



- Analyses of
- Commercial Fertilizers
- Sold During 1953-54

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D I G E S T

This is the 52nd annual report of the operation of the Texas fertilizer law, and covers the period from September 1, 1953 through August 31, 1954.

Fertilizers and fertilizer materials sold during the fertilizer year beginning July 1, 1953, amounted to 560,405 tons, which was a 2 percent decrease over the tonnage sold during the preceding year. Grades of the 1-2-1 ratio accounted for 53 percent, and the 1-1-1 ratio for 14 percent of the total of 280,701 tons of mixed goods sold. Nitrogenous materials represented 39 percent, phosphatic materials, 23 percent and ammoniated phosphates 18 percent of the total of 279,704 tons of materials sold.

Analyses of 2,210 official samples of fertilizers are given. Valuations found on analysis are compared with the analyses guaranteed by the registrants. Rebates totaling \$2079.95 were paid on 105 lots of fertilizer for which the valuation found was 4 percent or more below the valuation guaranteed.

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Analyses of Commercial Fertilizers Sold During 1953-54

J. F. FUDGE, STATE CHEMIST, and T. L. OGIER, CHEMIST

THIS IS the 52nd annual fertilizer bulletin published in compliance with the Texas fertilizer law, which requires that the State Chemist shall issue at least one bulletin annually setting forth the analyses of fertilizers made under the provisions of the fertilizer law, the operations of the law and other information pertaining to the sale of fertilizer in Texas.

SOME REQUIREMENTS OF THE TEXAS FERTILIZER LAW

The law governing the sale of commercial fertilizers in Texas is found in Chapter Twelve of Title Nineteen of Vernon's Revised Criminal Statutes, 1925, and in Chapter Five of Title Four of Vernon's Texas Civil Statutes, 1925. A summary of some important requirements of the law follows. For further requirements, penalties, definitions and other detailed information, reference should be made to the full text of the law, which will be furnished by the State Chemist upon request.

Materials Covered by the Law

All mixed fertilizers, fertilizer materials and all other substances which have or are claimed to have a beneficial effect on the soil or to promote the growth of crops, come under the law, with the exception of lime, limestone, marl, agricultural gypsum, unground bones, stockpen manure, barnyard manure and the excrement of any domestic animal in case that said manure or excrement has not been dried or manipulated or otherwise treated, or is not claimed to have a value of more than \$4.00 a ton.

Registration

Before a fertilizer is offered for sale in Texas, it must be registered with the State Chemist of Texas. All registrations expire on August 31 of each year, and new applications for registration must be submitted for each year. Application blanks for registration are furnished by the State Chemist, College Station, Texas, upon request. The application blank must be filled out and sent to the State Chemist together with a copy of the printed bag or tag to be used. Such a bag or tag must meet the requirements of the fertilizer law. Wording on the application for registration must agree exactly with the wording on the printed bag or tag, and no change may be made in the wording on the bag or tag after it has been registered. Any such change requires a new registration.

The application for registration must state all of the materials used in the fertilizer, including the filler or conditioner, and these materials must be used in all batches. A change may be made only if the change meets the requirements of the law and the State Chemist is notified.

No brand name identical with or so similar to a brand name previously registered by another manufacturer as to lead to confusion can be accepted. No name which is misleading as to the ingredients of the fertilizer can be accepted. The grade of mixed fertilizers should be part of the brand name; for example, *Jupiter Brand 20 Percent Superphosphate* or *Mars Brand 5-10-5 Fertilizer*.

Labels

The law requires the following information to be printed on the bag or on a tag attached to the bag:

- Net weight of contents of the bag.
- Name of fertilizer in full.
- Name and address of manufacturer, manipulator or guarantor.
- Guaranteed analysis (in order given below):

- Nitrogen, percent.
- Available phosphoric acid, percent.
- Potash, percent.

Nitrogen refers to the total nitrogen (N) present. Such terms as "ammonia" or "equivalent to ammonia" cannot be used.

Available phosphoric acid (P_2O_5) must be guaranteed in all mixed fertilizers and in all fertilizer materials, with the following exceptions. Total phosphoric acid may be guaranteed in bone meal, tankage or other similar products, but where this is done, no guarantee of available phosphoric acid can be used. If it is desired to claim available phosphoric acid only, the guarantee must take the form set forth above.

Potash (K_2O) refers to potash soluble in distilled water. No other guarantee or term can be used.

Inspection Fees

To finance the inspection of fertilizers and the collection and analysis of official samples of fertilizer, experiments relative to the value of fertilizers, and for certain other purposes, the law imposes an inspection fee of 25 cents per ton on all fertilizers sold or offered for sale in Texas. This fertilizer inspection fee must be paid on the basis of and accompany sworn quarterly statements of sales, due in the office of the State Chemist on the first day of September, December, March and June.

Bulk Sales

Fertilizer in bulk for manufacturing purposes can be shipped only to the factory of a manufacturer who has registered fertilizer for sale in Texas.

Fertilizer in bulk cannot be sold to dealers for resale or distribution.

Registered fertilizers may be sold in bulk by manufacturers to persons, individuals or firms for their own use on their own lands, but not for resale or distribution, under rules prescribed by the State Chemist. The inspection fee must be paid on all such sales. All authorizations to sell fertilizer in bulk expire August 31 of each year.

Report of Sales

The guarantor must mail a report of each sale or shipment of fertilizer within or into Texas to the State Chemist within 3 days after such sale or shipment. The report must be made by sending to the State Chemist a copy of the invoice used in billing the customer. The invoices must be numbered, and the same number cannot be used twice during the same year. Reports of sales in bulk to manufacturers must be marked "for manufacturing purposes." Reports of sales in bulk to individuals for use on their own land must be marked "bulk sale to consumer."

FERTILIZER GRADES APPROVED FOR 1954-55

The grade of a mixed fertilizer is stated in numbers representing the guaranteed analysis as percentages of nitrogen, available phosphoric acid and water-soluble potash. For example, a grade of 5-10-5 means that the fertilizer is guaranteed by the manufacturer to contain 5 percent nitrogen, 10 percent available phosphoric acid and 5 percent water-soluble potash. Fertilizers are frequently referred to by these numbers, which form a short and accurate description of the fertilizer. The term grade may also refer to the percentage of a constituent in a fertilizer material, as in 20 percent superphosphate. Wherever practicable, the grade of a fertilizer or fertilizer material should be included as part of the full name of the fertilizer required on the bag or tag.

Fertilizers may also be described by a numerical statement expressing the relation among the principal constituents in its simplest form, called a ratio. For example, a 5-10-5 fertilizer contains 1 part of nitrogen to 2 parts of available phosphoric acid and to 1 part of potash. Consequently, this fertilizer has a 1-2-1 ratio; other grades having this ratio include 6-12-6, 10-20-10 and 12-24-12.

The grades of mixed farm fertilizers sold in Texas have been limited in number for nearly 30 years. Limitation and standardization of grades reduce the cost of manufacturing and handling, thereby permitting the fertilizer to be sold to the

consumer at a lower cost. They also assist the farmer to become familiar with the different grades of fertilizer, enable him to decide more readily on the proper grade to be used and enable the agricultural specialist to make definite recommendations. The ratios and minimum grades of mixed farm fertilizers to be approved in Texas during a given year are decided by the Texas Fertilizer Committee after a public hearing at which manufacturers and others interested may present recommendations. This public hearing is held in cooperation with fertilizer control officials, agricultural specialists and manufacturers of Texas, Louisiana, Arkansas, Oklahoma and New Mexico. The list of approved grades is published in the annual fertilizer bulletin and may also be obtained upon request to the State Chemist.

Following the annual public hearing on grades held at Galveston July 23, 1954, the Texas Fertilizer Committee approved the following ratios and minimum grades for use in Texas during the year beginning September 1, 1954:

Ratio approved	Minimum grade	Ratio approved	Minimum grade
0-1-1	0-14-14	1-2-3	4-8-12
0-2-1	0-16-8	1-3-1	4-12-4
1-1-0	10-10-0	1-3-6	3-9-18
1-1-1	8-8-8	1-4-4	3-12-12
1-2-0	7-14-0	2-1-0	14-7-0
1-2-1	5-10-5	2-2-1	10-10-5
1-2-2	5-10-10	3-4-6	6-8-12

Grades of mixed goods of the same ratios as those above, but of higher guaranteed analyses also were approved. For example, a 12-24-12 would be approved as a higher analysis of the 1-2-1 ratio.

All materials were approved. A few grades, such as 4-16-0 (ammoniated superphosphate), 16-20-0, 11-48-0 and 13-39-0 (ammonium phosphates) are approved as materials.

THE TEXAS FERTILIZER COMMITTEE

The Texas Fertilizer Committee, composed of agricultural subject-matter specialists of the Texas Agricultural and Mechanical College System and representatives of the U. S. Department of Agriculture, is appointed by the Director of the Texas Agricultural Experiment Station to advise and assist the State Chemist in the discharge of certain of his duties, particularly with respect to ratios and grades of mixed fertilizer to be approved for registration during the coming year. This committee is composed of the following individuals:

J. F. Fudge, State Chemist, Chairman
J. E. Adams, Head, Department of Agronomy
G. W. Adriance, Head, Department of Horticulture
F. R. Brison, Professor of Horticulture
J. E. Hutchison, Extension Horticulturist
O. J. Moss, Agricultural Conservation and Stabilization, U. S. Department of Agriculture
Donald R. Paterson, Department of Horticulture
E. B. Reynolds, Professor, Department of Agronomy
Ben M. Spears, Extension Agronomist
M. K. Thornton, Extension Agricultural Chemist

BRANDS AND TRADE-MARKS REGISTERED

The law requires the State Chemist to publish annually a list of brands or trade-marks registered with him. The following is a list of brands and trade-marks registered with the State Chemist during 1953-54:

AA Quality	Goldthwaites	Ortho
A CI-42	Good Earth	Ortho-Gro
Acid-Gro	Goldenrod	Ovene
Aero	Green Glo	Owl
Aero-Phos	Green Thumb	Pabak
Agco	Green Valley	Page
Agri-Chem	Gro-Best	Pasturgro
Alamo	Gro-Crop	Phillips 66
All-Weather	Gro-Green	Plantabbs
Ammo-Phos	Gro-Plus	Plant-Chem
A. & M.	Gro-Rite	P M
A. N. L.	Groso	Port
Arkansas Farmers	Gro-stuf	Pride of the Garden
Quality	Heart	Rainbow
Armour	Heart of Texas	Ra-Pid-Gro
Arrow	Heller-Gro	Ramshorn
Atlas	Hereford	Rancho del
Bactex	Hills	Descenso
Belintrial	Hi-Yield	Red Star
Best	Hi-Vita	Red Steer
Best Bet	Hoseco	Reliance
Big Boy	Hou-Actinite	Ruhm's
Bigcrop	Humusite	R X - 15
Bigrow	Hy-Gro	Scott's
Big Steer	Hyponex	Sequestrene
Blackland Booster	International	Silver Tip
Black Magic	Interstate	Shur-Gro
Blenn	Ivy	Sod-Gro
Blumes	K-W	Soil Booster
Boyer	La-Tex	Soil Nu
Brimm	Lawn Green	Sou-Tex
BR 61	Leeloam	Soylaid
C. C. I. I.	Leon's	S S S
Cal-Nitro	Life	Star
Cash	Lion	Stauffer
CF & I	Liqua Vita	Sul-Po-Mag
Champion	Little Geni	Sunnyland
Chatelier's	Loamium	Sunshine
Chief	Loma	Swfgas
Chagro	Lone Star	Swfgro
Code 944	Longhorn	Swfphos
Complesoil	M C C	Take-Hold
Cross Country	Magnite	T. C. C.
Davco	Magnolia	Terra Food
Davey	Magic Grow	Terra Kem
De-Pester	Marco	Terra Lite
Dixie	Mathieson	Terra-Sul
Double Circle	Maverick	Texas Green Acres
Dow	Mid-West	Texas Liquid
Driconure	Milorganite	Texas Longhorn
Dri-Flo	Min-Coll	Texaphos
Dupont	Min-Hu-Nite	Tex-Hi
Easy Going	Min-Sol	Thorobred
Ebony	Miracle-Gro	Top Crop
Es-Min-El	Montamsaltpeter	Top-O-Texas
Fertichem	Mr. N.	Top of the World
Fertigro	Mulch Plus	Topper
Fertilaid	Nale	Umbaugh
Fertilene	Na-Churs	Uran
Fertilize	Na-So-Co	V-C
Ferti-Lome	Navajo	V-O
Fidelity	Nichols	Versene
Flororganic	Nitrolime	Vertagreen
Folium	Nitronex	Victory
Ford	Nitro-Sul	Vigoro
Fourleaf	N. O. M.	Walker's
F T E	Nu-Green	Water Feed
Ful-O-Vim	Nurish	Weber-King
Garden Gro	Nu-Z	Wesco
G. & O.	Old Black Joe	Wolf
Golden Nugget	Oleander	Wonder-Gro
Gold Medal	Orga-Min	
	Orgro	

INSPECTION FEES COLLECTED DURING 1953-54

Fertilizer inspection fees equivalent to 543,518 tons of fertilizer were collected for fertilizer sold during the Texas fiscal year from September 1, 1952 through August 31, 1954. This

Table 1. Fertilizer inspection fees collected, calculated on a tonnage basis, during different periods (September 1 of one year through August 31 of the next year)

Year	Tonnage equivalent
1905-06	13,500
1910-18 (8-year average)	48,861
1918-23 (5-year average)	44,770
1923-28 (5-year average)	112,927
1928-33 (5-year average)	90,962
1933-38 (5-year average)	66,255
1938-43 (5-year average)	125,678
1943-44	196,877
1944-45	217,760
1945-46	305,510
1946-47	401,297
1947-48	451,132
1948-49	492,541
1949-50	545,899
1950-51	598,274
1951-52	621,943
1952-53	558,808
1953-54	543,518

tonnage is compared in Table 1 with tonnages on which fees were collected in previous periods.

All fees collected are used for the administration of the Texas fertilizer law and for research on various factors which influence the agricultural value of commercial fertilizers.

TONNAGE SALES OF DIFFERENT GRADES OF FERTILIZERS

The tonnage sales of different grades of mixed fertilizers and fertilizer materials from July 1 through December 31, 1953, from January 1 through June 30, 1954 and the total for the two 6-months periods, are given in Table 2. These

Table 2. Tonnages of principal mixed goods and materials sold, July 1, 1953-June 30, 1954, as reported currently by guarantors

Grade	July 1 to Dec. 31, 1953	Jan. 1 to July 31, 1954	Total tonnage	
			Actual	Relative 1953 = 100
Mixed goods	60590	220111	280701	99
0-12-12 and higher	1848	520	2368	50
0-14-7 and higher	18053	2570	20623	67
3-12-12 and higher	8885	3721	12606	138
4-12-4 and higher	1921	15058	16979	80
5-10-5	12543	100515	113058	97
5-10-10	209	5232	5441	150
6-10-4 and 6-12-4	2033	6907	8940	84
6-12-6	633	5951	6584	120
8-8-8	2379	22818	25197	89
10-10-0 and higher	1711	9063	10774	183
10-10-5 and higher	749	3583	4332	168
10-10-10 and higher	1150	11385	12535	114
10-20-0 and other	1279	5951	7230	112
10-20-10	1879	9382	11261	294
Other 1-2-1 grades	4174	14341	18515	98
Other grades	1127	3114	4241	124
Materials	125507	154197	279704	97
Anhydrous ammonia	6235	19171	25406	137
Ammonium nitrate	10649	22883	33532	129
Ammonium sulfate	7050	33624	40674	121
Nitrate of soda	266	2309	2575	114
Other nitrogen materials	1921	4422	6343	93
16-20-0	15362	31207	46569	84
Other N-P materials	1267	2477	3744	87
Superphosphate, normal	52694	22178	74872	87
Superphosphate, concentrated	12437	5876	18313	80
Unacidulated phosphates	14629	4133	18762	93
Potash materials	384	906	1290	102
Manures and composts	1721	3860	5581	113
Other products	893	1151	2044	47
Total fertilizers	186097	374308	560405	98

periods, rather than those based on the Texas fiscal year, are used because they are in accord with the periods almost universally used by fertilizer manufacturers, by the U. S. Department of Agriculture and by many states, and are those recommended by the Committee on Fertilizer Grades and Ratios of the American Society of Agronomy to provide a uniform basis for estimating the needs of the fertilizer industry in the United States. These data were compiled from current reports of sales of fertilizers required by law to be sent to the State Chemist by fertilizer guarantors within 3 days after sale.

Sales of mixed goods this year were only slightly lower than those of a year ago, the decrease amounting to less than 1 percent. This decrease is more than accounted for by the continued large decreases in sales of 0-12-12, 0-14-7 and 4-12-4. Highly significant increases occurred in sales of the 1-1-0 and 2-2-1 ratios and in grades of other ratios of high analysis. Sales of materials were about 3 percent lower than they were in 1952-1953. This decrease is more than accounted for by the large decreases in sales of phosphatic materials. Highly significant increases occurred in sales of all the principal nitrogen materials. Sales of normal superphosphate accounted for only about 27 percent of the tonnage of materials sold this year, as compared with about 76 percent of the materials sold 5 years ago. The actual tonnage of normal superphosphate sold this year was considerably less than one-half as great as it was 5 years ago.

The tonnages of the primary fertilizer components sold during the year, calculated from the current reports of guarantors and the guaranteed analyses, are shown in Table 3. Sales in the fall accounted for 23 percent of the nitrogen, 40 percent of the available phosphoric acid and 25 percent of the potash used during the entire year. Stated in another way, sales of nitrogen and of potash were three times as great in the spring as they were in the fall, while sales of available phosphoric acid were fairly evenly distributed between the two periods. Mixed goods supplied 26 percent of the nitrogen, 51 percent of the available phosphoric acid and 96 percent of the

Table 3. Primary fertilizer components sold, July 1, 1953-July 30, 1954, as reported currently by guarantors and calculated from guaranteed analyses

Primary components	July 1 to Dec. 31 1953	Jan. 1 to June 30 1954	Entire year
Nitrogen, tons			
In mixed goods	2,742	15,080	17,822
In materials	13,409	37,508	50,917
Total	16,151	52,560	68,739
Available phosphoric acid, tons			
In mixed goods	8,101	26,251	35,352
In materials	19,359	14,182	33,541
Total	27,460	40,433	68,893
Potash, tons			
In mixed goods	4,610	13,825	18,435
In materials	228	533	761
Total	4,838	14,358	19,196
Average over-all composition, percent			
Nitrogen	9.56	14.39	12.87
Available phosphoric acid	16.26	11.07	12.90
Potash	2.87	3.93	3.59
Total	28.69	29.39	29.36

potash. The average overall composition showed significant increases in nitrogen and potash and a slight decrease in available phosphoric acid. Giving a comparative value of 1 to nitrogen, the average ratio during 1953-54 was 1-1.00-0.28 as compared with 1-1.25-0.32 in 1952-53. The trend toward narrowing the ratio between nitrogen and available phosphoric acid is desirable for many of our crops and soils.

Different geographic regions of Texas (Figure 1) differed widely in the amount of primary components used. The tonnages used in the different regions during 1953-54 are shown graphically in Figure 2, and compared with the tonnages used 1 year ago and 5 years ago. Nitrogen consumption increased markedly in all regions and particularly in West Texas, which is now using about the same quantity of nitrogen used in the East Texas and the Gulf Coast regions. East Texas and the Gulf Coast used by far the largest tonnage of available phosphoric acid, but consumption in all regions has decreased from the levels attained in previous years. As usual, about one-half of the potash used in the State was used in East Texas.

The monthly distribution of the sales of the primary components (Figure 3) emphasizes the fact that too large a proportion of the year's total sales are made during just a few months. Nearly two-thirds of the total nitrogen and potash and one-half of the available phosphoric acid used during the year are sold during the 4 months from February through May. The manufacture of commercial fertilizers requires a large investment in equipment and labor. Restricted seasonal use of this equipment and labor is economically unsound. Improvement in time distribution of sales would make possible the manufacture of a much larger tonnage of fertilizer without additional expenditure for equipment or labor, which in turn would result in a lower cost per ton of fertilizer to the farmer.

TRENDS IN CONSUMPTION

In general, Table 2 emphasizes a continuance and acceleration of two trends which have been evident in the Texas fertilizer data for several years. One trend is toward the use of fertilizer containing a higher concentration of plant food. The other trend is toward a narrowing of the ratio between the tonnage of nitrogen and of phosphoric acid used in the State.

The trend toward goods of higher analysis is shown in Figure 4. The tonnage of fertilizers sold each year since 1950 has not changed greatly, but the tonnage of primary components, that is, of nitrogen, available phosphoric acid and potash, has continued to increase. On a relative basis, with 1944-45 as 100, sales of fertilizer last year were 232 whereas sales of primary components were 335. In other words, the tonnage of fertilizers sold has more than doubled during the last 10 years, but the tonnage of primary

components has more than tripled. Components in fertilizers sold during 1944-45 averaged 19.21 percent, whereas those sold during 1953-54 averaged 29.36 percent. Stated in another way, the 156,800 tons of primary components sold in 1953-54 would have required over 811,000 tons of fertilizer of the concentration used during 1944-45, whereas they were actually carried in only about 560,000 tons. By increasing the concentration of nutrients in the fertilizers used, Texas farmers have saved the expense of manufacturing, storing, transporting and applying over a quarter of a million tons of fertilizer.

The trend toward a narrowing of the ratio between the tonnages of nitrogen and of available phosphoric acid since 1945 is given in Figure 5,

which shows the tonnages of the primary components sold during each of the last 10 years. During the year ending June 30, 1949, the $N:P_2O_5$ ratio was 1:3.25, while during 1953-54, it was 1:1.00. Consumption of nitrogen has continued a rapid upward trend, while consumption of available phosphoric acid has decreased significantly for each of the last 3 years. Consumption of potash has nearly doubled in 10 years, but is still relatively low.

VALUATION PER TON

The Texas fertilizer law requires that a refund be made to all purchasers of fertilizer if the valuation found on analysis is 4 percent or more below the valuation guaranteed, and that

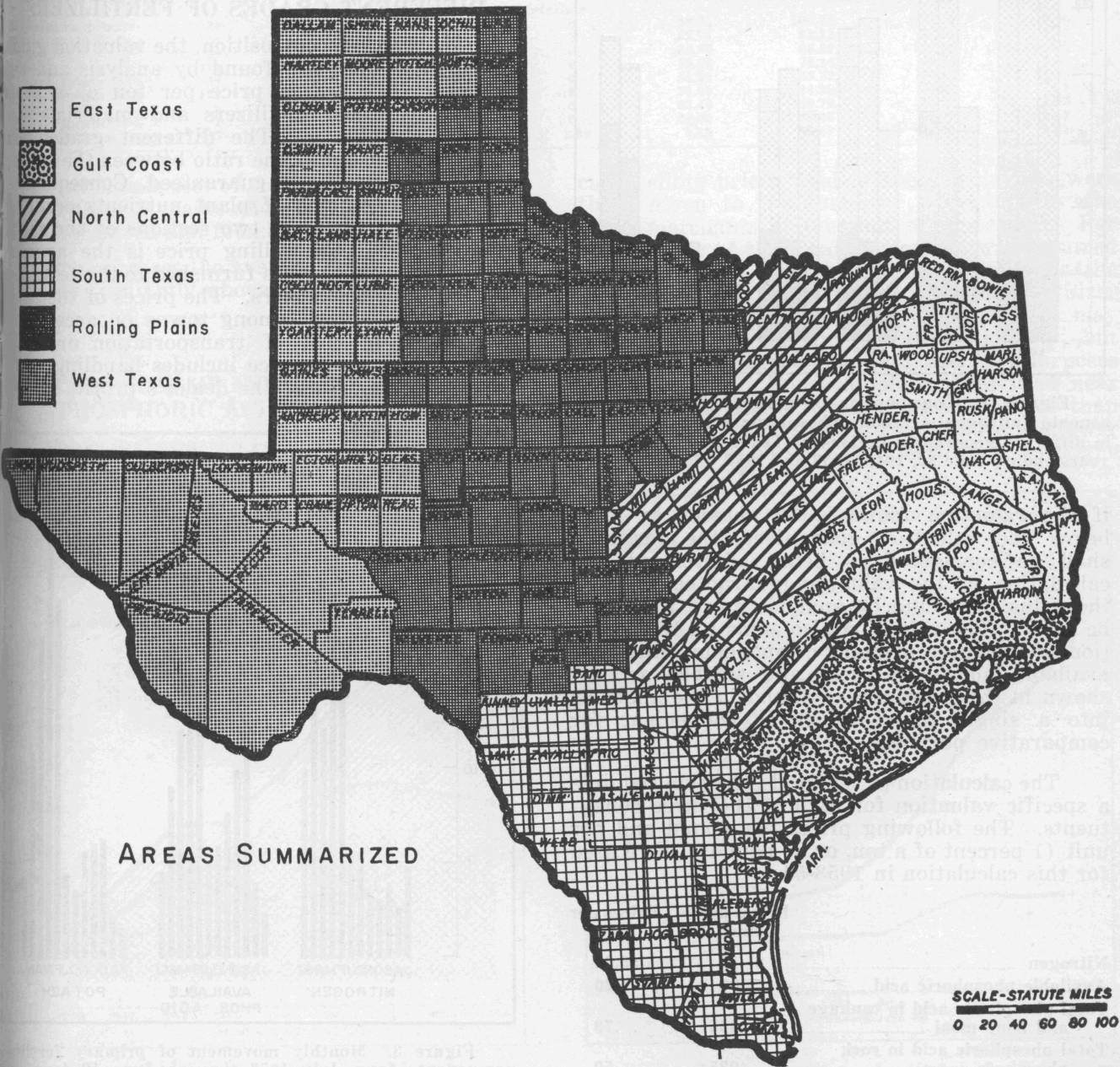


Figure 1. Geographic regions of Texas for which data are summarized.

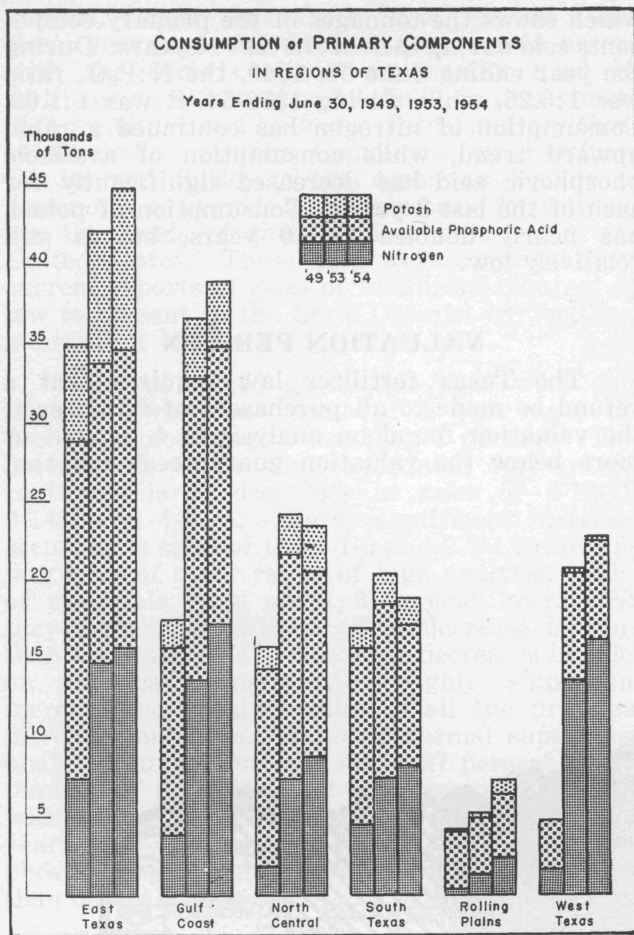


Figure. 2. Consumption of primary fertilizer components (nitrogen, available phosphoric acid and potash) in different geographic regions of Texas during fertilizer years ending June 30, 1949, 1953 and 1954.

if the valuation found is 10 percent or more below the valuation guaranteed, the fertilizer shall be considered as being adulterated. A calculation of the valuation guaranteed and of the valuation found by analysis must, therefore, be made. The valuation also sums up the valuation of the three primary components (nitrogen, available phosphoric acid and soluble potash) shown in the guarantee or found in the analysis, into a single figure which is convenient for comparative purposes.

The calculation of the total valuation requires a specific valuation for each of the three constituents. The following prices per pound and per unit (1 percent of a ton, or 20 pounds) were used for this calculation in 1953-54:

	Prices per pound	Prices per unit
Nitrogen	\$.15	\$3.00
Available phosphoric acid06	1.20
Total phosphoric acid in tankage and bone meal035	.70
Total phosphoric acid in rock phosphate025	.50
Soluble potash03	.60

The valuation is calculated by multiplying the percentage of each constituent by the valuation per unit, and adding the products. Following is an example of the calculation of the valuation of a ton of a 5-10-5 fertilizer:

Nitrogen	5 × \$3.00 = \$15.00
Available phosphoric acid	10 × \$1.20 = \$12.00
Soluble potash	5 × \$.60 = \$ 3.00
Guaranteed valuation.....	\$30.00

The valuation guaranteed and the valuation found are used for comparative purposes in a number of the following tables.

COMPOSITION AND SELLING PRICE OF DIFFERENT GRADES OF FERTILIZERS

The average composition, the valuation guaranteed, the valuation found by analysis and the average retail selling price per ton of various grades of mixed fertilizers and materials are shown in Table 4. The different grades are arranged in order of the ratio between the selling price and the valuation guaranteed. Consequently, the cheaper sources of plant nutrients occur in the upper parts of the two sections of the table. The average retail selling price is the average of the cash retail prices furnished to the fertilizer inspectors by the dealers. The prices of the same fertilizer may vary among towns on account of differences in cost of transportation or other causes. The retail price includes handling costs, carrying charges and the dealer's profit, as well

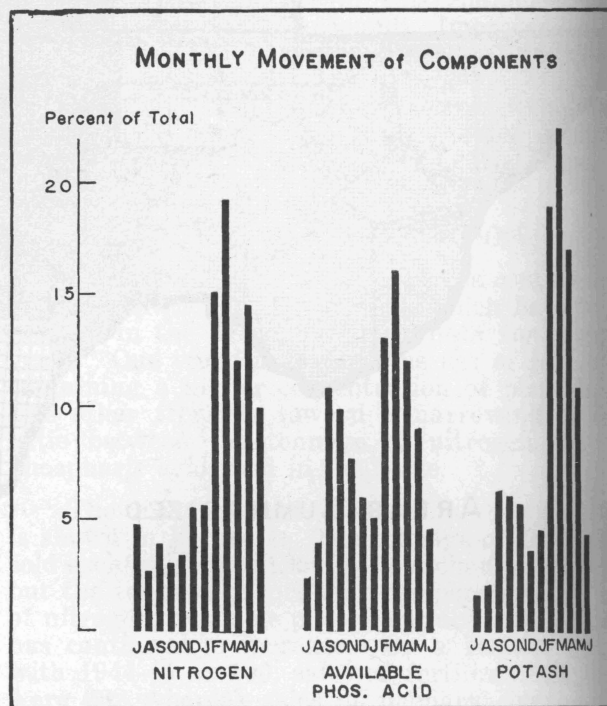


Figure 3. Monthly movement of primary fertilizer components from July 1953 through June 1954 as percent of total moved during the year.

Table 4. Average composition, valuations and selling prices of various grades of fertilizers, 1953-54

Grade	Number averaged	Nitrogen percent	Available phosphoric acid, percent	Potash, percent	Valuation guaranteed, \$ per ton	Valuation found, \$ per ton	Selling price, \$ per ton	Ratio, S.P.:V.G.
Mixed goods								
12-24-12	91	12.00	24.22	12.54	72.00	72.57	90.54	1.26
12-12-12	37	11.29	12.37	11.84	57.60	55.74	78.74	1.37
14-14-0	25	13.12	14.22	0	58.80	56.42	81.05	1.38
5-10-10	37	5.01	10.40	10.34	33.00	33.72	45.87	1.39
10-10-0	15	9.45	10.60	0	42.00	41.08	58.52	1.39
13-13-13	63	12.87	13.68	14.38	62.40	63.62	88.90	1.40
15-15-0	42	13.82	15.50	0	63.00	60.10	86.16	1.43
10-10-10	34	9.70	10.66	10.18	48.00	48.00	69.11	1.44
10-20-0	69	9.68	20.01	0	54.00	53.09	79.00	1.46
10-20-10	136	9.42	20.04	10.09	60.00	58.38	85.84	1.47
9-18-9	14	8.65	18.13	8.10	54.00	52.90	79.79	1.48
6-24-24	30	6.66	24.54	24.31	61.20	64.01	95.00	1.48
6-12-6	55	5.91	12.30	6.15	36.00	36.14	53.92	1.49
7-14-7	21	6.99	14.04	7.35	42.00	42.20	63.08	1.50
8-8-8	259	7.68	8.75	8.38	38.40	38.55	57.82	1.51
12-12-12	68	3.07	12.21	12.07	30.60	31.12	47.31	1.52
4-12-4	88	4.06	12.26	4.68	28.80	29.69	44.25	1.54
5-10-5	495	5.03	10.43	5.53	30.00	30.88	47.69	1.59
6-8-12	6	5.80	8.99	12.38	34.80	35.66	56.98	1.60
0-14-7	78	0	14.41	7.15	21.00	21.58	35.95	1.71
0-12-12	6	0	12.83	11.82	21.60	22.49	38.78	1.80
6-10-4	16	5.59	11.32	4.61	32.40	33.11	69.74	2.15
Materials								
Ammonium nitrate	33	36.04	0	0	99.85	100.81	90.87	0.90
Ammonium sulfate	14	21.04	0	0	62.74	63.13	68.89	1.09
13-39-0	25	13.38	38.70	0	85.80	86.59	108.36	1.25
16-20-0	172	16.04	20.86	0	72.00	73.14	96.00	1.31
Superphosphate 45%	59	0	44.57	0	54.00	53.83	74.62	1.39
Superphosphate 20%	155	0	20.32	0	24.00	24.38	34.34	1.41
5-32-0	9	7.63	31.50	0	62.40	60.70	86.58	1.43
Superphosphate 30%	7	0	30.40	0	36.00	37.43	55.19	1.47
Animal Manures	7	2.90	1.76	2.98	9.15	12.59	45.44	3.61

as the wholesale cost of the materials from which the fertilizer is made, and from which the valuation guaranteed and found are calculated.

In most cases the average valuation found by analysis is slightly above the guaranteed valuation.

AVERAGE COST OF NITROGEN, AVAILABLE PHOSPHORIC ACID AND POTASH

Table 5 shows the calculated retail costs in cents per pound of nitrogen, available phosphoric acid and potash, as calculated from the average selling price and valuation guaranteed of the various grades of fertilizer given in Table 4. The

cash selling prices used in the calculations were those given to the fertilizer inspectors by the retail merchants at the time of inspection. For the purpose of these calculations, it was assumed that the prices were in the same ratios as the valuations. As the price of the same fertilizer may vary in different places, these figures may not be correct for any particular locality, but represent averages only, and are for purposes of comparison. For example, grades used near the factories might average lower in price than those used some distance away because the lower transportation costs. The fertilizers with the

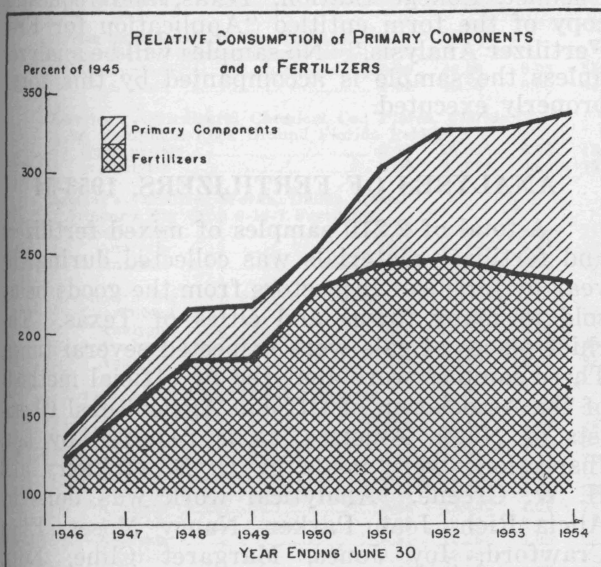


Figure 4. Relative consumption of total components and of fertilizers over the past 10 years (1944-45 = 100).

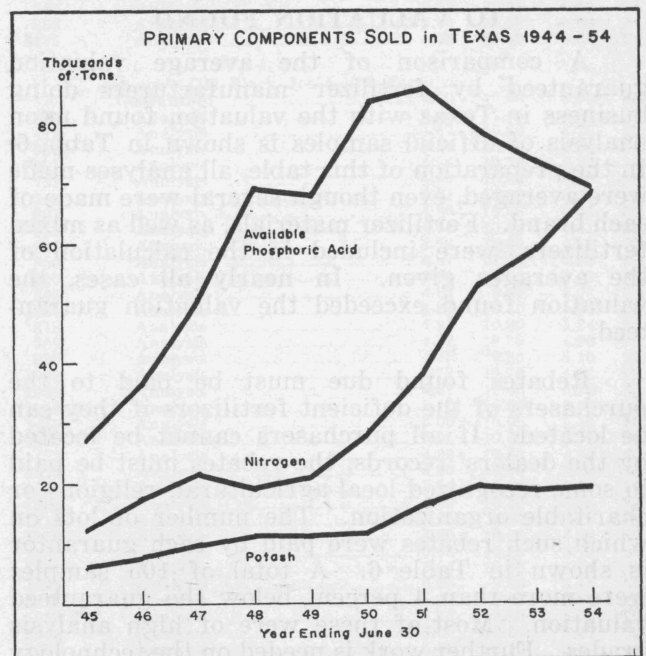


Figure 5. Consumption of primary fertilizer components in Texas during the past 10 years.

Table 5. Approximate average cost of nitrogen, available phosphoric acid, during 1953-54 (cents per pound)

Grade	Nitrogen	Available phosphoric acid	Potash
Ammonium nitrate	13.50	—	—
Ammonium sulphate	16.35	—	—
13-39-0	18.75	7.50	—
12-24-12	18.90	7.56	3.78
16-20-0	19.65	7.86	3.93
12-12-12	20.55	8.22	4.11
14-14-0	20.70	8.28	—
5-10-10	20.85	8.34	4.17
10-10-0	20.85	8.34	—
Superphosphate 45%	—	8.34	—
13-13-13	21.00	8.40	4.20
Superphosphate 20%	—	8.46	—
15-15-0	21.45	8.58	—
8-32-0	21.45	8.58	—
10-10-10	21.60	8.64	4.32
10-20-0	21.90	8.76	—
10-20-10	22.05	8.82	4.41
Suprphosphate 30%	—	8.82	—
6-24-24	22.20	8.88	4.44
9-18-9	22.20	8.88	4.44
6-12-6	22.35	8.94	4.47
7-14-7	22.50	9.00	4.50
8-8-8	22.65	9.06	4.53
3-12-12	22.80	9.12	4.56
4-12-4	23.10	9.24	4.62
5-10-5	23.85	9.54	4.77
6-8-12	24.00	9.60	4.80
0-14-7	—	10.26	5.13
0-12-12	—	10.80	5.40
6-10-4	32.25	12.90	6.45
Animal manures	54.15	21.66	10.83

lowest cost per unit of plant food to the farmer are given first in the table.

In general, plant food in fertilizers of high analysis costs less than that in lower analyses of the same ratio. The difference may be illustrated by a comparison of costs for the 1-2-1 ratio (5-10-5 vs 12-24-12) and 1-1-1 ratio (8-8-8 vs 12-12-12). A large part of the higher grades were pelleted, making a better product, which allowed better distribution and utilization. This is also true with materials.

RELATION OF VALUATION GUARANTEED TO VALUATION FOUND

A comparison of the average valuation guaranteed by fertilizer manufacturers doing business in Texas with the valuation found upon analysis of official samples is shown in Table 6. In the preparation of this table, all analyses made were averaged, even though several were made of each brand. Fertilizer materials, as well as mixed fertilizers, were included in the calculation of the averages given. In nearly all cases, the valuation found exceeded the valuation guaranteed.

Rebates found due must be paid to the purchasers of the deficient fertilizers if they can be located. If all purchasers cannot be located by the dealers' records, the rebates must be paid to some recognized local agricultural, religious or charitable organization. The number of lots on which such rebates were paid by each guarantor is shown in Table 6. A total of 105 samples were more than 4 percent below the guaranteed valuation. Most of these were of high analysis grades. Further work is needed on the technology of manufacturing these grades. Rebates amounting to \$2,079.95 were made to the purchasers.

Table 6. Average valuations guaranteed and found in samples of fertilizers guaranteed by different companies

Company	Valuation guaranteed	Valuation found	Number averaged	Rebate
Agricultural Chemicals Inc.	45.97	45.16	11	1
Agri-Chem of Texas	102.48	103.23	5	0
Armours Fertilizer Works, Dallas	39.68	39.16	181	10
Armour Fertilizer Works, Houston	40.65	40.62	275	12
Campbell Fertilizer Works	35.60	36.60	26	2
Central Texas Fertilizer Co.	29.40	31.51	4	0
Commercial Solvents Corp.	100.50	101.03	4	0
Davison Chemical Corp.	29.40	30.48	4	0
Dixie Fertilizer Co.	36.13	36.90	34	0
East Texas Products Co.	36.44	36.65	81	0
Farmers Fertilizer Co.	37.96	38.18	31	3
Fidelity Chemical Corp.	32.16	32.36	30	3
Gilmer Cotton Oil & Fertilizer Co.	32.57	33.70	18	0
Hi-Yield Fertilizer Co., Mt. Pleasant	36.47	35.43	17	4
Hi-Yield Fertilizer Co., Bonham	33.89	34.09	27	3
International Minerals & Chemical Corp.	40.72	40.50	228	25
Jacksonville Fertilizer Co.	36.03	36.02	35	0
Kelly, Weber Co., Inc.	36.27	35.82	22	0
Kipfer Chemical Co.	38.32	38.26	6	1
Lion Oil Co.	100.50	100.90	12	0
Marshall Cotton Oil Co.	34.50	36.02	7	0
Mathieson Chemical Corp.	60.44	61.49	414	1
Phillips Chemical Co.	87.00	88.17	21	0
Red Star Fertilizer Co.	35.10	35.20	44	3
Shreveport Fertilizer Works	36.57	37.59	81	3
Southwest Fertilizer & Chem. Co.	24.00	24.70	5	0
Swift & Co. Plant Food Division, Houston	38.13	37.94	178	17
Swift & Company, Shreveport	37.64	37.27	77	5
Texas Farm Products Co.	32.13	32.76	106	3
Tyler Fertilizer Co.	41.66	42.11	16	2
Virginia Carolina Chemical Corp.	35.69	36.14	181	6

HOW TO OBTAIN FREE ANALYSIS OF FERTILIZERS

Purchasers of commercial fertilizers for their own use on their own land (but not for sale) may obtain a free analysis of a sample, provided they take it in accordance with the requirements of the Texas fertilizer law. This privilege of a free analysis applies only to fertilizers sold under the fertilizer law and to samples properly taken so that they represent the goods sampled. The proper sampling of a fertilizer must be done carefully, and the law requires that it be taken in a certain way to insure a true sample. Those who desire the free analysis of a sample of commercial fertilizer should write to the State Chemist, College Station, Texas, and request a copy of the form entitled "Application for Free Fertilizer Analysis." No samples will be analyzed unless the sample is accompanied by this form, properly executed.

ANALYSES OF FERTILIZERS, 1953-54

A total of 2,210 samples of mixed fertilizers and fertilizer materials was collected during the year by fertilizer inspectors from the goods being sold in many towns and cities of Texas. The chief places of sale were inspected several times. These samples were analyzed by official methods of the Association of Official Agricultural Chemists of North America, as is required by law. Inspections were made by C. B. McLarry and H. W. Greene. Analytical work was done by Alicia Rich, Joan Parker, Nancy Moses, Ellen Crawford, Joy Jones, Margaret Cline, Edna Welch, Jean DeMottier and Waldo Walker. The analyses are shown in Table 7.

PUBLICATIONS DEALING WITH THE USE OF FERTILIZERS

During the year, two reports showing the tonnages of different fertilizers sold in each county in the State were published. Fall sales are shown in Progress Report 1648 and spring sales in Progress Report 1707. Tonnage data for 1947-53 were summarized by regions in Bulletin 779. Other publications dealing with the value and use of commercial fertilizers are issued fre-

quently by the Texas Agricultural Experiment Station and the Texas Agricultural Extension Service. Check lists of these publications will be sent free upon request to the Agricultural Information Office, College Station, Texas. To prevent needless waste, and to insure the best distribution possible of these publications, requestors are urged to limit their requests to publications they have reason to believe will be useful immediately, and which they will take the time to study.

Table 7. Analyses of commercial fertilizers sampled during 1953-54

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
Agricultural Chemicals, Inc., Henderson, Texas					
Wolf Brand Fertilizer 5-10-5					
1625	Guaranteed	5.00	10.00	5.00	30.00
	Analysis	5.78	9.50	5.76	32.20
1638	Analysis	4.26	11.10	5.41	29.35
Wolf Brand Fertilizer 8-8-8					
1624	Guaranteed	8.00	8.00	8.00	38.40
1809	Analysis	6.68	10.85	8.65	38.25
2075	Analysis	6.93	11.35	8.02	39.22
2075	Analysis	7.02	10.00	8.02	37.87
2075	Analysis	7.02	10.00	8.02	37.87
Wolf Brand Fertilizer 10-20-10					
2028	Guaranteed	10.00	20.00	10.00	60.00
2111	Analysis	8.03	19.80	11.84	54.95
2165	Analysis	8.37	23.40	8.09	58.04
	Analysis	9.46	20.90	8.09	58.31
Wolf Brand Fertilizer 12-12-12					
2029	Guaranteed	12.00	12.00	12.00	57.60
	Analysis	11.09	14.85	9.67	56.89
Wolf Brand Fertilizer 0-45-0					
1400	Guaranteed	0.00	45.00	0.00	54.00
	Analysis	0.00	44.46	0.00	53.35
Agri-Chem of Texas, San Antonio, Texas					
Agri Chem 16-32-16 Fertilizer					
402	Guaranteed	16.00	32.00	16.00	96.00
1130	Analysis	16.18	34.50	16.42	99.79
	Analysis	15.00	34.16	16.49	95.88
Agri Chem 22-22-11 Fertilizer					
403	Guaranteed	22.00	22.00	11.00	99.00
1129	Analysis	21.87	22.30	10.45	98.64
	Analysis	18.21	28.40	11.88	95.84
Agri Chem 20-52-0 Fertilizer					
1131	Guaranteed	20.00	52.00	0.00	122.40
	Analysis	20.70	53.25	0.00	126.00
Agricultural Products Co., Clint, Texas					
Agco Brand Superphosphate 46%					
949	Guaranteed	0.00	46.00	0.00	55.20
	Analysis	0.00	45.50	0.00	54.60
American Agricultural Chemical Co., Pierce, Florida					
AA Phosphate Rock Ground Florida Pebble					
116	Guaranteed	0.00	30.00*	0.00	15.00
	Analysis	0.00	30.87*	0.00	15.44
Armour's Fertilizer Works, Dallas, Texas					
Armour's Big Crop 0-14-7 Fertilizer					
476	Guaranteed	0.00	14.00	7.00	21.00
730	Analysis	0.00	14.40	9.07	22.72
	Analysis	0.00	13.85	8.18	21.53
Armour's Big Crop 5-10-10 Fertilizer					
2033	Guaranteed	5.00	10.00	10.00	33.00
2055	Analysis	4.59	10.30	9.71	31.96
2110	Analysis	4.74	10.30	10.92	33.13
	Analysis	4.82	10.60	10.35	33.39
Armour's Big Crop 4-12-4 Fertilizer					
499	Guaranteed	4.00	12.00	4.00	28.80
593	Analysis	3.75	12.50	4.07	28.69
684	Analysis	3.93	12.10	4.25	28.86
802	Analysis	4.00	12.60	4.28	29.69
804	Analysis	3.84	12.30	4.34	28.88
861	Analysis	3.74	12.30	4.04	28.40
866	Analysis	3.64	12.40	4.05	28.23
879	Analysis	3.86	12.40	3.78	28.73
981	Analysis	3.81	12.20	4.05	28.50
1114	Analysis	3.91	12.00	4.01	28.53
2057	Analysis	4.00	12.45	3.87	29.26
	Analysis	4.02	12.20	4.55	29.43

*Total phosphoric acid

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
Armour's Big Crop 8-8-8 Fertilizer					
1604	Guaranteed	8.00	8.00	8.00	38.40
1683	Analysis	7.75	8.10	8.47	38.05
1877	Analysis	7.57	8.40	8.17	37.71
1884	Analysis	7.21	8.85	8.34	37.25
1971	Analysis	7.55	8.40	8.04	37.55
2079	Analysis	7.16	8.50	7.84	36.38
	Analysis	7.00	9.20	8.19	36.95
Armour's Big Crop 6-12-6 Fertilizer					
800	Guaranteed	6.00	12.00	6.00	36.00
	Analysis	4.72	13.55	5.00	33.42
Armour's Big Crop 20% Superphosphate					
269	Guaranteed	0.00	20.00	0.00	24.00
529	Analysis	0.00	20.00	0.00	24.00
592	Analysis	0.00	20.10	0.00	24.12
602	Analysis	0.00	20.00	0.00	24.00
618	Analysis	0.00	20.50	0.00	24.60
619	Analysis	0.00	19.35	0.00	23.22
627	Analysis	0.00	20.30	0.00	24.36
630	Analysis	0.00	20.30	0.00	24.36
634	Analysis	0.00	20.30	0.00	24.36
635	Analysis	0.00	20.10	0.00	24.12
673	Analysis	0.00	19.46	0.00	23.35
677	Analysis	0.00	20.18	0.00	24.22
678	Analysis	0.00	20.45	0.00	24.54
683	Analysis	0.00	19.70	0.00	23.64
748	Analysis	0.00	17.94	0.00	21.73
790	Analysis	0.00	20.00	0.00	24.00
809	Analysis	0.00	19.65	0.00	23.58
812	Analysis	0.00	20.15	0.00	24.18
868	Analysis	0.00	20.30	0.00	24.36
2145	Analysis	0.00	20.40	0.00	24.48
Armour's Old Black Joe 5-10-5 Fertilizer					
470	Guaranteed	5.00	10.00	5.00	30.00
473	Analysis	4.65	11.45	4.97	30.67
530	Analysis	4.67	10.80	4.70	29.79
621	Analysis	4.84	10.70	4.51	30.07
737	Analysis	4.86	10.70	5.36	30.64
743	Analysis	4.60	10.60	5.20	29.64
801	Analysis	4.71	10.60	5.02	29.86
833	Analysis	4.80	10.70	5.36	30.46
837	Analysis	4.68	10.04	4.61	28.86
850	Analysis	4.73	10.40	4.86	29.59
860	Analysis	4.87	11.00	4.58	30.56
865	Analysis	4.81	10.90	5.03	30.53
867	Analysis	4.65	9.90	5.03	28.85
878	Analysis	4.84	10.40	4.94	29.96
889	Analysis	4.91	10.30	5.24	30.23
920	Analysis	4.87	10.30	4.96	29.95
982	Analysis	4.95	9.80	5.10	29.64
1059	Analysis	4.72	10.10	4.92	29.23
1120	Analysis	4.87	10.40	5.29	30.26
1120	Analysis	5.12	10.50	5.09	31.01
1449	Analysis	5.00	10.00	5.45	30.27
1460	Analysis	5.01	10.00	5.59	30.38
1473	Analysis	4.90	10.30	4.95	30.03
1477	Analysis	4.50	10.40	4.84	28.88
1603	Analysis	5.04	10.10	5.15	30.33
1684	Analysis	4.62	10.30	4.86	29.14
1710	Analysis	4.92	9.90	5.19	29.05
1839	Analysis	4.80	10.00	4.63	29.18
1885	Analysis	5.02	10.20	5.19	30.41
1901	Analysis	5.04	10.30	5.19	30.59
1929	Analysis	5.06	9.80	5.15	30.03
1970	Analysis	5.02	9.65	5.53	29.96
1993	Analysis	4.74	9.80	5.00	28.98
2046	Analysis	5.08	10.30	5.41	30.85
2056	Analysis	5.05	10.10	5.59	30.62
2073	Analysis	4.97	10.40	5.37	30.61
2078	Analysis	4.89	10.10	5.41	30.04
2169	Analysis	4.82	10.40	5.06	29.98
2208	Analysis	4.85	10.20	4.84	29.69

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
	Armour's Big Crop 20% Superphosphate						Armour's Vertagreen Plant Food 8-8-8				
29	Guaranteed	0.00	20.00	0.00	24.00		Guaranteed	8.00	8.00	8.00	38.40
52	Analysis	0.00	20.65	0.00	24.78	445	Analysis	8.12	9.00	8.13	40.04
65	Analysis	0.00	20.40	0.00	24.48	489	Analysis	8.37	8.70	8.61	40.72
95	Analysis	0.00	20.40	0.00	24.48	1025	Analysis	8.15	8.70	8.66	40.09
99	Analysis	0.00	20.00	0.00	24.00	1148	Analysis	7.89	8.80	8.38	39.37
107	Analysis	0.00	20.70	0.00	24.84	1238	Analysis	8.02	8.30	8.38	39.30
115	Analysis	0.00	20.70	0.00	24.84	1296	Analysis	7.96	8.50	8.54	39.20
128	Analysis	0.00	20.90	0.00	25.08	1530	Analysis	7.41	8.40	8.80	37.59
162	Analysis	0.00	20.30	0.00	24.36						
168	Analysis	0.00	20.40	0.00	24.48		Armour's Pebble Plant Food 3-12-12				
175	Analysis	0.00	20.70	0.00	24.84		Guaranteed	3.00	12.00	12.00	30.60
179	Analysis	0.00	20.70	0.00	24.84	235	Analysis	3.14	12.80	11.41	31.63
239	Analysis	0.00	20.03	0.00	24.04	295	Analysis	3.42	12.50	12.20	32.58
244	Analysis	0.00	20.40	0.00	24.48						
250	Analysis	0.00	20.60	0.00	24.72		Armour's Pebble Plant Food 10-10-0				
275	Analysis	0.00	20.80	0.00	24.96		Guaranteed	10.00	10.00	0.00	42.00
397	Analysis	0.00	20.25	0.00	24.30	112	Analysis	8.13	11.15	0.00	37.77
425	Analysis	0.00	20.80	0.00	24.96	129	Analysis	9.55	10.50	0.00	41.25
450	Analysis	0.00	21.35	0.00	25.62	382	Analysis	9.62	10.00	0.00	40.86
498	Analysis	0.00	20.30	0.00	24.36	1245	Analysis	9.29	10.40	0.00	40.35
509	Analysis	0.00	20.80	0.00	24.96	1343	Analysis	10.04	10.10	0.00	42.24
1070	Analysis	0.00	20.70	0.00	24.84	1370	Analysis	10.08	10.50	0.00	42.84
	Armour's Old Black Joe 5-10-5 Fertilizer						Armour's Pebble Plant Food 6-12-6				
26	Guaranteed	5.00	10.00	5.00	30.00		Guaranteed	6.00	12.00	6.00	36.00
31	Analysis	4.74	11.10	4.89	30.47	66	Analysis	6.15	12.60	5.64	36.95
51	Analysis	4.74	10.50	5.21	29.95	104	Analysis	6.06	12.00	6.28	36.35
67	Analysis	4.71	10.80	5.15	30.18	134	Analysis	6.12	12.25	6.51	36.97
73	Analysis	4.97	10.60	5.04	30.65	180	Analysis	6.20	11.80	6.06	36.40
79	Analysis	4.90	10.95	5.18	30.95	211	Analysis	5.55	12.00	4.44	33.71
108	Analysis	4.74	10.70	5.02	30.07	254	Analysis	6.18	12.30	5.86	36.82
118	Analysis	4.88	10.60	5.47	30.28	274	Analysis	5.75	12.50	5.82	35.74
133	Analysis	4.78	10.50	5.06	29.98	415	Analysis	6.27	12.50	6.02	37.42
160	Analysis	5.00	10.20	5.37	30.46	436	Analysis	6.18	12.40	5.88	36.95
174	Analysis	5.00	10.40	5.24	30.62	440	Analysis	6.55	11.50	5.41	36.70
178	Analysis	4.72	10.40	5.18	29.75	517	Analysis	6.27	12.00	5.67	36.61
212	Analysis	5.10	10.30	5.05	30.69	1097	Analysis	6.10	12.00	6.29	36.47
240	Analysis	4.80	10.70	5.09	30.29	1147	Analysis	6.01	12.10	6.36	36.37
242	Analysis	5.05	10.90	5.28	31.40	1215	Analysis	5.63	12.60	6.10	35.67
278	Analysis	5.00	11.00	5.40	31.44	1222	Analysis	5.72	12.60	6.25	36.03
289	Analysis	5.02	10.40	5.22	30.67	1226	Analysis	6.28	12.19	6.15	37.15
298	Analysis	4.86	10.40	5.03	30.07	1237	Analysis	6.03	12.57	6.36	36.98
307	Analysis	4.90	10.50	5.41	30.64	1244	Analysis	5.67	12.00	6.34	35.21
372	Analysis	5.00	10.40	5.33	30.68	1257	Analysis	5.74	11.80	6.03	34.99
443	Analysis	4.94	10.70	5.22	30.79	1279	Analysis	6.23	12.00	6.77	37.15
490	Analysis	4.89	10.50	5.55	30.60	1342	Analysis	6.02	12.00	6.63	36.45
1012	Analysis	5.12	11.05	5.19	31.73	1345	Analysis	5.98	12.00	6.68	36.35
1026	Analysis	4.90	10.40	5.10	30.24	1352	Analysis	6.24	12.22	6.34	37.18
1036	Analysis	4.68	10.40	5.01	29.53	1380	Analysis	6.06	12.30	6.48	36.83
1078	Analysis	5.01	10.00	5.38	30.26	1442	Analysis	5.90	12.30	6.97	36.68
1149	Analysis	4.68	10.20	5.25	29.43						
1184	Analysis	4.76	10.40	5.20	29.88		Armour's Pebble Plant Food 9-18-9				
1186	Analysis	5.20	10.40	5.08	31.12		Guaranteed	9.00	18.00	9.00	54.00
1190	Analysis	5.12	10.10	5.04	30.50		Analysis	8.48	18.11	8.00	51.97
1194	Analysis	4.88	10.50	4.91	30.19	23	Analysis	8.93	18.20	8.17	53.53
1220	Analysis	4.91	10.65	5.10	30.57	130	Analysis	8.52	18.07	8.43	52.30
1227	Analysis	5.07	10.80	5.18	31.28	181	Analysis	8.58	18.40	8.44	52.88
1249	Analysis	4.89	10.90	5.20	30.87	223	Analysis	8.55	17.45	8.86	51.91
1252	Analysis	5.00	10.00	5.37	30.22	243	Analysis	8.62	18.00	8.54	52.58
1288	Analysis	4.98	10.50	5.02	30.55	379	Analysis	8.88	18.33	8.58	53.79
1295	Analysis	4.73	11.00	5.08	30.44	414	Analysis	8.28	18.30	8.47	51.88
1297	Analysis	5.08	10.40	5.02	30.73	451	Analysis	9.10	18.61	8.88	54.96
1313	Analysis	5.16	10.50	5.41	31.33	1107	Analysis	8.88	17.83	8.84	53.33
1316	Analysis	4.81	10.70	5.30	30.45	1174	Analysis	8.85	18.00	8.80	53.43
1318	Analysis	5.03	10.20	5.50	30.63	1225	Analysis	8.29	18.00	9.17	51.97
1318	Analysis	5.00	10.40	5.34	30.68	1264	Analysis	8.60	18.40	9.04	53.30
1320	Analysis	4.94	10.40	5.64	30.68	1277					
1338	Analysis	5.16	10.70	5.71	31.75		Armour's Pebble Plant Food 10-20-10				
1344	Analysis	5.40	10.50	5.28	31.97		Guaranteed	10.00	20.00	10.00	60.00
1351	Analysis	5.16	10.90	5.37	31.78		Analysis	8.89	20.30	9.72	58.32
1358	Analysis	5.06	10.50	5.26	30.94	1516					
1362	Analysis	5.13	10.30	5.43	31.01		Armour's Pebble Plant Food 10-20-0				
1369	Analysis	5.28	10.60	5.10	31.62		Guaranteed	10.00	20.00	0.00	54.00
1379	Analysis	5.43	11.00	5.80	32.97		Analysis	10.03	19.35	0.00	53.31
1391	Analysis	5.00	10.20	5.05	30.27		Analysis	9.53	19.80	0.00	52.35
1401	Analysis	4.78	10.70	5.01	30.19	139	Analysis	9.45	19.60	0.00	51.87
1498	Analysis	5.08	10.30	5.19	30.71	225	Analysis	9.27	19.25	0.00	50.91
1502	Analysis	5.03	10.50	5.59	31.04	273	Analysis	9.85	19.92	0.00	53.45
1523	Analysis	5.08	10.30	5.19	30.71	282	Analysis	10.09	20.00	0.00	54.27
1737	Analysis	5.42	10.20	4.94	31.46	293	Analysis	10.00	19.35	0.00	53.22
	Armour's Vertagreen Plant Food 5-10-5					395	Analysis	9.61	20.05	0.00	52.89
284	Guaranteed	5.00	10.00	5.00	30.00	400	Analysis	10.22	19.90	0.00	54.54
297	Analysis	5.05	10.40	5.46	30.91	407	Analysis	10.04	19.55	0.00	53.58
394	Analysis	4.96	11.00	5.20	31.20	435	Analysis	9.62	19.71	0.00	52.51
401	Analysis	5.00	10.00	5.25	31.23	508	Analysis	9.29	20.70	0.00	52.71
420	Analysis	5.04	10.90	5.42	31.45	1079	Analysis	9.58	19.41	0.00	52.03
492	Analysis	4.77	10.80	5.68	30.68	1112	Analysis	9.76	20.00	0.00	52.23
1098	Analysis	4.97	10.80	5.33	31.07	1215	Analysis	9.55	20.00	0.00	53.65
1191	Analysis	5.12	10.05	5.27	30.58	1285	Analysis	9.80	20.00	0.00	51.80
1208	Analysis	5.19	10.10	5.50	30.99	1340	Analysis	9.62	20.00	0.00	52.86
1461	Analysis	5.04	10.30	5.59	30.83	1346	Analysis	9.57	20.41	0.00	53.20

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
	Goldenrod 12-12-12 Plant Food										
1670	Guaranteed	12.00	12.00	12.00	57.60	1606	Fidelity 8-8-8 Fertilizer				
2020	Analysis	11.42	12.00	12.62	56.23	1733	Guaranteed	8.00	8.00	8.00	38.40
	Analysis	11.70	11.60	12.31	56.41	1868	Analysis	6.14	10.40	6.83	35.60
						1990	Analysis	7.90	8.80	8.24	39.20
							Analysis	7.86	8.70	8.45	39.60
							Analysis	7.50	8.80	8.34	38.90
	Tex-Hi Specialized Crop Maker For Texas						Fidelity 10-10-0 Fertilizer				
2013	Guaranteed	8.00	8.00	8.00	38.40	1177	Guaranteed	10.00	10.00	0.00	42.00
2021	Analysis	7.85	8.30	8.54	38.63	1299	Analysis	8.96	10.40	0.00	39.30
	Analysis	7.93	8.10	8.49	38.60		Analysis	8.90	10.80	0.00	39.60
	Easy Going Ranch, Mountain Home, Texas						Fidelity 20% Superphosphate				
1484	Guaranteed	2.25	1.00	1.50	8.85	158	Guaranteed	0.00	20.00	0.00	24.00
	Analysis	1.77	.82	2.28	7.66	518	Analysis	0.00	19.49	0.00	23.30
						956	Analysis	0.00	21.30	0.00	25.50
							Analysis	0.00	20.50	0.00	24.60
	Farmers Fertilizer Co., Texarkana, Texas						Ferti-Lome For Lawns and Flowers				
648	Mule Brand 0-12-12					303	Guaranteed	6.00	12.00	4.00	34.80
	Guaranteed	0.00	12.00	12.00	21.60	947	Analysis	6.06	12.50	4.66	35.38
	Analysis	0.00	14.75	8.89	23.03		Analysis	5.59	12.70	4.00	34.41
654	Mule Brand 3-12-12						Ferti-Lome Rose Special Plant Food				
	Guaranteed	3.00	12.00	12.00	30.60	1552	Guaranteed	6.00	12.00	4.00	34.80
	Analysis	3.16	12.00	12.08	31.13	1693	Analysis	5.68	12.70	4.44	34.94
1959	Mule Brand 5-10-10					1991	Analysis	6.03	12.50	4.44	35.75
	Guaranteed	5.00	10.00	10.00	33.00		Analysis	6.00	12.60	4.57	35.30
	Analysis	4.82	9.50	10.00	31.86		Ford Motor Company, Dearborn, Michigan				
							Ford Ammonium Sulphate				
652	Mule Brand 5-10-5					751	Guaranteed	20.80	0.00	0.00	62.40
656	Guaranteed	5.00	10.00	5.00	30.00		Analysis	21.11	0.00	0.00	63.33
658	Analysis	5.20	10.80	5.05	31.59		Gilmer Cotton Oil and Fertilizer Co., Gilmer, Texas				
660	Analysis	5.10	10.80	5.45	31.53		Texas Longhorn 0-12-12				
1854	Analysis	5.20	10.50	5.94	31.76	575	Guaranteed	0.00	12.00	12.00	21.60
1884	Analysis	4.97	10.10	5.90	30.57		Analysis	0.00	12.30	12.98	22.55
1943	Analysis	5.16	10.20	5.58	31.07		Texas Longhorn 0-14-7				
1950	Analysis	5.03	10.00	5.30	30.27	319	Guaranteed	0.00	14.00	7.00	21.00
1960	Analysis	5.10	10.00	5.43	30.56		Analysis	0.00	13.40	7.95	20.35
2180	Analysis	5.40	9.80	5.87	31.48		Texas Longhorn 3-12-12				
	Analysis	6.39	10.20	7.50	35.91	318	Guaranteed	3.00	12.00	12.00	30.60
	Analysis	5.18	10.00	5.79	31.01	576	Analysis	3.56	12.20	12.76	32.97
						1049	Analysis	3.89	12.50	12.07	33.31
							Analysis	3.72	12.80	11.47	33.40
	Mule Brand 8-8-8						Texas Longhorn 5-10-5				
655	Guaranteed	8.00	8.00	8.00	38.40	709	Guaranteed	5.00	10.00	5.00	30.00
657	Analysis	7.75	8.50	8.62	38.62	1048	Analysis	5.19	10.40	5.73	31.49
1792	Analysis	7.42	9.50	8.05	38.49	1826	Analysis	5.21	9.50	6.70	31.05
1838	Analysis	8.12	8.50	8.93	39.92	1883	Analysis	5.28	10.90	5.64	32.30
1847	Analysis	7.62	8.30	8.58	37.97	1981	Analysis	5.26	9.60	6.42	31.15
1855	Analysis	8.02	8.40	8.24	39.08		Analysis	5.12	10.20	6.09	31.25
1940	Analysis	8.56	8.40	8.64	40.91		Texas Longhorn 8-8-8				
1944	Analysis	8.09	8.30	9.34	39.83	1047	Guaranteed	8.00	8.00	8.00	38.40
1951	Analysis	7.25	8.95	7.59	37.04	1161	Analysis	7.62	8.50	8.10	37.92
2181	Analysis	7.94	8.40	8.40	38.94	1827	Analysis	7.87	8.60	6.57	37.87
	Analysis	8.32	8.60	8.79	40.55	1882	Analysis	8.06	8.30	6.68	38.15
						1968	Analysis	8.02	8.55	7.40	38.76
							Analysis	7.58	9.45	8.80	39.26
	Mule Brand 10-20-10						Texas Longhorn 12-12-12				
1816	Guaranteed	10.00	20.00	10.00	60.00	1160	Guaranteed	12.00	12.00	12.00	57.60
2182	Analysis	8.70	21.80	9.70	58.08		Analysis	11.41	12.90	12.47	57.19
	Analysis	9.52	18.60	11.48	57.77		Texas Longhorn 20% Superphosphate				
						541	Guaranteed	0.00	20.00	0.00	24.00
							Analysis	0.00	20.80	0.00	24.96
	Mule Brand 12-12-12						Goulard & Olena, Skillman, New Jersey				
653	Guaranteed	12.00	12.00	12.00	57.60		G & O Rose Food				
659	Analysis	10.99	12.00	12.09	54.62	746	Guaranteed	7.00	8.00	5.00	33.60
1793	Analysis	10.95	12.70	11.47	54.97		Analysis	6.82	8.30	5.74	33.66
1813	Analysis	11.13	13.00	12.00	56.19		G & O Dahlia Gladiola Bulb Food				
	Analysis	10.55	10.77	11.86	51.69	747	Guaranteed	5.00	6.00	15.00	31.20
							Analysis	5.87	6.00	14.12	33.25
	Mule Brand 20% Superphosphate						Hi-Yield Fertilizer Co., Mt. Pleasant, Texas				
667	Guaranteed	0.00	20.00	0.00	24.00	567	Hi Yield 0-14-7				
	Analysis	0.00	21.05	0.00	25.26	642	Guaranteed	0.00	14.00	7.00	21.00
							Analysis	0.00	14.40	7.04	21.50
							Analysis	0.00	15.00	6.29	21.77
	Fidelity Chemical Corporation, Houston, Texas					1837	Hi-Yield Brand 5-10-10				
16	Fidelity 3-12-12 Fertilizer						Guaranteed	5.00	10.00	10.00	33.00
	Guaranteed	3.00	12.00	12.00	30.60		Analysis	5.42	9.35	9.21	33.01
	Analysis	3.08	12.70	12.58	32.03		Hi-Yield Brand 5-10-5				
1298	Fidelity 5-10-10 Fertilizer					1752	Guaranteed	5.00	10.00	5.00	30.00
1719	Guaranteed	5.00	10.00	10.00	33.00	1836	Analysis	6.07	9.60	6.41	33.58
	Analysis	4.44	9.80	11.59	32.03	1852	Analysis	5.30	9.05	5.08	29.21
	Analysis	5.00	10.50	10.40	33.84	1952	Analysis	5.23	9.75	6.19	31.10
1836	Fidelity 4-12-4 Fertilizer					2198	Analysis	5.00	9.55	5.86	29.58
1735	Guaranteed	4.00	12.00	4.00	28.80		Analysis	5.07	10.00	5.72	30.64
	Analysis	4.96	12.50	4.59	29.93						
	Analysis	4.00	12.20	4.38	29.27						
	Fidelity 5-10-5 Fertilizer										
181	Guaranteed	5.00	10.00	5.00	30.00						
1178	Analysis	4.81	10.60	5.70	30.57						
1198	Analysis	5.00	10.60	5.21	30.85						
1231	Analysis	4.55	10.20	5.28	29.03						
1327	Analysis	4.61	11.05	5.37	30.30						
1337	Analysis	4.92	10.10	5.41	30.13						
1543	Analysis	5.10	10.40	5.45	31.05						
1607	Analysis	4.93	10.90	3.47	29.95						
1734	Analysis	4.83	10.00	5.94	30.05						
1734	Analysis	4.91	10.50	4.22	29.86						
1869	Analysis	4.91	10.50	4.22	29.86						
	Analysis	5.01	10.70	5.73	31.31						

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
	Chief Brand 8-8-8 Fertilizer						Lion Oil Co., El Dorado, Arkansas				
	Guaranteed	8.00	8.00	8.00	38.40		Lion Ammonium Nitrate Fertilizer				
346	Analysis	7.82	8.00	8.52	38.17	302	Guaranteed	33.50	0.00	0.00	100.50
1039	Analysis	7.85	8.70	6.90	38.13	345	Analysis	33.69	0.00	0.00	101.07
1165	Analysis	7.88	8.30	6.80	37.68	416	Analysis	33.69	0.00	0.00	101.07
1664	Analysis	7.97	8.20	7.11	38.02	563	Analysis	33.59	0.00	0.00	100.77
1783	Analysis	7.59	8.00	7.54	36.89	579	Analysis	33.57	0.00	0.00	100.71
1862	Analysis	8.30	8.50	8.29	40.07	636	Analysis	33.55	0.00	0.00	100.65
1864	Analysis	7.49	8.40	7.74	37.19	662	Analysis	34.02	0.00	0.00	102.06
1880	Analysis	8.01	8.30	7.27	38.35	665	Analysis	33.73	0.00	0.00	101.25
1886	Analysis	7.84	8.70	7.27	38.32	671	Analysis	33.55	0.00	0.00	100.65
	Chief Brand 10-5-5 Fertilizer					906	Analysis	33.72	0.00	0.00	101.16
	Guaranteed	10.00	5.00	5.00	39.00	1061	Analysis	33.61	0.00	0.00	100.83
1754	Analysis	9.26	5.80	5.19	37.85	1602	Analysis	33.28	0.00	0.00	99.84
	Chief Brand 6-12-6 Fertilizer						Marshall Cotton Oil Co., Marshall, Texas				
	Guaranteed	6.00	12.00	6.00	36.00		Maverick Brand 0-14-7 Fertilizer				
1865	Analysis	5.52	12.20	6.50	35.10	568	Guaranteed	0.00	14.00	7.00	21.00
1878	Analysis	5.86	11.50	6.43	35.24		Analysis	0.00	12.75	8.17	20.20
	Chief Brand 10-20-10 Fertilizer						Maverick Brand 5-10-5 Fertilizer				
	Guaranteed	10.00	20.00	10.00	60.00	571	Guaranteed	5.00	10.00	5.00	30.00
1038	Analysis	10.08	20.40	10.68	61.13	1962	Analysis	5.03	10.60	5.49	31.10
1753	Analysis	9.82	19.66	10.12	59.12	1965	Analysis	5.10	10.10	5.59	30.47
1893	Analysis	8.83	21.50	10.09	58.34		Analysis	5.06	10.40	5.82	31.15
	Chief Brand 12-12-12 Fertilizer						Maverick Brand 8-8-8 Fertilizer				
	Guaranteed	12.00	12.00	12.00	57.60	572	Guaranteed	8.00	8.00	8.00	36.40
1739	Analysis	10.99	13.55	12.17	56.53	1966	Analysis	8.57	9.30	6.82	40.96
	Groso 5-10-5 Fertilizer						Analysis	8.08	9.00	7.68	39.65
	Guaranteed	5.00	10.00	5.00	30.00	573	Maverick Brand 12-12-12 Fertilizer				
	Groso Fertilizer 6-12-6						Guaranteed	12.00	12.00	12.00	57.60
	Guaranteed	6.00	12.00	6.00	36.00		Analysis	12.01	12.85	11.81	58.54
1860	Analysis	5.68	11.80	6.63	35.18		Mathieson Chemical Corporation, Pasadena, Texas				
	Kelly-Weber Co., Inc., Lake Charles, Louisiana					1758	Mathieson 0-24-12 Pelletized Fertilizer				
	Weber-King Brand Fertilizer Special 3-12-12						Guaranteed	0.00	24.00	12.00	36.00
	Guaranteed	3.00	12.00	12.00	30.60	15	Analysis	0.00	24.00	12.77	36.46
218	Analysis	2.85	11.81	11.49	29.61	63	Mathieson 6-24-24 Pelletized Fertilizer				
1511	Analysis	2.92	12.20	11.53	30.31	70	Guaranteed	6.00	24.00	24.00	61.20
	Weber-King Brand Fertilizer Special 4-12-4					81	Analysis	6.10	22.90	25.71	61.21
	Guaranteed	4.00	12.00	4.00	28.80	92	Analysis	6.30	23.40	22.17	60.28
199	Analysis	3.94	12.40	4.68	29.51	111	Analysis	6.10	24.10	24.38	61.85
1487	Analysis	4.33	12.20	4.55	30.36	217	Analysis	6.47	24.05	24.98	63.26
1532	Analysis	4.00	12.40	4.61	29.65	228	Analysis	6.06	24.40	24.83	62.36
	Weber-King Brand Fertilizer Special 5-10-5					252	Analysis	6.42	23.40	23.97	61.72
	Guaranteed	5.00	10.00	5.00	30.00	315	Analysis	6.96	26.30	24.27	67.00
200	Analysis	4.23	10.80	5.31	28.84	323	Analysis	7.60	24.60	23.74	66.56
1486	Analysis	4.76	10.80	5.06	30.28	324	Analysis	7.94	23.45	21.74	65.00
1500	Analysis	4.87	10.50	6.21	30.94	341	Analysis	7.65	23.30	21.94	64.07
1513	Analysis	4.62	10.20	5.23	29.24	353	Analysis	6.27	22.45	26.44	61.61
1522	Analysis	4.56	10.20	4.97	28.90	377	Analysis	6.00	24.90	26.19	63.59
1525	Analysis	4.22	10.80	5.40	28.86	481	Analysis	7.25	22.95	21.67	62.29
1531	Analysis	4.69	10.30	5.64	29.81	643	Analysis	7.70	23.60	21.28	64.19
1538	Analysis	4.71	10.20	5.87	29.89	974	Analysis	6.24	24.10	25.07	62.68
	Weber-King Brand Fertilizer Special 8-8-8					1105	Analysis	6.26	24.70	24.42	63.07
	Guaranteed	8.00	8.00	8.00	38.40	1187	Analysis	6.05	22.65	25.02	60.34
219	Analysis	7.25	8.80	7.97	37.09	1272	Analysis	7.02	24.80	24.24	65.36
1499	Analysis	8.06	8.20	7.61	38.59	1286	Analysis	6.48	25.95	26.46	66.46
1512	Analysis	7.31	8.60	8.72	37.48	1184	Analysis	6.26	24.10	25.40	62.94
1521	Analysis	7.80	8.70	8.32	38.83	1187	Analysis	6.82	26.35	24.50	66.78
1524	Analysis	7.42	8.40	8.36	37.46	1272	Analysis	6.82	27.60	24.94	68.54
1537	Analysis	7.58	8.40	8.04	37.64	1412	Analysis	6.66	28.60	25.42	69.55
	Weber-King Brand Fertilizer Special 10-20-10					1720	Analysis	7.26	24.20	24.20	65.34
	Guaranteed	10.00	20.00	10.00	60.00	1768	Analysis	7.11	28.05	24.94	69.95
1431	Analysis	9.14	20.70	9.41	57.91	1768	Analysis	6.76	24.47	24.34	64.24
1485	Analysis	9.35	20.42	10.35	58.76	1956	Analysis	6.76	24.47	24.34	64.24
1536	Analysis	8.95	20.00	12.26	58.21	2012	Analysis	6.36	26.15	23.73	64.70
	Kipfer Chemical Co., Rio Hondo, Texas					2209	Analysis	6.06	24.30	25.20	62.46
	Garden Gro Brand 5-10-5						Analysis	6.08	21.87	23.80	58.76
	Guaranteed	5.00	10.00	5.00	30.00		Mathieson 10-30-10 Pelletized Fertilizer				
291	Analysis	5.00	10.00	5.06	30.04	1119	Guaranteed	10.00	30.00	10.00	72.00
1815	Analysis	5.54	10.30	3.93	31.33	1765	Analysis	10.74	30.59	10.61	75.30
	K-W Brand 10-10-0					1857	Analysis	10.69	30.30	12.92	76.18
	Guaranteed	10.00	10.00	0.00	42.00		Analysis	10.80	30.10	11.33	75.32
289	Analysis	10.21	10.00	0.00	42.63		Mathieson 10-20-20 Pelletized Fertilizer				
1314	Analysis	8.79	10.50	0.00	38.97	1253	Guaranteed	10.00	20.00	20.00	66.00
	K-W Brand Sulphate of Ammonia					1430	Analysis	11.21	20.80	14.98	67.57
	Guaranteed	20.50	0.00	0.00	61.50	1930	Analysis	9.89	20.10	22.32	67.18
290	Analysis	21.00	0.00	0.00	63.00	1957	Analysis	10.53	20.20	17.73	66.47
	Shur-Gro Brand 20% Superphosphate						Analysis	10.94	20.20	17.08	67.31
	Guaranteed	0.00	20.00	0.00	24.00	20	Mathieson 12-24-12 Pelletized Fertilizer				
292	Analysis	0.00	19.30	0.00	23.16	38	Guaranteed	12.00	24.00	12.00	72.00

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
	Mathieson 12-24-12 Pelletized Fertilizer										
138	Analysis	11.68	24.70	12.81	72.37	147	Analysis	12.70	14.05	14.91	63.91
148	Analysis	12.33	24.50	12.12	73.66	165	Analysis	12.70	13.30	14.89	62.99
153	Analysis	11.83	24.20	12.93	72.29	229	Analysis	13.19	14.45	13.55	65.04
166	Analysis	12.02	24.07	12.44	72.40	309	Analysis	12.15	13.20	15.09	61.34
188	Analysis	11.74	22.65	13.35	70.41	322	Analysis	12.79	13.40	14.62	63.22
192	Analysis	11.83	24.60	12.50	72.51	336	Analysis	12.72	14.00	14.92	63.91
193	Analysis	11.83	24.20	13.33	72.53	366	Analysis	12.78	13.00	13.82	62.23
216	Analysis	12.02	24.65	12.32	73.03	452	Analysis	12.54	13.20	14.68	62.27
221	Analysis	12.14	24.20	11.80	72.54	560	Analysis	12.58	14.35	14.93	63.92
227	Analysis	12.18	24.50	11.11	72.61	574	Analysis	12.88	13.50	13.92	63.19
260	Analysis	12.34	24.00	11.79	72.89	584	Analysis	12.85	14.25	14.45	64.32
287	Analysis	11.99	24.20	12.75	72.66	829	Analysis	13.05	13.60	14.32	64.06
300	Analysis	12.30	24.10	12.06	73.05	829	Analysis	11.73	13.22	14.88	59.98
305	Analysis	12.10	24.40	11.63	72.56	892	Analysis	13.10	13.00	15.06	63.94
331	Analysis	11.62	23.85	11.80	69.96	997	Analysis	13.52	13.30	13.72	64.75
352	Analysis	11.71	24.40	12.44	71.87	1054	Analysis	13.43	13.90	13.62	65.11
367	Analysis	11.62	23.50	12.50	70.56	1134	Analysis	13.38	13.40	13.85	64.53
384	Analysis	11.88	25.10	12.16	73.06	1145	Analysis	13.24	13.40	13.97	64.18
387	Analysis	12.02	24.00	12.56	72.40	1205	Analysis	12.94	13.50	14.50	63.72
391	Analysis	11.93	24.10	12.76	72.37	1206	Analysis	13.58	13.20	12.68	64.18
398	Analysis	11.94	24.70	12.59	73.01	1233	Analysis	13.30	13.10	13.63	63.80
413	Analysis	12.00	24.00	12.67	72.40	1240	Analysis	13.36	14.20	14.32	65.75
426	Analysis	12.16	24.60	12.05	73.23	1248	Analysis	13.00	14.00	14.88	64.73
429	Analysis	12.19	24.30	11.60	72.69	1250	Analysis	12.84	13.50	14.54	63.43
551	Analysis	12.19	24.20	12.24	72.95	1262	Analysis	13.00	13.50	14.73	64.03
561	Analysis	11.65	24.20	11.66	70.99	1270	Analysis	13.00	14.05	14.50	64.55
569	Analysis	11.88	24.30	12.75	72.45	1317	Analysis	13.19	13.30	14.21	64.66
583	Analysis	12.00	23.70	12.60	72.00	1383	Analysis	13.08	13.00	15.10	63.90
594	Analysis	12.02	23.70	12.79	72.17	1388	Analysis	13.05	13.90	14.38	64.47
604	Analysis	11.79	24.10	12.33	71.69	1407	Analysis	12.79	13.20	15.41	63.46
608	Analysis	12.32	23.55	11.65	72.21	1464	Analysis	13.44	13.20	14.03	64.33
681	Analysis	12.14	24.60	12.37	73.36	1492	Analysis	12.69	13.70	16.03	64.11
722	Analysis	11.94	24.10	12.22	72.07	1519	Analysis	13.32	13.50	14.16	64.66
741	Analysis	12.00	23.75	11.67	71.50	1526	Analysis	12.90	13.40	15.31	63.96
827	Analysis	12.09	23.70	12.28	72.09	1553	Analysis	13.16	13.60	14.61	64.56
839	Analysis	11.80	23.85	12.86	71.74	1566	Analysis	13.01	13.30	15.14	64.07
841	Analysis	12.01	24.00	12.74	72.47	1730	Analysis	12.78	13.60	13.97	63.94
875	Analysis	12.04	24.90	12.27	73.36	1757	Analysis	12.43	14.00	15.70	63.51
891	Analysis	12.03	24.20	12.10	72.39	1766	Analysis	12.43	14.00	15.70	63.51
1053	Analysis	11.84	24.95	12.80	73.14	1795	Analysis	13.05	15.65	13.07	65.77
1106	Analysis	12.00	23.60	12.35	71.73	1805	Analysis	13.20	13.95	14.14	64.32
1110	Analysis	12.10	24.00	12.50	72.60	1840	Analysis	12.76	13.70	14.94	63.88
1126	Analysis	12.02	24.20	12.97	72.88	1928	Analysis	13.36	13.20	13.67	64.12
1132	Analysis	12.04	24.30	12.72	72.91	1958	Analysis	12.76	13.70	14.46	63.40
1133	Analysis	11.77	23.55	13.01	71.88	1992	Analysis	13.14	13.50	13.18	63.53
1155	Analysis	12.05	23.40	12.47	71.71	2077	Analysis	12.93	13.50	14.81	63.38
1175	Analysis	12.00	25.20	12.72	73.87	2091	Analysis	12.88	13.50	14.20	63.36
1188	Analysis	12.22	24.00	12.40	72.90	2096	Analysis	12.70	13.70	14.71	63.37
1199	Analysis	12.04	24.30	12.82	72.97	2119	Analysis	13.46	13.30	13.61	64.51
1204	Analysis	12.10	24.10	12.56	72.76	2210	Analysis	12.84	13.50	14.91	63.67
1210	Analysis	12.06	23.60	12.63	72.07			12.49	14.50	14.30	63.45
1212	Analysis	12.36	24.00	12.05	73.11						
1239	Analysis	12.02	24.00	12.79	72.53						
1246	Analysis	12.03	24.50	13.07	73.33						
1263	Analysis	12.02	24.60	13.00	73.38	364	Analysis	12.97	40.40	0.00	87.39
1269	Analysis	12.05	24.10	12.68	72.67	412	Analysis	13.20	39.30	0.00	86.76
1281	Analysis	12.08	24.20	13.18	73.19	418	Analysis	13.28	38.90	0.00	86.32
1285	Analysis	12.02	24.60	12.59	73.13	423	Analysis	13.64	29.66	0.00	76.51
1333	Analysis	12.00	24.90	12.60	73.44	427	Analysis	13.28	39.30	0.00	87.00
1359	Analysis	12.04	24.30	13.22	73.81	430	Analysis	13.32	39.20	0.00	87.00
1364	Analysis	12.04	24.00	13.23	72.86	625	Analysis	13.61	37.46	0.00	85.78
1368	Analysis	12.08	24.40	13.28	73.49	674	Analysis	13.17	39.90	0.00	87.39
1372	Analysis	12.12	24.60	13.32	73.87	786	Analysis	13.36	39.00	0.00	86.38
1378	Analysis	11.93	24.66	13.44	73.44	843	Analysis	13.74	36.50	0.00	85.02
1387	Analysis	12.00	24.10	13.22	72.85	843	Analysis	13.40	38.80	0.00	86.76
1410	Analysis	12.14	24.50	13.00	73.62	917	Analysis	13.62	38.60	0.00	87.18
1421	Analysis	12.16	24.50	11.93	73.04	983	Analysis	13.38	39.62	0.00	87.68
1432	Analysis	11.94	24.00	12.62	72.19	1067	Analysis	13.32	39.90	0.00	87.84
1452	Analysis	12.02	24.60	12.74	73.22	1083	Analysis	13.10	40.00	0.00	87.30
1463	Analysis	11.94	24.50	13.07	73.06	1093	Analysis	13.52	39.00	0.00	87.36
1491	Analysis	12.20	24.00	12.95	73.17	1096	Analysis	13.39	39.10	0.00	87.09
1527	Analysis	11.94	24.10	12.84	72.44	1111	Analysis	13.02	39.05	0.00	85.32
1567	Analysis	11.79	24.00	12.77	71.83	1118	Analysis	13.70	37.60	0.00	86.22
1572	Analysis	12.02	24.00	12.25	72.21	1125	Analysis	13.39	38.80	0.00	86.73
1586	Analysis	11.90	24.50	12.92	72.85	1189	Analysis	13.46	39.20	0.00	87.42
1767	Analysis	11.61	24.07	12.11	70.98	1193	Analysis	13.40	39.91	0.00	88.09
1767	Analysis	11.61	24.07	12.11	70.98	1202	Analysis	13.60	39.10	0.00	87.72
1931	Analysis	11.83	24.00	12.82	71.98	1360	Analysis	13.48	40.20	0.00	88.68
1967	Analysis	12.00	24.00	12.69	72.41	2151	Analysis	13.22	39.00	0.00	86.46
2104	Analysis	12.06	24.80	12.56	73.48						
2118	Analysis	12.21	24.20	12.47	73.15						
2150	Analysis	11.62	23.46	14.14	71.49						
2160	Analysis	11.63	25.25	12.80	72.87						
	Mathieson 13-13-13 Pelletized Fertilizer										
	Guaranteed	13.00	13.00	13.00	62.40	1	Analysis	16.00	20.00	0.00	72.00
6	Analysis	12.94	14.35	13.77	64.30	5	Analysis	16.12	20.10	0.00	72.48
62	Analysis	12.54	13.50	14.97	62.80	39	Analysis	15.92	21.90	0.00	74.04
69	Analysis	12.78	13.60	14.36	63.28	45	Analysis	15.66	21.80	0.00	73.14
77	Analysis	12.57	13.50	13.92	62.26	68	Analysis	16.16	21.45	0.00	74.22
80	Analysis	12.64	13.90	14.19	63.11	76	Analysis	15.93	20.90	0.00	72.87
90	Analysis	12.72	14.15	15.43	62.42	97	Analysis	16.24	20.70	0.00	73.56
93	Analysis	12.47	14.05	14.90	63.21	100	Analysis	15.82	21.00	0.00	72.66
106	Analysis	12.75	14.10	14.26	63.73	103	Analysis	16.04	21.35	0.00	73.74
114	Analysis	12.75	13.10	14.25	62.52	108	Analysis	15.81	20.50	0.00	72.03
121	Analysis	12.67	14.25	13.17	63.01	123	Analysis	16.33	19.80	0.00	72.75
						127	Analysis	16.28	20.70	0.00	73.68
						137	Analysis	16.00	21.30	0.00	73.56

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
187	Mathieson Ammophos 16-20-0 Pelletized Fertilizer	16.18	20.70	0.00	73.38	1082	Analysis	16.24	20.50	0.00	73.32
189	Analysis	16.11	22.05	0.00	74.79	1089	Analysis	15.53	20.50	0.00	71.19
191	Analysis	15.77	21.50	0.00	73.11	1092	Analysis	16.09	20.10	0.00	72.39
245	Analysis	16.34	20.20	0.00	73.26	1094	Analysis	15.92	20.60	0.00	72.48
247	Analysis	15.94	20.80	0.00	72.78	1095	Analysis	16.05	20.80	0.00	73.11
259	Analysis	16.16	20.50	0.00	73.08	1103	Analysis	16.02	20.10	0.00	72.18
267	Analysis	16.16	20.30	0.00	72.84	1109	Analysis	16.02	20.80	0.00	73.02
276	Analysis	16.14	20.70	0.00	73.26	1117	Analysis	15.67	22.10	0.00	73.53
277	Analysis	16.24	20.40	0.00	73.20	1124	Analysis	16.16	20.00	0.00	72.48
288	Analysis	15.96	22.55	0.00	74.94	1200	Analysis	16.40	20.40	0.00	73.68
294	Analysis	16.26	21.80	0.00	74.94	1201	Analysis	16.37	20.00	0.00	73.11
299	Analysis	15.88	20.95	0.00	72.78	1203	Analysis	16.02	20.10	0.00	72.18
301	Analysis	16.32	20.70	0.00	73.80	1209	Analysis	16.14	20.20	0.00	72.66
304	Analysis	16.22	20.00	0.00	72.66	1213	Analysis	16.00	21.50	0.00	73.80
373	Analysis	16.21	21.00	0.00	73.83	1214	Analysis	16.01	20.50	0.00	72.63
383	Analysis	15.92	20.70	0.00	72.60	1219	Analysis	16.00	21.50	0.00	73.80
392	Analysis	16.24	19.75	0.00	72.42	1234	Analysis	16.00	20.10	0.00	72.12
399	Analysis	16.22	21.70	0.00	74.70	1241	Analysis	16.04	20.60	0.00	72.84
431	Analysis	16.05	21.55	0.00	74.01	1247	Analysis	16.23	20.40	0.00	73.32
438	Analysis	16.00	22.25	0.00	74.70	1254	Analysis	16.06	20.70	0.00	73.02
495	Analysis	15.93	21.25	0.00	73.29	1271	Analysis	16.01	20.60	0.00	72.75
500	Analysis	15.89	20.80	0.00	72.63	1282	Analysis	15.96	20.90	0.00	72.96
510	Analysis	16.18	20.90	0.00	73.62	1325	Analysis	16.10	20.80	0.00	73.26
585	Analysis	16.00	20.70	0.00	72.84	1341	Analysis	16.10	20.40	0.00	72.78
588	Analysis	16.10	21.20	0.00	73.74	1357	Analysis	16.02	21.40	0.00	73.74
595	Analysis	16.13	20.95	0.00	73.53	1363	Analysis	16.01	20.50	0.00	72.63
605	Analysis	16.30	20.90	0.00	73.98	1371	Analysis	16.14	20.30	0.00	72.78
609	Analysis	15.83	21.95	0.00	73.83	1377	Analysis	15.90	22.65	0.00	74.88
611	Analysis	16.04	21.10	0.00	73.44	1386	Analysis	15.61	20.50	0.00	71.43
617	Analysis	15.91	21.10	0.00	73.05	1394	Analysis	16.00	20.70	0.00	72.84
620	Analysis	16.16	21.20	0.00	73.92	1411	Analysis	15.83	20.80	0.00	72.45
624	Analysis	16.00	20.60	0.00	72.72	1436	Analysis	16.00	21.40	0.00	73.68
626	Analysis	16.27	21.10	0.00	74.13	1453	Analysis	15.94	20.40	0.00	72.30
672	Analysis	15.60	20.60	0.00	71.52	1462	Analysis	16.14	20.50	0.00	73.02
675	Analysis	16.19	21.00	0.00	73.77	1493	Analysis	16.03	21.10	0.00	73.41
676	Analysis	16.07	20.80	0.00	73.17	1580	Analysis	15.91	20.40	0.00	72.21
679	Analysis	15.59	20.90	0.00	71.85	1585	Analysis	16.01	20.80	0.00	72.99
680	Analysis	15.79	21.20	0.00	72.81	1587	Analysis	15.84	20.80	0.00	72.48
686	Analysis	16.08	21.10	0.00	73.56	1695	Analysis	16.04	21.10	0.00	73.44
693	Analysis	16.04	20.80	0.00	73.08	1701	Analysis	16.10	21.90	0.00	74.58
702	Analysis	16.12	21.00	0.00	73.56	1721	Analysis	16.01	21.60	0.00	73.95
705	Analysis	16.02	20.60	0.00	72.78	1794	Analysis	15.82	21.75	0.00	73.56
707	Analysis	13.67	21.69	0.00	67.04	1804	Analysis	15.91	20.40	0.00	72.21
732	Analysis	16.05	20.80	0.00	73.11	1856	Analysis	15.93	20.80	0.00	72.75
740	Analysis	16.39	22.20	0.00	75.81	2108	Analysis	16.10	20.80	0.00	73.26
742	Analysis	15.46	21.00	0.00	71.58	2120	Analysis	16.02	20.50	0.00	72.66
763	Analysis	15.88	20.60	0.00	72.36	2123	Analysis	16.03	20.50	0.00	72.69
766	Analysis	15.73	19.80	0.00	70.95	2138	Analysis	15.94	20.30	0.00	72.18
767	Analysis	16.26	21.70	0.00	74.82	2144	Analysis	15.77	20.00	0.00	71.31
769	Analysis	16.36	20.80	0.00	74.04	2147	Analysis	16.40	21.65	0.00	75.18
777	Analysis	16.26	20.20	0.00	73.02	2149	Analysis	15.86	21.55	0.00	73.44
782	Analysis	16.36	20.10	0.00	73.20	2152	Analysis	16.13	20.70	0.00	73.23
792	Analysis	16.38	21.25	0.00	74.64	2153	Analysis	16.08	21.80	0.00	74.40
794	Analysis	16.25	20.60	0.00	73.47	2156	Analysis	16.05	21.80	0.00	74.31
795	Analysis	16.18	21.00	0.00	73.74	2159	Analysis	16.12	20.40	0.00	72.84
797	Analysis	16.12	20.90	0.00	73.44	2161	Analysis	15.94	20.60	0.00	72.54
806	Analysis	16.00	20.70	0.00	72.84	2171	Analysis	15.92	20.40	0.00	72.24
811	Analysis	16.08	21.30	0.00	73.80	2171	Analysis	16.32	23.35	0.00	76.98
824	Analysis	16.21	20.30	0.00	72.99	2173	Analysis	16.36	22.80	0.00	76.44
825	Analysis	16.36	20.60	0.00	73.80						
828	Analysis	16.30	20.60	0.00	73.62		Mathieson 20% Superphosphate Pelletized Fertilizer				
831	Analysis	15.93	21.00	0.00	72.99	78	Guaranteed	0.00	20.00	0.00	24.00
838	Analysis	16.34	20.80	0.00	73.98	132	Analysis	0.00	21.30	0.00	25.56
840	Analysis	15.86	20.50	0.00	72.18	238	Analysis	0.00	23.15	0.00	33.78
842	Analysis	16.12	20.70	0.00	73.20	419	Analysis	0.00	21.50	0.00	25.80
854	Analysis	16.33	20.60	0.00	73.71	472	Analysis	0.00	21.90	0.00	26.28
869	Analysis	16.19	21.20	0.00	74.01	511	Analysis	0.00	20.10	0.00	24.12
876	Analysis	16.12	20.30	0.00	72.72	622	Analysis	0.00	20.90	0.00	25.08
877	Analysis	16.06	20.80	0.00	73.14						
885	Analysis	16.39	20.80	0.00	74.13		Mathieson 30% Superphosphate Pelletized Fertilizer				
893	Analysis	15.94	20.70	0.00	72.66		Guaranteed	0.00	30.00	0.00	36.00
894	Analysis	16.29	20.20	0.00	73.11	237	Analysis	0.00	31.10	0.00	37.32
896	Analysis	16.36	20.30	0.00	73.44	1071	Analysis	0.00	30.30	0.00	36.36
897	Analysis	15.64	21.85	0.00	73.14	1073	Analysis	0.00	30.30	0.00	36.36
911	Analysis	16.18	20.50	0.00	73.14	1091	Analysis	0.00	31.50	0.00	37.80
914	Analysis	16.24	21.10	0.00	74.04	1108	Analysis	0.00	31.00	0.00	37.20
916	Analysis	16.28	20.15	0.00	73.02		Mathieson 0-12-12 Fertilizer				
918	Analysis	16.16	20.90	0.00	73.56		Guaranteed	0.00	12.00	12.00	21.60
923	Analysis	16.38	21.00	0.00	74.34	577	Analysis	0.00	12.70	12.82	22.93
928	Analysis	16.16	21.20	0.00	73.92						
930	Analysis	16.16	21.00	0.00	73.68		Mathieson 0-14-7 Fertilizer				
933	Analysis	15.94	20.50	0.00	72.42		Guaranteed	0.00	14.00	7.00	21.00
939	Analysis	16.26	20.00	0.00	72.78	351	Analysis	0.00	14.00	8.38	21.83
941	Analysis	16.20	20.30	0.00	72.96	461	Analysis	0.00	14.50	7.00	21.60
943	Analysis	16.04	20.00	0.00	72.12						
946	Analysis	16.01	20.40	0.00	72.51		Mathieson 3-12-12 Fertilizer				
948	Analysis	16.04	20.30	0.00	72.48		Guaranteed	3.00	12.00	12.00	30.60
950	Analysis	15.98	20.40	0.00	72.42	471	Analysis	3.09	13.25	12.01	32.38
953	Analysis	16.18	20.40	0.00	73.02	644	Analysis	3.19	12.10	11.08	30.74
971	Analysis	16.26	20.70	0.00	73.62	2100	Analysis	3.16	12.80	12.51	32.35
984	Analysis	16.06	22.20	0.00	74.82		Mathieson 5-10-5 Fertilizer				
998	Analysis	16.12	21.50	0.00	74.16		Guaranteed	5.00	10.00	5.00	30.00
1007	Analysis	16.18	21.90	0.00	74.82	718	Analysis	4.88	10.60	5.71	30.79
1064	Analysis	15.84	20.90	0.00	72.60	724	Analysis	5.04	10.20	6.48	31.25
1072	Analysis	15.76	20.40	0.00	71.76	1685	Analysis	5.30	10.60	6.13	32.30
1074	Analysis	15.61	20.80	0.00	71.79	1894	Analysis	5.10	10.40	5.76	31.24

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	
723	Mathieson 8-8-8 Fertilizer					1680	Analysis	8.11	21.70	10.12	56.44	
	Guaranteed	8.00	8.00	8.00	38.40		1689	Analysis	9.82	20.10	10.40	59.82
	Analysis	7.72	8.60	8.36	38.50		1810	Analysis	9.26	21.29	10.29	59.50
646	Mathieson Ammonium Nitrate Fertilizer					1823	Analysis	9.46	20.10	10.20	58.82	
	Guaranteed	33.50	0.00	0.00	100.50		2177	Analysis	9.05	20.80	10.09	58.16
	Analysis	33.95	0.00	0.00	101.85		2177	Analysis	9.05	20.80	10.09	58.16
687	Analysis	33.65	0.00	0.00	100.95							
1146	Analysis	33.80	0.00	0.00	101.40							
694	Mathieson Ammonium Sulphate Fertilizer					586	Red Star Brand 0-20-0					
	Guaranteed	21.00	0.00	0.00	63.00		589	Guaranteed	0.00	20.00	0.00	24.00
	Analysis	21.06	0.00	0.00	63.18		607	Analysis	0.00	19.16	0.00	22.99
728	Mathieson 20% Superphosphate Fertilizer					589	Analysis	0.00	19.85	0.00	23.82	
	Guaranteed	0.00	20.00	0.00	24.00		607	Analysis	0.00	20.20	0.00	24.24
	Analysis	0.00	20.50	0.00	24.60							
919	Analysis	0.00	21.45	0.00	25.74							
Phillips Chemical Co., Houston, Texas						Sewerage Commission, Milwaukee, Wisconsin						
Phillips 66 Prilled Ammonium Nitrate Fertilizer						Milwaukee Milorganite Ideal Lawn & Garden Fertilizer						
411	Guaranteed	33.00	0.00	0.00	99.00	753	Guaranteed	6.00	2.00	0.00	20.40	
	Analysis	33.68	0.00	0.00	101.04		945	Analysis	5.91	4.40	0.00	23.01
	Analysis	33.35	0.00	0.00	100.05			Analysis	5.66	3.82	0.00	21.56
687	Analysis	33.78	0.00	0.00	101.34	Shreveport Fertilizer Works, Shreveport, Louisiana						
691	Analysis	33.93	0.00	0.00	101.79	La-Tex 3-12-12 Fertilizer						
695	Analysis	34.24	0.00	0.00	102.72	2023	Guaranteed	3.00	12.00	12.00	30.50	
726	Analysis	33.65	0.00	0.00	100.95		Analysis	3.20	12.20	13.90	32.58	
775	Analysis	33.73	0.00	0.00	101.19	La-Tex 5-10-10 Fertilizer						
987	Analysis	33.14	0.00	0.00	99.42	220	Guaranteed	5.00	10.00	10.00	33.00	
940	Analysis	33.15	0.00	0.00	99.45		Analysis	4.89	9.65	10.12	32.33	
955	Analysis	33.60	0.00	0.00	100.80	La-Tex 4-12-4 Fertilizer						
1003	Analysis	33.45	0.00	0.00	100.35	8	Guaranteed	4.00	12.00	4.00	28.80	
1402	Analysis	33.08	0.00	0.00	99.24		1642	Analysis	2.68	9.47	7.54	23.82
1601	Analysis	33.11	0.00	0.00	99.33	1999	La-Tex 5-10-5 Fertilizer					
2179	Analysis	33.45	0.00	0.00	100.35	2024	Guaranteed	5.00	10.00	5.00	30.00	
Phillips 66 Ammonium Sulphate						La-Tex 8-8-8 Fertilizer						
122	Guaranteed	21.00	0.00	0.00	63.00	9	Guaranteed	8.00	8.00	8.00	38.40	
	Analysis	21.30	0.00	0.00	63.90		1169	Analysis	7.24	8.90	8.82	37.69
	285	Analysis	21.22	0.00	0.00		63.66	1520	Analysis	7.84	8.80	9.13
388	Analysis	21.22	0.00	0.00	63.66	1641	Analysis	7.47	9.00	8.66	38.40	
701	Analysis	20.84	0.00	0.00	62.52	2022	Analysis	7.82	8.90	7.12	38.41	
731	Analysis	21.13	0.00	0.00	63.39	La-Tex 10-20-10 Fertilizer						
1319	Analysis	21.03	0.00	0.00	63.09	1167	Guaranteed	10.00	20.00	10.00	60.00	
1438	Analysis	21.12	0.00	0.00	63.36		Analysis	9.66	19.80	10.84	59.24	
Red Star Fertilizer Co., Sulphur Springs, Texas						La-Tex 12-12-12 Fertilizer						
Red Star Brand 0-14-7						1168	Guaranteed	12.00	12.00	12.00	57.60	
87	Guaranteed	0.00	14.00	7.00	21.00		Analysis	11.06	12.60	12.27	55.68	
	Analysis	0.00	14.40	6.98	21.47	Lion 0-14-7 Fertilizer						
	334	Analysis	0.00	14.30	6.61	21.13	19	Guaranteed	0.00	14.00	7.00	21.00
339	Analysis	0.00	14.30	7.52	21.67	523		Analysis	0.00	15.00	6.60	21.96
587	Analysis	0.00	13.40	8.13	20.96	552		Analysis	0.00	15.25	6.85	22.41
638	Analysis	0.00	14.60	6.69	21.53	711	Analysis	0.00	16.60	4.84	22.82	
645	Analysis	0.00	14.00	6.60	20.76	Lion 5-10-10 Fertilizer						
666	Analysis	0.00	14.00	7.68	21.41	1507	Guaranteed	5.00	10.00	10.00	33.00	
1811	Analysis	0.00	13.67	7.42	20.85		Analysis	4.87	11.35	10.86	34.75	
Red Star Brand 3-12-12						Lion 4-12-4 Fertilizer						
86	Guaranteed	3.00	12.00	12.00	30.60	1428	Guaranteed	4.00	12.00	4.00	28.80	
	Analysis	2.79	12.00	12.00	30.34		1609	Analysis	4.44	12.00	9.15	33.21
	335	Analysis	2.85	12.00	10.84		29.45	Analysis	3.03	13.80	10.18	31.76
340	Analysis	2.32	11.54	11.08	27.46	Lion 5-10-5 Fertilizer						
562	Analysis	2.87	12.00	10.80	29.49	195	Guaranteed	5.00	10.00	5.00	30.00	
Red Star Brand 5-10-5							332	Analysis	5.01	10.70	7.61	32.44
4	Guaranteed	5.00	10.00	5.00	30.00			712	Analysis	4.76	10.90	6.49
	Analysis	5.73	9.45	6.40	32.37	1301		Analysis	5.44	10.70	6.58	33.11
	88	Analysis	7.00	8.65	7.88	45.81	1309	Analysis	5.04	10.50	5.62	31.09
1384	Analysis	5.28	10.20	5.41	31.93	1427	Analysis	5.04	10.10	5.50	31.02	
1681	Analysis	4.99	10.00	5.55	30.30	1454	Analysis	5.02	10.82	5.53	31.33	
1729	Analysis	4.77	10.00	5.26	29.47	1508	Analysis	5.04	10.50	5.87	31.24	
1788	Analysis	5.12	10.00	5.64	30.74	1608	Analysis	5.06	11.65	7.54	33.63	
1843	Analysis	5.34	10.20	5.82	31.75	1636	Analysis	5.00	10.70	6.00	31.44	
1979	Analysis	5.09	9.35	5.30	29.67	1636	Analysis	5.18	10.10	5.94	31.22	
1980	Analysis	5.18	10.00	5.41	30.79	1669	Analysis	4.98	10.50	7.39	31.97	
2000	Analysis	5.09	10.20	5.19	30.62	1678	Analysis	4.98	10.50	7.89	31.97	
2178	Analysis	5.02	10.20	5.73	30.74	1920	Analysis	5.05	10.90	5.82	31.72	
2186	Analysis	4.89	10.10	5.08	29.84	1920	Analysis	4.87	10.90	7.17	31.99	
2186	Analysis	4.89	10.10	5.08	29.84	1941	Analysis	5.20	11.05	7.48	33.35	
2193	Analysis	5.00	9.90	5.41	30.13	1945	Analysis	6.07	10.80	9.42	36.82	
2193	Analysis	5.00	9.90	5.41	30.13	1948	Analysis	5.00	10.90	5.71	31.51	
Red Star Brand 8-8-8						1987	Analysis	4.60	11.40	6.49	31.37	
1261	Guaranteed	8.00	8.00	8.00	38.40		1972	Analysis	5.26	10.60	5.63	31.88
	Analysis	7.47	8.60	8.72	37.96		1983	Analysis	6.84	10.90	8.13	38.48
	1385	Analysis	7.45	8.50	8.17	37.45		Analysis	5.33	11.50	6.56	33.70
1662	Analysis	8.00	8.10	8.43	38.78							
1728	Analysis	7.65	8.60	8.29	38.24							
1846	Analysis	7.94	8.50	8.49	39.11							
Red Star Brand 10-20-10												
714	Guaranteed	10.00	20.00	10.00	60.00							
	Analysis	9.50	19.68	9.23	57.66							
	1260	Analysis	9.56	20.00	10.12	58.75						
1280	Analysis	9.56	20.00	10.12	58.75							

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
Lion 8-8-8 Fertilizer						Swift's Red Steer 5-10-5					
17	Guaranteed	8.00	8.00	8.00	38.40	1195	Analysis	4.66	13.20	4.33	32.42
196	Analysis	8.04	8.40	9.34	39.80	1218	Analysis	4.12	12.09	4.13	29.33
333	Analysis	6.50	9.70	8.47	36.22	1321	Analysis	4.42	12.50	4.30	30.84
1135	Analysis	6.99	10.35	9.17	38.89	1328	Analysis	4.64	12.80	3.79	31.55
1172	Analysis	8.00	8.50	9.22	39.73	1365	Analysis	3.63	13.90	3.08	29.42
1300	Analysis	7.15	9.45	8.24	37.73	1465	Analysis	3.90	12.10	5.06	29.26
1426	Analysis	7.50	9.05	8.46	39.03	1483	Analysis	3.93	12.20	3.93	28.79
1456	Analysis	7.51	9.35	8.77	39.01	1612	Analysis	3.42	12.00	4.97	27.64
1635	Analysis	6.34	10.60	8.88	37.07	1648	Analysis	4.47	12.10	3.95	30.30
1635	Analysis	6.34	10.60	8.88	37.07	1704	Analysis	3.72	12.00	4.98	28.55
1668	Analysis	7.62	9.10	9.41	39.43	1891	Analysis	4.34	12.30	4.07	30.22
1679	Analysis	7.74	8.80	9.34	39.38	Swift's Red Steer 5-10-5					
1824	Analysis	7.79	9.05	8.81	39.52	40	Guaranteed	5.00	10.00	5.00	30.00
1853	Analysis	7.80	9.45	9.57	40.48	56	Analysis	4.50	10.60	5.12	29.53
1919	Analysis	8.00	8.80	8.51	39.67	75	Analysis	4.56	10.10	5.24	28.94
1942	Analysis	7.82	9.00	8.49	39.35	89	Analysis	4.75	10.00	6.48	30.14
1946	Analysis	7.86	9.30	8.64	40.36	119	Analysis	4.50	10.20	5.64	29.12
1949	Analysis	7.84	8.80	8.42	39.13	144	Analysis	4.56	10.10	6.49	29.69
1974	Analysis	7.80	8.70	8.34	38.84	197	Analysis	5.19	10.10	5.10	30.75
1984	Analysis	7.72	9.40	8.14	39.32	202	Analysis	4.94	10.60	5.00	30.54
2084	Analysis	7.54	9.40	8.80	39.18	265	Analysis	5.16	9.81	5.68	30.66
2084	Analysis	7.54	9.40	8.80	39.18	373	Analysis	5.14	10.20	5.77	31.12
Lion 6-8-12 Fertilizer						447	Analysis	5.02	11.10	5.89	31.91
Lion 10-20-10 Fertilizer						493	Analysis	4.57	9.90	5.46	28.87
1455	Guaranteed	6.00	8.00	12.00	34.80	507	Analysis	4.74	10.70	5.08	30.11
	Analysis	6.49	9.25	13.01	38.38	513	Analysis	5.02	9.75	5.80	30.24
1170	Guaranteed	10.00	20.00	10.00	60.00	978	Analysis	5.46	10.90	5.91	33.01
1308	Analysis	10.16	19.10	10.50	59.70	991	Analysis	5.02	11.50	4.92	31.81
1505	Analysis	9.40	20.20	10.52	58.75	1010	Analysis	5.36	10.00	6.52	31.99
1588	Analysis	9.72	19.40	10.77	58.90	1051	Analysis	5.00	10.60	5.79	31.19
1588	Analysis	10.13	19.85	10.66	60.61	1058	Analysis	5.38	11.00	6.10	33.00
1588	Analysis	10.13	19.85	10.66	60.61	1127	Analysis	4.65	10.00	5.30	29.13
1969	Analysis	9.49	19.46	10.46	58.10	1141	Analysis	5.48	10.60	5.85	32.67
Lion 10-10-10 Fertilizer						1153	Analysis	4.93	11.70	5.41	32.08
1171	Guaranteed	10.00	10.00	10.00	48.00	1196	Analysis	4.71	10.90	4.91	30.15
1814	Analysis	9.38	12.35	10.92	49.51	1207	Analysis	5.06	11.30	6.16	32.43
	Analysis	8.84	11.55	10.12	46.45	1217	Analysis	5.00	10.90	6.25	31.38
Lion 12-12-12 Fertilizer						1229	Analysis	4.90	11.00	5.19	31.01
1506	Guaranteed	12.00	12.00	12.00	57.60	1232	Analysis	4.85	10.90	5.30	30.81
1815	Analysis	9.44	12.60	11.08	50.09	1251	Analysis	5.04	10.90	5.23	31.33
	Analysis	11.74	12.10	12.47	57.22	1307	Analysis	4.75	10.90	5.30	30.51
Lion 20% Superphosphate						1322	Analysis	5.39	10.90	5.96	32.83
522	Guaranteed	0.00	20.00	0.00	24.00	1349	Analysis	4.26	10.60	5.71	28.93
1697	Analysis	0.00	20.20	0.00	24.24	1356	Analysis	5.15	12.10	4.26	32.52
	Analysis	0.00	20.20	0.00	24.24	1390	Analysis	5.06	12.05	5.37	32.86
Longhorn 5-10-5 Fertilizer						1392	Analysis	5.20	11.25	5.98	32.68
1545	Guaranteed	5.00	10.00	5.00	30.00	1409	Analysis	5.21	11.00	5.58	32.17
1555	Analysis	5.00	10.90	6.08	31.72	1413	Analysis	5.04	11.20	6.00	32.16
	Analysis	5.46	10.80	6.79	33.41	1417	Analysis	5.36	10.20	6.62	32.29
Longhorn 8-8-8 Fertilizer						1425	Analysis	4.61	9.85	6.06	29.28
1544	Guaranteed	8.00	8.00	8.00	38.40	1429	Analysis	5.05	10.10	6.61	31.24
1554	Analysis	7.56	9.30	9.75	39.69	1466	Analysis	4.29	12.40	5.30	30.93
	Analysis	7.59	8.87	9.84	39.31	1482	Analysis	4.57	10.40	5.32	29.38
Southwest Fertilizer & Chemical Co., El Paso, Texas						1611	Analysis	4.63	9.90	5.41	29.02
SWFGRO 0-20-0						1611	Analysis	4.63	9.90	5.41	29.02
417	Guaranteed	0.00	20.00	0.00	24.00	1646	Analysis	5.04	10.10	5.64	30.62
935	Analysis	0.00	20.90	0.00	25.08	1647	Analysis	4.92	10.80	5.76	31.18
958	Analysis	0.00	21.11	0.00	25.33	1723	Analysis	4.52	10.00	5.52	28.87
959	Analysis	0.00	20.00	0.00	24.00	1742	Analysis	4.63	10.60	5.30	29.79
1063	Analysis	0.00	20.70	0.00	24.84	1761	Analysis	5.23	11.65	5.45	32.94
	Analysis	0.00	20.20	0.00	24.24	1890	Analysis	4.71	10.10	5.50	29.55
Spencer Chemical Co., Kansas City, Missouri						2087	Analysis	5.20	10.70	6.36	32.26
Ammonium Nitrate Fertilizer						2087	Analysis	5.20	10.70	6.36	32.26
664	Guaranteed	33.50	0.00	0.00	100.50	Swift's Red Steer 6-10-4					
	Analysis	33.61	0.00	0.00	100.83	286	Guaranteed	6.00	10.00	4.00	32.40
Swift & Co., Plant Food Division, Houston, Texas							Analysis	5.48	10.40	4.46	31.60
Swift's Red Steer 0-14-7						Swift's Red Steer 8-8-8					
526	Guaranteed	0.00	14.00	7.00	21.00	55	Guaranteed	8.00	8.00	8.00	38.40
	Analysis	0.00	14.50	7.14	21.68	1610	Analysis	7.85	8.80	8.15	39.00
Swift's Red Steer 3-12-12						1760	Analysis	7.46	10.15	8.66	39.76
328	Guaranteed	3.00	12.00	12.00	30.60	1871	Analysis	7.32	9.25	8.04	37.88
	Analysis	3.02	12.00	11.40	30.30	2088	Analysis	7.34	8.95	9.57	38.50
Swift's Red Steer 4-12-4						2088	Analysis	7.25	9.60	8.26	38.23
142	Guaranteed	4.00	12.00	4.00	28.80		Analysis	7.25	9.60	8.26	38.23
145	Analysis	3.84	11.40	4.63	27.98	Swift's Red Steer 6-12-6					
145	Analysis	3.53	12.60	4.46	27.98	526	Guaranteed	6.00	12.00	6.00	36.00
154	Analysis	3.53	12.60	4.46	28.39		Analysis	5.89	12.00	8.14	36.95
201	Analysis	3.82	12.20	4.49	28.79	272	Analysis	6.17	12.30	6.92	37.42
448	Analysis	3.86	13.40	2.94	29.42	433	Analysis	5.93	10.80	6.25	34.60
972	Analysis	3.66	12.70	4.20	28.74	1276	Analysis	5.43	12.40	5.71	34.60
1052	Analysis	4.26	12.00	4.71	30.01	1291	Analysis	6.20	12.20	6.25	36.99
	Analysis	4.07	11.50	4.15	28.50	1306	Analysis	5.28	12.80	6.70	35.22
						1329	Analysis	6.36	11.75	6.34	36.98
						1613	Analysis	6.16	12.00	6.39	36.71
						1872	Analysis	6.04	12.30	4.73	35.72
Swift's Red Steer 10-20-10						54	Guaranteed	10.00	20.00	10.00	60.00
						57	Analysis	9.69	20.20	8.90	58.65
						990	Analysis	10.05	19.30	9.00	58.71
						1140	Analysis	9.26	20.30	9.29	57.71
							Analysis	9.88	20.15	9.57	59.56

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
1259	Swift's Red Steer 10-20-10						Swift's Brimm 12-12-6				
1331	Analysis	9.44	21.50	10.74	60.56		Guaranteed	12.00	12.00	6.00	54.00
1347	Analysis	10.20	20.40	10.06	61.12	1006	Analysis	12.70	11.09	6.20	55.11
1424	Analysis	8.97	21.75	10.69	59.42	1090	Analysis	11.52	12.10	6.41	52.93
1433	Analysis	8.84	20.00	10.69	56.93	1457	Analysis	11.27	12.50	6.82	52.90
1459	Analysis	10.02	19.61	10.01	59.60	1469	Analysis	9.32	12.20	6.77	46.66
1614	Analysis	9.31	20.80	10.45	60.66		Swift's Pasturgro 3-12-12				
1718	Analysis	8.49	22.05	10.40	58.17		Guaranteed	3.00	12.00	12.00	30.60
1724	Analysis	8.30	22.15	10.26	57.64	18	Analysis	2.83	11.80	12.43	30.11
1759	Analysis	9.41	21.75	10.84	60.83	49	Analysis	2.98	11.50	12.19	30.05
1870	Analysis	8.55	20.47	10.57	56.55	136	Analysis	2.81	12.40	11.30	30.09
2019	Analysis	8.90	20.40	10.75	57.63	183	Analysis	2.87	12.20	12.41	30.70
2019	Analysis	9.36	19.75	10.69	57.71	581	Analysis	3.00	12.20	10.85	30.15
2019	Analysis	9.36	19.35	10.69	57.71	1009	Analysis	3.22	12.50	11.50	31.56
	Swift's Red Steer 10-20-0					1416	Analysis	3.47	11.80	11.40	31.41
	Guaranteed	10.00	20.00	0.00	54.00	1595	Analysis	3.01	11.65	12.90	30.75
271	Analysis	9.45	19.64	0.00	51.92		Swift's Instant Vigoro				
432	Analysis	8.13	20.80	0.00	49.35		Guaranteed	19.00	28.00	14.00	99.00
1164	Analysis	10.04	20.40	0.00	54.60	1782	Analysis	19.10	27.23	14.95	98.56
1197	Analysis	9.75	19.46	0.00	52.60		Swift's & Company, Plant Food Division, Shreveport, Louisiana				
1330	Analysis	10.20	20.40	0.00	55.08		Swift's Red Steer 0-14-7				
1348	Analysis	9.07	21.60	0.00	53.13	477	Guaranteed	0.00	14.00	7.00	21.00
1467	Analysis	10.76	19.50	0.00	55.68	544	Analysis	0.00	14.30	7.23	21.50
1677	Analysis	10.07	21.30	0.00	55.77	548	Analysis	0.00	14.30	7.00	21.36
	Swift's Red Steer 12-12-12					558	Analysis	0.00	14.30	7.19	21.47
1008	Guaranteed	12.00	12.00	12.00	57.60	639	Analysis	0.00	14.00	7.61	21.37
1162	Analysis	12.06	12.50	10.46	57.45		Analysis	0.00	13.85	7.84	21.32
1162	Analysis	11.80	12.30	11.82	57.25		Swift's Red Steer 3-12-12				
1228	Analysis	11.95	12.50	10.75	57.30		Guaranteed	3.00	12.00	12.00	30.60
1275	Analysis	8.84	13.67	9.98	48.91	456	Analysis	2.52	12.70	11.45	29.67
1275	Analysis	11.11	12.20	10.88	54.50	564	Analysis	3.46	12.20	12.58	32.57
1367	Analysis	12.34	12.00	10.81	57.90		Swift's Red Steer 5-10-10				
1676	Analysis	11.93	12.40	9.95	53.64	2001	Guaranteed	5.00	10.00	10.00	33.00
1873	Analysis	11.30	12.17	11.66	55.50	2027	Analysis	4.84	10.30	10.07	32.92
1873	Analysis	11.30	12.17	11.66	55.50	2037	Analysis	5.49	10.30	10.56	35.17
2010	Analysis	11.30	12.17	11.66	55.50	2189	Analysis	4.78	10.30	10.01	32.56
	Swift's Red Steer 15-15-0					2195	Analysis	4.89	11.15	9.36	33.67
441	Guaranteed	15.00	15.00	0.00	63.00	2206	Analysis	5.34	12.30	11.89	37.91
446	Analysis	13.80	14.80	0.00	59.16		Analysis	5.05	10.60	10.01	33.83
446	Analysis	13.23	14.90	0.00	57.72		Swift's Red Steer 4-12-4				
872	Analysis	13.87	15.30	0.00	59.97		Guaranteed	4.00	12.00	4.00	28.80
1366	Analysis	13.88	15.00	0.00	58.14	554	Analysis	3.75	12.40	5.20	29.25
	Swift's Red Steer 0-20-0					1535	Analysis	3.67	12.00	4.97	28.30
22	Guaranteed	0.00	20.00	0.00	24.00	2040	Analysis	3.73	11.70	4.48	27.92
28	Analysis	0.00	20.20	0.00	24.24		Swift's Red Steer 5-10-5				
41	Analysis	0.00	20.75	0.00	24.90	3	Guaranteed	5.00	10.00	5.00	30.00
50	Analysis	0.00	20.80	0.00	24.96	457	Analysis	6.45	10.25	6.94	35.81
135	Analysis	0.00	20.50	0.00	24.60	488	Analysis	5.05	10.70	5.21	31.12
146	Analysis	0.00	20.55	0.00	24.66	457	Analysis	4.90	10.60	4.56	30.16
155	Analysis	0.00	21.20	0.00	25.44	555	Analysis	4.69	10.80	5.36	30.25
236	Analysis	0.00	20.20	0.00	24.24	559	Analysis	4.97	10.80	5.28	31.04
257	Analysis	0.00	21.10	0.00	25.32	647	Analysis	4.72	10.00	5.44	29.42
280	Analysis	0.00	20.60	0.00	24.72	1534	Analysis	5.46	10.00	6.38	32.20
439	Analysis	0.00	20.60	0.00	24.72	1622	Analysis	4.55	10.40	5.97	29.71
442	Analysis	0.00	20.80	0.00	24.96	1831	Analysis	4.87	10.30	5.21	30.10
449	Analysis	0.00	20.50	0.00	24.60	1902	Analysis	4.45	10.20	5.87	29.11
494	Analysis	0.00	19.22	0.00	23.06	1917	Analysis	5.00	10.60	5.69	31.13
502	Analysis	0.00	20.90	0.00	25.08	1924	Analysis	4.90	10.00	5.37	29.92
514	Analysis	0.00	21.30	0.00	25.56	1947	Analysis	4.94	10.30	5.21	30.31
527	Analysis	0.00	20.80	0.00	24.96	1988	Analysis	4.84	10.10	5.43	29.90
	Vigoro					2038	Analysis	4.69	10.80	5.19	30.14
404	Guaranteed	6.00	10.00	4.00	32.40	2083	Analysis	4.88	10.80	5.02	30.61
405	Analysis	5.26	11.10	5.33	32.30	2095	Analysis	5.02	10.20	5.08	30.25
512	Analysis	5.59	10.30	5.55	32.46	2098	Analysis	4.79	10.90	5.82	30.94
819	Analysis	5.72	10.50	4.48	32.45	2176	Analysis	4.60	10.40	5.88	29.51
1137	Analysis	5.45	10.20	4.77	31.45	2188	Analysis	4.65	10.40	5.69	29.84
1176	Analysis	6.28	9.65	4.63	33.20	2188	Analysis	4.65	10.40	5.69	29.84
1176	Analysis	5.56	11.80	4.28	33.41		Swift's Red Steer 8-8-8				
1192	Analysis	5.28	11.15	4.16	31.72		Guaranteed	8.00	8.00	8.00	33.40
1323	Analysis	5.74	11.30	4.13	33.26	2	Analysis	7.52	9.20	8.30	33.58
1414	Analysis	4.29	11.10	5.05	29.22	1550	Analysis	7.33	9.10	8.26	33.58
	Vigoro for Commercial Growers 10-10-5					1621	Analysis	7.19	8.80	8.34	37.13
501	Guaranteed	10.00	10.00	5.00	45.00	1833	Analysis	7.16	8.80	8.31	37.13
506	Analysis	8.59	10.70	5.12	41.68	1845	Analysis	7.61	9.00	8.37	38.56
	Vigoro for Commercial Growers 10-20-10					1899	Analysis	7.42	8.20	8.29	37.07
1159	Guaranteed	10.00	20.00	10.00	60.00	1916	Analysis	7.26	8.80	8.50	37.49
1458	Analysis	8.74	20.34	9.12	56.10	1923	Analysis	7.58	8.40	8.29	37.79
	Swift's Blenn 8-8-8					1989	Analysis	7.40	8.10	8.37	36.94
184	Guaranteed	8.00	8.00	8.00	38.40	1989	Analysis	7.40	8.10	8.37	36.94
1050	Analysis	7.68	8.10	8.10	37.62	2039	Analysis	6.28	9.20	7.79	34.55
1258	Analysis	7.38	8.50	8.34	37.34	2074	Analysis	7.75	8.70	8.67	38.29
1290	Analysis	7.88	8.40	8.24	38.66	2183	Analysis	7.09	9.00	8.77	37.33
1294	Analysis	7.73	8.60	8.29	38.48	2196	Analysis	7.34	8.30	8.44	37.04
1332	Analysis	7.53	9.10	8.09	38.36		Swift's Red Steer 10-20-10				
1408	Analysis	8.00	9.10	7.61	39.48		Guaranteed	10.00	20.00	10.00	60.00
1468	Analysis	7.91	8.40	8.42	38.86	1533	Analysis	9.14	20.17	10.40	57.85
1714	Analysis	7.74	8.60	7.70	38.16	1549	Analysis	9.86	20.40	10.12	60.13
						1594	Analysis	8.60	19.37	10.56	55.38

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
1629	Swift's Red Steer 10-20-10					1030	Analysis	4.30	12.06	4.29	29.94
1832	Analysis	8.76	20.27	10.12	56.67	1043	Analysis	4.27	11.50	4.62	29.38
1851	Analysis	9.70	20.30	10.34	59.66	1303	Analysis	4.00	12.00	5.03	29.42
1922	Analysis	8.82	19.13	10.90	55.96	1405	Analysis	4.01	11.75	4.51	28.84
1973	Analysis	9.18	20.00	10.37	57.76	1490	Analysis	4.30	11.80	4.88	29.99
2025	Analysis	9.39	20.06	9.74	58.08	1495	Analysis	4.57	11.40	5.26	30.55
	Analysis	9.77	20.20	10.84	60.05	2053	Analysis	5.14	11.50	5.73	32.66
	Swift's Red Steer 10-20-0						Lone Star Brand 5-10-5 Fertilizer				
1628	Guaranteed	10.00	20.00	0.00	54.00		Guaranteed	5.00	10.00	5.00	30.00
	Analysis	8.64	20.60	0.00	50.66	21	Analysis	4.80	10.75	5.39	30.53
	Swift's Red Steer 12-12-12					34	Analysis	4.64	10.45	5.46	29.74
1822	Guaranteed	12.00	12.00	12.00	57.60	59	Analysis	4.76	10.00	5.16	29.38
1898	Analysis	11.70	11.62	12.62	56.61	207	Analysis	4.83	10.00	5.38	29.72
1925	Analysis	11.57	12.60	12.68	57.44	209	Analysis	4.90	10.60	5.73	30.86
	Analysis	11.42	11.90	12.46	56.02	214	Analysis	4.67	10.00	5.82	29.50
	Swift's Red Steer 13-13-13					355	Analysis	4.90	9.75	5.64	29.78
2018	Guaranteed	13.00	13.00	13.00	62.40	479	Analysis	4.65	10.00	5.36	29.17
2112	Analysis	11.14	13.80	13.11	57.85	542	Analysis	4.84	10.10	5.49	29.93
	Analysis	12.92	14.20	12.77	63.46	993	Analysis	5.00	9.96	5.12	30.01
	Swift's Red Steer 15-15-0					1002	Analysis	5.10	10.30	5.44	30.92
1821	Guaranteed	15.00	15.00	0.00	63.00	1014	Analysis	5.01	10.50	5.50	30.93
	Analysis	13.30	15.30	0.00	58.16	1029	Analysis	4.88	10.20	5.59	30.23
	Swift's Red Steer 0-20-0					1042	Analysis	5.07	10.40	5.65	31.08
487	Guaranteed	0.00	20.00	0.00	24.00	1179	Analysis	5.22	10.00	5.55	30.99
547	Analysis	0.00	19.70	0.00	23.64	1180	Analysis	5.20	10.60	5.58	31.67
	Analysis	0.00	19.75	0.00	23.70	1181	Analysis	5.28	10.10	5.50	31.26
	Vigoro					1224	Analysis	5.20	10.60	5.87	31.84
745	Guaranteed	6.00	10.00	4.00	32.40	1302	Analysis	4.86	10.70	5.69	30.83
	Analysis	5.40	10.60	4.78	31.79	1312	Analysis	5.26	10.50	5.64	31.76
	Swift's Blenn 8-8-8					1406	Analysis	5.10	10.40	5.41	31.03
2175	Guaranteed	8.00	8.00	8.00	38.40	1419	Analysis	5.38	10.70	5.66	32.92
	Analysis	7.55	8.70	7.71	37.72	1420	Analysis	5.50	10.70	5.68	32.75
	Swift's Brimm 6-8-12					1489	Analysis	5.36	9.50	5.75	30.93
1623	Guaranteed	6.00	8.00	12.00	34.80	1494	Analysis	5.16	10.60	5.98	31.79
2207	Analysis	5.54	8.60	12.85	34.65	1577	Analysis	4.86	10.30	5.93	30.50
2207	Analysis	5.70	8.80	12.23	35.27	1637	Analysis	5.26	10.50	5.92	31.93
2207	Analysis	5.79	8.80	12.23	35.27	1639	Analysis	5.14	10.60	5.87	31.66
	Swift's Pasturgro 3-12-12					1661	Analysis	5.00	10.40	5.54	30.80
640	Guaranteed	3.00	12.00	12.00	30.60	1743	Analysis	5.04	10.00	5.59	30.47
2197	Analysis	2.92	10.92	12.35	29.27	1780	Analysis	5.04	10.20	5.78	30.83
	Analysis	3.15	12.00	12.45	31.32	1904	Analysis	5.08	10.50	5.71	31.27
	Texas City Chemicals, Inc., Texas City, Texas					1911	Analysis	5.02	10.30	5.15	30.51
	Texaphos 35% Dicalcium Phosphate					1913	Analysis	5.40	10.20	5.06	31.48
1415	Guaranteed	0.00	35.00	0.00	42.00	1955	Analysis	5.04	10.10	5.64	30.62
2076	Analysis	0.00	36.15	0.00	43.38	2052	Analysis	5.17	10.30	5.71	31.30
	Analysis	0.00	36.15	0.00	43.38	2071	Analysis	5.17	10.10	5.52	30.94
	Texas Cotton Cooperative Association, Pittsburg, Texas					2093	Analysis	5.32	9.50	5.80	30.84
	Double Circle 5-10-5 Fertilizer					2105	Analysis	5.16	10.10	5.63	30.98
1776	Guaranteed	5.00	10.00	5.00	30.00	2194	Analysis	5.08	10.00	5.08	30.29
	Analysis	5.47	10.00	6.58	32.36						
	Double Circle 8-8-8 Fertilizer						Lone Star Brand 7-14-0 Fertilizer				
1775	Guaranteed	8.00	8.00	8.00	38.40	1546	Guaranteed	7.00	14.00	0.00	37.80
	Analysis	7.56	8.10	7.79	37.07	1559	Analysis	6.93	14.00	0.00	37.59
	Texas Farm Products Co., Nacogdoches, Texas					1659	Analysis	6.93	14.40	0.00	38.07
	Lone Star Brand 0-14-7 Fertilizer						Analysis	6.84	13.25	0.00	36.42
12	Guaranteed	0.00	14.00	7.00	21.00	198	Guaranteed	8.00	8.00	8.00	38.40
32	Analysis	0.00	14.70	7.44	22.10	356	Analysis	7.67	8.00	8.49	37.70
480	Analysis	0.00	13.40	7.16	20.38	543	Analysis	7.67	8.80	8.21	38.50
483	Analysis	0.00	14.00	7.28	21.17	992	Analysis	7.87	8.80	8.71	39.40
534	Analysis	0.00	14.00	7.37	21.22	1001	Analysis	7.59	8.90	8.25	38.40
	Analysis	0.00	14.10	7.56	21.46	1013	Analysis	7.70	8.45	8.19	38.15
	Lone Star Brand 3-12-12 Fertilizer					1028	Analysis	8.14	8.30	8.74	39.62
10	Guaranteed	3.00	12.00	12.00	30.60	1041	Analysis	7.75	8.40	8.75	38.58
215	Analysis	2.63	12.10	12.71	30.04	1041	Analysis	7.65	8.50	8.30	38.13
232	Analysis	3.55	12.20	4.66	28.09	1182	Analysis	8.06	8.40	8.47	39.34
354	Analysis	2.88	12.90	11.76	31.18	1223	Analysis	7.34	8.90	8.90	38.04
482	Analysis	3.18	13.00	12.91	32.89	1304	Analysis	8.00	8.85	8.34	39.62
1909	Analysis	3.14	12.60	12.64	32.12	1311	Analysis	7.78	8.60	8.96	39.04
	Analysis	3.20	12.20	12.24	31.58	1418	Analysis	7.58	8.90	8.90	38.76
	Lone Star Brand 5-10-10 Fertilizer					1501	Analysis	7.45	8.70	8.59	37.94
1310	Guaranteed	5.00	10.00	10.00	33.00	1560	Analysis	7.92	8.50	10.08	40.00
1561	Analysis	4.86	10.91	10.23	33.80	1576	Analysis	7.62	8.30	8.75	38.07
1908	Analysis	5.18	10.50	10.35	34.85	1660	Analysis	8.84	8.90	8.96	42.58
	Analysis	5.00	10.50	10.12	33.67	1781	Analysis	8.16	8.80	8.99	40.43
	Lone Star Brand 4-12-4 Fertilizer					1892	Analysis	8.63	8.70	8.94	41.69
206	Guaranteed	4.00	12.00	4.00	28.80	1903	Analysis	7.66	8.30	8.75	38.19
208	Analysis	4.04	12.40	4.67	29.80	1910	Analysis	7.82	8.85	8.79	39.35
213	Analysis	3.86	12.00	4.75	28.53	1995	Analysis	6.10	8.80	6.72	32.89
994	Analysis	2.85	11.95	8.46	27.96	2051	Analysis	8.87	8.90	8.80	42.57
1015	Analysis	4.03	12.30	4.40	29.49	2094	Analysis	8.04	8.70	8.54	39.68
	Analysis	4.27	12.03	4.68	30.06	2094	Analysis	8.04	8.70	8.54	39.68
						2097	Analysis	7.70	8.24	8.62	38.16
						2103	Analysis	7.68	8.00	8.71	37.87
						2106	Analysis	7.67	8.70	8.92	38.80
						2167	Analysis	8.34	8.70	9.36	41.08
							Lone Star Brand 10-10-0 Fertilizer				
							Guaranteed	10.00	10.00	0.00	42.00
						1488	Analysis	8.62	10.80	0.00	38.82
						1547	Analysis	9.92	10.40	0.00	42.24
						1562	Analysis	9.55	10.90	0.00	42.63

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
	Lone Star Brand 20% Superphosphate					849	Analysis	4.91	10.30	5.20	30.21
11	Guaranteed	0.00	20.00	0.00	24.00	862	Analysis	4.86	10.30	5.35	30.15
33	Analysis	0.00	20.20	0.00	24.24	989	Analysis	4.95	10.80	5.25	30.96
60	Analysis	0.00	20.05	0.00	24.06	1005	Analysis	4.86	11.10	5.43	31.16
194	Analysis	0.00	19.35	0.00	23.22	1044	Analysis	5.00	10.40	5.30	30.66
205	Analysis	0.00	20.00	0.00	24.00	1060	Analysis	5.12	10.70	5.39	31.49
						1230	Analysis	5.00	10.30	5.41	30.61
						1503	Analysis	5.04	10.70	5.64	31.94
						1528	Analysis	5.08	10.50	5.39	31.07
						1551	Analysis	4.91	10.50	5.41	30.58
						1620	Analysis	5.13	10.30	5.38	30.98
						1634	Analysis	5.44	10.75	5.91	32.77
						1650	Analysis	4.91	10.30	5.41	30.34
						1655	Analysis	4.93	10.20	5.41	30.28
						1682	Analysis	4.96	10.40	5.23	30.50
						1741	Analysis	4.97	10.50	5.48	30.80
						1921	Analysis	5.08	10.60	5.62	31.33
						1982	Analysis	5.08	10.50	5.57	31.18
						1998	Analysis	4.95	10.60	5.21	30.70
						2034	Analysis	4.90	10.00	5.41	29.95
						2050	Analysis	4.90	10.10	5.43	30.08
						2061	Analysis	5.00	10.40	5.76	30.94
						2080	Analysis	5.29	10.20	5.85	31.62
						2122	Analysis	4.95	10.40	5.19	30.44
						2201	Analysis	5.29	10.50	5.66	31.87
							V-C Triple 8 Fertilizer				
							Guaranteed	8.00	8.00	8.00	33.40
						313	Analysis	7.20	9.55	8.78	33.33
						325	Analysis	7.32	8.80	8.00	32.82
						361	Analysis	7.89	11.75	8.72	43.00
						369	Analysis	7.51	8.70	8.15	37.85
						1540	Analysis	7.77	8.70	8.62	38.92
						1583	Analysis	7.60	8.90	8.04	38.90
						1619	Analysis	7.80	8.80	8.80	39.24
						1631	Analysis	7.86	8.50	8.29	38.75
						1633	Analysis	7.64	9.00	8.41	38.77
						1649	Analysis	7.67	8.60	8.34	38.33
						1740	Analysis	6.26	11.50	7.37	37.00
						1763	Analysis	6.68	10.50	7.64	32.22
						1778	Analysis	7.91	8.50	8.41	38.98
						1835	Analysis	7.88	8.40	8.34	38.70
						1961	Analysis	7.76	8.30	8.54	38.36
						2081	Analysis	7.50	8.30	8.62	37.63
							V-C Fertilizer 6-8-12				
							Guaranteed	6.00	8.00	12.00	34.80
						2035	Analysis	5.83	8.20	12.53	34.85
							V-C Fertilizer 10-10-10				
							Guaranteed	10.00	10.00	10.00	48.00
						1632	Analysis	10.18	13.80	11.92	54.25
							V-C Fertilizer 12-12-12				
							Guaranteed	12.00	12.00	12.00	67.60
						988	Analysis	11.11	12.80	11.45	55.56
						1630	Analysis	11.52	12.20	12.32	56.69
						1834	Analysis	10.78	12.01	12.62	54.82
							V-C 20% Superphosphate				
							Guaranteed	0.00	20.00	0.00	24.00
						24	Analysis	0.00	20.40	0.00	24.48
						36	Analysis	0.00	20.80	0.00	24.90
						44	Analysis	0.00	20.70	0.00	24.84
						47	Analysis	0.00	20.90	0.00	25.08
						152	Analysis	0.00	20.30	0.00	24.36
						159	Analysis	0.00	20.80	0.00	24.96
						170	Analysis	0.00	20.80	0.00	24.96
						241	Analysis	0.00	20.20	0.00	24.24
						524	Analysis	0.00	20.90	0.00	25.08
						536	Analysis	0.00	20.50	0.00	24.60
						813	Analysis	0.00	20.50	0.00	24.60
							V-C Granulated Fertilizer 3-12-12				
							Guaranteed	3.00	12.00	12.00	30.60
						230	Analysis	2.93	12.60	11.70	30.93
						847	Analysis	2.89	12.70	11.58	30.86
							V-C Granulated Fertilizer 5-10-5				
							Guaranteed	5.00	10.00	5.00	30.00
						83	Analysis	4.53	10.80	5.17	29.65
						124	Analysis	4.81	10.40	5.08	29.66
						169	Analysis	4.65	10.50	5.08	29.60
						226	Analysis	4.68	10.40	5.61	29.88
						231	Analysis	4.23	12.50	5.05	30.72
						256	Analysis	4.57	11.20	5.07	30.19
						815	Analysis	5.12	10.70	5.03	31.22
						848	Analysis	5.20	10.30	5.68	31.37
						863	Analysis	5.32	10.60	5.48	31.97
						871	Analysis	4.89	10.70	5.05	30.54
						976	Analysis	5.45	10.60	5.02	32.08
						987	Analysis	5.17	11.35	5.50	32.43
						1032	Analysis	5.30	10.50	5.44	31.76
						1143	Analysis	5.16	10.20	5.40	30.96
						1167	Analysis	5.64	10.50	5.90	33.06
						1289	Analysis	5.06	10.80	5.74	31.38
						1373	Analysis	5.08	10.60	5.41	31.21
							Tyler Fertilizer Co., Tyier, Texas				
							Heart Brand 3-12-12				
						468	Guaranteed	3.00	12.00	12.00	30.60
							Analysis	3.88	12.30	14.00	34.80
							Heart Brand 5-10-5				
						1046	Guaranteed	5.00	10.00	5.00	30.00
						1748	Analysis	5.43	10.30	5.17	31.75
						1896	Analysis	6.33	10.00	5.76	34.45
						2005	Analysis	5.20	10.10	5.76	31.18
						2042	Analysis	5.68	10.40	5.26	32.68
						2107	Analysis	6.00	10.00	5.81	33.49
							Analysis	6.69	9.25	6.39	35.00
							Heart Brand 8-8-8				
						469	Guaranteed	8.00	8.00	8.00	38.40
						1045	Analysis	8.46	8.40	8.82	40.75
						1747	Analysis	7.50	8.30	9.78	38.33
						1895	Analysis	7.78	9.15	8.73	39.56
						2004	Analysis	6.50	8.50	8.80	34.98
							Analysis	6.42	8.60	8.76	34.84
							Heart Brand 10-20-10				
						2002	Guaranteed	10.00	20.00	10.00	60.00
							Analysis	9.12	20.00	10.75	57.81
							Heart Brand 16-20-0				
						913	Guaranteed	16.00	20.00	0.00	72.00
						2003	Analysis	15.84	19.90	0.00	71.40
							Analysis	14.21	18.52	0.00	64.85
							Virginia-Carolina Chemical Corporation, Shreveport, Louisiana				
							V-C Fertilizer 0-12-12				
						455	Guaranteed	0.00	12.00	12.00	21.60
						578	Analysis	0.00	12.40	12.88	22.61
							Analysis	0.00	12.60	11.95	22.29
							V-C Fertilizer 0-14-7				
						25	Guaranteed	0.00	14.00	7.00	21.00
						82	Analysis	0.00	14.80	6.48	21.65
						320	Analysis	0.00	14.80	6.98	21.95
						348	Analysis	0.00	14.10	7.20	21.24
						358	Analysis	0.00	14.20	7.12	21.31
						368	Analysis	0.00	14.50	7.62	21.97

Table 7. Analyses of commercial fertilizers sampled during 1953-54, continued

Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars	Laboratory number	Manufacturer, place of business and brand	Nitrogen, percent	Available phosphoric acid, percent	Potash, percent	Valuation found per ton, dollars
V-C Granulated Fertilizer 5-10-5						975	Analysis	9.46	20.11	9.26	58.07
1403	Analysis	4.80	10.50	5.15	30.09	985	Analysis	9.23	21.60	9.30	59.19
1423	Analysis	5.16	10.40	5.60	31.32	999	Analysis	8.75	19.38	11.83	56.58
1437	Analysis	5.04	10.60	5.41	31.09	1004	Analysis	9.68	20.08	10.11	59.18
1573	Analysis	5.29	11.30	5.83	32.93	1158	Analysis	9.46	19.40	10.16	57.76
1598	Analysis	5.06	10.60	5.64	31.28	1273	Analysis	9.15	18.79	10.23	56.14
1645	Analysis	4.90	10.40	5.52	30.49	1283	Analysis	9.63	19.85	10.37	58.93
1764	Analysis	5.18	11.25	5.82	32.53	1375	Analysis	9.07	20.73	10.46	58.35
1779	Analysis	5.00	11.15	5.77	31.84	1382	Analysis	9.35	20.57	10.46	59.00
1800	Analysis	5.32	10.30	5.76	31.78	1389	Analysis	9.71	17.93	10.34	56.85
1841	Analysis	5.40	11.55	5.49	33.35	1435	Analysis	9.45	20.00	10.29	58.52
1859	Analysis	5.45	11.00	6.04	33.17	1574	Analysis	10.04	19.70	10.68	60.17
2009	Analysis	5.20	11.01	5.69	32.42	1643	Analysis	9.20	20.20	10.12	57.91
2101	Analysis	6.04	12.35	6.89	37.07	1674	Analysis	9.93	21.15	10.28	61.34
2166	Analysis	4.50	11.80	5.19	30.77	1762	Analysis	9.82	20.20	10.84	60.20
V-C Granulated Fertilizer 8-8-8						1785	Analysis	9.63	20.50	10.56	59.83
84	Guaranteed	8.00	8.00	8.00	38.40	1803	Analysis	9.64	20.84	11.03	60.55
125	Analysis	7.86	8.70	8.42	39.07	1842	Analysis	9.87	19.55	11.62	59.98
140	Analysis	7.72	8.50	8.20	38.28	2008	Analysis	9.80	20.26	10.98	59.30
185	Analysis	7.50	8.10	8.06	37.06	2016	Analysis	9.81	19.60	10.72	59.38
350	Analysis	7.67	8.90	8.18	38.60	2203	Analysis	10.06	19.45	10.12	59.59
716	Analysis	7.97	8.40	8.41	39.04	V-C Granulated Fertilizer 12-12-12					
986	Analysis	7.61	8.70	8.00	38.07	1000	Guaranteed	12.00	12.00	12.00	57.60
1061	Analysis	7.90	8.60	8.19	38.93	1274	Analysis	9.29	12.35	10.82	49.18
1142	Analysis	7.34	9.45	7.76	38.00	1284	Analysis	11.80	12.60	12.68	58.12
1374	Analysis	8.08	8.50	8.28	39.41	1802	Analysis	11.65	12.80	12.56	57.85
1404	Analysis	7.56	9.15	8.34	38.66	V-C Granulated 20% Superphosphate					
1422	Analysis	8.00	8.70	8.49	39.53	46	Guaranteed	0.00	20.00	0.00	24.00
1434	Analysis	7.90	8.30	8.87	38.98	61	Analysis	0.00	20.80	0.00	24.96
1599	Analysis	7.67	8.70	8.54	38.57	1600	Analysis	0.00	20.50	0.00	24.60
1644	Analysis	7.58	8.60	8.54	38.18	Waldo Fertilizer Works, Waldo, Arkansas					
1858	Analysis	7.62	8.60	8.49	38.27	Victory 5-10-5					
2017	Analysis	7.85	8.70	8.26	38.95	1565	Guaranteed	5.00	10.00	5.00	30.00
2102	Analysis	7.86	8.50	8.44	38.84	1964	Analysis	5.67	10.40	7.53	34.00
2192	Analysis	8.09	8.60	8.55	39.72	Victory 8-8-8					
2202	Analysis	8.25	8.20	8.74	39.83	1564	Guaranteed	8.00	8.00	8.00	38.40
V-C Granulated Fertilizer 10-20-10						Analysis					
185	Guaranteed	10.00	20.00	10.00	60.00	7.74 8.50 8.78 38.68					
846	Analysis	9.98	20.00	10.39	60.17						
870	Analysis	9.09	20.19	9.68	57.31						
	Analysis	9.84	19.75	10.02	59.23						

FERTILIZER GUARANTORS REGISTERED IN TEXAS, 1953-54

Located in Texas

- Agri-Chem of Texas, 2734 Roosevelt Avenue, San Antonio
 Agricultural Chemical of Dallas, Dallas
 Agricultural Chemicals, Inc., Henderson
 American Farm Chemical Company, Box 3092, Fort Worth
 Armour Fertilizer Works, Incorporated, Box 5296, Dallas
 Armour Fertilizer Works, Incorporated, Box 1412, Houston
 Associated Dallas Laboratory, Dallas
 Associated Growers of Hereford, Hereford
 Bactex Company, Incorporated, Box 4065, Station A, San Antonio
 Baker Bros. Co., Box 828, Fort Worth
 Best Fertilizer Company, 8420 Manchester St., Houston
 Blume System Tree Experts, 2736 Virginia, Houston 6
 Boyer Fertilizer Corporation, 236 Live Stock Exchange Building, Fort Worth
 Bryan Cotton Oil & Fertilizer Company, Bryan
 Campbell Fertilizer Company, Incorporated, 102 Japhet St., Houston
 Central Texas Fertilizer Company, Incorporated, Box 761, Comanche
 Consolidated Chemical Industries, Incorporated, 640 Melle Esperson Building, Houston
 East Texas Products Company, Box 176, Tyler
 Easy Going Ranch, Mountain Home
 Ellis Supply Company, Weslaco
 Farm Chemical Company, Tulia
 Farmers Fertilizer Company, Texarkana
 Ferti-Chem Company, Preston and Alpha Roads, Dallas
 Fidelity Chemical Corporation, Box 1189, Houston
 Forrest's Greenhouse, Waxahachie
 Gilmer Cotton Oil and Fertilizer Company, Gilmer
 Good Earth Soil Company, Incorporated, 248 Casa Blanca, Fort Worth
 Gorman Peanut Company, Gorman
 Gulf Chemical Co., Box 938, Galena Park
 Gulf Coast Organic and Mineral Co., Box 815, Pharr
 Gulf Rendering By Products Corporation, 6426 Ave. J., Galveston
 Hill's Nursery, Victoria
 Hi-Yield Plant Food Company, Mount Pleasant
 Hi-Yield Fertilizer Company, Box 143, Bonham
 Hope Nursery Company, Scottsville
 Houston Seed Company, 6123 Kirby Drive, Houston
 International Minerals and Chemical Corporation, Deen Road, Fort Worth
 International Organic and Fertilizer Co., Perryton
 Interstate By-Products and Supply Company, 529 North Throckmorton St., Fort Worth
 Jacksonville Fertilizer Company, Box 1225, Jacksonville
- Jaffee Cotton Products, Box 5184, Dallas
 Kipfer Chemical Company, Box 770, Harlingen
 Kipfer Chemical Company, Phosphate Plant, Box 315, Rio Hondo
 Kirkham Poultry Farm, Box 384, Cleburne
 Lister Laboratory Limited, Rural Route 8, Box 127 H, San Antonio
 Little Geni Corporation, 366 Westminster, San Antonio
 Lone Star Phosphate Co., Nacogdoches
 Lone Star Steel Company, Box 8087, Dallas
 Marbach, E. W., Converse
 Marco Soil Conditioner, 18th and Houston Street, McAllen
 Margie Korn Garden Shop, 5213 W. Lovers Lane, Dallas
 Marshall Cotton Oil Company, Marshall
 Mathieson Chemical Corporation, 2416 Gulf Building, Houston
 Mid West Feed Yards, Box 1370, San Angelo
 J. W. Nichols Co., 719 N. Main, Fort Worth
 N. O. M. Inc., Box 8155, San Antonio
 Orga-Min Producing Company, Box 1453, Laredo
 Page Chemical Company, Port Arthur
 Albert Pemberton, Route 1, Taylor
 Pittsburg Fertilizer Co., Pittsburg
 Carl Pool Laboratories, 420 Kelly Drive, San Antonio
 Port Fertilizer and Chemical Co., Los Fresnos
 Red Star Fertilizer Company, Box 486, Sulphur Springs
 Rose City Nursery, Tyler
 Rowland and Gordon Co., Plainview
 Rugh, E. H., Bandera
 San Jacinto Chemical Corporation, Box 9747, Houston 15
 Safe-Way Farm Products, Box 921, Austin
 Scientific Soil Service, Elsa
 Shannon, E. and R., 150 Apache St., San Antonio
 Sod Gro Fertilizer Co., Monahans
 Soil Prescription Service, Route 2, Mercedes
 Southland Cotton Oil Co., Cameron
 Southwest Chemical Company, 500 South 19th St., McAllen
 Southwest Fertilizer and Chemical Company, 5030 East Paisano Drive, El Paso
 Sou-Tex Laboratory, Box 1348, Bay City
 Soyland Incorporated, 102 West French Place, San Antonio
 Stauffer Chemical Company, Houston
 Stauffer Chemical Company, Weslaco
 Swift and Company, Plant Food Division, Houston
 Texas City Chemicals, Texas City
 Texas Cotton Cooperatives Association, Pittsburg
 Texas Farm Products, Nacogdoches
 Texas Liquid Fertilizer Company, La Feria

FERTILIZER GUARANTORS REGISTERED IN TEXAS, 1953-54—Continued

Texas Plant Food Company, Bryan
 Texas Organic Mineral Soil Company, San Juan
 Texas Vermiculite Company, 303 Brazos Street, Austin
 Toyah Basin Sulphur Company, Box 226, Toyah
 Tri-State Soil Products Company, 2218 N. Piedras, El Paso
 Tyler Fertilizer Company, 420 South Oakland, Tyler
 Vital Organic Company, Houston
 W. P. Walker, Route 5, Abilene
 Western Fertilizer Company, Muleshoe
 Wonder-Gro Corporation, 1118 Frost National Bank Building, San Antonio
 Wyatt Seed Company, San Angelo

Located Elsewhere

Agricultural Products Company, Anthony, New Mexico
 American Agricultural Chemical Company, 50 Church Street, New York 7, New York
 American Chemical Paint Company, Ambler, Penna.
 American Cyanamid Company, 30 Rockefeller Plaza, New York 20, New York
 American Liquid Fertilizer Company, Marietta, Ohio
 Arkansas Farmers Plant Food Company, Box 112, North Little Rock, Arkansas
 Ark-La Cotton Oil Company, Magnolia, Arkansas
 Associated Cooperatives, Incorporated, Sheffield, Alabama
 Atkins and Durbrow, Incorporated, 165 John Street, New York 38, New York
 Allied Chemical and Dye Corporation, Nitrogen Division, 40 Rector St., New York, N. Y.
 Atlas Chemical Company, 1 Drumm Street, San Francisco, 11, California
 Baker, H. J. and Brother, 600 Fifth Ave., New York, New York
 Bersworth Chemical Company, Framingham, Mass.
 Better Homes Bureau, Newark, New York
 Bradley and Baker, 155 East 44th St., New York 17, New York
 California Spray Chemical Corporation, Lucas and Ortho Way, Richmond, California
 Chilean Nitrate Sales Corporation, 120 Broadway, New York 5, New York
 Colloidal Products, Post Office Box 1156, Tampa, Florida
 Colorado Fuel and Iron Corporation, Box 1920, Denver, Colorado
 Commercial Solvents Corporation, 160 Madison Ave., New York, New York
 Davey Tree Expert Company, 117 South Water Street, Kent, Ohio
 Davison Chemical Corporation, Gretna, Louisiana
 Dixie Fertilizer Company, Incorporated, Box 1111, Shreveport, Louisiana
 Dow Chemical Company, Midland, Michigan

E. I. DuPont de Nemours and Company, Wilmington, Delaware
 Economy Nursery Company, Little Silver, New Jersey
 Farm Service, Incorporated, Opelousas, Louisiana
 Ferro Corporation, 4150 East 56th St., Cleveland, Ohio
 Ford Motor Company, Dearborn, Michigan
 Garden Research Laboratory, 141 Fifth Avenue, New York, New York
 Germain, Incorporated, 747 Terminal Street, Los Angeles 21, California
 Geigy Company, Incorporated, 89 Barclay Street, New York, New York
 Goulard and Olena, Incorporated, Skillman, New Jersey
 Gro-Crop, Incorporated, Summerdale, Alabama
 Heinel's Greenhouses, 4401 La Grange Street, Toledo, Ohio
 Hoover Soil Service, Gilman, Illinois
 Hydroponic Chemical Company, Incorporated, Copley, Ohio
 International Minerals and Chemical Corporation, Box 928, Texarkana, Arkansas
 International Minerals and Chemical Corp., Thompson Phosphate Division, 407 S. Dearborn, Chicago 5, Illinois
 Kelly, Weber and Company, Incorporated, Lake Charles, Louisiana
 Lake Charles Feed Company, Incorporated, Lake Charles, Louisiana
 Leon's Horticulture Specialties Company, 433 West Magnolia Avenue, Glendale 4, Calif.
 Lion Oil Company, El Dorado, Arkansas
 McCormick and Company, Incorporated, Baltimore 2, Maryland
 Loamium Company of America, 2 Kingsland Ave., Harrison, New Jersey
 Mathieson Chemical Corporation, Mathieson Building, Baltimore, Maryland
 Mathieson Chemical Corporation, Little Rock, Arkansas
 Minden Cotton Oil and Ice Company, Ltd., Minden, Louisiana
 Mississippi Chemical Corporation, Yazoo City, Mississippi
 Monsanto Chemical Company, 1700 S. Second St., St. Louis, Missouri
 Na-Churs Plant Food Company, 421 Monroe Street, Marion, Ohio
 Natural Plant Food Company, 210 W. California, Oklahoma City, Oklahoma
 New York Hanseatic Corporation, 120 Broadway, New York, New York
 Nutritional Concentrates, Box 309, New Lexington, Ohio
 Oklahoma Fertilizer Chemical Company, Oklahoma City, Oklahoma
 Phillips Chemical Company, Bartlesville, Oklahoma
 Phosphate Minerals, 319 South 8th Street, Boise, Idaho
 Plantabbs Corporation, 1105 Maryland, Baltimore, Maryland

FERTILIZER GUARANTORS REGISTERED IN TEXAS, 1953-54—Continued

- Plant-Chem, Incorporated, Operating University Hydroponic Service, 2229 McGee Ave., Berkeley 3, California
- Proen Products Company, 9th and Grayson, Berkeley, California
- Ra-Pid-Gro Corporation, 88 Ossian Street, Dansville, New York
- Reliance Fertilizer Company, Savannah, Georgia
- Robin Jones Phosphate Company, Box 1021, Nashville, Tennessee
- Ruhm Phosphate and Chemical Company, 1585 Maple Ave., Evanston, Illinois
- O. M. Scott and Sons, Company, Marysville, Ohio
- Sears, Roebuck and Company, 925 South Homan Avenue, Chicago 7, Illinois
- Sewerage Commission of the City of Milwaukee, Box 2097, Milwaukee 1, Wisconsin
- Shreveport Fertilizer Works, Shreveport, Louisiana
- Soil Booster Corporation, 2501 East Fourth Street, Oklahoma City, Oklahoma
- Soil Builders, Incorporated, Dunnellon, Florida
- Spencer Chemical Company, 610 Dwight Building, Kansas City, Missouri
- Sterns Garden Products, Geneva, New York
- Stockdale Fertilizer Company, Morris, Illinois
- Sunshine Plant Food Company, Clovis, New Mexico
- Swift and Company, Plant Food Division, 508 Industries Building, New Orleans, Louisiana
- Swift and Company, Plant Food Division, Shreveport, Louisiana
- Synthetic Fertilizer and Chemicals, 500 Fifth Avenue, New York, New York
- Synthetic Nitrogen Products Corporation, 285 Madison Avenue, New York 17, New York
- Tennessee Coal & Iron Division, Box 599, Sheffield, Alabama
- Tennessee Corporation, 619-27 Grant Building, Atlanta, Georgia
- Tennessee Corporation Lockland, Cincinnati 1, Ohio
- Terra Food Fertilizer Company, 3038 Azusa Road, El Monte, California
- Umbaugh Agricultural Chemical Company, Memphis, Tennessee
- U. S. Phosphoric Division, Tennessee Corporation, Box 3269, Tampa, Florida
- Virginia-Carolina Chemical Corporation, Shreveport, Louisiana
- Victor Chemical Works, 141 W. Jackson, Chicago, Illinois
- Waldo Fertilizer Works, Waldo, Arkansas
- Western Mines, Inc., 1400 S. Lipan, Denver, Colorado