker.....	8.00	3.00	.....	30.00
Hope Cantaloupe Fertilizer.....	8.00	3.00	1.00	34.00
Hope Fertilizer No. 8.....	9.00	1.65	2.00	31.40
Hope Fertilizer No. 9.....	9.00	1.65	3.00	35.40
Hope Fertilizer No. 10.....	11.00	1.65	.....	26.40
Hope Fertilizer No. 14.....	8.00	3.00	4.00	46.00
Hope Fertilizer No. 15.....	10.00	3.00	2.00	23.00
Hope Fertilizer No. 16.....	10.00	.....	4.00	31.00
Hope Fertilizer No. 17.....	10.00	3.00	4.00	49.00
Hope Hustler (Without Potash).....	10.00	1.65	.....	24.90
Hope Meal Mixture.....	10.00	2.50	.....	30.00
Hope Wheat Fertilizer No. 1.....	8.00	1.00	1.00	22.00
Our Corn Grower.....	12.00	1.65	.....	27.90
Our Cotton Grower.....	10.00	1.65	1.00	28.90
Our Early Fruiter.....	10.00	1.00	1.00	25.00
Our Extra Cotton Grower.....	10.00	1.65	2.00	32.90
Ozan Trucker.....	8.00	2.50	1.00	31.00
Pride of Dallas.....	10.00	4.00	4.00	55.00
Stork Brand Acid Phosphate 18 Per Cent.....	18.00	.....	.....	27.00
Stork Brand Acid Phosphate 16 Per Cent.....	16.00	.....	.....	24.00
Stork Brand Nitrate of Soda.....	15.00	.....	.....	90.00
Houston County Oil Mill and Manufacturing Co., Crockett, Texas.				
Crockett Compound.....	9.00	3.50	1.00	38.50
Crockett Phosphate Meal Mixture.....	11.00	1.65	.....	26.40
Crockett 16 Per Cent Acid Phosphate.....	16.00	.....	.....	24.00

Table 4.—Registration of commercial fertilizers, season 1919-1920.

Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton;
Houston Packing Co., Houston, Texas.—				
Blood and Bone.....	*14.50	5.60	.....	\$48.10
Longview Cotton Oil Co., Longview, Texas.—				
Longview Corn and Potato Special.....	10.00	3.00	.....	33.00
Longview Cotton Grower.....	11.50	2.00	.....	29.25
Jno. Marbach, New Braunfels, Texas.—				
Bat Guano.....	3.50	8.40	.....	55.65
Marshall Fertilizer Factory, Marshall, Texas.—				
High Grade Acid Phosphate.....	16.00	.....	15.00	24.00
Nitrate of Soda.....	.....	.....	1.00	90.00
Standard Grade Cotton and Corn Special.....	10.00	.....	1.65	24.90
Meridian Fertilizer Factory, Shreveport, La.—				
Caddo Cotton.....	9.35	1.90	1.00	29.43
Caddo Cotton Non-Potassic.....	10.35	1.90	.....	26.93
Caddo Queen Non-Potassic.....	12.00	1.65	.....	27.90
Caddo Special.....	6.00	2.47	7.00	51.82
Caddo Vegetable.....	8.00	3.30	4.00	48.80
Meridian Blood and Bone.....	10.00	1.65	1.00	28.90
Meridian Blood and Bone Non-Potassic.....	11.00	1.65	.....	26.40
Meridian Bone and Potash.....	12.00	.....	2.00	26.00
Meridina Cane Special No. 1.....	4.00	5.35	.....	38.10
Meridian Cantaloupe Special.....	8.00	2.47	1.00	30.82
Meridian Corn Club Special.....	7.50	2.47	1.00	30.07
Meridian Corn Club Special Non-Potassic.....	8.50	2.47	.....	27.57
Meridian Corn Grower.....	7.50	2.88	1.00	32.53
Meridian Corn Grower Non-Potassic.....	8.50	2.88	.....	30.03
Meridian Cotton and Corn Special.....	9.00	2.47	3.00	40.32
Meridian Easy Driller Phosphate.....	16.00	.....	.....	24.00
Meridian Farm Special.....	10.00	1.65	.....	24.90
Meridian Golden Harvester.....	10.00	3.30	4.00	50.80
Meridian Golden West.....	10.00	2.00	2.00	35.00
Meridian Great Western.....	12.00	1.65	2.00	35.90
Meridian Ham Bone Guano.....	10.00	1.65	1.50	30.90
Meridian Home Mixture.....	10.00	1.65	1.00	28.90
Meridian Home Mixture Non-Potassic.....	11.00	1.65	.....	26.40
Meridian Improved Meal Compound.....	8.50	2.88	.....	30.03
Meridian Meal Mixture.....	10.00	1.65	1.00	28.90
Meridian Meal Mixture Non-Potassic.....	11.00	1.65	.....	26.40
Meridian Melon Grower.....	8.50	2.47	.....	29.57
Meridian Nitrated Bone and Potash.....	10.00	1.65	2.00	32.90
Meridian Perfection Acid Phosphate.....	18.00	.....	2.47	27.00
Meridian Perfection Blood Compound.....	10.00	.....	2.47	3.00
Meridian Perfection Cotton and Corn.....	12.00	2.47	.....	32.82
Meridian Perfection Cotton Formula.....	11.00	2.47	.....	31.32
Meridian Perfection Meal Compound.....	10.00	2.47	3.00	41.82
Meridian Perfection Potash Formula.....	12.00	.....	4.00	34.00
Meridian Potash Compound.....	10.00	.....	4.00	31.00
Meridian Potato Grower.....	8.00	3.30	.....	31.80
Meridian Potato Special.....	8.00	3.30	2.00	39.80
Meridian Prolific Wonder.....	12.00	2.00	2.00	38.00
Meridian Rawbone Mixture.....	10.00	1.65	1.00	28.90
Meridian Rawbone Mixture Non-Potassic.....	11.00	1.65	.....	26.40
Meridian Rice Grower.....	10.00	.....	2.00	23.00
Meridian Soluble Guano.....	10.00	1.65	1.50	30.90
Meridian Southern Acid Phosphate.....	14.00	.....	.....	21.00
Meridian Southern Standard.....	10.00	2.00	.....	27.00
Meridian Special Meal Compound.....	12.00	2.00	.....	30.00
Meridian Special Top Dressing.....	5.00	4.25	2.00	41.00
Meridian Special Truck Formula.....	6.00	3.00	4.00	43.00
Meridian Standard Cotton and Corn.....	9.35	1.90	1.00	29.43
Meridian Standard Cotton and Corn Non-Potassic.....	10.35	1.90	.....	26.93
Meridian Tankage Compound.....	8.50	2.47	.....	27.57
Meridian Tomato Special.....	10.00	2.47	1.00	33.82
Meridian Tomato Special Non-Potassic.....	11.00	2.47	.....	31.32
Meridian Truck Grower.....	10.00	2.47	.....	29.82
Meridian Truckers Special.....	9.00	1.65	2.00	31.40
Meridian Vegetable Grower.....	8.00	2.47	5.00	46.82
Nitrate of Soda.....	.....	15.00	.....	90.00
Special Cotton Formula.....	10.00	1.65	.....	24.90
Star.....	10.00	1.65	1.00	28.90
Star Non-Potassic.....	11.00	1.65	.....	26.40

Table 4.—Registration of commercial fertilizers, season 1919-1920.

Manufacturer, Place of Business and Brand.

	Phosphoric Acid— Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Meridian Fertilizer Factory, Shreveport, La.—Continued.				
Texas Special.....	10.00	2.72	.....	\$31.32
Union Special Acid Phosphate.....	16.00	.....	.....	24.00
Weevil Beater Guano.....	10.00	1.65	1.00	28.90
Weevil Beater Guano Non-Potassic.....	11.00	1.65	.....	26.40
H. K. Mulford Co., Philadelphia, Pa.—				
Mulford Cultures for Legumes.....	.....	.....	.....	.....
Nitrate Agencies Co., New Orleans, La.—				
N. A. Co. Brand Acid Phosphate.....	16.00	.....	.....	24.00
N. A. Co. Brand Nitrate of Soda.....	.....	15.00	.....	90.00
Palestine Oil and Manufacturing Co., Palestine, Texas.—				
Acid Phosphate.....	16.00	.....	.....	24.00
Palestine Corn and Vegetable Fertilizer.....	8.00	3.50	1.00	37.00
Palestine Cotton Fertilizer.....	12.00	1.65	.....	27.90
Palestine Cotton Grower.....	11.00	1.65	.....	26.40
Palestine Special Cotton Fertilizer.....	12.00	2.00	.....	30.00
Pelican Fertilizer Works, Shreveport, La.—				
Pelican Corn Grower.....	8.00	2.47	1.00	30.82
Pelican Corn Grower Non-Potassic.....	9.00	2.47	.....	28.32
Pelican Cotton and Corn.....	8.00	2.00	2.00	32.00
Pelican Cotton Grower.....	10.00	1.65	.....	24.90
Pelican Cotton Producer.....	11.50	1.65	.....	27.15
Pelican Cotton Special.....	10.00	1.65	2.00	32.90
Pelican Fish Bone Fertilizer.....	10.00	1.65	2.00	32.90
Pelican Fish Formula.....	10.00	1.65	1.00	28.90
Pelican Fish Formula Non-Potassic.....	11.00	1.65	.....	26.40
Pelican Golden West.....	10.00	1.65	1.00	28.90
Pelican Golden West Non-Potassic.....	11.00	1.65	.....	26.40
Pelican High Grade.....	9.00	2.47	3.00	40.32
Pelican Meal Compound.....	10.00	1.65	1.00	28.90
Pelican Meal Compound Non-Potassic.....	11.00	1.65	.....	26.40
Pelican Potash and Bone.....	12.00	.....	2.00	26.00
Pelican Potash and Superphosphate.....	10.00	.....	4.00	31.00
Pelican Potato Grower.....	8.00	3.30	.....	31.80
Pelican Potato Special.....	8.00	3.30	2.00	39.80
Pelican Rice Formula.....	10.00	.....	2.00	23.00
Pelican Rice Phosphate.....	16.00	.....	.....	24.00
Pelican Special Formula.....	10.00	1.65	.....	24.90
Pelican Special Phosphate.....	16.00	.....	.....	24.00
Pelican Standard Acid Phosphate.....	14.00	.....	.....	21.00
Pelican Tomato Special.....	10.00	2.47	1.00	33.82
Pelican Tomato Special Non-Potassic.....	11.00	2.47	.....	31.32
Pelican Truck Grower.....	10.00	2.47	.....	29.82
Pelican Vegetable Grower.....	8.00	2.47	4.00	42.82
Peoples Cotton Oil Co., Winnsboro, Texas.—				
Fertilizer Cotton Seed Meal.....	.....	7.00	.....	42.00
Planters Fertilizer and Chemical Co., Houston, Fort Worth, Texas, and New Orleans, La.—				
Planters' Ground Bone Meal.....	*22.00	1.65	.....	31.90
Planters' Nitrate of Soda.....	14.81	.....	.....	88.86
Planters' Plow Brand 18 Per Cent Acid Phosphate.....	18.00	.....	.....	27.00
Planters' Plow Brand 14 Per Cent Acid Phosphate.....	14.00	.....	.....	21.00
Planters' Plow Brand 16 Per Cent Acid Phosphate.....	16.00	.....	.....	24.00
Planters' Plow Brand Ammoniated Superphosphate With Potash.....	10.00	1.65	2.00	32.90
Planters' Plow Brand Ammoniated Superphosphate Without Potash.....	12.00	1.65	.....	27.90
Planters' Plow Brand Blood and Bone With Potash.....	10.00	1.65	1.00	28.90
Planters' Plow Brand Blood and Bone Without Potash.....	10.00	1.95	.....	26.70
Planters' Plow Brand Corn Fertilizer.....	8.00	2.47	2.00	34.82
Planters' Plow Brand Crescent Phosphate.....	12.00	.....	.....	18.00
Planters' Plow Brand Dried Blood.....	.....	13.16	.....	78.96
Planters' Plow Brand Farmers' Champion With Potash.....	10.00	1.65	1.00	28.90
Planters' Plow Brand Farmers' Champion Without Potash.....	10.00	1.95	.....	26.70
Planters' Plow Brand Farm Special.....	8.00	1.65	2.00	29.90
Planters' Plow Brand Farm Special Without Potash.....	10.00	1.65	.....	24.90
Planters' Plow Brand Fruit and Truck Special.....	8.00	2.47	4.00	42.82
Planters' Plow Brand Fruit and Vegetable Formula.....	8.00	1.65	3.00	33.90

*Total Phosphoric Acid.

Table 4.—Registration of commercial fertilizers, season 1919-1920.

Manufacturer, Place of Business and Brand.

	Phosphoric Acid— Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Planters Fertilizer and Chemical Co., Houston, Fort Worth, Texas, and New Orleans, La.—Continued.—				
Planters' Plow Brand Golden Mixture With Potash.....	9.50	1.65	1.50	\$30.15
Planters' Plow Brand Golden Mixture Without Potash.....	11.00	1.65	..	26.40
Planters' Plow Brand Imperial Cotton Mixture.....	8.00	1.65	2.00	29.90
Planters' Plow Brand Imperial Cotton Mixture Without Potash.....	10.00	1.65	..	24.90
Planters' Plow Brand Imperial Grain Grower.....	8.00	1.65	2.00	29.90
Planters' Plow Brand Imperial Rice Mixture.....	8.00	1.65	2.00	29.90
Planters' Plow Brand Imperial Rice Mixture Without Potash.....	10.00	1.65	..	24.90
Planters' Plow Brand Imperial Truck Grower.....	8.00	2.47	2.00	34.82
Planters' Plow Brand Magic Strawberry Producer.....	10.00	2.47	4.00	45.82
Planters' Plow Brand Meal Mixture Without Potash.....	12.00	1.65	..	27.90
Planters' Plow Brand Raw Bone Superphosphate With Potash.....	9.50	1.65	1.50	30.15
Planters' Plow Brand Raw Bone Superphosphate Without Potash.....	11.00	1.65	..	26.40
Planters' Plow Brand Strawberry Special With Potash.....	10.00	1.65	2.00	32.90
Planters' Plow Brand Sulphate of Ammonia.....	10.00	20.58	..	123.48
Planters' Plow Brand Texas Trucker.....	10.00	2.47	..	29.82
Planters' Plow Brand Tomato Grower.....	10.00	2.47	..	29.82
Planters' Plow Brand Vegetable Grower.....	7.00	2.47	3.50	39.32
Planters' Raw Bone Meal.....	*22.00	3.70	..	44.20
Shreveport Fertilizer Works, Shreveport, La.—				
Lion Acid Phosphate and Limestone.....	16.00	..	..	24.00
Lion Corn Food.....	9.00	2.50	..	28.50
Lion Double "B".....	10.00	1.65	..	24.90
Lion Double "S".....	9.00	2.00	..	25.50
Lion Georgia Special.....	8.00	3.00	3.00	42.00
Lion Gold Coin Guano.....	10.00	1.65	2.00	32.90
Lion Meal Formula.....	10.00	1.65	..	24.90
Lion Potash Mixture.....	10.00	1.65	1.00	28.90
Lion Prolific Fruiter.....	10.00	2.00	..	27.00
Lion Red Land Cotton Grower.....	12.00	1.65	..	27.90
Lion Success Mixture.....	11.00	1.65	..	26.40
Lion Superfine Acid Phosphate.....	18.00	..	..	27.00
Lion Superior Acid Phosphate.....	17.00	..	..	25.50
Lion Tomato Special.....	10.00	2.50	..	30.00
Lion Truck Special.....	8.50	2.50	..	27.75
Lion Veribest.....	12.00	3.00	..	36.00
Lion Xtra Good Acid Phosphate.....	16.00	..	..	24.00
Nitrate of Soda.....	..	15.00	..	90.00
Sulphur Springs Acid and Fertilizer Co., Sulphur Springs, Texas.				
Acid Phosphate.....	16.00	..	..	24.00
Blood and Bone.....	11.00	1.65	..	26.40
Plantation Acid Phosphate.....	14.00	..	..	21.00
Plantation Fertilizer.....	11.00	1.65	..	26.40
Planters' Special Fertilizer.....	8.00	3.00	..	30.00
Plantation Special Grower.....	10.00	2.00	..	27.00
Swift & Co., Fort Worth, Texas, Harvey and Shreveport, La.—				
Swift's Ammoniated Raw Bone Superphosphate.....	9.50	1.65	1.50	30.15
Swift's Blood and Bone.....	12.00	1.65	..	27.90
Swift's Blood and Bone Special.....	10.00	2.47	..	29.82
Swift's Bone Meal Fertilizer.....	*24.00	2.47	..	38.82
Swift's Champion Vegetable Grower.....	8.00	3.29	3.00	43.74
Swift's Cotton and Corn Grower.....	9.00	1.65	2.00	31.40
Swift's Diamond "C" Onion Grower.....	8.00	2.47	2.00	34.82
Swift's Diamond "G" Onion Grower.....	6.00	2.47	2.00	31.82
Swift's Diamond "S" Rice Grower.....	12.00	..	2.00	26.00
Swift's Eagle Guano.....	10.00	1.65	2.00	32.90
Swift's Early Vegetable and Fruit Fertilizer.....	10.00	3.29	3.00	34.74
Swift's East Texas Trucker.....	8.00	2.47	3.00	38.82
Swift's Farmers' Favorite.....	9.00	1.65	3.00	35.40
Swift's Fruit and Vegetable Grower.....	10.00	3.29	..	34.74
Swift's Garden City Phosphate 14 Per Cent Fertilizer.....	14.00	..	..	21.00
Swift's General Crop Producer.....	11.00	1.65	..	26.40
Swift's Good Luck Compound.....	10.00	1.65	2.00	32.90
Swift's Ground Bone Meal Fertilizer.....	*27.00	2.06	..	39.36
Swift's High Grade Acid Phosphate 16 Per Cent Fertilizer.....	16.00	..	..	24.00
Swift's High Grade Mixture.....	4.00	7.40	..	50.40
Swift's Laredo Mixture.....	8.00	3.29	..	31.74
Swift's Laredo Special.....	3.00	4.94	3.00	46.14

*Total Phosphoric Acid.

Table 4.—Registration of commercial fertilizers, season 1919-1920.

Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Swift & Co., Fort Worth, Texas; Harvey and Shreveport, La.—Continued.				
Swift's Nitrate of Soda.....	14.80	.....	\$88.80	
Swift's Non-Potassic Raw Bone Special.....	11.00	1.65	26.40	
Swift's Onion Grower.....	7.00	3.70	3.00	44.70
Swift's Palmetto Guano.....	8.00	2.47	3.00	38.82
Swift's Phosphate and Potash.....	10.00	.....	4.00	31.00
Swift's Raw Bone Meal Fertilizer.....	*23.00	3.70	.....	45.20
Swift's Red Steer Guano.....	10.00	2.47	3.00	41.82
Swift's Rice Grower.....	10.00	.....	2.00	23.00
Swift's Special Cotton and Corn Grower.....	10.00	1.65	1.00	28.90
Swift's Special High Grade Acid Phosphate.....	18.00	.....	.....	27.00
Swift's Special Mixture.....	10.00	1.65	.....	24.90
Swift's Special Onion Grower.....	6.00	3.29	.....	28.74
Swift's Special Phosphate and Potash.....	12.00	.....	4.00	34.00
Swift's Special Tankage Fertilizer.....	4.80	5.27	.....	38.82
Swift's Standard Tankage Mixture.....	6.00	3.29	3.00	40.74
Swift's Steamed Bone Meal Fertilizer.....	*31.00	1.31	.....	38.86
Swift's Steamed Bone Meal Fertilizer.....	*29.00	1.86	.....	40.16
Swift's Tankage Mixture.....	9.00	3.29	.....	33.24
Swift's Tomato Special.....	10.00	2.47	1.00	33.82
Swift's Truckers' Favorite.....	8.00	2.47	1.00	30.82
Swift's Vegetable Special.....	8.00	3.29	2.00	39.74
Tennessee Coal, Iron Railroad Co., Birmingham, Ala.—				
Duplex Basic Phosphate.....	*18.00	.....	.....	18.00
14 Per Cent Duplex Basic Phosphate.....	*14.00	.....	.....	14.00
Union Seed and Fertilizer Co., New Orleans, La.—				
Ammoniated Raw Bone Superphosphate.....	11.00	1.65	.....	26.40
Ammoniated Raw Bone Superphosphate and Potash.....	10.00	1.65	1.00	28.90
Black Diamond Acid Phosphate.....	12.00	.....	.....	18.00
Blood and Bone.....	11.00	1.65	.....	26.40
Blood, Bone and Beef.....	10.00	1.65	1.00	28.90
Blood, Bone and Beef (Without Potash).....	11.00	1.65	.....	26.40
Blood, Bone and Potash.....	10.00	1.65	1.00	28.90
Blue Rose Rice Grower.....	12.00	.....	2.00	26.00
Bull Dog Acid Phosphate.....	16.00	.....	.....	24.00
Creole Sugar Fertilizer No. 38.....	8.00	2.50	.....	27.00
Crescent City Acid Phosphate.....	12.00	.....	.....	18.00
Cyanamid 15 Per Cent.....	15.00	.....	.....	90.00
Dissolved Bone and Potash 10-4.....	10.00	.....	4.00	31.00
Economizer.....	10.00	1.65	2.00	32.90
Economizer (Without Potash).....	12.00	1.65	.....	27.90
Excelsior.....	10.00	1.65	2.00	32.90
Excelsior (Without Potash).....	12.00	1.65	.....	27.90
Golden Guano.....	10.00	1.65	1.00	28.90
Golden Guano (Without Potash).....	11.00	1.65	.....	26.40
Goldsmith's Improved Mixture.....	10.00	1.65	1.00	28.90
Goldsmith's Improved Mixture (Without Potash).....	11.00	1.65	.....	26.40
Honduras Rice Grower.....	12.00	.....	4.00	34.00
Lone Star Blood Mixture.....	10.00	0.82	1.00	23.92
Lone Star Meal Mixture.....	10.00	0.82	1.00	23.92
Louisiana Plant Cane Grower.....	6.00	3.30	.....	28.80
Louisiana Rice Grower.....	10.00	.....	2.00	23.00
Louisiana Stubble Cane Grower.....	4.00	4.94	.....	35.64
Meal Ammoniated Superphosphate.....	11.00	1.65	.....	26.40
Meal Ammoniated Superphosphate and Potash.....	10.00	1.65	1.00	28.90
New Orleans Acid Phosphate.....	14.00	.....	.....	21.00
Nitrate of Soda.....	15.00	.....	.....	90.00
Special Sugar Cane Grower No. 67.....	7.00	5.00	.....	40.50
Supreme Acid Phosphate.....	18.00	.....	.....	27.00
Texas Guano.....	10.00	1.65	.....	24.90
Texas Onion Grower.....	6.00	3.30	6.00	52.80
Truck Grower.....	6.00	3.30	1.00	32.80
Vegetable Fertilizer (Without Potash).....	6.00	3.30	.....	28.80
Vegetable Grower.....	6.00	2.47	4.00	39.82
Virginia-Carolina Chemical Co. of Delaware, Shreveport, La.—				
B. B. B. Beef, Blood and Bone.....	10.00	1.65	1.00	28.90
B. B. B. Beef, Blood and Bone Non-Potassic.....	11.00	1.65	.....	26.40
Eureka Complete Fertilizer.....	10.00	1.65	4.00	40.90
Georgia State Grange.....	10.00	1.65	1.00	28.90

*Total Phosphoric Acid.

Table 4.—Registration of commercial fertilizers, season 1919-1920.

Manufacturer, Place of Business and Brand.	Phosphoric Acid—Available Per Cent.	Nitrogen—Per Cent.	Potash—Per Cent.	Valuation—Per Ton.
Virginia-Carolina Chemical Co. of Delaware, Shreveport, La.—Continued.				
Georgia State Grange, Non-Potassic.....	11.00	1.65	12.00	\$26.40
German Kainit.....				48.00
Mobile Double Eagle Guano.....	10.00	1.65	1.50	30.90
Mobile Double Eagle Guano Non-Potassic.....	11.50	1.65		27.15
Mobile Raw Bone Ammoniated Superphosphate.....	10.00	1.65	1.50	30.90
Mobile Raw Bone Ammoniated Superphosphate Non-Potassic.....	11.50	1.65		27.15
Muriate of Potash.....			48.00	192.00
Nitrate of Soda.....		14.81		88.86
Royal Blood and Bone, Non-Potassic.....	11.50	1.65		27.15
Royal Blood, Bone and Potash.....	10.00	1.65	1.50	30.90
Royal Compound.....	10.00		2.00	23.00
Royal Cotton Boll Guano.....	8.00	1.65		29.90
Royal Cotton Boll Guano Non-Potassic.....	10.00	1.65		24.90
Royal Fruit Grower.....	8.00	2.47	5.00	46.82
Royal High Grade Guano.....	10.00	1.65	2.00	32.90
Royal High Grade Guano Non-Potassic.....	12.00	1.65		27.90
Royal Potash Compound.....	10.00		4.00	31.00
Royal Tomato Formula.....	10.00	2.47	1.00	33.82
Royal Tomato Formula Non-Potassic.....	11.00	2.47		31.32
Royal Vegetable Fertilizer.....	8.00	2.47	4.00	42.82
Royal Vegetable Fertilizer Non-Potassic.....	12.00	2.47		32.82
Scott's Gossypium Phospho.....	10.00	1.65	1.50	30.90
Scott's Gossypium Phospho Non-Potassic.....	11.50	1.65		27.15
Scott's Gossypium Phospho Special.....	10.00	1.65	2.00	32.90
Scott's Gossypium Phospho Special Non-Potassic.....	12.00	1.65		27.90
Scott's High Grade Acid Phosphate.....	14.00			21.00
Scott's Potasso Phospho.....	12.00		2.00	26.00
Scott's State Standard Guano.....	8.00	1.65	2.00	29.90
Scott's State Standard Guano Non-Potassic.....	10.00	1.65		24.90
Sulphate of Potash.....			48.00	192.00
Tip Top Nitrogen Compound.....	2.00	13.16		81.96
V. C. Ammoniated Bone Non-Potassic.....	10.00	1.65		24.90
V. C. C. Co.'s 18 Per Cent Acid Phosphate.....	18.00			27.00
V. C. C. Co.'s 16 Per Cent Acid Phosphate.....	16.00			24.00
V. C. C. Co.'s Truck Grower.....	8.00	2.06	6.00	48.36
V. C. High Grade Champion Compound.....	9.00	3.00	3.00	43.50
V. C. High Grade Champion Compound, Non-Potassic.....	12.00	3.00		36.00
V. C. High Grade Dixie Special.....	7.00	3.00	1.00	32.50
V. C. High Grade Dixie Special Non-Potassic.....	8.00	3.00		30.00
V. C. High Grade Guano.....	10.00	1.65	2.00	32.90
V. C. High Grade Guano Non-Potassic.....	12.00	1.65		27.90
V. C. High Grade Potash Compound.....	12.00		4.00	34.00
V. C. High Grade Top Dresser.....	4.00	6.17	2.50	53.02
V. C. High Grade Top Dresser Non-Potassic.....	6.50	6.17		46.77
V. C. Meal Formula Non-Potassic.....	10.00	1.65		24.90
V. C. Plant Food (for Vegetables, Lawns and Flowers).....	8.00	4.92	2.00	49.52
V. C. Rice Special.....	10.00	1.65	2.00	32.90
V. C. Rice Special Non-Potassic.....	12.00	1.65		27.90
V. C. Special Potash Compound.....	12.00		8.00	50.00
V. C. Tomato Special.....	10.00	2.47	1.50	35.82
V. C. XXX Special.....	8.00	2.47	1.00	30.82
V. C. XXX Special Non-Potassic.....	9.00	2.47		28.32
V. C. Fruit and Truck Special.....	6.00	3.29	8.00	60.74
Wills Point Cotton Oil Co., Wills Point, Texas.				
Fertilizer Cotton Seed Meal.....	1.00	7.00	1.00	47.50
Semper Fidelis Acid Phosphate.....	16.00			24.00
Semper Fidelis Phospho Meal.....	9.00	3.50	1.00	38.50
Semper Fidelis Royal Fertilizer.....	10.00	1.65		24.90
Semper Fidelis Special Fertilizer.....	11.00	1.65	1.00	30.40