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- Analyses of
- *Commercial Fertilizers*
- Sold during 1956-57

*September 1957*

TEXAS AGRICULTURAL EXPERIMENT STATION

R. D. LEWIS, DIRECTOR, COLLEGE STATION, TEXAS

## DIGEST

This is the 55th annual report of the operation of the Texas fertilizer law, and covers the period from September 1, 1956 through August 31, 1957.

Fertilizers and fertilizer materials sold during the fertilizer year beginning July 1, 1956, amounted to 595,175 tons, which was a 5 percent increase over the tonnage sold during the preceding year. Sales of mixed goods decreased 4 percent, while sales of materials increased 14 percent. Grades of the 1-2-1 ratio accounted for 69 percent, and the 1-1-1 ratio for 10 percent, of the total of 270,086 tons of mixed goods sold. Nitrogenous materials accounted for 49 percent, superphosphates for 23 percent and ammoniated phosphates for 23 percent of the total of 325,089 tons of materials sold.

Analyses are given of 1,734 official samples of fertilizers. Valuations found on analyses are compared with the analyses guaranteed by the registrants.

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# Analyses of Commercial Fertilizers Sold during 1956-57

J. F. FUDGE, State Chemist

THIS IS THE 55TH 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 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 on request.

### Materials Covered

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 a ton.

### Registration

Before a fertilizer is offered for sale in Texas, it must be registered with the State Chemist of Texas, College Station, 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, on 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 can be made in the wording on the bag or tag after it has been registered. Such change requires a new registration.

The application for registration must be accompanied by a Product Sheet on which is listed all of the materials used in the fertilizers, including the filler or conditioner, and these materials must be used in all batches. A change may be made only if it meets the requirements of the law and the State Chemist is notified. The applica-

tion for registration also must be accompanied by all printed material to be used in connection with advertising and marketing the product.

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 fertilizers should be part of the name of the product; for example, *Jupiter Brand Superphosphate 0-20-0* 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.

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.

No advertising of any kind shall be printed on the label.

### Inspection Fees

To finance the inspection of fertilizers and the collection and analysis of official samples of fertilizer, experiments on the value of fertilizers, and for certain other related 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 by the guarantor on the basis of and must accompany a sworn quarterly statement of sales, due in the office of the State Chemist on the first day of September, December, March and June. If the tonnage report is not filed and the payment of inspection fees is not made within 20 days after the date due, a collection fee amounting to 10 percent of the amount due must be charged against the guarantor.

## 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."

## GRADES APPROVED FOR 1957-58

The grade of a mixed fertilizer is stated in numbers representing the guaranteed analyses 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 guarantor to contain 5 percent nitrogen, 10 percent available phosphoric acid and 5 percent water-soluble potash. The term *grade* also may refer to the percentage of a primary component in a fertilizer material, as in superphosphate, 0-20-0. 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 label.

Fertilizers also may be described by a numerical statement expressing the relation among the primary components 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 more than 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 in becoming familiar with the different grades of fertilizer, enable him to decide more readily on the proper grade to be used and enable agricultural specialists to make defi-

nite and simple 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 annually in cooperation with fertilizer control officials, agricultural specialists and manufacturers of Texas, Louisiana, Arkansas, Oklahoma and New Mexico. The list of approved ratios and minimum grades is published in the annual fertilizer bulletin and also may be obtained on request to the State Chemist.

Following the annual public hearing on ratios and grades held at Galveston, Texas, on July 19, 1957, the Texas Fertilizer Committee took the following action:

1. Removed the 1-3-1 ratio from the approved list.
2. Raised the minimum grade in the 2-1-1 ratio to 12-6-6.
3. Continued the minimum approved concentration of 20 units in two-component mixed goods containing nitrogen and available phosphoric acid.
4. Beginning September 1, 1958, the minimum approved concentration of three-component mixed goods containing nitrogen, available phosphoric acid and potash will be 24 units.

As a result of these actions, the approved ratios and minimum grades during the year starting September 1, 1957, are:

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

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 is approved as a higher analysis of the 1-2-1 ratio.

All fertilizer materials were approved. A few products containing both nitrogen and available phosphoric acid, such as 4-16-0 (ammoniated superphosphate), 16-20-0, 11-48-0 and 13-39-0 (ammonium phosphates), also were approved as materials.

## 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. This committee is composed of the following:

- J. F. Fudge, State Chemist, Chairman
- G. W. Adriance, Head Department of Horticulture
- H. T. Blackhurst, Professor of Horticulture
- B. G. Hancock, Extension Horticulturist
- O. J. Moss, Agricultural Conservation and Stabilization, U. S. Department of Agriculture
- J. B. Page, Dean, Graduate School
- Donald R. Paterson, Associate Horticulturist
- J. S. Rogers, Head, Department of Agronomy
- Ben R. Spears, Extension Agronomist
- J. B. Storey, Assistant Professor, Horticulture

### BRANDS AND TRADE-MARKS

The law requires the State Chemist to publish annually a list of brands or trade-marks registered with him. The following brands and trade-marks were registered with the State Chemist during 1956-57:

AA Quality	C F & I	Grace
ACI-42	Champion	Gran-U-Pels
AC I-45	Chee-Ko	Green Acres
Aero	Chik-a-nure	Green Dot
Aero-Phos	Chief	Green Growth
Agco	Cinagro	Greenlawn
Agri-Chem	Coastal Bend	Green Light
Agri-Sul	Coastal Flori-Gro	Green Thumb
All-Weather	Co-Op	Green Up
Ammo-Phos	Cross Country	Green Valley
Anaconda	C.S.C.	Gro-Green
Anchor	Davey	Gro-Mo
Aqua dry	De-Pester	Gro-Mor
Arcadian	Dixie	Gro-Rite
Arkansas Farmers	Dixsol	Grosol
Quality	Doubleton	Gro-stuf
Ark-Mo	Dow	Gro-Tex
Armour Pebble	Driconure	Heart
Armour Big Crop	Dri-Flo	Heart of Texas
Arrow	DuPont	Heller-Gro
Atlas	Easy Going	Hill's
Bactex	Es Min-El	Hi-Yield
Bal-Jac	Faun	Hoffman's
Bandini	Fertilaid	Hou-Actinite
Best	Ferti-Lome	Hy-Gro
Best Bet	Ferti-Mulch	Hyponex
BFC	Fidelity	Indian
Big N	Flora-Phos	International
Big Steer	Folium	Interstate
Bio-Gro	Ford	K-W
Black Magic	Four Leaf	La-Tex
Blenn	F T E	Leeloam
Blumes	Garden Gro	Linck's
Boost	General	Life
Borden's 38	G. & O.	Lion
Brimm	Golden Nugget	Liqua-food
C.C.I.L.	Goldenrod	Liqua Vita
Cal-Nitro	Goldenrod	Liquidry
Calunite	Gran-u-pels	Liquikik
Campbell's	Gold Medal	Lone Star
Granulated	Goldthwaite's	Longhorn

Lonfosco	Pelleform	Sunshine
Lush	Phillips 66	Swfgas
Ma-Der-Gro	Plainsman	Swfgro
M C C	Plantabbs	Swfkick
Magnolia	Plantation	Swfpbos
Magic Gro	Plant-Gro	Take-Hold
Mathieson	Plantrons	T. C. C.
Maverick	Port	Tencor
M.C.G.	Pride of the	Terra Lite
Mello-Green	Garden	Texas Farm
M.G.	Q-W	Supply
Mid-West	Rainbow	Texas Green
Milorganite	Ramshorn	Acres
Min-Hu-Nite	Min-Pid-Gro	Texas Liquid
Min-Sol	Red Stag	Texas Longhorn
Mission	Red Star	Texas Pride
Mr. N.	Red Steer	Tex-Hi
Mule	Reliance	Thrifty
Na-Churs	Reuter's Special	Tide Green
Naturizer	Rich Lawn	Top Crop
Nichols	R.S.S.	Topper
Nitra-Phos	Ruhm's	Tracin
Nitro-Form	RX-15	Tri-40
N.O.M.	Scott's	Uramite
N-Rich-R	Sequestrene	Valley Gro
Nu-Green	Shur-Green	V-C
Nurish	Sod-Gro	Vita-Pure
Nu-Z	Soil Booster	V-O
Old Black Joe	Soil Nu	Vertagreen
Oleander	Sowesco	Vigoro
Orga-Min	Soylaid	Vitrea
Orgro	S S S	Wacco
Ortho	Sta-Green	Water Feed
Ortho-Gro	Star	Weber-King
Ozark	Staffel's	Wesco
Palmer's	Stauffer's	Wolf
Palo Duro	Steamboat	Wonder-Gro
Panhandle Gold	Stim-U-Plant	Woodgrow
Pasturgo	Sulfa Soil	Wyatt's A-M
P.D.Q.	Sul-Po-Mag	

### INSPECTION FEES COLLECTED

Fertilizer inspection fees equivalent to 626,545 tons of fertilizer were collected for fertilizer sold during the Texas fiscal year from September 1, 1956 through August 31, 1957. This 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.

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
1943-48 (5-year average)	314,515
1948-49	492,541
1949-50	545,899
1950-51	598,274
1951-52	621,943
1952-53	558,808
1953-54	543,518
1954-55	603,828
1955-56	566,339
1956-57	626,545

# TONNAGE SALES

The tonnages of different grades of mixed fertilizers and fertilizer materials sold in different areas of Texas, Figure 1, during the year, and in the State during the fall and spring seasons, are shown in Table 2. 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 date of sales. Detailed reports of sales by counties are given in Progress Reports 1924 (fall sales) and 1976 (spring sales).

Total sales for the year were about 5 percent higher than during the preceding year. Sales of mixed goods were down 4 percent, but sales of

materials were 14 percent higher. Mixed goods made up 45 percent of the total tonnage, compared with 50 percent a year ago. Sales of mixed goods of the 1-2-1 ratio accounted for 69 percent and of the 1-1-1 ratio, for 10 percent of the mixed goods sold during the year. Combined sales of the 1-2-1 and 1-1-1 ratios thus accounted for more than three-fourths of the total tonnage of mixed goods. Sales of the 5-10-5 grade were down significantly, but those of 10-20-10 were 29 percent greater than a year ago. Sales of the 12-12-12 grade also showed a highly significant increase. East Texas used 48 percent of the mixed goods sold in the State, and 58 percent of the goods of the 1-2-1 ratio. East Texas, the Gulf Coast and the North Central regions used 80 percent of the

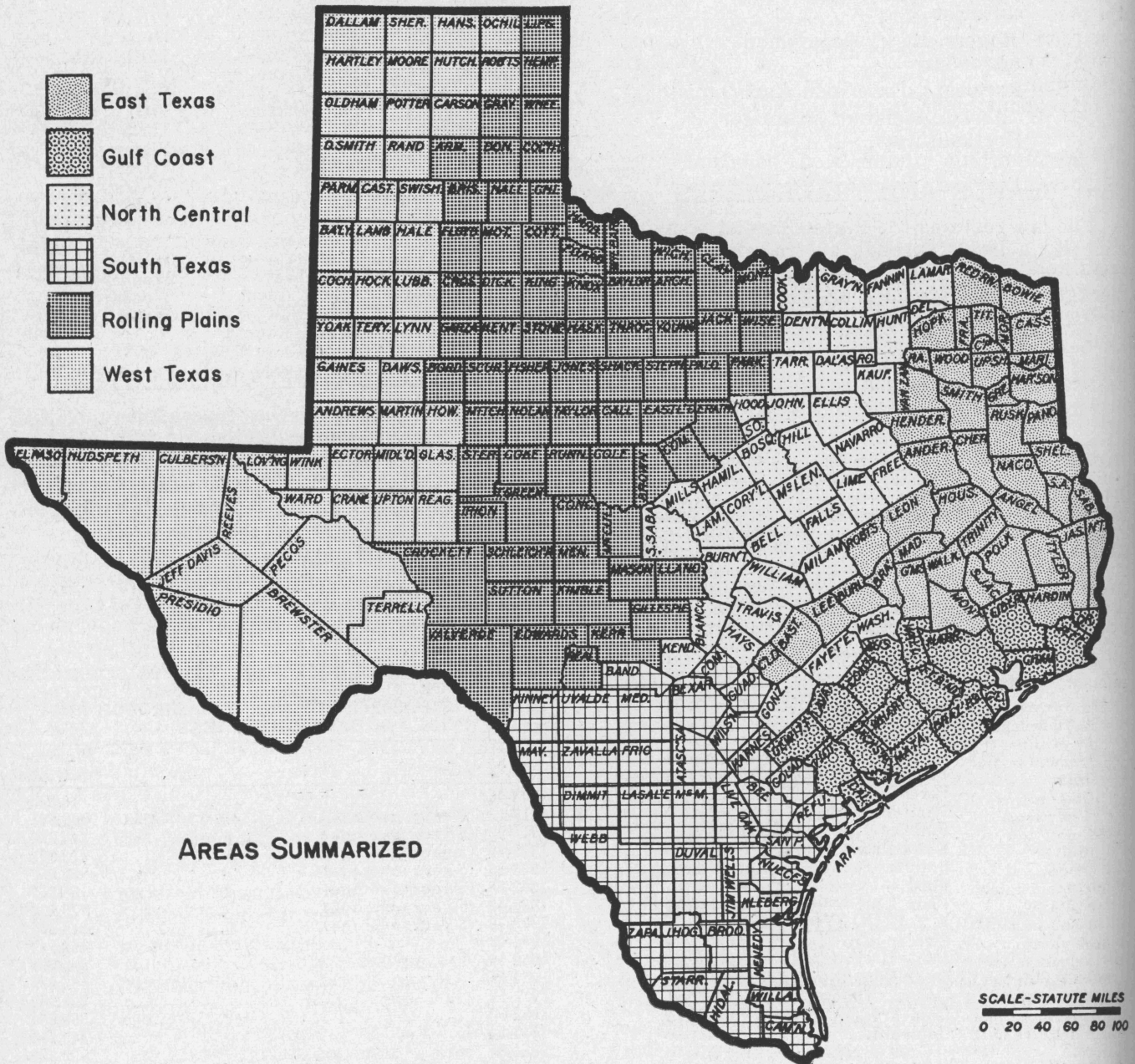


Figure 1. Geographic regions of Texas for which fertilizer data are summarized.



total mixed goods sold. Mixed goods accounted for 82 percent of the total sold in East Texas, 47 percent of the total sold along the upper Gulf Coast and less than 8 percent of the total sold in West Texas.

The total tonnage of materials sold during the year was 20 percent higher than the total of mixed goods; fall sales of materials were 30 percent higher and spring sales 16 percent higher than those of mixed goods. East Texas used half of the ammonium nitrate sold in the State, the Gulf Coast and West Texas each used about one-third of the ammonium sulfate, West Texas used 82 percent of the anhydrous ammonia, and West Texas and South Texas together used nearly all (93 percent) of the nitrogen solutions used in the State. Sales of superphosphates were about the same as during the preceding year, but there was a small increase in the proportion of concentrated superphosphates. The total of 44,232 tons of ordinary superphosphate sold during 1956-57 is only about one-fourth of the total of 176,272

tons sold during 1949-50. Concurrent with this decrease in the consumption of superphosphate has been the marked increase in the use of nitrogenous materials, amounting to 158,881 tons in 1956-57, as compared with 32,551 tons in 1949-50, a year before anhydrous ammonia was sold on the Texas market as a fertilizer material. During 1956-57, anhydrous ammonia supplied 58 percent of the materials nitrogen and 47 percent of the total nitrogen used in the State.

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 31 percent of the nitrogen, 38 percent of the available phosphoric acid and 33 percent of the potash used during the entire year. Stated in another way, sales of nitrogen, available phosphoric acid and potash in the spring were about twice as great as in the fall. Mixed goods supplied 20 percent of the nitrogen, 49 percent of the available phosphoric acid and 95 per-

TABLE 2. TONNAGES OF MIXED GOODS AND MATERIALS SOLD IN DIFFERENT REGIONS AND SEASONS, AS REPORTED CURRENTLY BY GUARANTORS

Grade	By regions July 1, 1956, to June 30, 1957						Entire State			
	East Texas	Gulf Coast	North-Central	South Texas	Rolling Plains	West Texas	July 1 to Dec. 31	Jan. 1 to June 30	Full year	
									Actual	Relative 1956 = 100
<b>Mixed goods</b>										
1-2-1 Ratio (total)	106672	27076	23219	17244	7262	3712	66236	118949	185185	98
5-10-5	62742	8259	12699	7455	3406	444	27635	67370	95005	80
10-20-10	42056	7846	9303	5378	2324	2207	31971	37143	69114	129
6-12-6	209	724	140	666	36	8	370	1413	1783	61
Other grades	1665	10247	1077	3745	1496	1053	6260	13023	19283	130
1-1-1 Ratio (total)	13818	10076	1424	666	226	1208	5128	22289	27417	96
8-8-8	10470	1795	699	191	0	20	1821	11354	13175	85
12-12-12	2173	2781	323	65	18	427	798	4989	5787	153
Other grades	1175	5500	402	410	208	761	2509	5946	8455	92
1-2-0 Ratio	2242	2121	4234	1823	578	1358	6680	5676	12356	95
1-3-1 Ratio	1806	836	774	2239	1885	491	1189	6842	8031	91
1-1-0 Ratio	237	1148	896	2094	174	658	994	4213	5207	66
1-4-4 Ratio	1250	2532	51	600	135	197	1188	3577	4765	69
1-2-2 Ratio	2592	1371	118	225	83	0	981	3408	4389	73
2-2-1 Ratio	201	1615	95	1282	56	110	515	2844	3359	91
0-2-1 Ratio	813	228	216	90	187	1067	986	1615	2601	98
Turf and garden specialties	1051	3490	2890	2705	511	1231	3017	8832	11849	105
Other grades	233	1450	376	1477	288	1074	1058	3869	4927	152
Total mixed goods	130916	51942	34294	30445	11384	11105	87972	182114	270086	96
Relative to 1956	88	100	94	118	92	153	104	92	96	96
<b>Materials</b>										
Nitrogen materials (total)	16625	23603	13432	18402	6220	80599	46654	112227	158881	128
Anhydrous ammonia	2153	1352	1112	5005	1727	50401	18685	43065	61750	148
Ammonium sulfate	1879	18499	8331	8684	2603	19271	17106	42161	59267	138
Ammonium nitrate	11746	653	3644	1505	1619	4198	5469	17896	23365	105
Urea	94	2322	198	996	114	1737	1132	4329	5461	194
Other solid N	753	414	147	372	38	431	579	1576	2155	29
N solutions	0	363	0	1840	119	4561	3683	3200	6883	105
N-P materials (total)	2910	21262	7512	12760	5706	23756	29245	44662	73907	110
16-20-0	2637	18395	6013	8137	4180	12523	21488	30397	51885	109
Others	273	2867	1499	4625	1526	11233	7757	14265	22022	114
Superphosphates (total)	7586	7342	15563	10166	3145	30229	32538	41493	74031	97
0-20-0	6406	2807	9894	3952	1973	19200	19871	24361	44232	93
0-30-0 and up	1180	4535	5669	6214	1172	11029	12667	17132	29799	104
Rock phosphates	1940	2751	115	650	0	0	2030	3426	5456	81
Potash materials	109	282	93	336	73	1000	262	1631	1893	181
Manures and composts	385	935	2252	1372	756	702	2504	3898	6402	85
Other products	160	1508	284	1436	165	963	1199	3317	4516	183
Total materials	29716	57684	39250	45125	16065	137249	114434	210655	325089	114
Relative to 1956	102	84	90	96	103	171	105	120	114	114
All fertilizers	160632	109626	73544	75570	27449	148354	202406	392769	595175	105
Relative to 1956	91	91	92	104	98	169	104	105	105	105

cent of the potash. The total tonnage of nitrogen was 35 percent higher than that of available phosphoric acid. Although the tonnage of fertilizers sold during 1956-57 was only 5 percent higher than during 1955-56, the total tonnage of all primary components was 14 percent higher.

Geographic regions of Texas differed widely in the amount of primary components used. Nitrogen consumption increased markedly in all regions, particularly in West Texas. East Texas used 44 percent of the nitrogen from mixed goods while West Texas used 61 percent of the nitrogen from materials. East Texas and the Gulf Coast used 45 percent of the tonnage of available phosphoric acid and 69 percent of the potash used in the State.

### 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 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 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 primary components. The following prices per unit (1 percent of a ton, or 20 pounds) were used for this calculation in 1956-57:

	Prices per unit
Nitrogen .....	\$2.75
Available phosphoric acid.....	1.75
Total phosphoric acid in tannage and bone meal .....	.70
Total phosphoric acid in rock phosphate	.50
Soluble potash .....	1.00

The valuation is calculated by multiplying the percentage of each primary component 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 x \$2.75 =	\$13.75
Available phosphoric acid.....	10 x \$1.75 =	\$17.50
Soluble potash .....	5 x \$1.00 =	\$ 5.00
Guaranteed valuation.....		\$36.25

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

### VALUATION GUARANTEED AND FOUND

A comparison of the average valuation guaranteed by fertilizer manufacturers doing business in Texas with the valuation found upon analysis

TABLE 3. TONNAGE OF PRIMARY FERTILIZER COMPONENTS SOLD JULY 1, 1956 TO JUNE 30, 1957, AS REPORTED CURRENTLY BY GUARANTORS AND CALCULATED FROM GUARANTEED ANALYSIS

Region	Nitrogen			Available phosphoric acid			Potash		
	Mixed	Materials	All	Mixed	Materials	All	Mixed	Materials	All
Fall season, June 1 to December 31, 1956									
East Texas	3525	1022	4547	7024	1441	8465	3536	7	3543
Gulf Coast	1562	3891	5453	2710	4128	6838	1380	69	1449
North Central	1159	1753	2912	2237	4232	6469	815	12	827
South Texas	889	2652	3541	1651	3383	5034	815	21	836
Rolling Plains	97	1126	1223	182	1114	1296	80	1	81
West Texas	157	16274	16431	230	2542	2772	75	20	95
Entire State	7389	26718	34107	14034	16841	30875	6701	130	6831
Relative to 1956	115	135	130	112	92	100	113	104	112
Spring season, Jan. 1 to June 30, 1956									
East Texas	5946	5684	11630	10857	1000	11857	5995	58	6053
Gulf Coast	3351	5852	9203	5697	3236	8933	3343	100	3443
North Central	1506	3380	4886	2750	2056	4806	1242	44	1286
South Texas	1793	6632	8425	2541	3602	6143	1254	122	1376
Rolling Plains	725	2070	2795	1500	1240	2740	666	29	695
West Texas	900	36351	37251	1636	13368	15004	717	552	1269
Entire State	14221	59969	74190	24981	24502	49483	13217	905	14122
Relative to 1956	97	130	122	96	120	107	97	214	101
Full year, July 1, 1956 to June 30, 1957									
East Texas	9471	6706	16177	17881	2441	20322	9531	65	9596
Gulf Coast	4913	9743	14656	8407	7364	15771	4723	169	4892
North Central	2665	5133	7798	4987	6288	11275	2057	56	2113
South Texas	2682	9284	11966	4192	6985	11177	2069	143	2212
Rolling Plains	822	3196	4018	1682	2354	4036	746	30	776
West Texas	1057	52625	53682	1866	15910	17776	792	572	1364
Entire State	21610	86687	108297	39015	41343	80358	19918	1035	20953
Relative to 1956	102	132	124	101	107	104	102	170	104



of official samples is shown in Table 4. In the preparation of this table, all analyses made were averaged, even though several were made of each brand. Fertilizer materials and 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 4.

### TO OBTAIN A FREE ANALYSIS

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 taken properly 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, Col-

lege 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

A total of 1,734 official samples of fertilizers and fertilizer materials was collected during 1956-57 by fertilizer inspectors, who collected samples in nearly every town and city in the State where fertilizer was being sold. Principal points of distribution were inspected several times during the year. In every case, official samples of all products being sold in the towns visited were collected. These samples were analyzed by official methods of the Association of Official Agricultural Chemists of North America, as is required by Article 98 of the Texas Civil Statutes. The analyses of these samples are given in detail in Table 5.

### PUBLICATIONS ON FERTILIZERS

Two reports showing the tonnages of different fertilizers sold in each county in the State were published during the year. Fall sales are shown in Progress Report 1924 and spring sales in Progress Report 1976. Other publications dealing with the value and use of commercial fertilizers are issued frequently by the Texas Agri-

TABLE 4. AVERAGE VALUATIONS GUARANTEED AND FOUND IN SAMPLES OF FERTILIZERS GUARANTEED BY DIFFERENT COMPANIES

Company	Valuation guaranteed	Valuation found	Number averaged	Rebates
Ark-Mo Plant Food Co.	80.23	80.88	16	2
Armour Fertilizer Works, Dallas	58.41	59.42	124	1
Armour Fertilizer Works, Houston	57.23	58.47	141	0
Best Fertilizer Co.	71.05	72.98	5	0
Campbell Fertilizer Co.	49.33	56.00	9	0
Central Texas Fertilizer Co.	65.64	64.16	20	4
Chemical Specialties Co.	60.40	59.56	5	0
Dixie Fertilizer Co.	52.79	54.49	33	1
East Texas Products Co.	51.19	52.72	37	0
Farmers Fertilizer Co.	49.38	51.34	21	0
Fidelity Chemical Corp.	50.49	51.67	15	0
Gilmer Cotton Oil & Fertilizer Co.	41.43	43.27	7	0
Hayes-Sammons Co.	49.87	48.91	46	10
Hi-Yield Fertilizer Co.	56.44	57.00	147	11
Hi-Yield Plant Food Co.	44.26	46.00	6	0
International Minerals & Chemical Corp., Fort Worth	60.37	60.23	162	11
International Minerals & Chemical Corp., Texarkana	52.80	55.55	61	0
Jacksonville Fertilizer Co.	45.78	48.58	10	0
Olin Mathieson Chemical Corp.	83.41	85.96	248	0
Nichols Fertilizer & Chemical Co.	73.35	69.51	10	5
Ozark Mahoning Co.	90.84	92.05	7	0
Phillips Chemical Co.	70.64	71.12	8	0
Pittsburg Fertilizer Co.	55.69	53.17	4	1
Red Star Fertilizer Div., SFSA	59.26	60.37	110	7
Smith-Douglas Co.	81.28	84.10	24	0
Southwest Chemical Co., McAllen	60.33	61.99	10	0
Swift & Co. Plant Food Div., Houston	63.78	64.99	99	3
Swift & Co. Plant Food Div., Shreveport	49.48	50.37	46	3
Texas Farm Products Co.	55.77	56.35	64	1
Texas Liquid Fertilizer Co.	68.89	67.93	7	2
Tide Petroleum Products	59.00	60.23	14	1
Tyler Fertilizer Co.	56.46	57.27	25	2
Virginia-Carolina Chemical Corp.	55.45	57.17	115	2
Wonder-Gro Fertilizer Co.	59.54	60.75	7	1



cultural Experiment Station and the Texas Agricultural Extension Service. Check lists of these publications will be sent free on 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 request to publications they have reason to believe will be useful immediately, and which they will take the time to study.

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
<b>AGRI-CHEM OF TEXAS, SAN ANTONIO, TEXAS</b>					
Agri-Chem 24-24-12 Fertilizer					
Guaranteed		24.00	24.00	12.00	120.00
61		23.45	24.50	12.48	119.84
<b>ALLIED CHEMICAL &amp; DYE CORP., NITROGEN DIVISION, OMAHA, NEBRASKA</b>					
"Arcadian" Urea 45-0-0 Fertilizer Compound					
Guaranteed		45.00	00.00	00.00	123.75
1148		46.16	00.00	00.00	126.94
<b>ARKMO PLANT FOOD COMPANY, WALNUT RIDGE, ARK.</b>					
Doubleton 10-20-10					
Guaranteed		10.00	20.00	10.00	72.50
13		9.52	21.24	10.01	73.36
1360		10.98	19.71	10.90	75.59
1410		10.08	19.66	10.64	72.77
1425		10.08	20.00	10.60	73.32
General 16-20-0					
Guaranteed		16.00	20.00	00.00	79.00
14		15.40	20.75	00.00	78.66
1117		16.22	20.20	00.00	79.96
1361		14.45	19.52	00.00	73.90
1378		16.68	20.00	00.00	80.87
1424		15.11	20.22	00.00	76.94
1439		15.28	20.00	00.00	77.02
1470		15.43	20.10	00.00	77.61
General 13-39-0					
Guaranteed		13.00	39.00	00.00	104.00
1362		13.21	39.25	00.00	105.02
1379		12.73	39.40	00.00	103.96
1423		12.00	37.48	00.00	98.59
1469		11.55	39.64	00.00	101.13
Ark-Mo 0-20-0					
Guaranteed		00.00	20.00	00.00	35.00
1438		00.00	20.00	00.00	35.00
<b>ARMOUR FERTILIZER WORKS, DALLAS, TEXAS</b>					
Armour's Big Crop 0-16-8 Fertilizer					
Guaranteed		00.00	16.00	8.00	36.00
400		00.00	17.45	9.40	39.34
Armour's Big Crop 4-12-4 Fertilizer					
Guaranteed		4.00	12.00	4.00	36.00
1484		3.74	12.42	4.00	36.02
1486		4.04	13.39	4.40	38.88
1505		3.74	12.59	4.01	36.33
Armour's Old Black Joe 5-10-5 Fertilizer					
Guaranteed		5.00	10.00	5.00	36.25
90		5.00	10.51	5.50	37.64
96		4.83	10.00	5.35	36.13
102		5.42	11.73	5.30	40.73
123		5.05	10.20	4.91	36.65
158		5.09	10.40	5.20	37.40
159		5.00	10.70	5.18	37.66
253		5.00	10.30	5.52	37.30
339		4.70	10.40	5.45	36.58
351		5.26	11.72	5.20	41.18
396		5.60	10.00	5.30	38.20
442		5.16	10.50	5.20	37.77
503		5.24	10.00	5.18	37.09
749		5.02	10.00	5.35	36.66
761		5.00	10.00	5.20	36.45

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
	769	5.32	10.40	5.20	38.03
	979	4.76	10.60	5.38	37.02
	984	5.00	10.20	5.55	37.15
	990	4.66	10.24	5.40	36.14
	1042	5.20	11.18	5.38	39.25
	1249	7.28	13.86	6.90	51.18
	1487	4.56	10.41	5.38	36.14
	1493	4.77	10.80	5.30	37.32
	1506	5.08	10.50	5.20	37.55
	1522	4.78	10.20	5.30	36.30
	1574	4.70	10.44	5.45	36.65
	1617	5.19	10.20	5.25	37.37
<b>Armour Vertagreen Plant Food 5-10-5</b>					
Guaranteed		5.00	10.00	5.00	36.25
1186		5.59	10.20	5.35	38.57
1533		5.01	10.30	5.28	39.14
1562		4.74	10.50	5.18	36.59
1585		4.74	10.40	5.45	36.69
1682		5.00	10.00	5.48	36.73
<b>Armour Valley Special Plant Food 5-10-5</b>					
Guaranteed		5.00	10.00	5.00	36.25
1480		4.74	11.44	5.30	38.36
<b>Armour's Big Crop 8-8-8 Fertilizer</b>					
Guaranteed		8.00	8.00	8.00	44.00
930		8.04	8.00	8.70	44.81
991		7.68	8.00	9.20	44.32
<b>Armour Vertagreen Plant Food 8-8-8 Commercial</b>					
Guaranteed		8.00	8.00	8.00	44.00
1563		7.00	10.15	6.68	43.69
<b>Armour Pebble Plant Food 10-20-0</b>					
Guaranteed		10.00	20.00	00.00	62.50
427		10.04	20.65	00.00	63.75
472		10.68	19.00	00.00	62.62
1266		10.01	20.00	00.00	62.53
1273		10.00	20.10	00.00	62.68
1339		10.98	21.00	00.00	66.95
1345		10.22	21.09	00.00	65.01
1352		9.77	20.10	00.00	62.04
1426		9.73	20.00	00.00	61.76
1554		9.60	20.00	00.00	61.40
<b>Armour's Old Black Joe 10-20-10 Fertilizer</b>					
Guaranteed		10.00	20.00	10.00	72.50
103		10.00	21.61	10.60	75.92
112		9.86	21.48	10.40	75.11
118		10.00	21.77	10.70	76.30
124		10.00	22.22	10.50	76.89
130		10.00	20.25	10.70	73.64
212		10.05	21.64	10.74	76.25
245		10.36	21.00	10.70	75.94
284		10.40	21.07	11.20	76.67
751		9.64	20.40	10.70	72.91
760		9.31	21.30	10.40	73.28
762		9.55	20.60	10.60	72.91
916		9.03	18.80	10.70	68.43
1187		9.42	20.60	10.80	72.76
1238		10.09	20.15	10.80	73.81
1346		10.54	20.20	10.60	74.94
1350		9.01	20.50	10.60	71.25
1385		10.32	20.60	10.70	75.13

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
Armour Pebble Plant Food 10-20-10					
Guaranteed	10.00	20.00	10.00	72.50	
335	9.68	21.50	10.40	74.65	
340	10.46	20.75	11.00	76.08	
352	9.88	21.24	10.70	75.04	
383	10.08	20.75	10.70	74.73	
386	10.28	20.00	10.40	73.67	
397	10.60	20.99	10.70	76.58	
401	9.66	20.24	11.00	72.99	
405	9.64	21.25	10.72	74.42	
443	9.34	21.50	10.70	74.01	
590	10.01	20.50	10.50	73.90	
796	10.02	20.40	10.36	73.62	
1618	9.08	20.00	10.50	70.47	
1699	9.43	20.40	10.20	71.83	
Armour Pebble Plant Food 15-15-0					
Guaranteed	15.00	15.00	00.00	67.50	
409	14.66	16.25	00.00	68.75	
434	13.76	15.90	00.00	65.67	
483	14.64	15.30	00.00	67.04	
789	13.51	15.80	00.00	64.80	
1267	16.29	13.44	00.00	68.32	
1555	15.02	14.00	00.00	65.81	
Armour Pebble Plant Food 13-39-0					
Guaranteed	13.00	39.00	00.00	104.00	
423	12.74	40.04	00.00	105.11	
1343	13.58	37.05	00.00	102.18	
1386	12.12	39.00	00.00	101.58	
1428	11.44	40.17	00.00	101.75	
1434	12.76	38.66	00.00	102.75	
Armour Pebble Plant Food 16-20-0					
Guaranteed	16.00	20.00	00.00	79.00	
135	15.42	20.40	00.00	78.11	
413	15.60	21.25	00.00	80.09	
422	16.32	18.90	00.00	77.96	
428	15.64	21.75	00.00	81.07	
444	16.03	21.50	00.00	81.71	
487	16.51	18.60	00.00	77.95	
1265	14.98	21.16	00.00	78.23	
1274	16.03	20.56	00.00	80.06	
1335	15.19	23.30	00.00	82.55	
1351	16.38	20.70	00.00	81.27	
1429	15.68	20.60	00.00	79.17	
1586	15.31	20.10	00.00	77.28	
Armour's Big Crop 0-20-0 Fertilizer					
Guaranteed	00.00	20.00	00.00	35.00	
127	00.00	20.28	00.00	35.49	
1336	00.00	20.77	00.00	36.35	
1553	00.00	20.20	00.00	35.35	
Armour Pebble Plant Food 20% Superphosphate					
Guaranteed	00.00	20.00	00.00	35.00	
404	00.00	20.21	00.00	35.37	
410	00.00	20.30	00.00	35.53	
471	00.00	19.32	00.00	33.81	
795	00.00	20.00	00.00	35.00	
1340	00.00	20.66	00.00	36.16	
1342	00.00	20.47	00.00	35.82	
1344	00.00	20.40	00.00	35.70	
1349	00.00	20.19	00.00	35.33	
1380	00.00	20.00	00.00	35.00	
1433	00.00	20.00	00.00	35.00	
1488	00.00	20.22	00.00	35.39	
Armour Pebble Plant Food 45% Superphosphate					
Guaranteed	00.00	45.00	00.00	78.75	
128	00.00	45.60	00.00	79.80	
411	00.00	44.37	00.00	77.65	
752	00.00	45.00	00.00	78.75	

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
	1264	00.00	45.00	00.00	78.75
	1337	00.00	45.00	00.00	78.75
	1443	00.00	45.75	00.00	80.06
Armour Pebble Plant Food 8-32-0					
Guaranteed	8.00	32.00	00.00	78.00	
399	8.42	34.22	00.00	83.04	
1411	7.46	33.36	00.00	78.90	
1427	8.24	32.00	00.00	78.66	
ARMOUR FERTILIZER WORKS, HOUSTON, TEXAS					
Armour's Big Crop 4-12-4 Fertilizer					
Guaranteed	4.00	12.00	4.00	36.00	
72	3.48	12.00	4.65	35.22	
641	4.06	12.10	4.80	37.14	
782	4.23	12.40	3.65	36.98	
Armour's Old Black Joe 5-10-5 Fertilizer					
Guaranteed	5.00	10.00	5.00	36.25	
24	5.00	11.00	5.22	38.22	
88	5.18	10.85	5.35	38.58	
510	4.55	10.00	5.30	35.31	
517	4.80	10.00	5.18	35.88	
536	5.66	10.30	5.40	38.99	
591	5.16	10.00	5.50	37.19	
601	5.00	10.00	5.50	36.75	
607	5.02	10.00	5.35	36.66	
617	4.73	10.50	5.18	36.47	
619	5.03	10.60	5.20	37.58	
622	5.00	10.00	5.20	36.45	
652	5.04	10.00	5.10	36.46	
655	5.03	10.00	5.10	36.43	
726	5.04	9.59	5.20	35.84	
733	5.01	10.38	5.35	37.29	
743	5.09	10.23	5.20	37.10	
774	5.38	10.00	5.18	37.48	
783	5.04	10.20	5.16	36.87	
929	5.28	10.30	5.80	38.35	
952	4.85	10.00	5.40	36.24	
957	5.04	10.00	5.00	37.16	
1005	5.01	9.80	5.58	36.51	
1016	5.04	10.00	5.52	36.88	
1030	4.86	10.24	6.10	37.39	
1032	4.83	10.00	5.70	36.48	
1055	4.83	9.87	5.41	35.97	
1059	5.04	10.15	5.40	37.02	
1063	5.08	10.00	5.12	36.59	
1080	5.72	10.07	5.42	38.77	
1115	5.02	10.00	5.15	36.46	
1134	5.12	10.02	5.15	36.77	
1202	5.08	10.67	5.12	37.76	
1229	5.12	10.19	5.20	37.11	
Armour Vertigreen Plant Food 5-10-5 Commercial					
Guaranteed	5.00	10.00	5.00	36.25	
19	5.12	10.49	5.35	37.79	
26	5.14	10.80	5.20	38.24	
664	4.83	10.00	5.10	35.88	
672	5.04	10.00	5.20	36.56	
1125	5.60	10.00	5.00	38.00	
1130	5.04	10.00	5.30	36.66	
1147	5.17	10.00	5.25	36.97	
1535	4.74	10.40	5.30	36.54	
Armour's Big Crop 5-10-10 Fertilizer					
Guaranteed	5.00	10.00	10.00	41.25	
1088	5.26	10.00	10.36	42.33	
Armour Pebble Plant Food 5-20-20					
Guaranteed	5.00	20.00	20.00	68.75	
1190	5.66	19.51	19.34	69.04	



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
Armour Pebble Plant Food	6-12-6					Armour Pebble Plant Food	12-24-12				
Guaranteed		6.00	12.00	6.00	43.50	Guaranteed		12.00	24.00	12.00	87.00
620		6.24	11.70	6.00	43.64	1123		12.02	24.50	11.40	87.33
623		6.28	11.70	6.00	43.75	Armour Pebble Plant Food	15-15-0				
642		6.10	12.00	6.12	43.90	Guaranteed		15.00	15.00	00.00	67.50
955		6.00	12.00	6.10	43.60	39		14.56	16.85	00.00	69.53
1116		6.11	12.00	6.00	43.81	728		16.04	15.03	00.00	70.41
Armour's Big Crop 8-8-8 Fertilizer						1017		14.30	16.40	00.00	68.03
Guaranteed		8.00	8.00	8.00	44.00	Armour's Big Crop 20% Superphosphate Fertilizer					
953		8.28	8.00	8.98	45.75	Guaranteed		00.00	20.00	00.00	35.00
960		8.05	8.60	8.98	46.17	18		00.00	21.59	00.00	37.78
1006		8.24	8.00	8.64	45.30	34		00.00	22.14	00.00	38.75
Armour Pebble Plant Food	10-10-10					36		00.00	21.88	00.00	38.29
Guaranteed		10.00	10.00	10.00	55.00	38		00.00	22.29	00.00	39.01
599		9.81	12.39	11.44	60.10	55		00.00	21.57	00.00	37.75
Armour Pebble Plant Food	10-20-0					680		00.00	20.50	00.00	35.88
Guaranteed		10.00	20.00	00.00	62.50	Armour Pebble Plant Food 20% Superphosphate					
67		11.06	19.58	00.00	64.68	Guaranteed		00.00	20.00	00.00	35.00
131		10.90	21.50	00.00	67.60	676		00.00	19.24	00.00	33.67
181		10.24	20.60	00.00	64.21	684		00.00	19.52	00.00	34.16
186		10.01	21.00	00.00	64.28	1198		00.00	20.30	00.00	35.53
370		9.76	21.99	00.00	65.32	Armour Pebble Plant Food 45% Superphosphate					
540		8.78	21.50	00.00	61.77	Guaranteed		00.00	45.00	00.00	78.75
592		10.01	20.00	00.00	62.53	372		00.00	46.14	00.00	80.75
598		10.02	20.30	00.00	63.08	618		00.00	45.00	00.00	78.75
624		10.40	19.70	00.00	63.08	626		00.00	45.00	00.00	78.75
631		10.36	20.00	00.00	63.49	633		00.00	45.00	00.00	78.75
727		10.44	19.66	00.00	63.12	681		00.00	45.00	00.00	78.75
742		11.24	18.41	00.00	63.13	1263		00.00	45.00	00.00	78.75
1090		10.80	18.60	00.00	62.25	Armour Pebble Plant Food 13-39-0					
1204		10.08	22.20	00.00	66.57	Guaranteed		13.00	39.00	00.00	104.00
Armour Pebble Plant Food	10-20-10					377		12.32	40.54	00.00	104.83
Guaranteed		10.00	20.00	10.00	72.50	635		13.58	37.07	00.00	102.22
68		9.73	22.29	10.50	76.27	Armour Pebble Plant Food 16-20-0					
75		9.64	21.80	10.70	75.36	Guaranteed		16.00	20.00	00.00	79.00
174		10.16	20.00	10.40	73.34	69		16.45	20.25	00.00	80.68
179		10.32	20.00	10.70	74.08	129		16.00	20.50	00.00	79.87
187		9.66	21.70	10.40	74.94	362		15.52	21.25	00.00	79.87
353		10.04	21.20	10.20	74.91	371		16.00	20.25	00.00	79.44
519		10.45	20.00	10.70	74.44	600		16.06	18.10	00.00	75.84
537		10.72	17.57	10.80	71.03	634		15.81	22.92	00.00	83.59
541		9.62	20.10	10.90	72.53	636		15.77	23.86	00.00	85.12
571		9.80	20.30	10.40	72.88	671		15.44	21.00	00.00	79.21
596		8.93	21.91	10.70	73.60	721		16.01	18.86	00.00	77.03
632		9.07	21.60	10.40	73.14	734		16.00	20.00	00.00	79.00
656		10.24	19.75	9.40	72.12	741		16.96	19.70	00.00	81.12
662		10.76	19.20	10.70	73.89	784		16.04	21.30	00.00	81.39
663		10.04	21.67	10.40	75.93	1018		16.68	21.30	00.00	83.15
711		10.28	19.00	10.40	71.92	1102		16.25	17.81	00.00	75.86
722		11.06	21.80	10.40	73.97	1124		15.13	29.14	00.00	92.60
775		10.24	20.00	10.20	73.36	1133		16.02	20.00	00.00	79.06
956		10.52	19.14	10.74	73.17	1203		16.44	20.71	00.00	81.45
961		10.84	22.30	10.80	79.64	1209		15.51	22.30	00.00	81.68
1007		10.30	20.00	11.10	74.43	1537		16.00	19.06	00.00	77.36
1013		9.80	21.75	10.74	75.75	BEST FERTILIZER COMPANY, HOUSTON, TEXAS					
1033		10.05	20.10	10.70	73.51	Sulphate of Ammonia 21%					
1064		9.59	21.80	10.36	74.88	Guaranteed		21.00	00.00	00.00	57.75
1091		9.23	22.39	10.30	74.87	627		21.08	00.00	00.00	57.97
1176		10.52	20.74	10.40	75.63	1377		21.40	00.00	00.00	58.85
1210		11.12	20.40	7.00	73.28	Granulated Superphosphate 0-45-0					
1230		10.08	21.70	10.20	75.90	Guaranteed		00.00	45.00	00.00	78.75
1536		10.01	20.29	10.56	73.60	37		00.00	47.68	00.00	83.44
Armour Pebble Plant Food	12-12-12					Granulated Superphosphate 0-46-0					
Guaranteed		12.00	12.00	12.00	66.00	Guaranteed		00.00	46.00	00.00	80.50
1027		11.53	13.10	12.68	67.31	685		00.00	46.50	00.00	81.38
1029		11.48	13.90	13.12	69.02	1101		00.00	47.00	00.00	82.25
1089		9.88	14.91	12.20	65.46						

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
<b>CALIFORNIA SPRAY CHEMICAL CORP., RICHMOND, CALIFORNIA</b>					
Ortho 20-20-0 Pelletized Fertilizer					
Guaranteed	20.00	20.00	00.00	00.00	90.00
1446	21.20	20.50	00.00	00.00	94.17
Ortho-Gro Urea (Prilled)					
Guaranteed	45.00	00.00	00.00	00.00	123.75
1447	44.03	00.00	00.00	00.00	121.08
<b>CAMPBELL FERTILIZER CO., INC., HOUSTON, TEXAS</b>					
All-Weather/OBF 5-10-5					
Guaranteed	5.00	10.00	5.00	5.00	36.25
535	8.05	10.00	5.55	5.55	45.19
613	7.50	12.17	6.30	48.22	48.22
973	9.19	11.05	7.90	52.51	52.51
1001	6.17	11.56	5.50	42.70	42.70
"M.G." Brand Organic Base Fertilizer 5-10-5					
Guaranteed	5.00	10.00	5.00	5.00	36.25
608	5.67	13.35	5.70	44.66	44.66
"Green-Glo"/OBF 8-8-8					
Guaranteed	8.00	8.00	8.00	8.00	44.00
614	8.33	10.05	10.70	51.20	51.20
Campbell's Ammonium Sulphate 21-0-0					
Guaranteed	21.00	00.00	00.00	00.00	57.75
64	21.02	00.00	00.00	00.00	57.81
Campbell's Granulated Fertilizers 0-46-0					
Guaranteed	00.00	46.00	00.00	00.00	80.50
1381	00.00	46.75	00.00	00.00	81.81
1382	00.00	45.66	00.00	00.00	79.91
<b>CENTRAL TEXAS FERTILIZER CO., COMANCHE, TEXAS</b>					
Topper 3-12-12					
Guaranteed	3.00	12.00	12.00	12.00	41.25
451	4.29	13.00	12.40	46.95	46.95
Topper 4-12-4					
Guaranteed	4.00	12.00	4.00	36.00	36.00
1489	5.21	14.79	4.60	44.81	44.81
1507	5.33	10.85	4.40	38.05	38.05
1523	5.22	10.39	4.65	37.19	37.19
1527	5.98	11.80	5.08	42.18	42.18
Topper 5-10-5					
Guaranteed	5.00	10.00	5.00	36.25	36.25
1508	5.34	10.20	4.17	36.71	36.71
Topper 10-20-10					
Guaranteed	10.00	20.00	10.00	72.50	72.50
445	9.72	20.50	10.40	73.01	73.01
452	10.00	20.00	10.30	72.90	72.90
1475	9.81	18.72	10.70	70.44	70.44
1503	10.64	19.30	7.77	70.81	70.81
1509	10.12	18.44	10.60	70.70	70.70
1529	10.44	19.30	10.62	73.11	73.11
1668	10.80	17.18	10.10	69.87	69.87
Topper 13-39-0					
Guaranteed	13.00	39.00	00.00	104.00	104.00
1440	12.41	32.55	00.00	91.00	91.00
Topper 16-20-0					
Guaranteed	16.00	20.00	00.00	79.00	79.00
1432	16.19	16.61	00.00	73.59	73.59
1476	15.19	20.72	00.00	78.03	78.03
1504	14.85	16.72	00.00	70.10	70.10
1510	13.78	19.54	00.00	72.09	72.09
1524	15.64	19.36	00.00	76.89	76.89
1528	15.59	18.19	00.00	74.71	74.71

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
<b>CHEMICAL SPECIALTIES COMPANY, LAREDO, TEXAS</b>					
N-Rich-R 8-24-0					
Guaranteed	8.00	24.00	00.00	64.00	64.00
709	7.87	23.02	00.00	61.93	61.93
802	9.39	20.74	00.00	62.12	62.12
837	7.68	24.02	00.00	63.16	63.16
N-Rich-R 20-0-0					
Guaranteed	20.00	00.00	00.00	55.00	55.00
710	19.74	00.00	00.00	54.29	54.29
803	20.48	00.00	00.00	56.32	56.32
<b>CHILEAN NITRATE SALES CORP., NEW YORK, N.Y.</b>					
Chilean Nitrate of Soda-Champion Brand					
Guaranteed	16.00	00.00	00.00	44.00	44.00
1383	16.02	00.00	00.00	44.06	44.06
<b>COLORADO FUEL AND IRON CORP., DENVER, COLORADO</b>					
CF&I DAP (Diammonium Phosphate 21-53-0)					
Guaranteed	21.00	53.00	00.00	150.50	150.50
1331	21.24	54.00	00.00	152.91	152.91
1338	21.08	53.00	00.00	150.72	150.72
<b>COMMERCIAL SOLVENTS CORP., NEW YORK 16, N.Y.</b>					
C.S.C. Granular Ammonium Nitrate Fertilizer 33.5					
Guaranteed	33.50	00.00	00.00	92.13	92.13
525	33.50	00.00	00.00	92.13	92.13
856	33.69	00.00	00.00	92.65	92.65
<b>DIXIE FERTILIZER COMPANY, SHREVEPORT, LA.</b>					
Dixie 3-12-12 Fertilizer					
Guaranteed	3.00	12.00	12.00	41.25	41.25
801	4.28	12.70	12.80	46.80	46.80
Dixie 5-10-5 Fertilizer					
Guaranteed	5.00	10.00	5.00	36.25	36.25
227	4.00	10.40	5.20	34.40	34.40
304	5.31	10.75	5.50	38.92	38.92
800	5.58	9.30	5.32	36.94	36.94
920	5.81	10.40	6.18	40.36	40.36
1598	5.07	10.10	6.50	38.12	38.12
1687	5.50	10.00	5.62	38.25	38.25
1721	4.80	15.10	5.22	44.85	44.85
Dixie Granular 5-10-5 Fertilizer					
Guaranteed	5.00	10.00	5.00	36.25	36.25
234	4.76	11.22	6.17	38.90	38.90
504	6.76	11.20	5.80	43.99	43.99
835	5.07	10.10	5.52	37.14	37.14
1065	6.01	10.90	6.50	42.10	42.10
Dixie Granular 5-10-10 Fertilizer					
Guaranteed	5.00	10.00	10.00	41.25	41.25
1234	5.88	9.05	10.40	42.41	42.41
1626	5.62	10.60	10.56	44.57	44.57
Dixie Lawn and Garden Special 8-8-8					
Guaranteed	8.00	8.00	8.00	44.00	44.00
921	8.18	8.80	9.46	47.36	47.36
Dixie Granular 8-8-8 Fertilizer					
Guaranteed	8.00	8.00	8.00	44.00	44.00
882	8.74	8.60	8.84	47.93	47.93
1066	8.00	9.10	8.40	46.33	46.33
1722	7.50	8.70	8.10	43.95	43.95
Dixie Granular 10-20-10 Fertilizer					
Guaranteed	10.00	20.00	10.00	72.50	72.50
228	9.86	19.50	11.00	72.24	72.24
235	8.68	20.72	10.70	70.83	70.83
305	10.16	20.75	10.40	74.65	74.65
505	10.00	20.40	10.44	73.64	73.64
802	9.83	20.30	10.74	73.30	73.30
836	9.69	19.55	10.72	71.58	71.58
883	10.32	20.00	10.66	74.04	74.04
1067	11.12	21.86	10.80	79.64	79.64



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
Dixie Granular 10-20-10 Fertilizer	1235	10.14	20.00	10.24	73.13
	1599	9.51	18.60	10.60	69.30
	1700	10.00	20.00	10.24	72.74
	1720	10.00	20.00	10.24	72.74
	1723	9.12	20.50	10.20	71.16
Dixie Granular 12-12-12 Fertilizer	Guaranteed	12.00	12.00	12.00	66.00
	1627	10.95	11.50	8.78	59.02
Dixie Granular 20% Superphosphate	Guaranteed	00.00	20.00	00.00	35.00
	296	00.00	21.00	00.00	36.75
E. I. DU PONT DE NEMOURS AND COMPANY, WILMINGTON, DELAWARE					
Du Pont Nu Green Fertilizer Compound 45-0-0	Guaranteed	45.00	00.00	00.00	123.75
	687	45.71	00.00	00.00	125.70
EAST TEXAS PRODUCTS CO., TYLER, TEXAS					
Goldenrod 5-10-5	Guaranteed	5.00	10.00	5.00	36.25
	101	5.56	11.44	5.20	40.51
	109	5.46	10.50	5.35	38.74
	139	5.50	10.70	5.22	39.07
	151	5.20	10.00	5.35	37.15
	188	5.00	10.40	5.55	37.50
	392	5.40	10.70	5.37	38.95
	502	5.04	10.00	5.20	36.56
	516	5.18	9.66	5.30	36.45
	755	5.03	10.50	5.25	37.46
	770	5.40	10.10	5.16	37.69
	914	5.00	10.00	5.25	36.50
	924	5.03	10.81	5.50	38.25
	966	5.36	10.00	5.35	37.59
	968	5.22	10.00	5.80	37.66
	977	5.10	10.00	5.50	37.03
	980	5.05	10.80	5.70	38.49
	992	5.12	10.80	5.80	38.78
	1002	5.02	10.60	5.80	38.16
	1025	5.26	10.50	5.80	38.64
	1567	5.09	10.40	5.18	37.38
Goldenrod 8-8-8	Guaranteed	8.00	8.00	8.00	44.00
	967	7.72	8.40	9.20	45.13
	1696	7.46	9.40	8.24	45.21
Goldenrod 10-20-10	Guaranteed	10.00	20.00	10.00	72.50
	110	10.16	20.75	10.40	74.65
	161	10.34	20.00	10.70	74.14
	211	10.16	20.75	10.70	74.95
	285	10.12	21.39	10.80	76.06
	391	10.20	20.75	10.64	75.00
	393	10.16	21.14	10.72	75.66
	398	10.40	21.25	10.74	76.53
	509	10.28	20.00	11.00	74.27
	565	9.68	20.56	10.70	73.30
	946	10.24	20.29	9.01	72.68
	1271	9.88	20.06	10.64	72.91
	1275	10.70	20.50	10.90	76.20
	1278	9.72	19.26	10.80	71.23
	1568	10.04	18.44	10.60	70.48
Goldenrod 12-12-12	Guaranteed	12.00	12.00	12.00	66.00
	1026	11.13	12.00	12.00	63.61
EASY GOING RANCH, MOUNTAIN HOME, TEXAS					
Easy Going Sheep Manure 2.25-1-1.50	Guaranteed	2.25	1.00	1.50	7.70
	1462	2.08	0.62	2.75	9.55
FARMERS FERTILIZER COMPANY, TEXARKANA, ARK.-TEX.					
Mule Brand 5-10-5	Guaranteed	5.00	10.00	5.00	36.25
	272	5.00	10.50	5.25	37.38
	273	5.16	12.46	5.60	41.60
	838	5.16	10.70	5.60	38.52
	840	5.24	10.70	10.74	43.88
	845	5.40	12.30	5.10	41.48
	1584	5.19	10.30	5.28	37.58
	1594	5.12	10.70	5.30	38.11
	1607	5.06	10.40	5.30	37.42
	1609	5.10	10.40	5.30	37.53
	1620	5.00	10.30	5.45	37.23
Mule Brand 8-8-8	Guaranteed	8.00	8.00	8.00	44.00
	846	7.36	9.21	9.60	45.96
	1561	8.67	9.70	9.30	50.12
	1621	7.40	8.00	8.20	42.55
Mule Brand 10-20-10	Guaranteed	10.00	20.00	10.00	72.50
	270	9.64	21.29	10.70	74.47
	274	10.04	20.75	10.80	74.72
	278	10.28	21.14	10.70	75.97
	839	9.68	21.00	11.00	74.37
	1560	9.66	19.50	10.80	71.49
	1608	9.77	20.50	9.00	71.74
	1610	9.43	19.46	10.50	70.49
Mule Brand 20% Superphosphate	Guaranteed	00.00	20.00	00.00	35.00
	298	00.00	20.26	00.00	35.46
FIDELITY CHEMICAL CORP., HOUSTON, TEXAS					
Fidelity 5-10-5 Fertilizer	Guaranteed	5.00	10.00	5.00	36.25
	59	4.77	11.60	5.00	38.42
	200	5.39	10.00	5.20	37.52
	548	4.79	11.30	5.40	38.35
	931	5.08	10.30	5.22	37.22
	1047	5.24	11.17	5.15	39.11
	1698	5.43	10.00	5.10	37.53
Fidelity 5-10-10 Fertilizer	Guaranteed	5.00	10.00	10.00	41.25
	1702	4.26	10.50	10.44	40.53
Ferti-Lome for Lawns & Gardens 6-12-4	Guaranteed	6.00	12.00	4.00	41.50
	1704	5.73	13.00	4.10	42.61
Fidelity 8-8-8 Fertilizer	Guaranteed	8.00	8.00	8.00	44.00
	1048	7.26	8.80	8.50	43.87
	1703	6.30	10.00	8.24	43.07
Fidelity 10-20-10 Fertilizer	Guaranteed	10.00	20.00	10.00	72.50
	199	9.48	21.00	7.75	70.57
	360	10.09	21.19	10.30	75.13
	625	10.52	20.60	10.80	75.78
	628	10.24	20.40	10.60	74.46
Fidelity 16-20-0 Fertilizer	Guaranteed	16.00	20.00	00.00	79.00
	361	16.00	21.00	00.00	80.75
FORD MOTOR COMPANY, DEARBORN, MICHIGAN					
Ford Di Ammonium Phosphate	Guaranteed	21.00	53.00	00.00	150.50
	1448	21.60	53.75	00.00	153.46
	1454	21.00	53.25	00.00	150.94
GILMER COTTON OIL & FERTILIZER CO., GILMER, TEXAS					
Latex Brand 5-10-5	Guaranteed	5.00	10.00	5.00	36.25
	246	5.02	11.14	7.80	41.10

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
Lion Brand 5-10-5					
Guaranteed		5.00	10.00	5.00	36.25
289		5.44	10.90	5.50	39.54
1570		5.07	9.32	6.30	36.55
852		5.06	10.90	6.00	38.99
Texas Longhorn 5-10-5					
Guaranteed		5.00	10.00	5.00	36.25
1619		5.06	9.70	5.35	36.24
1690		5.01	10.07	5.50	36.90
Texas Longhorn 10-20-10					
Guaranteed		10.00	20.00	10.00	72.50
210		10.08	20.27	10.48	73.67
GULF COAST ORGANIC & MINERALS CO., PHARR, TEXAS					
Fertilaid 4-2-0					
Guaranteed		4.00	2.00	00.00	14.50
1201		6.01	4.87	00.00	25.02
HAYES-SAMMONS CO., MISSION, TEXAS					
Mission Brand Fertilizer Solutions 6-10-4 Lawn & Garden Special					
Guaranteed		6.00	10.00	4.00	38.00
29		6.02	10.04	4.65	38.78
51		6.00	10.02	4.57	38.61
57		6.99	10.27	4.57	41.77
66		6.00	10.62	4.53	39.62
659		6.00	10.15	4.48	38.74
692		5.65	9.47	4.07	36.18
695		5.80	9.81	4.44	37.56
698		5.37	10.04	4.48	38.19
706		5.55	9.74	4.58	36.39
1127		6.98	10.58	5.31	43.02
1152		6.04	10.10	4.90	39.19
1155		6.20	10.04	4.65	39.27
1159		6.16	10.03	5.00	39.49
1162		6.19	10.10	5.18	39.88
1164		6.41	10.00	4.77	39.90
1171		6.21	10.32	4.88	40.02
1177		6.39	10.12	5.01	40.29
Mission Brand Fertilizer Solutions 14-10-4					
Guaranteed		14.00	10.00	4.00	60.00
27		13.11	9.67	4.65	57.63
54		13.73	10.07	4.43	59.81
1129		14.07	10.31	5.44	62.18
1172		14.42	10.13	4.85	62.23
Mission Brand Fertilizer Solutions 8-20-0 (Ammonium Phosphate)					
Guaranteed		8.00	20.00	00.00	57.00
28		7.86	21.03	00.00	58.42
53		7.65	20.30	00.00	56.56
58		8.09	20.90	00.00	58.82
65		7.72	20.36	00.00	56.86
660		7.17	19.65	00.00	54.11
693		7.72	19.64	00.00	55.60
696		9.85	25.06	00.00	70.94
697		8.03	19.53	00.00	56.26
707		7.77	20.00	00.00	56.37
717		6.65	15.95	00.00	46.20
1128		8.17	20.16	00.00	57.75
1153		8.07	20.01	00.00	57.21
1158		8.00	19.43	00.00	56.00
1161		8.01	20.06	00.00	57.13
1170		8.06	20.00	00.00	57.17
1178		8.00	20.51	00.00	57.89
Mission Brand Fertilizer Solutions 14-10-0					
Guaranteed		14.00	10.00	00.00	56.00
708		13.75	10.08	00.00	55.45

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
Mission Brand Fertilizer Solutions 20-0-0 (Ammonia Aqua)					
Guaranteed		20.00	00.00	00.00	55.00
52		14.40	00.00	00.00	39.60
691		17.89	00.00	00.00	49.20
1151		20.00	00.00	00.00	55.00
1154		12.35	00.00	00.00	33.96
1157		17.82	00.00	00.00	49.01
1160		18.81	00.00	00.00	51.73
1163		14.50	00.00	00.00	39.88
1179		19.52	00.00	00.00	53.68
HI-YIELD FERTILIZER COMPANY, BONHAM, TEXAS					
Hi-Yield Brand 4-12-4					
Guaranteed		4.00	12.00	4.00	36.00
780		4.81	10.17	4.30	35.33
Hi-Yield Brand 5-10-5					
Guaranteed		5.00	10.00	5.00	36.25
91		5.00	11.61	5.40	39.47
93		5.26	11.22	5.45	39.55
132		5.29	10.60	5.20	38.30
145		5.40	11.10	5.20	39.48
148		5.18	10.92	5.20	38.56
149		5.62	12.16	5.30	42.04
152		5.27	10.80	5.90	39.29
153		5.62	10.90	5.55	40.08
165		5.00	12.04	5.20	40.02
201		5.53	11.40	5.30	40.46
204		5.16	11.00	5.32	38.76
247		5.02	10.70	5.25	37.78
257		5.24	11.10	5.32	39.16
267		5.51	11.37	5.35	40.40
311		5.14	10.80	5.50	38.54
332		5.26	10.50	5.35	38.19
348		5.24	10.40	5.32	37.93
349		5.39	10.60	5.00	38.37
355		5.45	10.90	5.22	39.28
357		4.40	17.06	5.50	47.46
513		4.73	9.32	5.50	34.82
515		4.75	9.66	5.35	35.32
756		4.83	10.00	5.50	36.28
763		5.06	10.70	5.45	38.09
767		5.02	10.00	6.30	37.61
776		5.04	9.74	5.60	36.51
803		5.13	10.70	5.85	38.68
816		5.02	9.24	6.70	36.68
843		5.38	10.20	5.50	38.15
849		6.02	10.80	5.61	41.07
855		4.83	9.25	5.18	34.65
862		4.72	10.00	5.50	35.98
872		4.69	9.35	5.60	34.86
497		4.70	9.40	5.52	34.90
585		6.92	14.40	5.40	49.63
981		5.03	9.75	6.10	37.00
983		5.26	10.60	5.99	39.01
995		5.38	10.20	5.79	38.43
1003		5.72	10.00	6.10	39.33
1012		5.66	10.10	5.55	38.79
1045		5.12	10.30	5.30	37.41
1239		4.55	10.20	5.37	35.73
1256		5.18	10.00	5.32	37.06
1276		4.40	10.00	5.37	34.97
1282		5.28	10.00	5.48	37.50
1309		5.22	9.42	5.40	36.24
1547		5.02	10.00	5.45	36.76
1577		5.34	14.95	5.30	46.15
1689		5.03	9.56	5.48	36.04
Hi-Yield Brand 5-10-10					
Guaranteed		5.00	10.00	10.00	41.25
334		5.04	10.90	10.70	43.64



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
Hi-Yield Brand 8-8-8							982	10.20	20.80	10.70	75.15
Guaranteed		8.00	8.00	8.00	44.00		997	10.56	20.40	11.00	75.74
764		6.62	8.40	9.35	42.26		1046	8.40	14.01	10.40	58.02
844		6.58	9.30	9.40	43.77		1240	10.40	20.01	10.36	73.98
850		6.86	8.60	9.38	43.30		1257	10.02	18.20	11.20	70.60
874		6.84	7.77	9.00	41.41		1277	10.12	20.80	10.56	74.79
974		7.50	8.30	9.00	44.15		1280	10.24	19.67	11.00	73.58
996		7.54	8.70	9.60	45.56		1284	10.08	20.10	10.80	73.69
1004		8.42	10.01	8.64	49.31		1308	9.59	18.81	10.90	70.19
1730		6.61	8.40	8.00	40.88		1546	10.02	19.44	10.64	72.22
							1549	9.61	19.47	10.60	71.10
Hi-Yield Brand 10-20-0							1552	9.44	20.80	10.60	72.96
Guaranteed		10.00	20.00	00.00	62.50		1559	7.86	20.09	10.90	67.67
291		10.52	19.06	00.00	62.29		1578	9.30	19.00	10.90	69.73
299		9.80	20.02	00.00	61.99		1606	9.42	19.75	10.90	71.37
306		8.81	20.75	00.00	60.54		1659	10.03	18.12	11.24	70.53
307		10.01	20.75	00.00	63.84	Hi-Yield Brand 12-12-12					
317		10.50	21.20	00.00	65.98	Guaranteed		12.00	12.00	12.00	66.00
324		9.76	20.50	00.00	62.72	875		9.84	12.30	12.80	61.39
499		10.16	20.00	00.00	62.94	Hi-Yield Brand 15-15-0					
1283		10.12	19.39	00.00	61.76	Guaranteed		15.00	15.00	00.00	67.50
1307		9.87	20.07	00.00	62.27	408		12.06	17.54	00.00	63.86
Hi-Yield Brand 10-20-10						Hi-Yield Brand 16-20-0					
Guaranteed		10.00	20.00	10.00	72.50	Guaranteed		16.00	20.00	00.00	79.00
94		8.50	21.40	10.58	71.41	818		14.70	19.45	00.00	74.46
140		9.28	21.50	10.76	73.91	1316		16.08	18.34	00.00	76.32
146		10.00	21.11	10.76	75.20	1431		13.51	20.00	00.00	76.15
150		10.60	20.39	10.20	75.03	1550		14.74	19.15	00.00	74.05
154		10.08	21.26	10.40	75.33	1593		14.50	20.29	00.00	75.38
160		10.00	20.00	10.44	72.94	1658		13.68	19.15	00.00	71.13
164		9.15	21.00	10.70	72.61	Hi-Yield Brand 0-20-0					
202		9.38	20.50	10.70	72.37	Guaranteed		0.00	20.00	0.00	35.00
203		10.60	20.40	10.70	75.55	133		0.00	20.50	0.00	35.88
205		10.02	21.60	10.40	75.76	290		0.00	21.25	0.00	37.19
239		10.24	21.25	10.74	76.09	297		0.00	20.25	0.00	35.44
244		9.52	20.00	10.70	71.88	319		0.00	21.25	0.00	37.19
248		9.67	20.25	10.70	72.73	814		0.00	20.66	0.00	36.16
250		9.38	21.07	10.70	73.37	1258		0.00	20.40	0.00	35.70
258		9.68	21.22	10.80	74.56	1306		0.00	20.70	0.00	36.23
268		10.56	20.75	11.04	76.39	Hi-Yield Brand 0-45-0					
269		10.00	20.12	13.20	75.91	Guaranteed		0.00	45.00	0.00	78.75
292		10.52	21.50	10.50	77.06	134		0.00	47.50	0.00	83.13
300		8.72	21.00	10.64	71.37	1294		0.00	48.14	0.00	84.24
308		9.52	21.25	1.42	64.79	HI-YIELD PLANT FOOD CO., MT. PLEASANT, TEXAS					
312		10.04	20.00	10.64	73.25	Hi-Yield 5-10-5					
318		10.00	20.25	10.74	73.68	Guaranteed		5.00	10.00	5.00	36.25
320		9.00	21.00	10.40	71.90	287		5.18	10.10	5.50	37.42
325		9.79	19.50	10.50	71.55	1597		6.71	11.30	6.55	44.78
331		10.38	20.50	10.74	75.16	1615		6.30	9.40	6.00	39.78
333		10.25	20.00	10.24	73.43	Hi-Yield 5-10-10					
342		9.80	20.30	10.60	73.08	Guaranteed		5.00	10.00	10.00	41.25
350		9.80	22.02	10.30	75.79	249		4.90	8.51	10.74	39.11
356		9.28	21.47	10.70	73.79	Hi-Yield 8-8-8					
358		9.52	21.25	10.70	74.07	Guaranteed		8.00	8.00	8.00	44.00
407		9.65	21.25	10.40	74.13	1616		7.35	8.05	8.20	42.50
498		9.44	20.40	10.74	72.40	Hi-Yield 10-20-10					
501		10.01	19.50	10.70	72.35	Guaranteed		10.00	20.00	10.00	72.50
514		9.52	20.00	10.70	71.88	279		9.67	20.25	10.30	72.33
583		8.76	20.00	11.74	70.83	INTERNATIONAL MINERALS & CHEMICAL CORPORATION, FORT WORTH, TEXAS					
586		8.75	20.20	10.60	70.01	International 0-14-14 Phosphate and Potash					
757		9.76	20.30	10.70	73.07	Guaranteed		00.00	14.00	14.00	38.50
768		6.93	18.00	10.74	61.30	1357		00.00	12.00	16.56	37.56
777		10.00	20.00	10.24	72.74	1366		0.00	12.30	18.05	39.58
781		10.48	20.70	10.40	75.45						
817		10.28	20.00	11.10	74.37						
823		10.24	20.36	11.00	75.89						
851		10.12	20.00	10.66	73.49						
857		9.51	18.55	11.10	69.72						
864		10.16	19.45	11.00	72.98						
873		10.06	18.79	11.00	71.55						



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
<b>International 4-12-4 Fertilizer</b>					
Guaranteed	4.00	12.00	4.00	36.00	
1206	4.28	12.00	3.61	36.26	
1479	5.46	11.42	3.52	38.52	
1485	4.54	12.00	4.90	38.39	
1490	3.79	14.65	3.60	39.66	
1513	4.93	12.15	4.20	39.02	
1544	5.23	10.90	3.60	37.06	
1674	3.84	11.45	4.30	34.90	
<b>International 5-10-5 Fertilizer</b>					
Guaranteed	5.00	10.00	5.00	36.25	
143	5.46	10.00	5.20	37.72	
343	5.25	9.70	5.50	36.91	
384	6.41	12.79	5.00	45.01	
438	4.76	10.30	5.62	36.74	
448	5.81	11.00	4.00	39.23	
560	5.45	9.70	5.60	37.56	
563	5.00	12.40	5.55	41.00	
808	5.64	8.86	5.00	36.52	
935	5.67	9.31	6.31	38.20	
1036	5.44	10.10	5.10	37.74	
1038	4.59	8.00	5.35	31.97	
1261	5.13	9.08	5.30	35.29	
1481	5.08	9.36	5.00	35.35	
1491	5.04	9.00	4.17	33.78	
1514	5.34	10.16	5.60	38.07	
1517	5.18	9.61	3.32	34.38	
1525	5.11	9.61	5.32	36.19	
1540	5.15	11.00	5.30	38.71	
1545	5.22	9.65	5.90	37.14	
1638	5.80	11.90	5.90	42.68	
1643	4.42	9.32	5.10	33.57	
<b>International 7-14-7 Rainbow Fertilizer</b>					
Guaranteed	7.00	14.00	7.00	50.75	
725	7.03	13.26	8.00	50.54	
1037	7.12	13.72	8.56	52.15	
1197	7.11	14.00	7.01	51.06	
1220	8.27	11.36	8.20	50.82	
1296	8.15	11.34	9.00	51.26	
1482	7.24	13.60	8.96	52.67	
1492	7.04	12.37	8.30	49.31	
1496	7.16	13.00	7.00	49.44	
1518	8.02	11.60	8.00	50.36	
1520	7.32	13.62	5.16	49.13	
1532	6.34	13.51	10.72	51.80	
1644	7.52	11.26	9.00	49.39	
1663	7.07	13.79	7.20	50.78	
<b>International 8-8-8 Fertilizer</b>					
Guaranteed	8.00	8.00	8.00	44.00	
936	8.05	8.50	9.00	46.01	
<b>International 10-20-0 Ammoniated Phosphate</b>					
Guaranteed	10.00	20.00	00.00	62.50	
310	10.28	20.25	00.00	63.71	
321	10.72	20.25	00.00	64.92	
416	10.74	20.00	00.00	64.54	
421	11.56	18.75	00.00	64.60	
424	10.74	18.60	00.00	62.09	
432	10.00	20.65	00.00	63.64	
435	10.69	20.50	00.00	65.27	
439	11.65	18.62	00.00	64.62	
463	12.26	18.46	00.00	66.02	
469	10.00	20.20	00.00	62.85	
490	9.36	19.39	00.00	59.67	
747	11.80	18.34	00.00	64.55	
791	10.77	20.00	00.00	64.62	
811	10.04	19.20	00.00	61.21	
820	10.28	20.51	00.00	64.16	
1295	10.80	20.00	00.00	64.70	

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
	1303	10.26	20.00	00.00	63.22
	1359	10.65	20.00	00.00	64.29
	1639	9.56	20.00	00.00	61.29
	1645	9.70	19.44	00.00	60.70
	1667	10.03	20.20	00.00	52.93
<b>International 10-20-5 Rainbow Fertilizer</b>					
Guaranteed	10.00	20.00	5.00	67.50	
1221	10.00	20.00	4.45	66.95	
1297	10.04	19.52	6.90	68.67	
1305	9.87	20.10	5.45	67.77	
1356	10.15	19.50	6.00	68.04	
1397	9.48	20.00	5.60	66.67	
1467	9.26	20.20	5.50	66.32	
1664	10.22	20.00	5.25	68.36	
<b>International 10-20-10 Fertilizer</b>					
Guaranteed	10.00	20.00	10.00	72.50	
80	10.20	21.00	10.80	75.60	
116	10.32	21.08	11.00	76.27	
144	10.00	20.00	7.38	69.88	
322	8.96	21.25	11.00	72.83	
344	9.48	20.75	10.40	72.78	
385	8.02	21.25	10.24	69.48	
417	7.52	22.95	10.36	71.20	
453	9.00	21.75	11.04	73.85	
470	8.70	20.40	10.12	69.75	
561	9.28	20.20	10.50	71.37	
718	10.13	19.40	10.60	72.41	
748	6.85	27.92	10.20	77.90	
792	10.04	21.00	10.70	75.06	
810	9.50	19.85	11.00	71.86	
937	9.59	20.20	10.74	72.46	
1039	10.01	20.80	10.80	74.73	
1041	10.01	19.60	11.04	72.87	
1289	10.36	20.40	10.80	74.99	
1302	10.37	21.50	10.90	77.04	
1358	9.56	20.40	10.60	72.59	
1412	10.26	20.80	10.90	75.52	
1521	9.50	19.30	10.60	70.50	
1526	10.02	18.11	10.90	70.15	
1581	9.24	20.80	10.60	72.41	
1590	9.73	19.70	10.70	71.93	
1666	9.79	20.20	10.56	72.83	
<b>International 12-12-12 Fertilizer</b>					
Guaranteed	12.00	12.00	12.00	66.00	
1373	10.99	12.10	13.20	64.60	
<b>International 15-15-0 Ammoniated Phosphate</b>					
Guaranteed	15.00	15.00	00.00	67.50	
809	14.07	14.86	00.00	64.70	
1313	15.18	15.30	00.00	68.52	
1395	14.29	15.00	00.00	65.55	
1398	13.49	15.62	00.00	64.43	
1466	14.60	15.20	00.00	66.75	
<b>International 8-32-0 Ammoniated Phosphate</b>					
Guaranteed	8.00	32.00	00.00	78.00	
33	7.91	30.60	00.00	75.30	
<b>International 13-39-0 Ammoniated Phosphate</b>					
Guaranteed	13.00	39.00	00.00	104.00	
447	12.14	37.00	00.00	98.14	
461	12.28	37.00	00.00	98.52	
474	12.67	35.71	00.00	97.34	
724	11.17	37.71	00.00	96.71	
1396	11.97	35.00	00.00	94.17	
1409	12.69	39.85	00.00	104.64	
1649	12.33	37.07	00.00	98.78	
<b>International 16-20-0 Ammoniated Phosphate</b>					
Guaranteed	16.00	20.00	00.00	79.00	
314	14.77	21.25	00.00	77.81	
420	15.19	21.25	00.00	78.96	

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
International 16-20-0 Ammoniated Phosphate											
	425	16.80	21.25	00.00	83.39		254	5.46	10.30	5.50	38.54
	446	17.30	21.25	00.00	84.76		275	4.80	12.26	5.50	40.16
	454	15.26	21.75	00.00	80.03		575	5.92	9.00	5.37	37.40
	458	16.20	20.64	00.00	80.67		577	5.18	10.00	5.50	37.25
	500	16.00	20.40	00.00	79.70		830	5.20	9.50	5.40	36.33
	719	16.01	20.30	00.00	79.55		866	5.74	9.70	5.20	37.96
	1196	16.95	20.39	00.00	82.30		909	5.50	9.50	5.20	36.95
	1219	17.25	18.00	00.00	78.94		926	6.09	10.00	6.56	40.81
	1290	16.18	18.60	00.00	77.04		1601	4.78	8.87	5.45	34.12
	1304	17.09	19.00	00.00	80.24		1631	5.06	9.66	5.50	36.32
	1435	16.01	19.34	00.00	77.87		1717	5.25	10.00	5.22	37.16
	1456	16.45	20.24	00.00	80.66	International 5-10-10 Fertilizer					
	1478	15.47	21.00	00.00	79.29	Guaranteed	5.00	10.00	10.00	41.25	
	1497	13.23	23.85	00.00	78.12	259	4.73	11.10	10.72	43.15	
	1519	15.40	19.30	00.00	76.13	906	6.09	8.80	10.74	42.89	
	1640	15.11	20.30	00.00	77.08	International 6-12-12 Rainbow Fertilizer					
	1648	15.45	20.00	00.00	77.49	Guaranteed	6.00	12.00	12.00	49.50	
	1665	16.45	20.00	00.00	80.24	868	6.10	12.10	12.48	50.43	
	1677	17.20	20.10	00.00	82.48	International 7-14-7 Rainbow Fertilizer					
International 0-20-0 Superphosphate						Guaranteed	7.00	14.00	7.00	50.75	
Guaranteed	00.00	20.00	00.00	35.00	190	7.00	14.00	8.27	52.02		
115	00.00	19.60	00.00	34.30	241	7.07	15.00	7.04	52.73		
309	00.00	20.25	00.00	35.44	572	7.36	14.00	8.00	52.74		
382	00.00	21.24	00.00	37.17	870	7.56	14.30	7.40	53.22		
426	00.00	21.15	00.00	37.01	910	7.62	14.00	7.18	52.64		
433	00.00	20.90	00.00	36.58	943	6.55	14.60	6.19	49.75		
456	00.00	20.80	00.00	36.40	1718	7.08	13.77	7.20	50.77		
460	00.00	20.70	00.00	36.23	1729	7.03	13.44	7.00	49.85		
486	00.00	20.90	00.00	36.58	International 8-8-8 Fertilizer						
495	00.00	20.30	00.00	35.53	Guaranteed	8.00	8.00	8.00	44.00		
790	00.00	20.90	00.00	36.58	217	7.72	8.85	9.40	46.12		
819	00.00	20.20	00.00	35.35	576	8.14	7.76	9.00	44.97		
1194	00.00	20.10	00.00	35.18	867	7.81	8.30	8.40	44.40		
1207	00.00	20.00	00.00	35.00	911	8.06	8.70	9.60	46.99		
1218	00.00	20.09	00.00	35.16	927	8.10	8.20	9.00	45.63		
1288	00.00	19.65	00.00	34.38	1604	8.01	8.00	8.40	44.43		
1589	00.00	20.00	00.00	35.00	1632	6.83	10.30	10.79	47.60		
1637	00.00	20.35	00.00	35.61	International 10-10-10 Fertilizer						
International 0-45-0 Triple Superphosphate						Guaranteed	10.00	10.00	10.00	55.00	
Guaranteed	00.00	45.00	00.00	78.75	573	10.48	10.60	10.70	58.07		
418	00.00	46.64	00.00	81.67	944	10.68	10.30	10.60	58.00		
457	00.00	45.00	00.00	78.75	1603	9.69	10.71	10.60	54.90		
459	00.00	45.00	00.00	78.75	1701	9.35	10.30	10.44	54.18		
473	00.00	45.75	00.00	80.06	International 10-20-0 Ammoniated Phosphate						
482	00.00	45.00	00.00	78.75	Guaranteed	10.00	20.00	00.00	62.50		
496	00.00	45.50	00.00	79.63	223	11.08	19.35	00.00	64.33		
1195	00.00	45.10	00.00	78.93	831	9.56	20.00	00.00	61.29		
1457	00.00	47.00	00.00	82.25	International 10-20-10 Fertilizer						
1498	00.00	45.01	00.00	72.77	Guaranteed	10.00	20.00	10.00	72.50		
Sul-Po-Mag (Sulphate of Potash Magnesia)						195	10.00	20.25	10.28	73.22	
Guaranteed	00.00	00.00	21.00	21.00	214	10.40	21.30	10.70	76.58		
1135	00.00	00.00	21.60	21.60	224	10.52	22.00	10.80	78.23		
Muriate of Potash 60%						242	10.52	21.25	10.70	76.82	
Guaranteed	00.00	00.00	60.00	60.00	251	9.80	20.00	10.70	72.65		
1394	00.00	00.00	60.36	60.36	255	9.56	21.16	10.70	74.02		
INTERNATIONAL MINERALS & CHEMICAL CORP., TEXARKANA, ARK.											
International 3-12-12 Fertilizer						263	10.01	20.64	10.80	74.45	
Guaranteed	3.00	12.00	12.00	41.25	266	10.28	21.76	10.74	77.09		
282	3.01	12.65	12.80	43.22	276	10.56	21.44	10.70	77.26		
International 5-10-5 Fertilizer						280	10.32	20.55	10.70	75.04	
Guaranteed	5.00	10.00	5.00	36.25	283	9.53	20.56	10.60	72.79		
191	5.36	11.10	5.60	39.77	884	10.40	20.80	10.70	75.70		
194	5.30	10.90	5.45	39.10	871	9.54	21.30	10.72	74.23		
213	5.06	10.70	5.55	38.19	907	9.80	21.00	11.00	74.70		
216	5.30	10.10	5.18	37.43	928	9.84	20.30	11.20	73.79		
					942	9.66	20.00	9.50	71.07		
					945	10.20	20.20	10.39	73.79		
					1602	9.47	20.00	10.70	71.74		
					1719	10.02	19.15	10.20	71.27		



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
International 12-12-12 Fertilizer							117	10.36	20.25	11.10	75.03
Guaranteed	12.00	12.00	12.00	12.00	66.00	155	9.24	22.14	11.00	75.16	
264	12.56	12.70	13.20		69.97	163	10.54	21.00	11.00	76.74	
International 0-20-0 Superphosphate						168	10.06	20.25	10.70	73.80	
Guaranteed	00.00	20.00	00.00	00.00	35.00	171	10.08	20.39	11.20	74.60	
215	00.00	21.04	00.00	00.00	36.82	182	10.40	20.75	11.04	75.95	
832	00.00	19.59	00.00	00.00	34.28	229	10.40	21.49	10.90	77.11	
JACKSONVILLE FERTILIZER CO., JACKSONVILLE, TEXAS						277	11.28	20.50	11.00	77.90	
Gros Brand 5-10-5 Fertilizer						366	10.40	21.25	10.74	76.53	
Guaranteed	5.00	10.00	5.00	5.00	36.25	506	11.32	18.12	10.74	73.58	
243	5.25	11.00	5.30	5.30	38.99	508	10.28	20.00	11.00	74.27	
345	5.19	13.16	5.00	42.30		532	10.00	19.45	10.70	72.24	
915	5.22	13.00	5.55	42.66		593	10.30	20.40	10.80	74.83	
932	5.36	10.90	5.58	39.40		615	11.44	18.86	10.40	74.87	
1242	5.59	10.00	5.98	38.85		616	10.40	20.00	11.10	74.70	
Gros Brand 6-12-6 Fertilizer						686	10.64	20.60	10.80	76.11	
Guaranteed	6.00	12.00	6.00	43.50		750	10.00	20.00	11.00	73.50	
933	5.02	12.60	6.62	42.48		759	10.04	19.60	10.74	72.65	
Gros Brand 8-8-8 Fertilizer						847	10.60	21.30	11.24	77.67	
Guaranteed	8.00	8.00	8.00	44.00		970	11.06	19.37	10.80	75.11	
1031	8.12	10.42	8.60	49.17		978	10.90	19.59	11.64	75.90	
1705	8.00	8.70	8.44	46.51		993	10.64	20.40	11.00	75.96	
Gros Brand 10-20-10 Fertilizer						1010	10.65	19.29	10.00	73.05	
Guaranteed	10.00	20.00	10.00	72.50		1040	10.16	20.50	10.62	74.44	
934	10.23	18.69	10.74	71.58		1049	10.14	20.80	10.90	75.19	
1011	10.22	20.00	10.74	73.85		1056	10.24	20.06	10.90	74.17	
KELLY-WEBER & COMPANY, INC., LAKE CHARLES, LA.						1060	10.16	20.40	10.82	74.46	
Weber-King Fertilizer Granular 12-12-12						1188	10.44	20.50	10.90	75.49	
Guaranteed	12.00	12.00	12.00	66.00		1248	10.60	20.20	11.20	75.70	
901	12.01	12.00	12.80	68.58		1252	10.76	20.00	11.80	76.39	
KIPFER CHEMICAL CO., HARLINGEN, TEXAS						1279	10.34	19.86	11.20	74.39	
K-W Brand Ammonium Sulfate 21-0-0						1499	10.12	20.49	11.00	74.69	
Guaranteed	21.00	00.00	00.00	57.75		1512	10.00	20.00	10.70	73.20	
1156	21.04	00.00	00.00	57.86		1542	10.22	20.60	10.90	75.05	
LION OIL COMPANY, EL DORADO, ARKANSAS						1551	10.15	20.00	11.00	73.91	
Lion Ammonium Nitrate Fertilizer 33.5-0-0						1566	10.05	20.60	10.80	74.49	
Guaranteed	33.50	00.00	00.00	92.13		1573	10.00	20.40	10.70	73.90	
837	33.72	00.00	00.00	92.73		1587	10.22	20.70	10.70	75.03	
1353	33.68	00.00	00.00	92.62		1595	10.10	20.10	10.90	73.55	
MARSHALL COTTON OIL COMPANY, MARSHALL, TEXAS						1675	10.06	20.80	11.00	75.07	
Maverick Brand 5-10-5 Fertilizer						1678	10.24	20.00	10.90	74.06	
Guaranteed	5.00	10.00	5.00	36.25		1680	10.00	20.40	10.90	74.10	
582	5.06	10.00	5.25	36.67		Mathieson Ammo-Phos 10-20-20 Pelletized Fertilizer					
1611	5.53	11.59	5.60	41.09		Guaranteed	10.00	20.00	20.00	82.50	
Maverick Brand 10-20-10 Fertilizer						189	10.32	21.25	20.61	86.18	
Guaranteed	10.00	20.00	10.00	72.50		1651	10.01	20.30	22.00	85.05	
1612	9.81	20.80	10.70	74.08		Mathieson Ammo-Phos 10-30-10 Pelletized Fertilizer					
OLIN MATHIESON CHEM. CORP., HOUSTON, TEXAS						Guaranteed	10.00	30.00	10.00	90.00	
Mathieson Ammo-Phos 6-24-24 Pelletized Fertilizer						56	10.56	31.81	10.70	95.41	
Guaranteed	6.00	24.00	24.00	82.50		679	10.80	30.50	10.70	93.78	
544	6.24	25.00	25.00	85.91		1173	10.80	31.00	10.60	94.55	
731	6.88	24.80	26.75	89.07		Mathieson Ammo-Phos 12-24-12 Pelletized Fertilizer					
1372	6.72	25.90	23.40	87.21		Guaranteed	12.00	24.00	12.00	87.00	
Mathieson Ammo-Phos 8-24-8 Pelletized Fertilizer						15	12.08	25.14	12.60	89.82	
Guaranteed	8.00	24.00	8.00	72.00		60	12.02	25.33	12.40	89.78	
1418	8.88	25.50	9.16	78.21		141	12.45	24.75	12.60	90.15	
Mathieson Ammo-Phos 10-20-10 Pelletized Fertilizer						183	12.20	25.60	12.80	91.15	
Guaranteed	10.00	20.00	10.00	72.50		464	12.05	24.00	12.60	87.74	
22	10.01	20.00	10.70	73.22		524	12.00	24.01	12.80	87.82	
79	10.28	20.76	10.70	75.30		533	12.00	23.27	12.80	86.52	
82	10.74	21.00	10.60	76.89		594	12.04	24.40	12.88	88.69	
84	11.04	21.50	10.80	78.79		654	12.00	24.32	12.48	88.04	
98	11.44	21.30	10.14	78.88		678	12.03	24.00	12.80	87.88	
106	10.72	20.93	10.70	76.81		730	12.34	24.00	13.60	89.54	
						848	12.44	25.02	13.20	91.20	
						1074	12.08	24.00	12.80	88.02	
						1087	12.92	23.56	12.20	88.96	
						1092	12.00	24.00	12.40	87.40	
						1107	12.80	23.71	12.20	88.89	

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57. CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
<b>Mathieson Ammo-Phos 12-24-12 Pelletized Fertilizer</b>											
	1175	12.53	24.30	12.40	89.38		1122	13.72	40.25	0.00	108.17
	1189	12.56	24.30	12.00	89.07		1199	13.48	39.16	0.00	105.60
	1241	12.84	24.89	12.60	91.47		1247	13.64	39.00	0.00	105.76
	1314	12.68	24.00	13.20	90.07		1320	13.80	39.50	0.00	107.07
	1329	12.44	25.00	13.10	91.06		1322	13.33	39.00	0.00	104.91
	1365	12.16	24.00	13.28	88.72		1341	13.43	39.00	0.00	105.18
	1390	11.46	24.00	13.52	87.04		1354	13.14	40.00	0.00	106.14
	1407	12.52	24.00	12.80	89.23		1364	13.37	39.00	0.00	105.02
	1662	12.36	24.10	12.48	88.65		1388	13.82	39.00	0.00	106.26
	1673	12.37	24.10	12.60	88.79		1392	13.20	39.25	0.00	105.38
	1679	12.17	24.70	12.88	89.57		1400	13.32	39.20	0.00	105.23
							1408	13.80	40.00	0.00	107.95
<b>Mathieson Ammo-Phos 13-13-13 Pelletized Fertilizer</b>											
	Guaranteed	13.00	13.00	13.00	71.50		1417	13.66	39.25	0.00	106.25
	74	13.60	14.59	14.00	76.93		1437	13.68	39.00	0.00	105.87
	85	13.36	13.75	15.08	75.88		1473	13.24	39.75	0.00	105.97
	172	13.64	14.11	14.00	76.20		1647	13.09	39.35	0.00	104.86
	546	13.00	13.50	13.60	72.98		1650	13.46	39.50	0.00	106.14
	971	13.24	13.39	14.20	74.04		1671	13.29	41.75	0.00	109.61
	994	13.30	13.10	13.40	72.90	<b>Mathieson Ammo-Phos 16-20-0 Pelletized Fertilizer</b>					
	1106	13.20	14.27	13.00	74.27		Guaranteed	16.00	20.00	0.00	79.00
	1184	13.84	13.70	13.80	75.84		16	16.40	21.84	0.00	83.32
	1253	13.76	13.74	14.80	76.68		20	16.10	21.51	0.00	81.92
	1375	13.92	13.50	14.40	76.31		25	16.24	22.61	0.00	84.23
<b>Mathieson Ammo-Phos 15-30-0 Pelletized Fertilizer</b>							62	16.02	20.00	0.00	79.06
	Guaranteed	15.00	30.00	0.00	93.75		78	16.52	22.22	0.00	84.32
	226	15.24	32.50	0.00	98.79		126	16.04	21.25	0.00	81.30
	430	15.10	31.85	0.00	97.26		367	16.41	22.26	0.00	84.08
	484	15.20	31.30	0.00	96.58		412	16.67	21.60	0.00	83.64
	493	15.30	31.00	0.00	96.33		414	16.01	21.50	0.00	81.65
	1024	15.68	30.20	0.00	95.97		419	16.00	22.16	0.00	82.78
	1214	15.52	31.21	0.00	97.30		440	16.25	20.30	0.00	80.21
	1311	15.76	30.75	0.00	97.15		449	16.45	21.20	0.00	82.34
	1389	15.28	31.71	0.00	95.76		455	16.09	21.50	0.00	81.87
	1402	15.03	31.06	0.00	95.69		462	16.44	21.94	0.00	83.61
	1655	15.26	30.25	0.00	94.90		465	16.04	20.70	0.00	80.34
	1672	15.28	30.25	0.00	94.96		468	16.20	21.40	0.00	82.00
<b>Mathieson Ammo-Phos 16-8-8 Pelletized Fertilizer</b>							491	16.20	20.80	0.00	80.95
	Guaranteed	16.00	8.00	8.00	66.00		602	16.00	20.40	0.00	79.70
	7	16.02	9.08	8.01	67.96		630	16.00	20.00	0.00	79.00
	1104	16.00	9.30	8.80	69.08		643	16.24	20.40	0.00	80.36
	1413	14.73	10.16	9.20	67.49		649	16.29	20.10	0.00	79.97
	1460	16.18	9.10	8.60	69.02		673	16.44	20.60	0.00	81.26
<b>Mathieson Ammo-Phos 11-48-0 Pelletized Fertilizer</b>							715	15.72	20.40	0.00	78.93
	Guaranteed	11.00	48.00	0.00	114.25		729	16.60	20.00	0.00	80.65
	17	11.56	50.38	0.00	119.96		736	16.60	20.00	0.00	80.65
	677	11.32	48.45	0.00	115.92		1071	16.00	20.10	0.00	79.18
	1355	11.10	48.00	0.00	114.53		1073	16.20	20.10	0.00	79.73
	1371	12.07	48.75	0.00	118.51		1075	16.81	20.00	0.00	81.23
	1376	11.93	50.25	0.00	120.75		1076	16.84	20.21	0.00	81.68
	1399	11.40	48.00	0.00	115.35		1082	16.03	20.80	0.00	80.48
	1471	11.00	48.21	0.00	114.62		1086	16.56	20.10	0.00	80.72
<b>Mathieson Ammo-Phos 13-39-0 Pelletized Fertilizer</b>							1093	15.11	22.22	0.00	80.44
	Guaranteed	13.00	39.00	0.00	104.00		1103	16.56	20.20	0.00	80.89
	21	13.32	41.01	0.00	108.40		1121	16.96	20.20	0.00	81.99
	63	13.36	41.55	0.00	109.45		1132	16.32	20.70	0.00	81.11
	429	13.56	40.76	0.00	108.62		1146	16.52	21.10	0.00	82.36
	441	13.53	40.86	0.00	108.71		1183	16.28	20.00	0.00	79.77
	450	13.32	41.01	0.00	108.40		1208	16.25	20.70	0.00	80.91
	466	13.56	40.00	0.00	107.29		1211	16.03	21.30	0.00	81.36
	467	13.52	39.50	0.00	106.31		1254	16.03	20.10	0.00	79.26
	485	13.44	40.50	0.00	107.84		1301	16.18	20.20	0.00	79.85
	644	13.72	37.50	0.00	103.36		1310	16.24	20.70	0.00	80.89
	650	13.26	39.75	0.00	106.03		1319	16.72	21.40	0.00	83.43
	653	13.73	39.50	0.00	106.88		1321	16.68	20.90	0.00	82.44
	714	13.96	39.25	0.00	107.08		1327	16.48	20.70	0.00	81.54
	1081	13.57	39.04	0.00	105.64		1328	16.81	21.00	0.00	82.98
	1085	13.72	39.00	0.00	105.98		1330	16.32	20.80	0.00	81.28
							1332	16.48	20.60	0.00	81.37
							1333	16.10	21.20	0.00	81.38
							1334	16.19	20.20	0.00	79.87



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
<b>Mathieson Ammo-Phos 16-20-0 Pelletized Fertilizer</b>					
	1363	16.16	20.20	0.00	79.79
	1370	16.01	21.20	0.00	81.13
	1374	16.60	20.80	0.00	82.05
	1384	16.40	21.30	0.00	82.38
	1391	16.17	20.40	0.00	80.17
	1401	16.60	20.60	0.00	81.70
	1406	17.04	20.00	0.00	81.86
	1416	16.25	20.30	0.00	80.21
	1430	16.44	21.00	0.00	85.25
	1436	16.02	20.70	0.00	80.28
	1442	16.32	20.70	0.00	81.10
	1445	16.01	21.20	0.00	81.13
	1472	15.66	20.10	0.00	78.24
	1474	15.76	20.50	0.00	79.22
	1477	15.77	20.80	0.00	79.77
	1483	15.64	21.42	0.00	80.50
	1494	16.02	20.30	0.00	79.58
	1511	16.08	20.20	0.00	79.57
	1539	16.04	21.00	0.00	80.86
	1543	16.03	20.80	0.00	80.48
	1596	16.03	20.50	0.00	79.96
	1646	15.88	20.60	0.00	79.72
	1652	16.05	20.20	0.00	79.49
	1656	16.28	20.50	0.00	80.65
	1660	16.17	21.30	0.00	81.74
	1661	16.41	20.00	0.00	80.13
	1670	16.07	20.30	0.00	79.72
	1676	16.01	21.20	0.00	81.13
	1681	16.46	20.00	0.00	80.27
<b>Diammonium Phosphate 21-53-0</b>					
	Guaranteed	21.00	53.00	0.00	150.50
	1174	21.84	53.75	0.00	154.12
<b>Mathieson Triple Superphosphate 45%</b>					
	Guaranteed	0.00	45.00	0.00	78.75
	23	0.00	47.63	0.00	83.35
	81	0.00	48.25	0.00	84.44
	87	0.00	48.95	0.00	85.66
	326	0.00	47.90	0.00	83.83
	415	0.00	47.14	0.00	82.50
	431	0.00	43.35	0.00	79.36
	480	0.00	46.60	0.00	81.55
	481	0.00	47.00	0.00	82.25
	492	0.00	46.25	0.00	80.94
	494	0.00	46.25	0.00	80.94
	595	0.00	46.75	0.00	81.81
	683	0.00	46.00	0.00	80.50
	1200	0.00	46.50	0.00	81.38
	1215	0.00	45.50	0.00	79.63
	1262	0.00	46.00	0.00	80.50
	1312	0.00	45.75	0.00	80.06
	1315	0.00	46.25	0.00	80.94
	1323	0.00	46.25	0.00	90.93
	1450	0.00	45.00	0.00	78.75
	1657	0.00	46.50	0.00	81.38
<b>MISSISSIPPI CHEMICAL CORP., YAZOO CITY, MISS.</b>					
<b>"MCC" Brand Ammonium Nitrate Fertilizer 33.5%</b>					
	Guaranteed	33.50	00.00	00.00	92.13
	713	34.70	00.00	00.00	95.43
	1591	33.26	00.00	00.00	91.47
<b>"NA-CHURS" PLANT FOOD CO., MARION, OHIO</b>					
<b>"Na-Churs" Liquid Fertilizer 10-20-10</b>					
	Guaranteed	10.00	20.00	10.00	72.50
	1347	10.65	20.86	10.61	76.40
<b>"Na-Churs Liquid Fertilizer 7-14-7</b>					
	Guaranteed	7.00	14.00	7.00	50.75
	1348	8.13	15.39	7.61	56.90

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
<b>NICHOLS FERTILIZER &amp; CHEMICAL CO., OKLAHOMA CITY, OKLA.</b>					
<b>Nichols 10-20-0 Pellets</b>					
	Guaranteed	10.00	20.00	00.00	62.50
	303	8.37	21.39	00.00	60.45
	825	10.56	19.64	00.00	63.41
	1369	12.39	21.79	00.00	72.21
<b>Nichols 10-20-10 Pellets</b>					
	Guaranteed	10.00	20.00	10.00	72.50
	826	11.49	19.06	10.70	75.65
	1324	6.50	21.00	10.60	65.22
<b>Nichols 13-39-0 Pellets</b>					
	Guaranteed	13.00	39.00	00.00	104.00
	1326	12.20	32.80	00.00	90.90
	1368	10.96	35.39	00.00	92.07
<b>Nichols 16-20-0 Pellets</b>					
	Guaranteed	16.00	20.00	00.00	79.00
	1318	11.62	19.81	00.00	66.62
	1325	13.64	20.00	00.00	72.51
<b>Nichols 0-20-0 Pellets</b>					
	Guaranteed	00.00	20.00	00.00	35.00
	1317	00.00	20.60	00.00	36.05
<b>OZARK-MAHONING COMPANY, TULSA, OKLA.</b>					
<b>PDQ Brand 5-10-5</b>					
	Guaranteed	5.00	10.00	5.00	36.25
	1592	5.23	11.47	5.45	39.91
<b>PDQ Brand 15-15-0</b>					
	Guaranteed	15.00	15.00	00.00	67.50
	1419	14.32	15.65	00.00	66.77
<b>PDQ Brand Fertilizer 0-20-0</b>					
	Guaranteed	00.00	20.00	00.00	35.00
	1422	00.00	20.00	00.00	35.00
<b>Ozark Ammonium Nitrate 33.5-0-0</b>					
	Guaranteed	33.50	00.00	00.00	92.13
	824	33.34	00.00	00.00	91.69
<b>Ozark Soluble Ammonium Phosphate 13-39-0</b>					
	Guaranteed	13.00	39.00	00.00	104.00
	1421	13.16	39.25	00.00	104.88
<b>Di-Ammonium Phosphate 21-53-0</b>					
	Guaranteed	21.00	53.00	00.00	150.50
	1420	21.40	53.40	00.00	152.30
	1453	21.88	53.50	00.00	153.79
<b>PHILLIPS CHEMICAL CO., BARTLESVILLE, OKLA.</b>					
<b>Phillips 66 Ammonium Sulfate 21.0%</b>					
	Guaranteed	21.00	00.00	00.00	57.75
	665	21.24	00.00	00.00	58.41
	674	21.00	00.00	00.00	57.75
	969	21.00	00.00	00.00	57.75
	1126	21.11	00.00	00.00	58.05
	1444	21.40	00.00	00.00	58.85
<b>Phillips 66 Fertilizer Grade Ammonium Nitrate 33.5%</b>					
	Guaranteed	33.50	00.00	00.00	92.13
	40	34.02	00.00	00.00	93.56
	668	33.50	00.00	00.00	92.13
	675	33.63	00.00	00.00	92.48
<b>PITTSBURG FERTILIZER CO., PITTSBURG, TEXAS</b>					
<b>Golden Nugget 5-10-5</b>					
	Guaranteed	5.00	10.00	5.00	36.25
	865	4.69	9.10	5.00	34.32
<b>Golden Nugget 10-20-10</b>					
	Guaranteed	10.00	20.00	10.00	72.50
	261	9.68	20.75	10.84	73.77

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
Golden Nugget 16-20-0											
Guaranteed		16.00	20.00	00.00	79.00		477	10.20	21.20	10.80	75.95
1686		14.18	16.91	00.00	68.59		488	10.98	20.00	11.00	76.20
Golden Nugget 0-20-0							530	10.80	19.76	10.80	75.08
Guaranteed		00.00	20.00	00.00	35.00		539	10.12	20.60	11.00	74.88
1685		00.00	20.57	00.00	35.99		555	10.60	20.00	11.00	75.15
PORT FERTILIZER & CHEMICAL CO., LOS FRESNOS, TEXAS							794	10.52	21.20	10.50	76.53
Liquidry Soluble Fertilizer 20-20-20							813	11.48	19.00	10.74	75.56
Guaranteed		20.00	20.00	20.00	110.00		815	11.30	19.46	10.74	75.87
35		20.32	21.35	17.78	111.02		828	10.84	20.00	10.40	75.21
RED STAR FERTILIZER DIVISION OF SFSA, SULPHUR SPRINGS, TEXAS							858	8.61	20.90	10.40	70.65
Red Star Brand 0-20-10							923	9.81	20.50	10.80	73.65
Guaranteed		00.00	20.00	10.00	45.00		948	11.04	19.60	11.24	75.90
177		00.00	20.60	10.70	46.75		1044	10.93	19.56	10.76	75.05
178		00.00	20.25	10.70	46.14		1083	12.40	17.47	10.90	75.57
Red Star Brand 5-10-5							1572	10.00	20.00	9.24	71.74
Guaranteed		5.00	10.00	5.00	36.25	Red Star Brand 12-12-12	1576	10.08	20.00	9.16	71.88
162		5.95	12.92	5.75	44.72	Guaranteed	1579	9.50	20.00	10.70	71.82
329		4.84	11.10	5.50	38.24		1583	10.17	19.40	10.60	72.52
554		5.70	9.30	5.45	37.40		1634	10.63	20.10	10.64	75.05
793		5.92	10.00	5.35	39.13		1642	10.49	20.00	10.50	74.35
798		5.86	8.67	5.10	36.39		1692	9.38	19.42	10.50	70.28
812		6.83	9.36	5.35	40.51		1710	9.33	20.00	10.44	71.10
827		6.06	9.50	5.37	38.66	Guaranteed	949	12.80	12.00	12.44	68.64
861		6.38	9.10	5.60	39.07		1095	11.31	13.00	12.00	65.85
922		4.22	9.24	5.20	32.98	Red Star Brand 12-24-12					
972		5.70	10.05	5.50	38.76	Guaranteed	10	9.48	23.10	12.40	78.90
1043		5.62	10.00	5.62	38.58		1077	12.81	24.00	12.00	89.23
1108		6.27	9.46	5.20	39.00		1079	10.25	23.35	12.00	81.05
1233		5.78	9.50	5.30	37.82		1084	13.82	24.90	12.02	93.60
1281		5.40	9.64	5.48	37.20		1111	14.09	24.40	12.00	93.45
1285		5.22	9.52	5.46	36.47		1166	15.00	24.00	12.00	95.25
1564		5.20	10.00	5.30	37.10	Red Star Brand 15-15-0					
1575		5.12	10.00	5.28	36.86	Guaranteed	9	15.00	15.00	00.00	67.50
1582		5.37	10.00	5.45	37.72		1096	14.20	20.55	00.00	75.01
1628		4.70	8.91	5.30	33.82		1109	15.16	15.80	00.00	69.34
1641		5.52	10.30	5.30	38.51		1299	16.59	15.10	00.00	72.05
1684		4.69	9.20	5.40	34.40		1654	15.44	15.00	00.00	68.71
1691		5.82	9.87	5.62	38.90			13.83	15.30	00.00	64.81
Red Star Brand 8-8-8						Red Star Brand 16-20-0					
Guaranteed		8.00	8.00	8.00	44.00	Guaranteed	8	16.00	20.00	00.00	79.00
1565		6.76	9.71	9.64	45.22		479	15.73	20.01	00.00	78.28
1571		7.44	9.10	9.60	45.99		489	15.42	19.10	00.00	75.83
1629		7.40	9.20	8.44	44.89		640	14.45	20.40	00.00	75.44
Red Star Brand 10-20-0							833	15.74	19.84	00.00	78.01
Guaranteed		10.00	20.00	00.00	62.50		1110	16.80	19.52	00.00	80.36
302		10.72	21.50	00.00	67.11		1165	16.68	13.66	00.00	69.78
323		10.92	20.75	00.00	66.34		1078	16.28	20.30	00.00	80.30
476		10.92	20.00	00.00	65.03		1094	16.01	20.20	00.00	79.38
799		10.63	20.00	00.00	64.23		1217	15.76	20.00	00.00	78.34
1287		10.88	19.14	00.00	63.42		1300	16.80	19.11	00.00	79.64
1298		10.54	19.24	00.00	62.66		1635	16.72	20.00	00.00	80.98
Red Star Brand 10-20-10							1643	14.83	20.04	00.00	75.85
Guaranteed		10.00	20.00	10.00	72.50			15.49	20.95	00.00	79.26
92		9.03	23.08	10.60	75.93	Red Star Brand 21-0-0					
147		9.80	20.00	11.00	72.95	Guaranteed	797	21.00	00.00	00.00	57.75
179		9.80	21.00	10.72	74.42		1387	21.08	00.00	00.00	57.97
208		10.14	20.59	10.74	74.66			21.01	00.00	00.00	57.78
252		10.08	20.29	10.80	74.03	Red Star Brand 0-20-0					
256		9.32	20.04	10.40	71.10	Guaranteed	138	00.00	20.00	00.00	35.00
286		9.30	20.00	10.74	71.32		175	00.00	20.00	00.00	35.00
295		9.52	21.00	10.70	73.65		293	00.00	20.25	00.00	35.44
301		10.02	21.89	10.72	76.58		294	00.00	20.25	00.00	35.44
328		10.20	23.54	10.64	79.89		313	00.00	20.00	00.00	35.00
330		10.14	20.01	10.64	73.54			00.00	21.00	00.00	36.75
402		10.92	21.25	10.80	78.02						



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
Red Star Brand 0-20-0					
	327	00.00	21.25	00.00	37.19
	403	00.00	18.01	00.00	31.52
	475	00.00	18.70	00.00	32.73
	478	00.00	20.00	00.00	35.00
	829	00.00	19.00	00.00	33.25
	834	00.00	21.40	00.00	37.45
	1286	00.00	19.21	00.00	33.62
	1633	00.00	19.65	00.00	34.39
	1683	00.00	19.24	00.00	33.67
	1556	00.00	20.00	00.00	35.00

SEWERAGE COMMISSION OF CITY OF MILWAUKEE, MILWAUKEE 1, WIS.

Milwaukee Milorganite 5.5-4-0					
Guaranteed	5.50	4.00	00.00	22.13	
1441	5.64	3.45	00.00	21.49	

SMITH-DOUGLASS COMPANY, INC., HOUSTON, TEXAS

"Pelleform" 6-24-24					
Guaranteed	6.00	24.00	24.00	82.50	
1070	6.44	24.30	24.00	84.24	

"Pelleform" 10-20-0					
Guaranteed	10.00	20.00	00.00	62.50	
1403	11.24	20.70	00.00	67.14	

"Pelleform" 10-20-10					
Guaranteed	10.00	20.00	10.00	72.50	
359	11.29	20.79	10.44	77.87	
523	10.12	21.10	11.00	74.01	
538	10.20	20.20	10.70	74.10	
1015	10.48	21.50	11.00	77.45	
1068	11.72	20.20	10.70	77.93	

"Pelleform" 12-12-12					
Guaranteed	12.00	12.00	12.00	66.00	
1697	12.00	12.20	12.40	66.75	

"Pelleform" 12-24-12					
Guaranteed	12.00	24.00	12.00	87.00	
30	12.45	24.68	12.40	89.83	
658	12.45	24.79	12.40	90.02	
667	13.20	23.17	12.80	89.65	
1100	12.68	24.30	12.60	90.00	

"Pelleform" 14-14-14					
Guaranteed	14.00	14.00	14.00	77.00	
1069	14.00	14.20	14.00	77.34	
1099	14.40	15.20	14.00	83.08	

"Pelleform" 11-48-0					
Guaranteed	11.00	48.00	00.00	114.25	
1463	11.00	48.50	00.00	115.13	

"Pelleform" 13-39-0					
Guaranteed	13.00	39.00	00.00	104.00	
1405	14.24	38.75	00.00	106.97	
1465	13.04	40.04	00.00	105.93	

"Pelleform" 16-20-0					
Guaranteed	16.00	20.00	00.00	79.00	
657	16.56	21.60	00.00	83.34	
666	16.44	20.30	00.00	80.74	
1072	16.28	20.90	00.00	81.35	
1098	16.56	20.50	00.00	81.42	
1105	16.40	20.80	00.00	81.50	
1404	16.80	20.30	00.00	81.73	
1464	16.40	20.40	00.00	80.80	

SOUTH TEXAS FERT. & CHEM. CO., EL CAMPO, TEXAS

Green Dot 4-11-11 Liquid Fertilizer					
Guaranteed	4.00	11.00	11.00	41.25	
1114	4.05	11.06	12.11	42.60	

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
Green Dot 8-8-8 Liquid Fertilizer					
Guaranteed	8.00	8.00	8.00	44.00	
1112	8.15	8.12	9.14	45.76	

Green Dot 8-24-0 Liquid Fertilizer					
Guaranteed	8.00	24.00	00.00	64.00	
1113	8.01	22.72	00.00	61.79	

SOUTHWEST CHEMICAL CO., McALLEN, TEXAS

"Top-Crop" Liquid 5-10-10					
Guaranteed	5.00	10.00	10.00	41.25	
50	5.18	10.00	11.00	42.86	
704	5.19	10.01	10.01	41.80	

"Top-Crop" Liquid Fertilizer 8-16-4					
Guaranteed	8.00	16.00	4.00	54.00	
1142	8.21	16.99	4.73	57.04	

"Top-Crop" Liquid Fertilizer 10-10-5					
Guaranteed	10.00	10.00	5.00	50.00	
47	10.54	11.22	6.30	54.92	
1140	10.57	10.50	5.82	53.26	

"Top-Crop" Liquid Fertilizer 12-15-0					
Guaranteed	12.00	15.00	00.00	59.25	
48	11.84	15.60	00.00	59.86	
705	11.81	15.01	00.00	58.75	
1141	11.50	15.01	00.00	57.89	

"Top-Crop" Liquid 0-54-0					
Guaranteed	00.00	54.00	00.00	94.50	
49	00.00	56.20	00.00	98.35	
1139	00.00	54.37	00.00	95.15	

SOUTHWEST FERTILIZER & CHEMICAL CO., EL PASO, TEXAS

SWF-GRO Fertilizer 15-15-0					
Guaranteed	15.00	15.00	00.00	67.50	
1415	12.03	17.77	00.00	64.18	

SWF-GRO Fertilizer 0-20-0					
Guaranteed	00.00	20.00	00.00	35.00	
1414	00.00	18.60	00.00	32.55	
1449	00.00	19.46	00.00	34.06	

SWIFT & COMPANY, HOUSTON, TEXAS

Swift's Red Steer 4-12-4					
Guaranteed	4.00	12.00	4.00	36.00	
70	4.08	12.00	4.20	36.42	

Swift's Red Steer 5-10-5					
Guaranteed	5.00	10.00	5.00	36.25	
5	5.28	10.98	5.50	39.24	
71	5.12	10.40	5.60	37.88	
119	5.70	11.33	5.38	40.88	
167	5.25	11.00	5.15	38.84	
550	5.54	11.50	5.55	40.91	
570	5.50	10.90	5.40	39.60	
609	6.29	9.81	5.35	39.82	
647	5.64	11.60	5.16	40.97	
737	5.44	10.50	5.20	38.54	
785	5.50	11.00	5.25	39.63	
950	5.11	10.80	5.80	38.75	
987	5.48	10.20	5.93	38.85	
1022	5.03	10.50	5.85	38.06	
1051	5.10	10.89	5.50	38.58	
1118	6.08	10.85	5.15	40.86	
1500	5.38	10.70	5.30	38.82	
1515	5.40	10.90	5.40	39.33	

Swift's Red Steer 5-20-0					
Guaranteed	5.00	20.00	20.00	68.75	
1502	5.50	20.06	18.64	68.87	



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
Swift's Red Steer 6-12-6						Red Steer Gran-U-Pels 12-24-12					
Guaranteed		6.00	12.00	6.00	43.50	Guaranteed		12.00	24.00	12.00	87.00
604		6.12	12.00	6.70	44.53	1137		11.48	23.50	12.00	84.70
976		7.59	12.20	5.56	47.78	1144		11.41	23.47	12.00	84.45
Swift's Red Steer 8-8-8						Swift's Red Steer 15-15-0					
Guaranteed		8.00	8.00	8.00	44.00	Guaranteed		15.00	15.00	00.00	67.50
173		7.57	9.10	9.60	46.34	637		15.01	14.86	00.00	67.28
778		8.38	8.80	9.40	47.85	1136		14.16	16.40	00.00	67.64
940		8.04	8.40	8.60	45.41	Swift's Red Steer 13-39-0					
975		8.04	8.50	8.43	45.41	Guaranteed		13.00	39.00	00.00	104.00
988		8.03	8.40	9.80	46.58	378		11.27	40.75	00.00	102.31
1023		7.94	8.80	8.80	46.04	638		12.00	36.07	00.00	96.12
1034		8.01	8.70	8.80	46.05	Swift's Red Steer 16-20-0					
1226		8.06	8.24	8.44	45.03	Guaranteed		16.00	20.00	00.00	79.00
Swift's Red Steer 10-20-0						86		14.42	21.25	00.00	76.84
Guaranteed		10.00	20.00	00.00	62.50	365		15.72	20.75	00.00	79.54
232		10.60	27.64	00.00	77.52	380		15.40	22.20	00.00	81.20
363		10.80	21.00	00.00	66.45	639		16.03	19.15	00.00	77.60
381		10.00	20.31	00.00	63.04	648		16.02	21.10	00.00	80.98
526		10.32	20.00	00.00	63.38	651		16.01	22.24	00.00	82.95
605		10.73	19.06	00.00	62.86	723		16.01	20.00	00.00	79.03
738		10.64	19.63	00.00	63.61	745		16.00	20.30	00.00	79.53
744		10.44	20.10	00.00	63.89	786		16.10	19.51	00.00	78.42
959		10.80	20.00	00.00	64.70	1120		16.04	19.79	00.00	78.74
1050		10.00	19.27	00.00	61.22	1131		16.16	20.50	00.00	80.32
1119		10.36	20.30	00.00	64.02	1143		16.60	20.00	00.00	80.65
Swift's Red Steer 10-20-10						1212		16.04	19.61	00.00	78.43
Guaranteed		10.00	20.00	10.00	72.50	1468		13.81	20.00	00.00	72.98
3		10.12	20.75	10.70	74.84	1501		16.01	20.30	00.00	79.55
32		10.32	20.72	10.30	74.94	Swift's Red Steer 0-20-0					
73		10.52	20.82	10.40	75.77	Guaranteed		00.00	20.00	00.00	35.00
120		10.68	20.20	10.70	75.42	1455		00.00	19.28	00.00	33.74
233		9.44	21.00	10.74	73.45	Superphosphate 0-46-0					
364		10.20	21.07	10.70	75.62	Guaranteed		00.00	46.00	00.00	80.50
379		10.29	21.50	10.70	76.62	646		00.00	47.64	00.00	83.37
520		10.28	20.00	10.74	74.01	670		00.00	47.25	00.00	82.69
522		11.08	20.00	10.40	75.87	732		00.00	46.00	00.00	80.50
527		10.49	20.00	10.60	74.45	1145		00.00	46.75	00.00	81.81
531		10.76	19.89	10.60	75.00	1185		00.00	46.75	00.00	81.81
545		10.26	20.00	11.00	74.22	1213		00.00	45.25	00.00	79.19
551		10.62	20.00	10.80	75.01	1367		00.00	46.06	00.00	80.61
603		10.76	20.00	10.74	75.33	SWIFT & COMPANY, SHREVEPORT, LOUISIANA					
610		10.68	20.00	10.40	74.77	Swift's Red Steer 5-10-5					
669		8.86	18.54	10.40	67.21	Guaranteed		5.00	10.00	5.00	36.25
735		10.49	20.40	10.70	75.25	95		4.64	10.67	5.45	36.88
779		10.45	20.30	10.40	74.66	97		4.62	11.64	5.60	38.68
941		9.26	20.00	10.70	71.17	99		5.10	10.96	5.50	38.71
951		10.02	18.96	10.72	71.46	108		4.62	10.50	5.50	36.58
958		9.47	19.00	10.76	70.05	206		4.76	11.62	5.24	38.67
989		9.66	20.50	11.00	73.44	218		5.04	11.69	5.20	39.52
1035		9.12	20.40	10.74	71.52	238		4.70	10.70	5.50	37.15
1052		9.31	20.00	10.30	70.90	262		4.68	10.52	5.70	36.98
1228		9.75	19.40	10.60	71.36	281		4.55	11.04	5.35	37.18
1516		9.66	20.00	10.44	72.01	394		4.83	10.90	5.40	37.76
1569		9.33	20.40	10.70	72.06	578		4.67	10.70	5.00	37.12
1695		9.42	18.91	10.20	69.20	804		5.03	11.20	5.60	39.03
Vigoro Commercial Grower 10-20-10						869		6.85	9.11	5.09	39.87
Guaranteed		10.00	20.00	10.00	72.50	876		5.02	10.20	5.55	37.21
606		10.44	19.50	10.80	73.64	881		4.62	9.36	5.70	34.79
Brimm 12-12-6						885		5.11	11.30	5.50	39.33
Guaranteed		12.00	12.00	6.00	60.00	912		4.37	9.42	6.50	35.00
31		11.62	12.90	6.00	60.53	917		5.01	10.50	6.00	38.15
Swift's Red Steer 12-12-12						1688		5.00	10.40	5.50	37.45
Guaranteed		12.00	12.00	12.00	66.00	1693		5.00	11.40	5.40	39.10
1227		11.20	12.30	12.60	64.93	1726		5.00	10.50	5.22	37.35

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
Swift's Red Steer 5-10-10					
Guaranteed		5.00	10.00	10.00	41.25
1625		5.05	11.00	10.60	43.74
Swift's Red Steer Gran-U-Pels 8-8-8					
Guaranteed		8.00	8.00	8.00	44.00
878		8.02	8.20	9.02	45.43
886		8.16	8.40	6.67	43.81
913		7.84	9.10	9.00	46.49
1245		8.04	8.00	8.00	44.11
1694		7.84	8.10	8.44	44.18
1733		7.62	8.00	8.30	43.26
Blenn 8-8-8					
Guaranteed		8.00	8.00	8.00	44.00
879		8.12	8.00	9.06	45.39
1605		7.56	8.10	8.34	43.35
Brimm 8-8-8					
Guaranteed		8.00	8.00	8.00	44.00
880		8.32	8.10	9.02	46.08
Swift's Red Steer 10-20-0					
Guaranteed		10.00	20.00	00.00	62.50
902		10.32	20.00	00.00	63.38
Swift's Red Steer 10-20-10					
Guaranteed		10.00	20.00	10.00	72.50
100		9.68	20.50	19.76	73.26
209		10.32	21.74	10.70	77.13
219		10.08	21.49	10.40	75.73
260		9.10	18.59	10.70	68.26
395		9.17	17.00	10.74	65.71
556		10.52	19.45	10.70	73.67
589		10.36	18.56	10.80	71.77
754		9.76	20.30	11.00	73.37
822		10.00	19.45	9.20	70.74
877		9.64	21.20	10.70	74.31
1246		10.03	20.60	10.17	73.80
1272		10.78	20.50	10.64	76.16
1731		9.34	20.00	10.20	70.89
1734		9.25	20.00	10.20	70.64
TEXAS FARM PRODUCTS CO., NACOGDOCHES, TEXAS					
Lone Star Brand 3-12-12 Fertilizer					
Guaranteed		3.00	12.00	12.00	41.25
180		3.28	12.00	12.60	42.62
542		3.26	11.32	12.40	41.18
Lone Star Brand 4-12-4 Fertilizer					
Guaranteed		4.00	12.00	4.00	36.00
1222		3.82	12.02	4.10	35.64
Lone Star Brand 5-10-5 Fertilizer					
Guaranteed		5.00	10.00	5.00	36.25
77		5.54	10.90	5.22	39.53
104		5.00	10.60	5.20	37.50
121		6.24	12.26	5.38	44.00
157		5.95	11.26	5.55	41.62
192		4.59	9.70	5.22	34.82
197		5.10	10.20	5.50	37.38
337		4.60	10.00	5.37	35.52
507		5.31	10.00	5.55	37.65
511		5.06	10.30	5.20	37.14
552		5.28	11.10	5.55	39.50
558		5.34	10.00	5.45	37.64
580		5.32	10.20	5.40	37.88
753		5.00	11.30	5.16	38.69
888		5.00	10.00	5.55	36.80
1223		5.04	10.00	5.20	36.56
1236		5.04	10.00	5.20	36.56
1243		5.03	10.00	5.20	36.53
1706		5.03	10.10	5.40	36.91

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	Valuation found per ton, \$
Lone Star Brand 5-10-10 Fertilizer					
Guaranteed		5.00	10.00	10.00	41.25
1724		4.81	10.60	10.24	42.02
Lone Star Brand 8-8-8 Fertilizer					
Guaranteed		8.00	8.00	8.00	44.00
889		8.08	8.20	9.20	45.77
1020		8.34	8.90	8.80	47.31
1062		7.35	8.00	8.69	42.90
1231		8.36	8.30	8.40	45.92
1613		8.21	8.80	8.00	45.98
1707		8.34	8.00	8.24	45.18
1713		8.00	8.00	8.20	44.20
Lone Star Brand 10-20-0 Fertilizer					
Guaranteed		10.00	20.00	00.00	62.50
230		10.02	20.25	00.00	62.99
368		11.52	20.75	00.00	67.99
Lone Star Brand 10-20-10 Fertilizer					
Guaranteed		10.00	20.00	10.00	72.50
1		9.14	19.50	11.00	70.26
105		9.58	20.01	10.76	72.12
107		9.40	20.45	10.40	72.04
122		9.31	20.50	10.60	72.08
193		9.01	21.10	10.70	72.40
198		9.52	20.00	10.72	71.90
231		9.26	21.21	10.40	72.98
237		9.44	20.75	11.00	73.27
369		10.52	19.50	10.60	73.66
543		9.46	20.00	11.00	72.02
549		9.08	20.00	11.10	71.07
553		10.12	19.45	10.74	72.61
559		9.28	20.00	10.74	71.26
581		9.76	20.07	10.40	72.36
766		10.01	20.60	10.40	73.98
900		10.08	20.00	11.00	73.72
1014		10.88	19.00	11.00	74.17
1021		10.28	19.40	10.70	72.92
1053		10.16	19.81	10.36	72.97
1061		10.25	19.41	10.60	72.76
1224		10.04	20.00	10.30	72.91
1232		10.44	19.57	10.24	73.20
1237		10.12	19.40	10.60	72.38
1244		10.64	19.40	10.24	73.45
1614		10.16	18.92	10.60	71.65
1725		10.00	17.30	10.30	68.08
Lone Star Brand 12-12-12 Fertilizer					
Guaranteed		12.00	12.00	12.00	66.00
236		12.18	16.72	12.80	75.56
1054		9.25	12.10	13.60	60.21
Lone Star Brand 16-20-0 Fertilizer					
Guaranteed		16.00	20.00	00.00	79.00
2		13.80	22.27	00.00	76.92
1225		13.79	20.10	00.00	73.10
1636		15.37	19.27	00.00	75.99
Lone Star Brand 20% Superphosphate					
Guaranteed		00.00	20.00	00.00	35.00
1019		00.00	20.00	00.00	35.00
1393		00.00	20.10	00.00	35.18
TEXAS LIQUID FERTILIZER CO., LA FERIA, TEXAS					
Texas Liquid 16-8-4 Fertilizer					
Guaranteed		16.00	8.00	4.00	62.00
690		16.00	8.16	4.35	62.63
1149		18.05	8.62	4.67	69.40
Texas Liquid 20-0-0 Fertilizer					
Guaranteed		20.00	00.00	00.00	55.00
45		20.00	00.00	00.00	55.00
689		20.36	00.00	00.00	55.99

TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
Texas Liquid 12-15-0 Fertilizer					
Guaranteed	12.00	15.00	00.00	59.25	
46	13.10	16.22	00.00	64.41	
Texas Liquid 0-54-0 Fertilizer					
Guaranteed	00.00	54.00	00.00	94.50	
688	00.00	49.42	00.00	86.49	
1150	00.00	46.63	00.00	81.60	
TIDE PETROLEUM PRODUCTS, INC., EDINBURG, TEXAS					
Tide Green 6-18-6 100% Water Soluble Liquid Fertilizer					
Guaranteed	6.00	18.00	6.00	54.00	
699	6.16	18.31	6.00	54.98	
1180	6.82	18.15	5.49	56.01	
1182	10.74	18.34	5.52	67.15	
Tide Green 8-24-0 100% Water Soluble Liquid Fertilizer					
Guaranteed	8.00	24.00	00.00	64.00	
1169	8.31	24.08	00.00	64.99	
1181	13.56	16.67	00.00	66.46	
Tide Green 10-10-0 100% Water Soluble Liquid Fertilizer					
Guaranteed	10.00	10.00	00.00	45.00	
702	9.78	10.15	00.00	44.66	
1167	10.11	10.89	00.00	46.86	
Tide Green 10-20-0 100% Water Soluble Liquid Fertilizer					
Guaranteed	10.00	20.00	00.00	62.50	
42	10.38	20.81	00.00	64.96	
Tide Green 12-12-4 100% Water Soluble Liquid Fertilizer					
Guaranteed	12.00	12.00	4.00	58.00	
44	12.03	13.40	4.68	61.21	
701	11.75	12.47	4.00	58.14	
Tide Green 15-15-0 100% Water Soluble Liquid Fertilizer					
Guaranteed	15.00	15.00	00.00	67.50	
41	13.65	16.60	00.00	66.59	
1180	6.82	18.15	00.00	50.52	
Tide Green 18-9-0 100% Water Soluble Liquid Fertilizer					
Guaranteed	18.00	9.00	00.00	66.25	
43	17.05	12.69	00.00	69.10	
700	17.22	9.30	00.00	63.63	
TYLER FERTILIZER COMPANY, TYLER, TEXAS					
Heart Brand 5-10-5					
Guaranteed	5.00	10.00	5.00	36.25	
111	5.19	10.00	5.10	36.87	
220	4.50	10.50	5.24	35.99	
338	6.24	10.10	5.35	40.19	
938	5.81	8.54	5.33	36.25	
985	5.44	9.56	5.10	36.79	
1028	6.50	9.41	5.30	39.64	
1250	6.32	10.30	5.48	40.88	
1459	6.16	10.00	5.35	39.79	
1708	5.64	9.60	5.40	37.71	
1714	6.16	9.70	5.22	39.14	
Heart Brand 8-8-8					
Guaranteed	8.00	8.00	8.00	44.00	
1709	6.94	8.20	8.00	41.44	
Heart Brand 10-20-0					
Guaranteed	10.00	20.00	00.00	62.50	
406	12.35	20.75	00.00	70.28	
Heart Brand 10-20-0					
Guaranteed	10.00	20.00	10.00	72.50	
156	10.41	20.00	10.70	74.33	
221	11.08	18.50	11.00	73.85	
341	10.52	19.50	10.72	73.78	
390	9.80	21.25	11.00	75.14	
557	10.24	18.45	10.40	70.85	
758	9.45	18.05	10.80	68.38	
939	11.35	18.72	10.36	74.33	

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
	986	10.04	20.00	11.00	73.61
	1251	10.04	19.20	11.20	72.41
	1715	8.81	21.40	10.50	72.18
	1732	8.97	16.79	10.20	64.25
Heart Brand 12-12-12					
Guaranteed	12.00	12.00	12.00	66.00	
1716	11.08	12.90	12.00	65.05	
Heart Brand 16-20-0					
Guaranteed	16.00	20.00	00.00	79.00	
1458	15.66	20.26	00.00	78.52	
VALLEY GROWERS COOPERATIVE, MISSION, TEXAS					
Valley Gro Brand Ammonium Sulphate 21-0-0					
Guaranteed	21.00	00.00	00.00	57.75	
1138	21.72	00.00	00.00	59.73	
VIRGINIA-CAROLINA CHEMICAL CORPORATION, SHREVEPORT, LA.					
V-C Fertilizers 0-16-8					
Guaranteed	00.00	16.00	8.00	36.00	
587	00.00	16.00	8.92	36.92	
V-C Fertilizers 4-12-4					
Guaranteed	4.00	12.00	4.00	36.00	
1530	4.68	13.10	4.50	40.30	
V-C Fertilizers 5-10-5					
Guaranteed	5.00	10.00	5.00	36.25	
196	5.18	11.26	5.50	39.45	
225	5.06	11.00	5.50	38.67	
265	5.40	11.00	5.52	39.62	
336	5.08	11.20	5.50	39.07	
346	4.88	10.50	5.20	37.00	
562	5.09	10.40	5.35	37.55	
841	5.16	10.77	5.60	38.64	
904	5.34	10.80	5.80	39.39	
925	5.14	10.80	5.85	38.89	
954	5.16	10.70	5.55	38.47	
1008	5.00	10.60	5.81	38.11	
1495	5.42	10.30	5.50	38.43	
1531	5.32	10.50	5.45	38.46	
1534	5.50	10.10	5.00	38.12	
1622	5.10	10.40	5.45	37.68	
1727	5.07	10.10	5.20	36.82	
V-C Granulated Fertilizers 5-10-5					
Guaranteed	5.00	10.00	5.00	36.25	
89	5.15	11.40	5.35	39.46	
125	5.07	11.47	5.20	39.22	
184	5.00	10.84	5.20	37.92	
354	5.02	11.20	5.20	38.61	
512	5.20	11.00	5.80	39.35	
568	5.10	10.60	5.50	38.08	
746	5.08	10.30	5.35	37.35	
765	5.24	11.00	5.35	39.01	
771	5.30	10.40	5.37	38.15	
805	5.05	11.00	5.55	38.69	
853	5.04	10.60	5.37	37.78	
V-C Fertilizers 5-10-10					
Guaranteed	5.00	10.00	10.00	41.25	
1630	4.83	10.10	10.60	41.56	
V-C Granulated Fertilizers 5-10-10					
Guaranteed	5.00	10.00	10.00	41.25	
860	5.68	10.80	10.50	45.02	
V-C 5-10-10 Prolific					
Guaranteed	5.00	10.00	10.00	41.25	
999	5.12	10.76	10.70	43.61	
V-C Fertilizers 8-8-8					
Guaranteed	8.00	8.00	8.00	44.00	
567	8.06	8.70	8.80	46.19	



TABLE 5. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1956-57, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
V-C Fertilizers 8-8-8					
	903	8.01	9.10	9.20	47.15
	947	7.70	9.20	9.00	46.28
	1623	8.01	9.24	8.44	46.64
	1711	7.42	9.40	8.20	45.06
V-C Granulated Fertilizers 8-8-8					
Guaranteed	8.00	8.00	8.00	8.00	44.00
	806	8.03	9.40	9.40	47.93
	854	8.08	9.00	9.40	47.37
	859	8.01	9.30	9.60	47.90
	887	7.85	9.60	8.96	47.35
	963	8.20	9.60	9.50	48.85
	998	8.00	9.94	9.00	48.40
	1057	7.84	9.00	8.84	46.15
	1268	8.02	9.20	7.40	45.58
V-C Granulated Fertilizers 10-20-0					
Guaranteed	10.00	20.00	00.00	00.00	62.50
	137	10.00	19.88	00.00	62.29
	316	10.00	21.25	00.00	64.69
	374	10.26	21.39	00.00	65.65
	387	8.74	20.56	00.00	60.01
	437	10.00	20.70	00.00	63.73
	597	10.00	20.00	00.00	62.50
	787	10.24	20.80	00.00	64.56
V-C Granulated Fertilizers 10-20-0					
Guaranteed	10.00	20.00	10.00	10.00	72.50
	83	10.05	21.00	10.70	75.09
	114	10.00	22.76	10.80	78.13
	142	9.64	22.15	10.60	75.87
	169	9.73	20.00	10.80	72.56
	185	10.01	21.76	10.74	76.35
	207	10.73	20.00	10.70	75.21
	222	10.08	21.95	10.70	76.83
	240	10.08	21.37	10.70	75.82
	347	10.07	20.97	10.60	74.99
	376	10.72	21.36	8.16	75.02
	528	10.32	20.20	11.00	74.73
	534	9.55	20.00	10.70	71.96
	547	9.71	20.00	7.00	68.70
	564	10.88	20.00	11.10	76.02
	566	10.00	20.30	11.00	74.03
	569	10.21	20.50	11.00	74.95
	574	9.68	20.00	10.40	72.02
	579	10.00	20.30	10.90	73.93
	584	10.24	19.60	10.80	73.26
	588	10.36	20.80	11.00	75.89
	612	10.12	20.00	10.36	73.19
	621	10.12	20.10	10.36	73.37
	772	9.21	20.00	11.20	71.53
	773	9.69	20.60	10.80	73.50
	788	10.11	19.24	10.70	72.17
	807	9.65	20.10	10.80	72.51
	821	10.27	20.20	10.74	74.33
	842	10.35	22.60	11.00	79.01
	905	9.79	20.70	10.70	73.85
	918	9.49	20.00	10.72	71.82
	962	10.44	20.50	11.10	75.69
	964	10.56	20.60	10.00	75.09
	1000	8.64	17.71	10.70	65.45
	1009	9.78	20.70	10.70	73.82

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	Valuation found per ton, \$
	1058	10.28	20.30	10.30	74.10
	1255	10.36	19.51	11.80	74.43
	1269	10.71	21.00	11.50	77.67
	1580	9.62	20.55	10.64	73.06
	1588	9.44	20.40	10.60	72.26
	1712	9.47	19.57	10.44	70.73
	1728	10.39	20.30	10.20	74.30
V-C Granulated Fertilizers 12-12-12					
Guaranteed	12.00	12.00	12.00	12.00	66.00
	170	11.70	12.70	12.60	67.00
	529	11.55	12.30	12.40	65.69
	908	11.20	12.00	12.44	64.24
	919	11.69	12.30	12.44	66.11
	965	11.27	13.16	13.12	67.14
V-C Granulated Fertilizers 15-15-0					
Guaranteed	15.00	15.00	00.00	00.00	67.50
	375	15.40	15.86	00.00	70.11
V-C Granulated Fertilizers 16-20-0					
Guaranteed	16.00	20.00	00.00	00.00	79.00
	1216	16.02	20.00	00.00	79.06
	1259	16.00	20.00	00.00	79.00
V-C 20% Superphosphate					
Guaranteed	00.00	20.00	00.00	00.00	35.00
	136	00.00	20.75	00.00	36.31
	166	00.00	21.60	00.00	37.80
	373	00.00	20.44	00.00	35.77
	388	00.00	21.69	00.00	37.96
	436	00.00	20.10	00.00	35.18
	629	00.00	20.00	00.00	35.00
	1270	00.00	20.10	00.00	35.18
V-C Granulated 20% Superphosphate					
Guaranteed	00.00	20.00	00.00	00.00	35.00
	4	00.00	21.25	00.00	37.19
	315	00.00	20.29	00.00	35.51
	611	00.00	20.60	00.00	36.05
V-C 45% Granular Triple Superphosphate					
Guaranteed	00.00	45.00	00.00	00.00	78.75
	76	00.00	47.78	00.00	83.62
	113	00.00	46.67	00.00	81.67
	389	00.00	43.71	00.00	76.49
	1260	00.00	45.00	00.00	78.75
WONDER-GRO FERTILIZER CO., INC., SAN ANTONIO, TEXAS					
Wonder-Gro 5-10-5					
Guaranteed	5.00	10.00	5.00	5.00	36.25
	739	6.10	12.75	5.18	44.27
	1191	5.97	10.25	5.12	39.48
Wonder-Gro 5-10-10					
Guaranteed	5.00	10.00	10.00	10.00	41.25
	1193	5.60	12.04	10.60	47.07
Wonder-Gro 10-20-10					
Guaranteed	10.00	20.00	10.00	10.00	72.50
	720	10.40	17.52	10.60	69.86
	1192	9.45	18.00	10.30	67.79
Wonder-Gro 16-20-0					
Guaranteed	16.00	20.00	00.00	00.00	79.00
	740	15.37	20.00	00.00	77.27
	1205	16.00	20.30	00.00	79.53

## FERTILIZER GUARANTORS REGISTERED IN TEXAS, 1956-57

### LOCATED IN TEXAS

- Agri-Chem of Texas, 2734 Roosevelt Avenue, San Antonio
- Agricultural Chemicals of Dallas, 3707 E. Kiest Blvd., Dallas
- Agricultural Chemicals, Inc., Llano
- Agricultural Chemicals, Inc., Box 130, Henderson
- Armour Fertilizer Works, Inc., Box 5296, Dallas
- Armour Fertilizer Works, Inc., Box 1412, Houston
- Ashwood Co., 1005 Hyde Park, Houston
- Associated Laboratories, 2121 S. Central Expressway, Dallas
- Bactex Company, Inc., Box 4065, Station A, San Antonio
- Baker Bros. Co., Box 828, Fort Worth
- Balch-Jackson Co., 623 S. Oakes, San Angelo
- Best Fertilizer Company, 8420 Manchester Street, Houston 12
- Blume System Tree Experts, 2736 Virginia, Houston 6
- Boesch Farm Products Co., Inc., 607 William St., Lufkin
- Bovina Farm Chemical, 801 Third Street, Bovina
- Bryan Cotton Oil & Fertilizer Company, Bryan
- Campbell Fertilizer Co., Inc., 102 Japhet Street, Houston
- Carl Pool Labs, 420 Kelly Drive, San Antonio
- Castro County Grain Co., Dimmitt
- Central Texas Fertilizer Co., Inc., Box 761, Comanche
- Chemical Products Co., Inc., Box 387, Hurst
- Chemical Specialties Co., Box 1453, Laredo
- Coastal Chem. Specialties Co., Route 3, Box 591, Houston
- Consolidated Chem. Industries, Inc., 640 Melle Esperson Bldg., Houston
- Currie Seed Co., 907 S. Staples St., Corpus Christi
- Dixie Farms Service, Inc., Box 312, Rosenberg
- East Texas Products Company, Box 176, Tyler
- Easy Going Ranch, Mountain Home
- Ellis Supply Company, Weslaco
- Ewing & Sherman Co., 4600 Broadway, San Antonio
- Farmers Fertilizer Company, Box 944, Texarkana, Ark-Tex
- Ferd Staffel Co., Box 2380, San Antonio
- Ferti-Mulch Company, Route 2, Round Rock
- Fidelity Chemical Corp., Box 1189, Houston
- Forrest's Greenhouse, Box 357, Waxahachie
- Garrison Dehydration Co., Garrison
- Gilmer Cotton Oil & Fertilizer Company, Gilmer
- Green Growth Fertilizer Co., 4831 Palo Duro Lane, Dallas
- Green Thumb Laboratories, Box 851, Bay City
- Gulf Coast Organic and Mineral Co., 325 S. Cage Blvd., Pharr
- Gulf Rendering By-Products Corp., 6426 Ave. J., Galveston
- Hale Laboratories, Box 1348, Bay City
- Hayes-Sammons Co., Box 633, Mission
- Hill's Nursery, Victoria
- Hi-Yield Plant Food Company, Box 491, Mount Pleasant
- Hi-Yield Fertilizer Company, Box 143, Bonham
- Interstate By-Products and Supply Co., Box 1142, Fort Worth
- International Minerals & Chem. Corp., Box 4545, Fort Worth
- Jacksonville Fertilizer Company, Box 1225, Jacksonville
- Jaffee Cotton Products, Box 5184, Dallas
- Jones Farm Store, Box 786, Muleshoe
- Kipfer Chemical Company, Box 770, Harlingen
- Klauss-White, 1441 W. Popular St., San Antonio 7
- H. H. Koym, East Bernard
- Lister Laboratory, Ltd., Route 8, Box 127H, San Antonio
- Lone Star Phosphate Co., Box 31, Nacogdoches
- Lone Star Steel Company, Box 12226, Dallas
- Manning Minerals Corp., Wilson-Tyler Bldg., Box 1558, Corpus Christi
- Marbach, E. W., Converse
- Margie Korn Garden Shop, 5213 W. Lovers Lane, Dallas
- Marshall Cotton Oil Company, Marshall
- Mid West Feed Yards, Box 1370, San Angelo
- MVG Products Co., Harlingen
- J. W. Nichols Co., 719 N. Main, Fort Worth
- Nitra-Phos Chemicals, Inc., 9441 Telephone Road, Houston 17
- Pan Handle Gold Fertilizer Co., 1745 E. Tenth, Amarillo
- Parker's Mother Nature Fertilizer Co., Round Rock
- Pittsburg Fertilizer Co., Pittsburg
- Plainsman Supply Co., 601 E. 5th Street, Plainview
- Port Fertilizer and Chemical Co., Los Fresnos

## FERTILIZER GUARANTORS REGISTERED IN TEXAS, 1956-57 — Continued

Product Development Co., 1525B N. Post Oak Road, Houston

Red Star Fertilizer Company, Box 486, Sulphur Springs

Richlawn of Fort Worth, Inc., Box 3207, Fort Worth

Rio Soil Service, 219 West Highway, San Juan

Rose City Nursery, Tyler

Rowland-Gordon Co., Box 170, Plainview

E. H. Rugh, Bandera

Scientific Soil Service, Elsa

Shannon Feed Mills, 150 Apache St., San Antonio

Shea Chemical Corp., 8800 Central Expressway S., Dallas

Smith-Douglass Co., Inc. (San Jacinto Chem. Co.)  
Box 9747, Houston 15

Sod-Gro Fertilizer Co., 205 S. Allen Street, Monahans

Soil Organic Service, 8729 Old County Road, Ysleta

Soil Prescription Service, 851 Acme Road, San Antonio

South Texas Fertilizer & Chemical Co., El Campo

Southwest Chemical Company, 500 South 19th St., McAllen

Southwest Fertilizer Co., Box 12234, Dallas

Southwest Fertilizer and Chemical Co., 5030 East Paisano Drive, El Paso

Soylaid, Inc., 102 W. French Place, San Antonio 12

Stauffer Chemical Company, Box 507, Weslaco

Swift & Company, Plant Food Div., Box 7707, Houston

Taylor-Evans Farm Store, 2701 East 3rd Street, Amarillo

Tech Chemicals, Inc., Clint

Tex-Ammonia, Inc., Elsa

Texas Farm Products, Box 31, Nacogdoches

Texas Farm Supply, 1820 Ave. H., Bay City

Texas Liquid Fertilizer Company, Box 808, La Feria

Texas Organic Minerals Soil Company, San Juan

Texas Vermiculite Co., 2651 Manila Road, Dallas

Tide Petroleum Products, Inc., 800 North Closner, Edinburg

Toyah Basin Sulphur Company, Box 226, Toyah

Tri-State Soil Products Company, 2218 N. Piedras Street, El Paso

Tyler Fertilizer Company, 429 South Oakland, Tyler

Valley Growers Cooperative, Box 907, Mission

Western Fertilizer Company, Muleshoe

J. Bob White, 5500 Camp Bowie Blvd., Ft. Worth

Wonder-Gro Corp., Room 2, International Airport, San Antonio

Wood Chemical Co., Box 599, Lubbock

Wyatt Seed Company, 16 S. Taylor, San Angelo

### LOCATED ELSEWHERE

Agricultural Products Company, Box 658, Anthony, New Mexico

Allied Chemical & Dye Corp, Nitrogen Div., Drawer 61, Hopewell, Virginia

American Agricultural Chemical Co., 50 Church Street, New York 7, New York

American Bulb Co., 711 Third Ave., New York 17, New York

American Chemical Paint Company, Ambler, Pennsylvania

American Cyanamid Company, 30 Rockefeller Plaza, New York 21, New York

American Liquid Fertilizer Company, 2nd and St. Clair Street, Marietta, Ohio

The Anaconda Company, Anaconda, Montana

Ark-La Feed & Fertilizer Co., Magnolia, Arkansas

Arkmo Plant Food Co., Inc., Walnut Ridge, Arkansas

Associated Cooperatives, Inc., 312 Montgomery Ave., Sheffield, Alabama

Atkins and Durbrow, Inc., Box 55, Port Colborne, Ontario, Canada

Atlas Fish Fertilizer Co., 1 Drumm Street, San Francisco 11, California

Better Homes Bureau, Newark, New York

Bio Products, Inc., Warrenton, Oregon

The Borden Co.—Chem. Div., 350 Madison Avenue, New York 17, New York

Bradley & Baker, 10 So. Brentwood Blvd., St. Louis 5, Missouri

California Spray Chemical Corp., Lucas and Ortho Way, Richmond, California

Chilean Nitrate Sales Corp., 120 Broadway, New York 5, New York

Colorado Fuel and Iron Corp., Box 1920, Denver, Colorado

Commercial Solvents Corp., 260 Madison Ave., New York, New York

Davey Tree Expert Company, 117 South Water Street, Kent, Ohio

Dixie Fertilizer Company, Inc., Box 1111, Shreveport, Louisiana



FERTILIZER GUARANTORS REGISTERED IN TEXAS, 1956-57 — Continued

- Dow Chemical Company, Midland, Michigan
- E. I. DuPont de Nemours and Company, Box 993,  
Wilmington, Delaware
- Ferro Corporation, 4150 East 56th St., Cleveland,  
Ohio
- Ford Motor Company, Dearborn, Michigan
- Garden Research Laboratory, 699 Madison Ave.,  
New York 21, New York
- Geigy Company, Inc., Saw Mill River Road, Ards-  
ley, New York
- Germain, Inc., 1126 N. 21st Street, Phoenix,  
Arizona
- Goulard and Olena, Inc., Skillman, New Jersey
- Grace Chemical Co., Box 4906, Memphis 7,  
Tennessee
- Grand River Chem. Div. of Deere & Co., 2010 So.  
Utica, Tulsa 4, Oklahoma
- Grant Company, 2735 N. Ashland Avenue, Chicago  
14, Illinois
- Growth Products Co., Pascagoula, Mississippi
- Heinl's Greenhouses, 4401 La Grange Street,  
Toledo, Ohio
- Heller Greenhouse Laboratories, 218 E. Pikes  
Peak Ave., Colorado Springs, Colorado
- A. H. Hoffman, Inc., Landisville, Pennsylvania
- Hydroponic Chemical Company, Inc., Copley, Ohio
- Hy-Gro Corp., 1101 Maryland Ave., Baltimore 1,  
Maryland
- International Minerals & Chemical Corp., Box  
928, Texarkana, Arkansas
- International Minerals & Chem. Corp., Thompson  
Phosphate Div., 20 North Wacker Drive,  
Chicago 6, Illinois
- Kelly, Weber and Company, Inc., Lake Charles,  
Louisiana
- Lake Charles Feed Company, Inc., Lake Charles,  
Louisiana
- Leeds Chemical Products, 112 E. Walton, Chicago,  
Illinois
- Loncala Phosphate Company, Box 338, High  
Springs, Florida
- Nitro-Form Agricultural Chemicals, 92 Sunny-  
side Ave., Woonsocket, R. I.
- Olin Mathieson Chemical Corp., Box 991, Little  
Rock, Arkansas
- Forward House Div. of Olin Mathieson Chem.  
Corp. 745 Fifth St., New York 22, N. Y.
- Mid-South Chemical Corp., 1222 Riverside Blvd.,  
Memphis, Tennessee
- Minden Cotton Oil and Ice Company, Ltd., Min-  
den, Louisiana
- Mississippi Chemical Corp., Yazoo City,  
Mississippi
- Monsanto Chemical Co., 1700 S. Second St., St.  
Louis 4, Missouri
- Na-Churs Plant Food Company, 421 Monroe St.,  
Marion, Ohio
- Natural Plant Food Company, 210 W. California,  
Oklahoma City, Oklahoma
- Naturizer Company, Box 755, Norman, Oklahoma
- Nichols Seed & Fertilizer Co., Box 1296, Okla-  
homa City, Oklahoma
- Nursery Stock Exchange, Box 1235, Coolidge,  
Arizona
- Ouachita Fertilizer & Chemical Co., Box 454,  
Monroe, Louisiana
- Ozark-Mahoning Co., 310 W. Sixth St., Tulsa 1,  
Oklahoma
- Phillips Chemical Company, Bartlesville, Okla-  
homa
- Plantabbs Corporation, 1005 Maryland, Baltimore,  
Maryland
- Proen Products Company, 9th and Grayson,  
Berkeley, California
- Ra-Pid-Gro Corp., 88 Ossian Street, Dansville,  
New York
- Ravel Bros. Inc., Box 462, Albuquerque, New  
Mexico
- Reliance Fertilizer Company, 106 East Bay St.,  
Savannah, Georgia
- Renard Co., 223 Riverdale Ave., Yonkers, New  
York
- Reuther Seed Co., Inc., New Orleans 9, Louisiana
- Robin Jones Phosphate Company, Box 1021,  
Nashville 4, Tennessee
- Ruhm Phosphate & Chemical Co., 813 S. Garden  
Street, Columbia, Tennessee
- Scope Chemicals, 279 Ninth St., Benton Harbor,  
Michigan
- O. M. Scott and Sons Company, Marysville, Ohio
- Sears, Roebuck and Company, 925 So. Homan  
Ave., Chicago 7, Illinois
- Sewerage Commission of the City of Milwaukee,  
Box 2079, Milwaukee 1, Wisconsin
- Shankles Wholesale Bulb Co., Jonesboro, Louisiana
- Shea Chemical Corp., Box 326, Jeffersonville,  
Indiana
- Soil Booster Corp., 2501 East Fourth St., Okla-  
homa City, Oklahoma
- Spencer Chemical Company, 610 Dwight Build-  
ing, Kansas City, Missouri
- Stimuplant Labs., Box 1955, Columbus 16, Ohio



**FERTILIZER GUARANTORS REGISTERED IN TEXAS, 1956-57 — Continued**

Sunshine Plant Food Company, Box 885, Clovis,  
New Mexico

Swift & Company, Plant Food Div., Box 3567,  
Queensboro Station, Shreveport, La.

Tennessee Corp., 619-29 Grant Building, Atlanta,  
Georgia

Tennessee Corp., Lockland, Cincinnati 1, Ohio

U. S. Phosphoric Division, Tennessee Corp, Box  
3269, Tampa, Florida

Victor Chemical Works, 155 N. Wacker Drive,  
Chicago, Illinois

Virginia-Carolina Chemical Corp., Box 3218  
Queensboro Station, Shreveport, La.

Waldo Fertilizer Works, Waldo, Arkansas

Western Agricultural Chem. Company, 102 South  
Victoria Street, Pueblo, Colorado

Western Phosphates, Inc., Box 308, Garfield, Utah



# State-wide Research



The Texas Agricultural Experiment Station is the public agricultural research agency of the State of Texas, and is one of ten parts of the Texas A&M College System

Location of field research units of the Texas Agricultural Experiment Station and cooperating agencies

## ORGANIZATION

IN THE MAIN STATION, with headquarters at College Station, are 16 subject-matter departments, 2 service departments, 3 regulatory services and the administrative staff. Located out in the major agricultural areas of Texas are 21 substations and 9 field laboratories. In addition, there are 14 cooperating stations owned by other agencies. Cooperating agencies include the Texas Forest Service, Game and Fish Commission of Texas, Texas Prison System, U. S. Department of Agriculture, University of Texas, Texas Technological College, Texas College of Arts and Industries and the King Ranch. Some experiments are conducted on farms and ranches and in rural homes.

## OPERATION

THE TEXAS STATION is conducting about 400 active research projects, grouped in 25 programs, which include all phases of agriculture in Texas. Among these are:

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| Conservation and improvement of soil | Beef cattle                     |
| Conservation and use of water        | Dairy cattle                    |
| Grasses and legumes                  | Sheep and goats                 |
| Grain crops                          | Swine                           |
| Cotton and other fiber crops         | Chickens and turkeys            |
| Vegetable crops                      | Animal diseases and parasites   |
| Citrus and other subtropical fruits  | Fish and game                   |
| Fruits and nuts                      | Farm and ranch engineering      |
| Oil seed crops                       | Farm and ranch business         |
| Ornamental plants                    | Marketing agricultural products |
| Brush and weeds                      | Rural home economics            |
| Insects                              | Rural agricultural economics    |
|                                      | Plant diseases                  |

Two additional programs are maintenance and upkeep, and central services.

*Research results are carried to Texas farmers, ranchmen and homemakers by county agents and specialists of the Texas Agricultural Extension Service*

AGRICULTURAL RESEARCH seeks the WHATS, the WHYS, the WHENS, the WHEREs and the HOWS of hundreds of problems which confront operators of farms and ranches, and the many industries depending on or serving agriculture. Workers of the Main Station and the field units of the Texas Agricultural Experiment Station seek diligently to find solutions to these problems.

*Today's Research Is Tomorrow's Progress*