



- Analysis of
- *Commercial Fertilizers*
- Sold during 1960-61

*November 1961*

# DIGEST

This is the 59th annual report of the operation of the Texas fertilizer law and covers the period from September 1, 1960 to August 31, 1961.

Fertilizers and fertilizer materials sold during the fertilizer year beginning July 1, 1960, as reported currently by invoices forwarded by guarantors, amounted to 766,055 tons, which was about 8 percent higher than the tonnage sold during the preceding year. Sales of mixed goods increased 6 percent and sales of materials increased 9 percent. Grades of the 1-2-1 ratio accounted for 58 percent, and the 1-1-1 ratio for 8 percent of the total 301,518 tons of mixed goods sold. Mixed goods made up 39 percent of the total tonnage sold. Nitrogen materials accounted for 58 percent, superphosphates for 11 percent and ammoniated phosphates for 26 percent of the total of 464,537 tons of materials sold.

Analyses are given of 3,297 official samples of fertilizers. Valuations found on analyses are compared with the analyses guaranteed by the registrants.

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# Analysis of Commercial Fertilizers Sold during 1960-61

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THIS IS THE 59TH 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.

## NEW FERTILIZER LAW

The Commercial Fertilizer Control Act of 1961 became effective September 1, 1961. All questions relative to legal fertilizer control in Texas after that date should be referred to:

Reed McDonald, Director  
Feed and Fertilizer Control Service  
The A&M College of Texas  
College Station, Texas

## INSPECTION FEES COLLECTED

Fertilizer inspection fees equivalent to 788,573 tons of fertilizer were collected for fertilizer sold during the Texas fiscal year from September 1, 1960 through August 31, 1961. 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. A detailed financial statement concerning receipts and expenditures of fertilizer inspection and collection fees is given in Table 2.

## TONNAGE SALES

The tonnages 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 3. 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 the date of sale. Detailed reports of sales by counties are given in Progress Reports 2169 (fall sales) and 2200 (spring sales).

Total sales for the year were 8 percent higher than during the preceding year. Sales of mixed goods were 6 percent higher and sales of materials were 9 percent higher than last year. Mixed goods made up 39 percent of the total tonnage. Sales of the 1-2-1 ratio accounted for

58 percent, and of the 1-1-1 ratio, for 8 percent of the total tonnage of mixed goods sold. Combined sales of these two ratios thus accounted for 67 percent of the total tonnage of mixed goods. Sales of the 10-20-10 grade accounted for 66 percent of the 1-2-1 ratio and 39 percent of the tonnage of all mixed goods. East Texas used 37 percent of the mixed goods sold in the State, and half of the 1-2-1 ratio. East Texas, the Gulf Coast and the North Central areas used 70 percent of the mixed goods. Mixed goods accounted for 73 percent of the total sold in East Texas and 42 percent of the total sold in the North Central area.

The total tonnage of materials sold during the year was 54 percent higher than the total of mixed goods; fall sales of materials were more than twice as high as those of mixed goods, while spring sales were 37 percent higher. East Texas used 37 percent of the total ammonium nitrate used in the State, and the Gulf Coast used 32 percent of the ammonium sulfate. West Texas used 51 percent of the total nitrogen materials, 80 percent of the anhydrous ammonia and 73 percent of the total tonnage of nitrogen solutions. Sales of all nitrogen materials increased about 11 percent, with highly significant increases in the tonnages of ammonium nitrate, nitrogen solutions and urea.

The tonnages of the primary fertilizer components sold during the year, calculated from

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 reported sold
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
1948-53 (5-year average)	563,493
1953-54	543,518
1954-55	603,828
1955-56	566,339
1956-57	626,545
1957-58	623,825
1958-59	676,210
1959-60	721,824
<b>FEES COLLECTED</b>	
1960-61	788,573



current reports of sales and from guaranteed analyses, are shown in Table 4. Sales of nitrogen, available phosphoric acid and potash were about twice as great during the spring as during the fall season. Mixed goods provided 15 percent of the total nitrogen, 51 percent of the available phosphoric acid and 95 percent of the potash used in the State. The total tonnage of nitrogen was 87 percent higher than the total tonnage of available phosphoric acid. The tonnage of nitrogen increased by 8 percent and of available phosphoric acid by 10 percent over a year ago.

Geographic regions of Texas differed widely in the amount of primary components used. East Texas used 37 percent of the nitrogen and 39 percent of the available phosphoric acid used in mixed goods. West Texas used 52 percent of the total nitrogen, 59 percent of the materials nitrogen and 31 percent of the materials phosphoric acid used in the State. East Texas and the Gulf Coast used 22 percent of the nitrogen, 43 percent of the available phosphoric acid and 63 percent of the potash used in the State.

### VALUATION PER TON

The old fertilizer law required 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 con-

sidered 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.

	Prices per unit
Nitrogen .....	\$3.00
Available phosphoric acid .....	2.00
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 6-12-6 fertilizer:

Nitrogen .....	6 × \$3.00 = \$18.00
Available phosphoric acid .....	12 × \$2.00 = \$24.00
Soluble potash .....	6 × \$1.00 = \$ 6.00
Guaranteed valuation .....	\$48.00

### ANALYSES GUARANTEED AND FOUND

The analyses of 3,297 individual official samples collected by inspectors and analyzed in

TABLE 2. RECEIPTS AND EXPENDITURES OF FERTILIZER INSPECTION AND COLLECTION FEES FOR THE YEAR ENDING AUGUST 31, 1961

RECEIPTS				
	Balance September 1, 1960			\$ 73,708.21
	Inspection fees			197,143.21
	Collection fees			1,252.39
	Total available			\$272,103.81
	Less balance August 31, 1961			72,006.58
	Total as shown below			\$200,097.23
EXPENDITURES				
Item	Salaries and wages	Other operating expenses	Equipment	Total
Administration of law				
State Chemist—main office	\$ 50,740.89	\$12,762.61	\$ 1,721.25	\$ 65,224.75
Statistical services		3,894.00		3,894.00
Feed Control Service	19,216.00	6,558.11	2,114.82	27,888.93
Total	\$ 69,956.89	\$23,214.72	\$ 3,836.07	\$ 97,007.68
Research to assist in administration of law				
Administration		2,514.70		2,514.70
Agricultural Information Office		3,798.38	40.59	3,838.97
Agronomy	46,310.96	8,691.97	1,074.64	56,077.57
State Chemist	2,400.00			2,400.00
Substation No. 8—Lubbock	3,966.37			3,966.37
Substation No. 9—Trans-Pecos	2,765.46	2,652.04	34.97	5,452.47
Substation No. 12—Chillicothe	321.77	740.23	3,532.00	4,594.00
Substation No. 15—Weslaco	13,017.00	1,909.34	1,004.65	15,930.99
S. W. Great Plains Field Station—Bushland	767.01	1,706.01	2,197.15	4,670.17
F. I. C. A. matching money		3,000.00		3,000.00
Workmen's Compensation Insurance		644.31		644.31
Total	69,548.57	25,656.98	7,884.00	103,089.55
Total expenditures	\$139,505.46	\$48,871.70	\$11,720.07	\$200,097.23



the laboratory of the State Chemist are shown in Table 7 at the end of this bulletin. Where more than five samples of a single product were analyzed, the average of the analyses found were calculated and are shown at the end of each such group. To show the variation among the individual samples within each group, standard deviations were calculated and are expressed as percentages of the averages; these are shown as coefficients of variation after the averages. A small coefficient of variation indicates a uniform product, while a large coefficient shows a wide range among individual analyses. The total valuation found in each sample, expressed as a percentage of the valuation guaranteed, is shown in the last column of Table 7.

Summaries of the individual analyses of the principal grades are shown in Table 5. In every grade, the average valuation found exceeded the

valuation guaranteed. There were a few cases in which the nitrogen found averaged slightly less than the nitrogen guaranteed. Variations among samples were greatest for available phosphoric acid and smallest for nitrogen. The average retail selling prices also are shown, both as averages and as ratios in relation to the valuations guaranteed.

Similar data for individual manufacturers are summarized in Table 6.

## 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 2169 and spring sales in Progress Report 2200. Other publications dealing with the value and use of commercial fertilizers are issued frequently by the Texas

TABLE 3. TONNAGES OF MIXED GOODS AND MATERIALS SOLD IN DIFFERENT REGIONS AND SEASONS, AS REPORTED CURRENTLY BY GUARANTORS

Grade	By regions July 1, 1960 to June 30, 1961						Entire State			
	East Texas	Gulf Coast	North Central	South Texas	West Central	West Texas	July 1 to Dec. 31 1960	Jan. 1 to June 30 1961	Full year	
									Actual	Relative 1960 = 100
<b>MIXED GOODS</b>										
1-2-1 ratio (total)	88321	28442	31031	13355	10600	4123	52730	123142	175872	99
6-12-6	12767	4605	3189	5473	1662	51	4189	23558	27747	85
10-20-10	73380	10905	20441	4172	5538	2163	42315	74284	116599	105
12-24-12	781	11216	985	1548	1243	1558	3924	13407	17331	83
Others	1393	1716	6416	2162	2157	351	2302	11893	14195	101
1-1-1 ratio (total)	13172	8456	1192	1214	515	530	3884	21195	25079	101
8-8-8	10122	1074	272	97	31	108	1091	10613	11704	104
12-12-12	1841	2749	339	67	32	124	873	4279	5152	115
Others	1209	4633	581	1050	452	298	1920	6303	8223	90
O-P-K grades	695	254	174	113	198	999	890	1543	2433	78
1-1-0 ratio	370	950	611	3335	52	300	1235	4383	5618	77
1-2-0 ratio	1056	1126	3520	1524	693	136	3973	4082	8055	91
1-2-2 ratio	4267	2085	323	107	262	39	1232	5851	7083	106
1-4-4 ratio	1451	2567	152	532	430	135	1281	3985	5266	117
2-2-1 ratio	563	2495	2300	3557	864	1030	2513	8296	10809	103
10-20-5	477	98	869	1334	508	1557	1132	3711	4843	53
Turf and garden	691	2914	5209	3435	1367	2975	4415	12176	16591	112
Other grades	703	3509	1289	4340	2388	27640	3567	36302	39869	255
Total mixed goods	111765	52896	46670	32846	17877	39464	76852	224666	301518	106
Relative to 1960	101	98	110	86	122	168	92	113	106	106
<b>MATERIALS</b>										
Nitrogen materials (total)	22064	33395	22301	37185	15933	137376	85886	182368	268254	111
Anhydrous ammonia	2771	2139	2627	8803	6728	93094	39374	76787	116161	104
Ammonium sulfate	2845	20047	7376	13516	3214	15846	18640	44204	62844	96
Ammonium nitrate	14482	722	11560	3737	3517	5240	13292	25966	39258	135
Urea	367	9016	648	2971	489	3039	3470	13060	16530	120
Other solid N	607	816	46	4305	23	246	2210	3833	6043	102
N solutions	992	655	44	3854	1962	19911	8900	18518	27418	172
N-P materials (total)	5206	29878	28704	17053	12384	26668	41525	78368	119893	111
16-20-0	4636	23917	26482	12692	10103	14393	33784	58439	92223	115
Others	570	5961	2222	4361	2281	12275	7741	19929	27670	102
Phosphates (total)	6476	5361	10538	6153	3391	19226	20619	30526	51145	100
Ordinary (0-20-0)	5241	1830	5751	3936	1644	8793	11815	15380	27195	104
Concentrated	1235	3531	4787	2217	1747	10433	8804	15146	23950	96
Rock phosphates	7174	5591	487	522	1	146	6029	7892	13921	98
Potash materials	379	530	189	186	257	1501	509	2533	3042	124
Manures and composts	198	731	1824	2334	81	768	1937	3999	5936	124
Other products	55	118	87	694	3	1390	1020	1327	2347	86
Total materials	41552	75604	64128	64128	32050	187075	157524	307013	464537	109
Relative to 1960	120	89	132	100	138	111	105	112	109	109
<b>ALL FERTILIZERS</b>										
Total tonnage	153317	128500	110798	96974	49927	226539	234376	531679	766055	108
Relative to 1960	106	93	122	95	132	118	100	112	108	108

TABLE 4. TONNAGE OF PRIMARY FERTILIZER COMPONENTS SOLD JULY 1, 1960, TO JUNE 30, 1961, 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, July 1 to December 31, 1960									
East Texas	3067	2647	5714	6065	2130	8195	3135	26	3161
Gulf Coast	1254	3449	4703	2184	3265	5449	1252	59	1311
North Central	1561	5247	6808	2877	5935	8812	1244	28	1272
South Texas	1047	4695	5742	1555	2763	4318	702	87	789
West Central	234	3670	3904	418	2089	2507	174	6	180
West Texas	252	31738	31990	462	1698	2160	285	53	338
Entire State	7415	51446	58861	13562	17880	31442	6792	259	7051
Relative to 1959	90	104	102	90	116	103	94	73	93
SPRING SEASON, January 1 to June 30, 1961									
East Texas	7176	6479	13655	13269	1593	14862	7402	164	7566
Gulf Coast	4142	11891	16033	6959	6538	13497	4172	253	4425
North Central	2647	7189	9836	4513	3697	8210	2141	87	2228
South Texas	2463	12727	15190	3212	3247	6459	1240	24	1264
West Central	1304	6351	7655	2536	1982	4518	1192	65	1257
West Texas	2552	60485	63036	6188	13179	19367	1900	411	2311
Entire State	20284	105121	125405	36677	30236	66913	18047	1004	19051
Relative to 1960	111	116	111	115	112	114	107	133	108
FULL FERTILIZER YEAR, July 1, 1960 to June 30, 1961									
East Texas	10243	9126	19369	19334	3723	23057	10537	190	10727
Gulf Coast	5396	15340	20736	9143	9803	18946	5424	312	5736
North Central	4208	12436	16644	7390	9632	17022	3385	115	3500
South Texas	3510	17422	20932	4767	6010	10777	1942	111	2053
West Central	1538	10021	11559	2954	4071	7025	1366	71	1437
West Texas	2804	92223	95026	6650	14877	21527	2185	464	2649
Entire State	27699	156567	184266	50239	48116	98355	24839	1263	26102
Relative to 1959-60	104	109	108	107	114	110	103	114	104
TOTALS DURING PRECEDING FERTILIZER YEARS									
1959-60	26549	143569	170118	46991	42347	89338	24049	1109	25158
1958-59	26094	121892	147986	47116	38640	85756	24072	1291	25363
1957-58	23177	120345	143522	42294	38772	81066	21870	1602	23472
1956-57	21610	86687	108297	39015	41343	80358	19918	1035	20953
1955-56	21132	65864	86996	38450	38717	77167	19482	608	20090
1954-55	21506	53782	75288	39319	35300	74619	20104	617	20721
1953-54	17822	50917	68739	35352	33541	68893	18435	761	19196
1952-53	16378	42576	58954	34193	39536	73729	18417	739	19156

TABLE 5. AVERAGE ANALYSES OF PRINCIPAL GRADES, WITH SUPPLEMENTARY STATISTICAL DATA

Grade	Number of samples	Nitrogen			Available phosphoric acid			Potash			VF/VG(3) %	S.P.(4) \$	SP/VG
		Average %	S.D.(1) %	C.V.(2)	Average %	S.D. %	C.V.	Average %	S.D. %	C.V.			
Ammonium nitrate	47	33.63	.16	0.5	—	—	—	—	—	—	100.4	82.43	.820
0-46-0	61	—	—	—	46.46	.78	1.7	—	—	—	101.0	77.15	.839
Ammonium sulfate	84	20.99	.16	0.7	—	—	—	—	—	—	100.0	54.37	.863
13-39-0	44	12.83	.75	5.9	39.64	1.01	2.5	—	—	—	100.7	106.26	.908
10-20-10	991	9.95	.59	5.9	20.41	1.00	4.9	10.26	1.10	10.7	101.2	73.25	.916
0-20-0	70	—	—	—	20.30	.44	2.2	—	—	—	101.5	38.24	.956
16-20-0	509	15.61	1.07	6.9	20.59	1.84	9.0	—	—	—	100.0	85.51	.972
12-24-12	149	11.99	.33	2.7	24.59	.89	3.6	12.36	.99	8.0	101.6	94.51	.984
12-12-12	61	11.90	.69	5.8	13.00	1.47	11.3	12.16	.91	7.5	102.6	71.73	.996
10-20-0	92	9.93	.91	9.2	20.55	.95	4.6	—	—	—	101.3	72.30	1.033
5-10-10	18	5.79	.96	16.5	10.73	.84	7.8	10.12	1.36	13.5	108.8	47.61	1.058
10-20-5	30	9.72	.63	6.5	20.11	.61	3.0	5.76	1.16	20.1	100.2	79.73	1.063
13-13-13	47	12.81	.68	5.3	13.71	.73	5.3	13.59	1.34	9.8	101.9	84.81	1.087
6-12-6	342	6.47	.87	13.4	12.53	1.33	10.6	6.54	1.25	19.1	106.3	52.36	1.090
10-10-10	15	9.81	.41	4.2	10.36	.29	2.8	10.59	1.26	11.9	101.2	68.60	1.143
8-8-8	180	8.22	.69	8.3	8.57	.90	10.5	8.49	.93	11.0	104.8	55.34	1.153
5-10-5	8	5.22	.54	10.4	11.31	1.46	12.9	5.57	1.19	21.4	109.6	47.23	1.181

- (1) S.D.: standard deviation.
- (2) C.V.: coefficient of variation or standard deviation as percent of average.
- (3) VF./VG.: valuation found/valuation guaranteed.
- (4) S.P.: selling price.



Agricultural 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 possible distribution 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 have time to study.

TABLE 6. AVERAGE ANALYSES GUARANTEED AND FOUND IN SAMPLES GUARANTEED BY DIFFERENT COMPANIES

Company	Nitrogen			Available phosphoric acid			Potash		
	Number	AG(1) %	AF(2) %	Number	AG %	AF %	Number	AG %	AF %
Ark-Mo Plant Food	16	14.00	13.82	16	22.06	22.51	10	12.70	13.45
Armour, Dallas	146	10.50	10.56	153	18.90	19.38	110	8.54	8.75
Armour, Houston	316	11.71	11.67	314	18.69	19.43	216	8.55	8.70
Best	244	13.50	13.45	229	21.60	22.25	121	10.98	11.55
Campbell	29	9.90	9.80	29	14.62	15.26	25	8.64	9.47
Cap Rock	11	13.27	12.29	13	18.85	18.94	6	6.67	6.50
Central Texas	30	10.77	10.61	31	18.03	18.78	18	7.78	7.91
Coastal Chemical	39	13.92	14.03	39	23.15	23.66	18	12.06	12.74
Consumers	7	8.29	7.94	7	12.14	11.20	7	7.57	8.17
East Texas Products	95	9.41	9.50	94	16.49	16.82	91	9.49	9.38
Farmers	61	12.05	9.59	67	17.25	17.03	53	11.91	9.21
Gilmer	27	8.52	8.56	27	15.11	15.51	27	8.52	9.04
Goodpasture	35	7.83	8.03	32	16.06	16.85	15	9.40	9.53
B. L. Henderson	25	16.24	15.70	25	17.40	18.85	17	11.65	11.82
Hi-Yield	91	9.97	9.89	96	17.51	18.02	77	7.92	8.32
International, Texarkana	261	9.18	9.20	275	17.06	17.42	240	9.10	9.62
International, Fort Worth	157	10.94	10.66	170	18.88	19.27	103	8.32	8.00
Jacksonville	11	11.73	11.70	10	17.60	18.36	10	9.60	9.83
Olin-Mathieson	423	14.32	14.40	393	22.50	23.03	220	12.04	12.63
Pittsburg	42	8.69	8.74	42	14.81	15.64	38	8.47	10.22
Red Star	118	10.95	10.95	131	17.38	17.85	84	8.56	8.71
Smith-Douglass	178	12.56	12.92	187	23.80	24.54	100	11.32	11.95
Swift, Houston	168	10.42	10.34	172	18.33	19.11	144	9.57	9.39
Swift, Shreveport	50	8.98	8.98	50	15.46	16.02	50	9.20	9.64
Texas Farm Products	160	9.57	9.54	169	16.82	17.23	140	9.41	9.68
Tyler	30	11.00	10.77	28	18.50	19.06	25	9.52	10.69
Virginia-Carolina	188	10.12	9.96	198	17.65	18.15	160	9.29	9.51
All companies	3111	11.88	11.81	3091	19.12	19.67	2172	9.55	9.78

<sup>1</sup>AG: average analyses guaranteed.

<sup>2</sup>AF: average analyses found.

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
<b>AGRICULTURAL CHEMICAL OF DALLAS, DALLAS, TEXAS</b>					
Sta Green 10-10-5					
Guaranteed		10.0	10.0	5.0	
1132		9.6	12.9	4.4	107
Hi-D Ammonium Nitrate 33.5					
Guaranteed		33.5	0.0	0.0	
1133		33.5	0.0	0.0	100
<b>ALLIED CHEMICAL, HOPEWELL, VIRGINIA</b>					
Arcadian Golden Uran 32 Solution 32-0-0					
Guaranteed		32.0	0.0	0.0	
555		32.0	0.0	0.0	100
1344		31.0	0.0	0.0	97
2200		32.0	0.0	0.0	100
2467		32.5	0.0	0.0	102
2868		31.4	0.0	0.0	98
3152		32.0	0.0	0.0	100
Mean		31.8	0.0	0.0	
Coef. Var.		1.7	0.0	0.0	
<b>ARKMO FERTILIZER COMPANY, WALNUT RIDGE, ARK.</b>					
Arkmo General Brand 20-20-0					
Guaranteed		20.0	20.0	0.0	
2310		19.2	20.0	0.0	98
Arkmo General Brand 12-12-12					
Guaranteed		12.0	12.0	12.0	
832		12.3	12.7	12.1	103
Sul Phos Brand 13-13-13					
Guaranteed		13.0	13.0	13.0	
2311		13.3	12.9	14.7	103
Arkmo General Brand 15-15-15					
Guaranteed		15.0	15.0	15.0	
834		15.0	15.3	15.7	101
Sul Phos 12-24-12					
Guaranteed		12.0	24.0	12.0	
1415		11.6	24.4	14.0	102
Arkmo General Brand 16-20-0					
Guaranteed		16.0	20.0	0.0	
2308		16.4	19.7	0.0	101
2902		16.1	20.0	0.0	100
3224		16.1	21.5	0.0	104
Arkmo General Brand 13-39-0					
Guaranteed		13.0	39.0	0.0	
1416		13.0	40.8	0.0	103
Arkmo General Brand 10-20-10					
Guaranteed		10.0	20.0	10.0	
1417		10.2	20.0	10.6	102
2901		10.4	20.0	11.8	104
3225		10.0	20.0	10.0	100
Sul Phos Brand 16-20-0					
Guaranteed		16.0	20.0	0.0	
833		16.0	20.1	0.0	100
Arkmo General Brand 15-30-15					
Guaranteed		15.0	30.0	15.0	
1418		13.4	32.8	15.0	101
1447		13.6	30.9	15.3	98
2309		14.5	29.0	15.3	97
<b>ARMOUR AGRICULTURAL CHEMICAL CO., DALLAS, TEXAS</b>					
Armour Pebble Plant Food 0-20-10					
Guaranteed		0.0	20.0	10.0	
163		0.0	20.8	9.4	102
Armour Pebble Plant Food 15-15-0					
Guaranteed		15.0	15.0	0.0	
1381		15.5	15.0	0.0	102

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
<b>Armour Pebble Plant Food 8-8-8</b>					
Guaranteed		8.0	8.0	8.0	
182		8.5	9.6	8.8	112
866		8.1	8.7	8.7	105
935		8.1	8.6	8.1	103
1071		8.3	8.6	8.7	106
1217		8.0	8.0	8.0	100
1230		8.6	8.0	8.0	104
1500		8.3	8.0	8.2	102
2053		8.1	8.0	8.5	101
2056		7.5	8.0	8.7	98
2337		8.3	8.0	8.8	104
2368		8.0	8.7	8.2	103
2481		8.4	8.2	8.5	104
2516		8.0	9.0	8.5	105
2558		8.0	8.0	8.9	101
2600		8.0	8.5	9.0	104
2745		8.0	8.5	8.2	103
Mean		8.1	8.4	8.5	
Coef. Var.		3.0	5.5	3.7	
<b>Armour Pebble Plant Food 10-10-10</b>					
Guaranteed		10.0	10.0	10.0	
2342		8.6	10.1	15.0	102
<b>Armour Pebble Plant Food 10-20-0</b>					
Guaranteed		10.0	20.0	0.0	
1497		10.2	20.5	0.0	102
1843		10.2	20.6	0.0	103
2132		10.0	20.4	0.0	101
<b>Armour Pebble Plant Food 10-20-10</b>					
Guaranteed		10.0	20.0	10.0	
725		9.4	20.8	10.2	100
1167		10.4	22.2	8.3	105
1857		9.4	20.3	11.0	100
1890		9.1	21.1	10.2	100
2559		10.0	20.6	8.5	100
2841		9.7	20.1	10.0	99
Mean		9.7	20.9	9.7	
Coef. Var.		4.9	3.6	11.0	
<b>Armour Pebble Plant Food 5-10-10</b>					
Guaranteed		5.0	10.0	10.0	
2057		5.9	10.1	10.0	106
2512		6.0	10.3	10.3	109
2746		5.7	10.8	10.0	108
<b>Armour Pebble Plant Food 16-20-0</b>					
Guaranteed		16.0	20.0	0.0	
395		16.1	22.0	0.0	105
495		15.8	21.6	0.0	103
600		16.0	20.2	0.0	100
768		15.4	20.4	0.0	99
1488		15.1	20.1	0.0	97
1507		15.1	21.3	0.0	100
1515		15.5	20.2	0.0	99
1643		15.1	20.9	0.0	99
2015		15.0	21.1	0.0	99
2127		15.4	20.1	0.0	98
2130		15.4	20.2	0.0	98
2344		16.1	20.0	0.0	100
2388		14.7	20.2	0.0	96
2525		15.3	19.8	0.0	97
2682		15.4	21.0	0.0	100
2895		15.0	20.2	0.0	98
2951		16.0	21.1	0.0	103
Mean		15.4	20.6	0.0	
Coef. Var.		2.7	3.1	0.0	
<b>Armour Pebble Plant Food 16-48-0</b>					
Guaranteed		16.0	48.0	0.0	
31		16.0	48.0	0.0	100
1444		15.1	46.0	0.0	95

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
Armour Pebble Plant Food 13-39-0							2480	6.3	12.0	6.2	102
Guaranteed		13.0	39.0	0.0		2517	6.6	11.8	5.6	102	
427		13.0	39.0	0.0	100	2592	6.4	12.0	6.4	103	
434		12.0	37.7	0.0	96	2601	6.0	12.8	6.5	104	
1443		12.5	39.0	0.0	99	2747	5.4	12.0	6.0	96	
1508		13.9	39.1	0.0	102	2953	7.0	12.4	6.3	109	
2345		13.1	39.7	0.0	101	Mean	6.6	12.5	6.2		
Mean		12.9	38.9	0.0		Coef. Var.	9.5	4.9	8.1		
Coef. Var.		5.5	1.9	0.0		Armour Old Black Joe Fertilizer 10-20-10					
Armour Pebble Plant Food 0-20-0						Guaranteed	10.0	20.0	10.0		
Guaranteed		0.0	20.0	0.0		2	9.5	20.8	11.0	102	
492		0.0	20.6	0.0	103	20	9.8	20.8	10.4	102	
738		0.0	20.0	0.0	100	54	10.5	20.4	10.0	103	
1383		0.0	20.0	0.0	100	89	10.2	20.4	10.0	102	
1858		0.0	20.1	0.0	100	152	10.0	21.3	10.0	104	
Armour Pebble Plant Food 0-46-0						174	9.8	21.7	10.0	104	
Guaranteed		0.0	46.0	0.0		179	9.4	21.9	9.0	102	
433		0.0	46.0	0.0	100	245	9.7	20.5	10.2	101	
450		0.0	47.1	0.0	103	306	10.1	20.0	10.0	101	
754		0.0	46.0	0.0	100	310	10.1	20.2	10.4	102	
1442		0.0	44.3	0.0	96	325	10.1	20.4	10.0	102	
2390		0.0	46.0	0.0	100	435	10.2	20.4	10.4	103	
2527		0.0	45.7	0.0	99	465	9.8	20.9	10.0	102	
2809		0.0	47.2	0.0	102	567	10.0	20.0	10.0	100	
Mean		0.0	46.0	0.0		606	10.1	20.6	10.4	102	
Coef. Var.		0.0	2.1	0.0		718	10.8	20.1	10.5	104	
Armour Vertagreen Plant Food 8-8-8						731	9.8	21.3	10.0	103	
Guaranteed		8.0	8.0	8.0		864	9.5	21.0	8.9	99	
1074		8.3	8.6	8.3	105	919	10.5	20.3	9.0	101	
Armour Vertagreen Plant Food 5-10-5						934	10.4	20.6	8.8	102	
Guaranteed		5.0	10.0	5.0		1070	10.7	20.4	8.4	102	
1696		5.2	10.1	5.0	101	1216	10.4	20.0	7.8	99	
Armour Vertagreen Plant Food 10-20-10						1229	10.0	20.0	9.8	100	
Guaranteed		10.0	20.0	10.0		1261	10.4	20.3	9.2	101	
1897		10.6	20.2	9.8	103	1398	10.8	20.0	9.3	102	
Armour Vertagreen Plant Food Commercial 7-14-7						1490	10.1	20.6	7.5	99	
Guaranteed		7.0	14.0	7.0		1498	10.5	20.0	9.2	101	
795		6.9	14.5	7.0	101	1603	10.0	20.1	9.5	100	
1218		7.9	14.0	7.0	105	1629	9.7	21.2	9.8	102	
1281		7.2	16.0	7.0	108	1642	10.0	20.2	9.3	100	
Armour Old Black Joe Fertilizer 10-20-0						1842	10.3	20.2	9.5	101	
Guaranteed		10.0	20.0	0.0		2026	10.1	20.2	10.4	101	
376		9.5	21.3	0.0	102	2055	9.0	20.1	10.5	97	
Armour Old Black Joe Fertilizer 6-12-6						2073	9.7	20.1	10.2	99	
Guaranteed		6.0	12.0	6.0		2339	10.0	20.0	10.1	100	
431		7.4	14.3	4.3	115	2369	9.4	20.1	10.9	99	
769		7.6	13.6	6.3	117	2426	9.5	20.7	10.6	101	
796		6.4	13.1	6.0	107	2515	9.6	20.6	10.9	101	
867		6.7	12.7	6.2	108	2576	9.6	20.0	10.3	99	
920		6.5	12.0	7.4	106	2591	9.8	20.3	10.3	100	
1072		6.5	12.6	6.0	106	2599	9.7	20.8	10.8	102	
1088		6.1	14.0	6.2	109	2738	9.6	19.2	11.2	98	
1231		6.5	12.1	6.0	104	2945	9.6	20.6	10.4	100	
1262		6.5	12.7	6.1	106	2952	10.0	20.0	10.2	100	
1382		6.4	12.8	6.0	106	Mean	10.0	20.4	9.9		
1399		6.8	12.8	6.0	108	Coef. Var.	3.9	2.4	8.0		
1489		6.0	12.4	6.4	103	Armour Ammonium Nitrate Fertilizer 33.5-0-0					
1499		6.2	12.0	6.1	101	Guaranteed	33.5	0.0	0.0		
1516		6.8	12.1	6.1	106	558	33.8	0.0	0.0	101	
1592		6.7	12.5	6.8	108	739	33.5	0.0	0.0	100	
1686		6.3	12.0	6.0	101	846	33.9	0.0	0.0	101	
2027		8.8	12.4	5.8	119	1560	33.5	0.0	0.0	100	
2072		7.3	12.4	6.2	110	1641	33.6	0.0	0.0	100	
2164		6.5	12.0	6.3	104	Mean	33.7	0.0	0.0		
2194		6.6	12.1	6.0	104	Coef. Var.	0.5	0.0	0.0		
2338		6.2	12.0	6.7	103	Armour Blend Fertilizer 10-20-0					
2343		6.1	12.2	6.6	103	Guaranteed	10.0	20.0	0.0		
						162	9.3	23.0	0.0	106	
						432	10.6	19.3	0.0	101	
						496	11.3	21.6	0.0	110	



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Armour Blend Fertilizer 10-20-10							74	10.1	23.5	7.6	106
Guaranteed	10.0	20.0	10.0			221	9.5	20.9	10.8	102	
131	9.5	21.3	10.2	102		288	10.2	19.0	10.4	99	
161	9.8	22.5	10.0	106		293	9.5	24.0	8.2	106	
175	8.8	23.1	13.0	107		343	10.3	19.4	10.8	101	
180	8.2	24.1	10.8	105		399	9.6	20.8	10.0	101	
246	9.2	15.7	18.4	97		442	10.0	20.0	10.8	101	
Mean	9.1	21.3	12.5			458	9.7	22.0	10.0	104	
Coef. Var.	6.9	15.5	28.2			511	10.1	18.8	10.8	98	
ARMOUR AGRICULTURAL CHEMICAL CO., HOUSTON, TEX.						541	9.3	21.5	9.2	100	
Armour Pebble Plant Food 0-16-8						544	9.5	20.6	10.0	100	
Guaranteed	0.0	16.0	8.0			656	10.2	20.6	10.6	103	
204	0.0	21.0	7.0	123		701	10.0	20.1	10.4	101	
406	0.0	16.2	8.0	101		845	9.3	23.0	10.0	105	
585	0.0	15.0	7.6	94		953	9.7	21.3	10.0	102	
Armour Pebble Plant Food 15-15-0						974	10.0	19.3	10.4	99	
Guaranteed	15.0	0.0				993	9.9	20.2	10.4	101	
556	14.5	15.3	0.0	99		1006	10.0	19.0	10.8	99	
1146	12.7	16.6	0.0	95		1033	9.6	20.0	10.0	99	
1243	13.1	15.0	0.0	92		1058	10.0	21.1	9.7	102	
Armour Pebble Plant Food 8-8-8						1059	10.0	20.6	10.0	102	
Guaranteed	8.0	8.0	8.0			1125	9.6	22.4	9.7	104	
910	8.1	9.2	9.6	109		1150	9.7	20.2	10.0	99	
1034	8.0	8.7	8.4	104		1181	10.0	21.1	9.6	102	
1179	7.5	9.9	8.2	105		1187	10.2	20.6	10.0	102	
1195	8.0	9.5	8.2	107		1193	10.0	20.1	10.6	101	
1245	8.1	8.8	8.4	105		1238	10.1	20.0	9.5	100	
1549	7.6	10.5	8.0	108		1246	11.8	20.0	10.5	107	
1577	7.6	8.1	8.5	99		1332	9.7	20.6	10.0	100	
1661	8.0	8.3	8.8	103		1569	10.1	20.0	11.3	102	
1920	7.5	8.2	8.7	99		1578	9.5	20.2	10.0	99	
2106	8.4	8.2	8.0	103		1660	10.0	20.8	10.5	103	
2294	8.3	8.9	8.3	106		1741	10.0	21.0	9.4	102	
Mean	7.9	8.9	8.5			1769	10.0	20.0	10.0	100	
Coef. Var.	4.0	8.7	5.3			1927	10.0	20.7	9.7	101	
Armour Pebble Plant Food 12-12-12						1930	10.0	20.1	10.0	100	
Guaranteed	12.0	12.0	12.0			1938	9.8	20.5	9.3	100	
225	11.7	12.4	12.8	101		1950	10.0	20.1	10.1	100	
911	11.6	13.8	14.0	106		1968	9.8	20.8	10.5	102	
963	12.0	11.6	12.4	99		2003	10.5	20.0	8.7	100	
1662	12.0	10.8	12.0	97		2175	10.3	20.3	11.3	104	
1757	12.1	12.0	12.8	102		2279	9.8	20.0	9.1	98	
1937	12.2	12.0	11.5	100		2348	10.2	20.3	10.0	102	
1952	12.0	12.6	12.1	102		2627	10.1	21.0	10.7	104	
2562	11.6	15.6	12.2	109		2644	9.3	21.7	10.0	102	
3251	11.7	12.5	11.3	99		2719	9.0	20.7	9.4	97	
Mean	11.9	12.6	12.3			2722	10.3	20.3	8.8	100	
Coef. Var.	1.9	11.0	6.5			2752	9.6	20.5	9.1	99	
Armour Pebble Plant Food 10-20-0						2754	10.1	20.0	8.4	98	
Guaranteed	10.0	20.0	0.0			3072	9.2	20.0	8.9	96	
370	10.0	20.0	0.0	100		Mean	9.9	20.6	9.9		
423	8.5	21.7	0.0	99		Coef. Var.	4.2	4.9	7.6		
579	9.8	21.4	0.0	103		Armour Pebble Plant Food 12-24-12					
615	8.8	20.9	0.0	97		Guaranteed	12.0	24.0	12.0		
906	10.0	20.8	0.0	102		223	11.7	25.5	12.0	102	
909	9.0	21.6	0.0	100		1145	11.7	24.3	10.6	98	
1004	9.3	20.9	0.0	100		1546	11.2	24.4	10.0	96	
1540	9.6	20.2	0.0	99		1821	12.1	23.6	11.5	99	
1748	9.1	21.1	0.0	99		2323	11.6	24.1	11.2	98	
1756	9.6	23.2	0.0	107		2383	12.1	24.3	12.1	101	
1768	10.0	20.0	0.0	100		3025	11.7	26.4	12.0	104	
2315	9.0	21.3	0.0	99		3029	11.8	24.5	12.0	100	
3272	11.5	20.0	0.0	106		3176	11.8	24.7	12.9	102	
Mean	9.6	21.0	0.0			3240	11.5	24.7	10.9	99	
Coef. Var.	8.0	4.3	0.0			Mean	11.7	24.7	11.5		
Armour Pebble Plant Food 10-20-10						Coef. Var.	2.3	3.2	7.4		
Guaranteed	10.0	20.0	10.0			Armour Pebble Plant Food 10-20-20					
34	9.5	21.3	10.0	102		Guaranteed	10.0	20.0	20.0		
						657	10.1	20.6	19.3	101	
						2387	9.8	21.1	20.0	102	

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Armour Pebble Plant Food 10-20-20	3026	10.0	24.0	19.3	108		3084	16.1	48.1	0.0	101
	3123	9.7	20.0	20.0	99		3239	16.1	49.3	0.0	102
	3166	10.0	20.7	19.0	100		3252	15.5	48.6	0.0	100
	Mean	9.9	21.3	19.5			Mean	16.0	48.7	0.0	
	Coef. Var.	1.4	7.4	2.3			Coef. Var.	1.7	0.9	0.0	
Armour Pebble Plant Food 5-20-20	Guaranteed	5.0	20.0	20.0		Armour Pebble Plant Food 8-32-0	Guaranteed	8.0	32.0	0.0	
	2730	5.0	20.9	19.2	101	557	6.7	33.3	0.0	98	
Armour Pebble Plant Food 16-20-0	Guaranteed	16.0	20.0	0.0		Armour Pebble Plant Food 13-39-0	Guaranteed	13.0	39.0	0.0	
	19	16.2	20.8	0.0	103	545	12.4	39.2	0.0	99	
	75	14.4	27.5	0.0	112	1283	13.4	40.2	0.0	103	
	199	16.4	19.0	0.0	99	3195	12.7	39.7	0.0	101	
	222	16.3	18.3	0.0	98	Armour Pebble Plant Food 0-20-0	Guaranteed	0.0	20.0	0.0	
	227	15.8	23.1	0.0	107	76	0.0	20.4	0.0	102	
	361	15.0	23.1	0.0	104	140	0.0	20.4	0.0	102	
	424	15.2	20.2	0.0	98	224	0.0	20.6	0.0	103	
	516	15.7	23.7	0.0	108	446	0.0	20.0	0.0	100	
	546	16.0	20.5	0.0	101	532	0.0	20.4	0.0	102	
	700	16.1	31.3	0.0	126	576	0.0	20.1	0.0	101	
	962	16.0	20.6	0.0	101	578	0.0	20.3	0.0	101	
	991	15.4	23.8	0.0	107	586	0.0	20.6	0.0	103	
	1118	16.0	21.1	0.0	103	Mean	0.0	20.4	0.0		
	1140	16.0	20.4	0.0	101	Coef. Var.	0.0	1.0	0.0		
	1144	16.0	20.4	0.0	101	Armour Pebble Plant Food 0-46-0	Guaranteed	0.0	46.0	0.0	
	1180	16.0	20.4	0.0	101	33	0.0	46.6	0.0	103	
	1184	16.0	20.3	0.0	101	205	0.0	46.0	0.0	100	
	1188	16.0	22.7	0.0	106	292	0.0	46.2	0.0	101	
	1194	15.7	21.6	0.0	103	398	0.0	46.2	0.0	101	
	1242	15.0	20.0	0.0	97	510	0.0	46.5	0.0	102	
	1465	15.2	20.7	0.0	99	531	0.0	46.0	0.0	100	
	1747	16.0	20.2	0.0	100	577	0.0	47.4	0.0	103	
	1763	15.6	20.1	0.0	99	664	0.0	46.2	0.0	100	
	1767	15.6	20.3	0.0	99	880	0.0	46.2	0.0	100	
	1820	14.7	27.3	0.0	112	905	0.0	48.0	0.0	104	
	1827	15.5	20.1	0.0	99	1147	0.0	46.0	0.0	100	
1839	16.4	20.2	0.0	102	1492	0.0	46.0	0.0	100		
1951	14.3	20.1	0.0	94	3132	0.0	46.6	0.0	101		
1967	15.7	20.8	0.0	101	Mean	0.0	46.5	0.0			
2021	16.2	20.9	0.0	103	Coef. Var.	0.0	1.3	0.0			
2088	15.6	20.3	0.0	99	Armour Vertagreen Plant Food 8-8-8	Guaranteed	8.0	8.0	8.0		
2105	16.0	20.4	0.0	101	1240	8.5	8.1	9.3	106		
2172	16.0	22.0	0.0	105	1478	8.3	8.3	8.8	105		
2278	16.0	21.2	0.0	103	1932	8.0	8.4	8.4	103		
2283	16.6	20.2	0.0	103	2314	8.0	8.5	8.4	103		
2386	16.3	21.4	0.0	104	Armour Vertagreen Plant Food 6-12-6	Guaranteed	6.0	12.0	6.0		
2437	16.3	20.0	0.0	101	1142	6.4	12.4	6.7	106		
2567	15.3	24.0	0.0	107	1948	6.1	12.5	6.3	103		
2624	15.5	20.0	0.0	98	2316	6.0	11.8	6.0	99		
2626	15.4	20.9	0.0	100	3145	6.2	12.3	6.8	104		
2654	14.8	26.0	0.0	110	Armour Vertagreen Plant Food 7-14-7	Guaranteed	7.0	14.0	7.0		
2720	16.5	20.0	0.0	102	2577	6.7	15.4	7.2	104		
2721	16.0	20.0	0.0	100	Armour Vertagreen Plant Food 10-20-10	Guaranteed	10.0	20.0	10.0		
2753	15.2	20.0	0.0	97	517	9.2	22.4	10.0	103		
2877	16.1	20.0	0.0	100	828	10.0	20.6	11.7	104		
2917	15.6	21.1	0.0	101	994	10.0	20.0	10.5	101		
3048	15.0	20.3	0.0	97	1141	10.0	21.7	10.3	105		
3150	16.6	20.6	0.0	103	1313	9.7	20.6	10.2	101		
3256	16.8	20.7	0.0	104	1749	10.0	20.0	10.4	100		
Mean	15.8	21.4	0.0		1760	10.0	20.2	10.2	101		
Coef. Var.	3.6	11.1	0.0		2140	9.5	21.7	9.4	102		
Armour Pebble Plant Food 11-48-0	Guaranteed	11.0	48.0	0.0							
	2908	11.0	48.5	0.0	101						
Armour Pebble Plant Food 16-48-0	Guaranteed	16.0	48.0	0.0							
	2860	16.1	48.7	0.0	101						
	2872	16.0	48.9	0.0	101						



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Armour Vertagreen Plant Food 10-20-10	2239	9.4	21.0	9.4	100	702	5.7	12.2	6.4	100	
	2878	9.8	20.6	9.5	100		878	6.0	12.3	7.0	103
	Mean	9.8	20.9	10.2			907	5.5	12.9	6.6	102
	Coef. Var.	3.1	3.9	6.7			964	6.0	12.8	6.0	103
							972	6.1	12.0	6.0	100
Armour Vertagreen Plant Food 5-20-20	Guaranteed	5.0	20.0	20.0		973	6.1	12.4	6.2	103	
	1658	5.3	20.1	19.6	101	992	6.1	12.1	6.0	101	
						1007	6.4	12.7	6.3	106	
						1035	6.2	12.0	6.3	101	
Armour Vertagreen West Texas Special 16-8-8	Guaranteed	16.0	8.0	8.0		1060	6.2	12.1	6.4	103	
	2380	16.8	7.5	8.0	102	1091	6.0	13.0	6.0	104	
						1108	6.0	13.5	6.5	107	
Armour Vertagreen Plant Food 10-10-5	Guaranteed	10.0	10.0	5.0		1124	6.0	13.1	6.4	105	
	1537	10.1	10.6	5.3	103	1143	6.0	12.6	6.4	103	
						1151	6.7	12.9	6.5	109	
						1182	5.6	13.1	5.7	101	
Armour Vertagreen Plant Food 12-12-6	Guaranteed	12.0	12.0	6.0		1183	6.0	12.6	6.0	103	
	226	11.0	14.0	6.5	103	1196	6.0	12.3	6.0	101	
	826	12.0	12.3	6.7	102	1239	7.0	13.0	6.0	110	
	1333	12.0	12.0	7.0	102	1244	6.3	12.9	6.3	106	
	1467	12.0	13.6	7.1	107	1247	6.0	12.0	6.3	100	
	1479	11.4	12.6	6.9	100	1451	6.1	12.2	6.5	103	
	1539	12.0	12.6	6.3	102	1477	6.8	12.1	6.0	105	
	1545	12.0	12.0	6.0	100	1538	6.0	12.1	6.5	101	
	2346	12.1	12.4	6.7	103	1550	6.0	12.0	6.3	100	
	2956	12.0	12.6	6.6	103	1561	6.5	12.1	6.0	104	
	Mean	11.8	12.7	6.6		1568	6.0	12.1	6.3	101	
	Coef. Var.	3.2	5.4	5.2		1576	6.0	12.1	6.4	101	
						1659	6.1	12.0	6.3	101	
						1740	5.9	12.5	6.0	101	
Armour Vertagreen Plant Food 6-24-12	Guaranteed	6.0	24.0	12.0		1750	6.2	13.0	6.1	106	
	2541	6.0	24.7	12.0	102	1759	6.0	12.8	6.2	104	
	2775	5.6	24.8	11.7	100	1762	5.8	12.5	6.0	100	
						1772	6.4	12.1	6.3	104	
Armour Vertagreen Plant Food 20-20-5	Guaranteed	20.0	20.0	5.0		1824	6.0	12.9	6.0	104	
	2201	19.3	20.5	5.5	99	1916	6.3	12.2	8.2	107	
						1921	6.2	12.6	6.5	105	
						1929	6.0	12.9	5.8	103	
Armour Vertagreen Plant Food 5-10-5	Guaranteed	5.0	10.0	5.0		1939	6.0	12.5	6.7	104	
	872	5.2	11.0	5.9	109	1953	6.4	12.6	8.8	111	
	971	5.2	10.4	5.4	105	2100	5.8	12.8	6.8	104	
	1758	5.0	11.1	5.6	107	2108	6.5	13.2	6.0	108	
	2731	5.0	10.9	5.0	105	2141	6.0	12.2	6.0	101	
						2147	6.0	12.1	6.4	101	
						2176	6.1	12.0	6.3	101	
Armour Vertagreen Plant Food Commercial 6-12-6	Guaranteed	6.0	12.0	6.0		2223	6.0	12.1	6.0	100	
	1312	6.0	12.2	6.2	101	2293	6.4	12.8	6.4	107	
	1315	6.0	12.0	5.8	100	2313	5.9	12.0	6.0	99	
	1969	6.0	12.6	6.0	103	2317	6.0	12.1	6.3	101	
	2879	6.2	14.1	6.2	110	2347	6.0	11.8	6.7	100	
						2542	6.1	11.8	6.4	100	
Armour Vertagreen Plant Food Commercial 10-20-10	Guaranteed	10.0	20.0	10.0		2625	6.2	11.9	5.7	100	
	2269	10.0	20.0	10.2	100	2643	6.2	12.1	6.3	102	
						2698	6.0	14.5	5.6	110	
						2705	7.1	12.3	6.0	108	
Armour Vertagreen Plant Food Commercial 10-10-5	Guaranteed	10.0	10.0	5.0		2780	5.9	12.2	6.0	100	
	1316	10.1	10.3	5.9	103	2827	6.7	12.0	6.3	105	
						2837	5.8	12.1	6.0	99	
Armour Vertagreen Plant Food Commercial 6-24-12	Guaranteed	6.0	24.0	12.0		2907	6.0	12.3	7.8	105	
	1931	6.3	23.7	11.4	100	2916	6.5	12.9	6.0	107	
	3196	5.4	24.6	11.0	98	3028	6.1	12.3	6.1	102	
						3146	6.2	14.7	5.6	112	
Armour Vertagreen Plant Food Commercial 15-15-5	Guaranteed	15.0	15.0	5.0		3149	6.0	11.8	5.6	98	
	827	14.3	17.0	5.3	103	Mean	6.2	12.5	6.4		
	1403	15.0	15.2	5.3	101	Coef. Var.	15.3	4.4	13.1		
Armour Old Black Joe Fertilizer 6-12-6	Guaranteed	6.0	12.0	6.0		Armour Ammonium Nitrate 33.5-0-0					
	289	5.7	12.3	6.6	101	Guaranteed	33.5	0.0	0.0		
	530	6.0	12.9	5.6	103	106	33.5	0.0	0.0	100	
	629	5.4	12.1	6.6	98	142	33.7	0.0	0.0	100	
						580	33.6	0.0	0.0	100	
					587	33.8	0.0	0.0	101		

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
<b>Armour Ammonium Nitrate 33.5-0-0</b>	625	33.7	0.0	0.0	101
	687	33.5	0.0	0.0	100
	815	33.5	0.0	0.0	100
	1111	33.5	0.0	0.0	100
	1131	33.5	0.0	0.0	100
	1464	33.7	0.0	0.0	101
	1900	33.5	0.0	0.0	100
	1928	33.5	0.0	0.0	100
	2022	33.7	0.0	0.0	101
	3134	33.6	0.0	0.0	100
Mean		33.6	0.0	0.0	
Coef. Var.		0.3	0.0	0.0	
<b>Armour Ammonium Sulfate 21-0-0</b>	Guaranteed	21.0	0.0	0.0	
	879	21.0	0.0	0.0	100
	908	21.0	0.0	0.0	100
	1185	21.0	0.0	0.0	100
	1949	21.0	0.0	0.0	100
	2436	21.0	0.0	0.0	100
	2573	21.0	0.0	0.0	100
	2861	21.0	0.0	0.0	100
	2904	21.0	0.0	0.0	100
	2999	21.0	0.0	0.0	100
	3085	21.0	0.0	0.0	100
Mean		21.0	0.0	0.0	
Coef. Var.		0.0	0.0	0.0	
<b>Armour Blend Fertilizer 10-20-10</b>	Guaranteed	10.0	20.0	10.0	
	1575	11.5	14.8	10.6	93
	1663	10.4	20.3	8.0	100
	1936	10.1	20.0	9.8	100
	2107	8.0	20.6	7.0	90
	2222	10.5	20.6	11.1	105
	2353	8.4	23.8	9.0	102
	2452	12.5	20.0	10.5	110
Mean		10.2	20.0	9.4	
Coef. Var.		15.6	13.3	15.9	
<b>Armour Big Crop Fertilizer 21-0-0</b>	Guaranteed	21.0	0.0	0.0	
	1241	21.0	0.0	0.0	100
<b>Armour Blend Fertilizer 16-20-0</b>	Guaranteed	16.0	20.0	0.0	
	1450	16.0	20.3	0.0	101
	2174	14.7	22.8	0.0	102
<b>Armour Vertagreen Rice Special 6-24-12</b>	Guaranteed	6.0	24.0	12.0	
	690	6.0	24.0	12.0	100
	2998	6.3	24.5	11.8	102
<b>Armour Vertagreen For Citrus 15-15-5</b>	Guaranteed	15.0	15.0	5.0	
	1314	14.7	15.1	5.5	100
	3215	15.3	15.6	5.6	103
<b>Armour Urea 45-0-0</b>	Guaranteed	45.0	0.0	0.0	
	3167	45.3	0.0	0.0	101
<b>BACTEX FERTILIZER, INC., SAN ANTONIO, TEXAS</b>					
<b>Robinhood Fertilizer 6-12-6</b>	Guaranteed	6.0	12.0	6.0	
	922	4.3	0.0	0.0	27
	1536	3.7	0.0	0.0	23
<b>Robinhood Fertilizer 16-20-0</b>	Guaranteed	16.0	20.0	0.0	
	921	5.4	0.0	0.0	18
	1535	4.9	0.0	0.0	17
<b>BENNETT CHEMICAL CO., DENVER, COLORADO</b>					
<b>Benco Vit-El-Izer 14-0-0</b>	Guaranteed	14.0	0.0	0.0	
	2867	15.0	0.0	0.0	107
<b>BEST FERTILIZER COMPANY, HOUSTON, TEXAS</b>					
<b>Best Brand Fertilizer 0-20-10</b>	Guaranteed	0.0	20.0	10.0	
	2498	0.0	20.0	11.1	102
<b>Best Brand Fertilizer 0-36-12</b>	Guaranteed	0.0	36.0	12.0	
	2961	0.0	37.3	13.0	104
<b>Best Brand Fertilizer 15-15-0</b>	Guaranteed	15.0	15.0	0.0	
	762	15.0	17.3	0.0	106
<b>Best Brand Fertilizer 8-8-8</b>	Guaranteed	8.0	8.0	8.0	
	1753	7.6	8.0	9.5	100
	1985	8.8	8.3	7.8	106
	2096	7.7	8.4	9.7	103
	2499	9.5	9.7	8.6	118
	2714	8.2	8.0	8.0	101
Mean		8.4	8.5	8.7	
Coef. Var.		9.5	8.3	9.8	
<b>Best Brand Fertilizer 12-12-12</b>	Guaranteed	12.0	12.0	12.0	
	559	12.1	11.4	13.3	100
	914	12.0	14.0	13.2	107
	1672	12.0	12.4	12.6	102
	1733	12.7	12.0	11.7	103
	1752	11.5	12.4	15.0	103
	1983	12.6	19.9	12.4	94
	2012	13.5	12.4	12.4	108
	2101	12.0	12.0	15.3	105
	2202	12.5	13.2	13.3	107
	2221	12.2	12.5	11.3	101
Mean		12.3	13.2	13.1	
Coef. Var.		4.4	18.5	9.9	
<b>Best Brand Fertilizer 13-13-13</b>	Guaranteed	13.0	13.0	13.0	
	1327	13.2	14.4	12.5	104
	1358	10.2	13.3	10.4	87
	1955	12.4	13.2	13.2	98
	2285	12.7	13.3	10.7	97
	2978	12.7	14.2	14.2	103
Mean		12.2	13.7	12.2	
Coef. Var.		9.6	4.1	13.3	
<b>Best Brand Fertilizer 10-20-0</b>	Guaranteed	10.0	20.0	0.0	
	6	11.2	20.0	0.0	105
	65	10.0	21.3	0.0	104
	116	9.6	23.0	0.0	107
	129	10.8	18.4	0.0	99
	198	9.6	22.9	0.0	107
	232	12.3	16.6	0.0	100
	397	10.0	23.5	0.0	110
	759	10.6	20.7	0.0	105
	1020	11.2	20.0	0.0	105
	1374	10.0	20.9	0.0	103
	1456	9.3	20.7	0.0	99
	1496	7.8	20.1	0.0	91
	1734	10.7	20.1	0.0	103
	1988	10.0	20.5	0.0	101
	2082	8.0	20.6	0.0	93
	2715	10.0	19.8	0.0	99
Mean		10.1	20.6	0.0	
Coef. Var.		11.2	8.2	0.0	

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Best Brand Fertilizer 15-30-0					
Guaranteed	15.0	30.0	0.0		
1005	15.0	30.0	0.0	100	
1619	14.0	31.8	0.0	101	
Best Brand Fertilizer 6-12-6					
Guaranteed	6.0	12.0	6.0		
1055	6.2	12.3	8.0	107	
1110	6.0	14.1	7.8	113	
1127	5.4	17.5	6.6	120	
1328	6.4	13.0	6.7	108	
1455	6.6	12.7	7.3	109	
1675	6.0	12.9	6.0	104	
1984	8.8	12.1	7.0	120	
2220	8.4	12.5	7.3	120	
2651	7.7	7.6	7.2	95	
2712	6.8	12.1	6.0	105	
2765	5.7	12.8	6.0	101	
Mean	6.7	12.7	6.9		
Coef. Var.	16.5	18.0	10.2		
Best Brand Fertilizer 10-20-10					
Guaranteed	10.0	20.0	10.0		
5	9.3	21.3	10.2	101	
30	10.2	19.5	10.4	100	
45	10.5	18.6	10.0	99	
52	10.0	19.7	10.0	100	
59	10.0	18.6	12.0	99	
66	10.0	19.8	11.0	101	
69	10.2	20.0	10.0	101	
104	9.1	20.6	10.4	99	
115	10.2	20.0	10.0	101	
128	10.1	20.6	10.0	102	
150	8.6	22.9	10.6	103	
170	9.5	19.9	10.8	99	
271	10.0	20.4	10.2	102	
277	10.5	20.8	9.4	102	
290	10.5	20.4	10.0	103	
342	9.0	22.2	10.0	102	
368	10.4	20.0	10.6	103	
416	10.4	19.0	10.8	100	
507	10.0	21.1	10.8	104	
552	10.4	18.8	11.0	100	
560	9.1	21.7	11.8	103	
706	10.5	20.0	9.3	101	
761	10.2	20.0	10.6	102	
913	10.0	21.3	11.7	105	
1021	10.5	19.7	10.6	102	
1081	9.3	20.7	10.5	100	
1161	10.4	20.3	9.7	102	
1259	8.7	22.8	10.6	103	
1271	11.4	20.0	11.1	107	
1325	10.0	20.3	10.5	101	
1375	9.5	21.5	10.7	103	
1436	10.2	20.2	10.4	102	
1476	10.4	19.3	10.9	101	
1495	12.2	20.1	10.0	109	
1566	9.8	20.6	10.8	102	
1581	9.5	20.8	9.8	100	
1585	10.8	20.0	10.8	104	
1597	8.8	20.1	11.0	97	
1670	9.1	20.4	10.0	98	
1674	10.0	20.1	11.3	102	
1682	10.4	20.0	10.8	103	
1700	10.6	20.1	12.6	106	
1732	9.7	20.6	11.6	102	
1754	9.7	20.1	12.0	102	
1844	10.1	20.7	10.5	103	
1851	9.7	20.0	10.9	100	
1862	9.8	20.0	10.3	100	
1911	8.7	20.8	10.9	98	
1986	9.6	20.8	10.0	100	

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
	2058	9.7	20.1	12.0	102
	2184	9.5	20.7	11.4	102
	2219	10.4	20.0	11.6	104
	2286	11.7	20.1	9.3	106
	2367	9.3	20.9	9.8	99
	2378	8.9	21.1	12.5	102
	2508	11.5	20.3	9.7	106
	2561	8.3	20.8	10.8	97
	2596	10.0	20.3	11.4	103
	2606	9.0	20.8	10.4	99
	2650	8.7	22.3	11.7	103
	2713	10.2	20.0	11.2	102
	2749	9.4	20.0	10.0	98
	3001	10.0	20.2	9.8	100
Mean		9.9	20.4	10.7	
Coef. Var.		7.6	4.1	7.1	
Best Brand Fertilizer 12-24-12					
Guaranteed	12.0	24.0	12.0		
418	12.3	23.1	12.4	100	
1359	11.4	25.0	12.2	100	
1406	12.1	24.3	12.7	102	
2092	11.5	23.5	15.0	101	
2773	11.4	24.7	13.3	101	
2965	12.0	24.1	13.1	101	
2967	12.0	24.4	12.7	102	
2997	12.1	24.8	12.3	102	
3104	13.2	24.3	12.9	105	
3121	12.1	24.9	12.0	102	
3122	12.0	26.5	10.2	103	
3189	12.0	24.6	12.3	102	
Mean		12.0	24.5	12.6	
Coef. Var.		4.0	3.4	8.7	
Best Brand Fertilizer 10-20-20					
Guaranteed	10.0	20.0	20.0		
1567	9.7	20.0	21.2	100	
1987	10.0	20.0	21.1	101	
2764	10.1	20.4	20.8	102	
2988	11.0	20.0	20.5	104	
Best Brand Fertilizer 5-20-20					
Guaranteed	5.0	20.0	20.0		
1565	5.0	22.3	19.3	105	
Best Brand Fertilizer 6-24-24					
Guaranteed	6.0	24.0	24.0		
369	6.5	26.3	23.2	106	
1128	6.2	28.1	23.0	109	
1731	6.4	23.4	22.9	99	
1751	9.4	26.1	20.4	112	
2979	6.2	26.0	24.0	105	
Mean		6.9	26.0	22.7	
Coef. Var.		19.9	6.5	6.0	
Best Brand Fertilizer 16-8-8					
Guaranteed	16.0	8.0	8.0		
1324	15.3	12.8	8.0	110	
Best Brand Fertilizer 16-16-4					
Guaranteed	16.0	16.0	4.0		
2595	16.1	16.0	4.1	100	
Best Brand Fertilizer 13-40-10					
Guaranteed	13.0	40.0	10.0		
2966	13.0	43.3	11.0	106	
Best Brand Ammonium Sulfate 21-0-0					
Guaranteed	21.0	0.0	0.0		
452	21.0	0.0	0.0	100	
518	21.0	0.0	0.0	100	
746	21.0	0.0	0.0	100	
1019	21.0	0.0	0.0	100	
1126	21.0	0.0	0.0	100	
1408	21.0	0.0	0.0	100	



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Best Brand Ammonium Sulfate 21-0-0											
	1469	21.0	0.0	0.0	100		2144	15.8	25.4	0.0	112
	1482	21.0	0.0	0.0	100		2146	15.8	20.0	0.0	99
	1559	20.9	0.0	0.0	100		2183	14.8	24.6	0.0	106
	1563	21.0	0.0	0.0	100		2236	16.0	20.0	0.0	100
	1635	21.0	0.0	0.0	100		2266	16.4	20.0	0.0	101
	1766	20.4	0.0	0.0	97		2349	15.5	20.2	0.0	99
	2013	21.2	0.0	0.0	101		2389	16.5	20.0	0.0	102
	2235	21.1	0.0	0.0	100		2522	17.0	19.9	0.0	103
	2237	21.3	0.0	0.0	101		2560	15.3	20.2	0.0	98
	2523	21.0	0.0	0.0	100		2652	16.0	20.2	0.0	100
	2880	21.0	0.0	0.0	100		2763	16.6	20.2	0.0	103
	2955	21.0	0.0	0.0	100		2822	16.0	20.0	0.0	100
	2960	21.0	0.0	0.0	100		2825	15.8	21.8	0.0	103
	2964	21.0	0.0	0.0	100		2881	15.3	23.2	0.0	105
	2989	21.0	0.0	0.0	100		2996	15.7	20.2	0.0	99
	2990	21.0	0.0	0.0	100		3058	16.0	20.0	0.0	100
	3059	21.0	0.0	0.0	100		3098	16.1	20.0	0.0	100
	3068	21.0	0.0	0.0	100		3188	16.0	20.0	0.0	100
	3088	21.2	0.0	0.0	101		3276	14.4	20.2	0.0	95
	3103	20.9	0.0	0.0	100	Mean		15.7	20.7	0.0	
	3137	21.0	0.0	0.0	100	Coef. Var.		4.9	8.4	0.0	
	3199	21.0	0.0	0.0	100	Best Brand Fertilizer 11-48-0					
	3214	21.0	0.0	0.0	100	Guaranteed		11.0	48.0	0.0	
	3216	21.1	0.0	0.0	100	390		11.6	48.0	0.0	102
	3219	21.0	0.0	0.0	100	Best Brand Fertilizer 16-48-0					
	3277	21.0	0.0	0.0	100	Guaranteed		16.0	48.0	0.0	
Mean		21.0	0.0	0.0		2267		16.0	48.2	0.0	100
Coef. Var.		0.5	0.0	0.0		3158		15.7	49.0	0.0	101
Best Brand Fertilizer 16-20-0						Best Brand Fertilizer 13-39-0					
Guaranteed		16.0	20.0	0.0		Guaranteed		13.0	39.0	0.0	
4		16.0	17.0	0.0	93	228		14.5	43.4	0.0	112
127		16.1	18.1	0.0	96	Best Ammonium Sulfate-Phosphate 21-20-0					
139		14.6	24.0	0.0	105	Guaranteed		21.0	20.0	0.0	
231		16.3	17.2	0.0	95	1954		20.1	20.0	0.0	97
267		15.7	21.3	0.0	102	2899		21.0	20.0	0.0	100
291		16.6	15.5	0.0	92	2991		20.7	21.0	0.0	101
387		15.0	21.2	0.0	100	3080		21.0	20.0	0.0	100
394		15.4	23.1	0.0	105	3083		21.0	20.9	0.0	102
396		15.1	21.8	0.0	101	3126		21.0	21.8	0.0	103
472		15.0	21.9	0.0	101	3187		20.9	20.8	0.0	101
551		15.6	20.3	0.0	100	3217		21.3	20.0	0.0	101
570		15.5	23.3	0.0	106	3218		21.0	20.6	0.0	101
637		14.8	25.1	0.0	107	3244		21.0	20.2	0.0	100
640		16.0	20.0	0.0	100	Mean		20.9	20.5	0.0	
707		16.0	20.1	0.0	100	Coef. Var.		1.5	2.9	0.0	
758		16.5	20.8	0.0	104	Diammonium Phosphate 21-53-0					
881		16.1	20.6	0.0	102	Guaranteed		21.0	53.0	0.0	
997		15.0	20.0	0.0	97	3180		21.0	53.2	0.0	100
1022		16.5	20.0	0.0	102	Best Brand Granulated Triple Superphosphate 0-46-0					
1092		15.2	20.0	0.0	97	Guaranteed		0.0	46.0	0.0	
1109		16.0	20.6	0.0	101	386		0.0	46.0	0.0	100
1285		15.4	23.6	0.0	106	405		0.0	46.0	0.0	100
1310		15.6	20.7	0.0	100	419		0.0	47.1	0.0	103
1326		15.7	21.7	0.0	103	429		0.0	46.0	0.0	100
1360		15.5	20.3	0.0	99	471		0.0	46.9	0.0	102
1376		15.4	20.4	0.0	99	760		0.0	46.8	0.0	102
1407		15.7	20.1	0.0	99	791		0.0	46.0	0.0	100
1435		16.0	20.2	0.0	100	1112		0.0	46.8	0.0	102
1457		14.7	20.5	0.0	97	1149		0.0	46.7	0.0	102
1466		15.2	20.8	0.0	99	1558		0.0	46.1	0.0	100
1475		16.6	20.3	0.0	103	2017		0.0	46.0	0.0	100
1494		16.2	20.7	0.0	102	2234		0.0	46.5	0.0	101
1557		14.1	20.2	0.0	94	2270		0.0	46.6	0.0	101
1564		16.1	20.2	0.0	101	2566		0.0	47.1	0.0	102
1620		16.2	20.0	0.0	101	3275		0.0	46.6	0.0	101
1671		12.2	20.5	0.0	88	Mean		0.0	46.5	0.0	
1673		16.6	19.5	0.0	101	Coef. Var.		0.0	0.9	0.0	
1835		15.0	20.2	0.0	97						
2083		16.9	20.0	0.0	103						
2128		15.4	22.2	0.0	103						

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
<b>CALIF. CHEMICAL CO., ORTHO DIV., RICHMOND, CALIF.</b>					
Ortho Unipel Pelleted Fertilizer 20-20-0					
Guaranteed	20.0	20.0	0.0		
2871	19.8	20.1	0.0		100
<b>CAMPBELL FERTILIZER COMPANY, HOUSTON, TEXAS</b>					
Campbells Organic Base Fertilizer 8-8-8					
Guaranteed	8.0	8.0	8.0		
1356	8.0	8.5	8.3		103
1963	8.0	8.2	7.1		99
Campbells Organic Base Fertilizer 6-12-6					
Guaranteed	6.0	12.0	6.0		
1357	6.4	12.9	6.0		106
1962	6.7	12.0	5.7		104
1970	7.9	12.6	7.8		118
Green Glo Crop Booster 8-8-8					
Guaranteed	8.0	8.0	8.0		
745	8.0	8.7	10.1		107
1317	7.4	8.3	7.4		96
2539	8.0	8.0	8.4		100
3204	7.7	8.5	8.2		100
Green Glo Crop Booster 12-12-12					
Guaranteed	12.0	12.0	12.0		
1828	12.0	12.8	10.0		99
Green Glo Crop Booster 6-12-6					
Guaranteed	6.0	12.0	6.0		
2455	6.6	12.2	6.9		106
Green Glo Crop Booster 13-13-13					
Guaranteed	13.0	13.0	13.0		
2412	12.4	14.1	12.0		99
Green Glo Crop Booster 10-20-10					
Guaranteed	10.0	20.0	10.0		
596	10.7	23.6	8.0		109
2000	9.7	20.6	9.8		100
2435	10.5	20.0	10.1		102
2563	9.2	21.1	12.3		103
2751	9.7	20.1	9.4		98
3118	10.0	20.0	10.2		100
Mean	10.0	20.9	10.0		
Coef. Var.	5.6	6.6	14.0		
Green Glo Crop Booster 12-24-12					
Guaranteed	12.0	24.0	12.0		
601	11.5	24.5	12.0		100
2963	11.5	24.5	13.6		101
Green Glo Crop Booster 10-20-20					
Guaranteed	10.0	20.0	10.0		
2727	10.9	20.1	19.3		102
Green Glo Crop Booster 10-20-5					
Guaranteed	10.0	20.0	5.0		
2460	7.4	19.8	11.0		97
Green Glo Crop Booster 16-20-0					
Guaranteed	16.0	20.0	0.0		
998	15.5	20.7	0.0		100
2456	14.5	19.9	0.0		95
3153	16.0	20.3	0.0		101
M-G Brand Organic Base Fertilizer 6-12-6					
Guaranteed	6.0	12.0	6.0		
2020	6.1	15.7	6.5		117
Topper Brand Fertilizer 7-14-7					
Guaranteed	7.0	14.0	7.0		
1792	7.0	14.3	8.1		103
2263	7.6	16.7	9.7		118
2634	6.0	14.2	6.2		94
Topper Brand Fertilizer 10-20-10					
Guaranteed	10.0	20.0	10.0		

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
	755	10.0	20.6	10.2	102
	1638	10.3	20.6	9.7	102
	1723	11.1	20.2	9.7	104
	1795	9.6	20.1	9.8	99
	2439	10.0	20.0	8.5	98
	2473	10.4	20.0	10.6	102
	2633	10.0	20.1	10.7	101
	3052	10.4	20.6	10.0	103
Mean		10.2	20.3	9.9	
Coef. Var.		4.3	1.3	6.9	
<b>Topper Brand Fertilizers 16-20-0</b>					
Guaranteed	16.0	20.0	0.0		
438	16.0	18.7	0.0		97
477	14.5	20.4	0.0		96
756	16.6	21.4	0.0		105
1463	16.0	19.9	0.0		100
1636	16.3	20.2	0.0		101
1721	11.6	20.7	0.0		87
1789	16.1	20.1	0.0		101
2262	16.8	20.0	0.0		103
2438	14.6	20.4	0.0		96
2474	15.4	21.0	0.0		100
Mean		15.4	20.3	0.0	
Coef. Var.		10.0	3.6	0.0	
<b>Topper Brand Fertilizer 13-39-0</b>					
Guaranteed	13.0	39.0	0.0		
269	11.1	40.8	0.0		99
<b>Topper Brand Fertilizer 0-20-0</b>					
Guaranteed	0.0	20.0	0.0		
1794	0.0	20.6	0.0		103
<b>CHAPMAN GRAIN, INC., HONDO, TEXAS</b>					
Chapmans Fertilizer 18-46-0					
Guaranteed	18.0	46.0	0.0		
812	18.4	46.1	0.0		101
<b>CHILEAN NITRATE SALES CORP., NEW YORK, NEW YORK</b>					
Champion Brand Chilean Nitrate of Soda 16-0-0					
Guaranteed	16.0	0.0	0.0		
835	16.0	0.0	0.0		100
852	16.0	0.0	0.0		100
2824	16.1	0.0	0.0		100
<b>COASTAL CHEMICAL CO., YAZOO CITY, MISSISSIPPI</b>					
Coastal Brand Fertilizer 13-13-13					
Guaranteed	13.0	13.0	13.0		
1553	13.6	13.0	13.4		103
2246	12.5	13.0	14.8		100
Coastal Brand Fertilizer 12-24-12					
Guaranteed	12.0	24.0	12.0		
793	12.0	25.5	11.1		102
794	12.0	26.0	13.5		106
831	11.8	24.1	12.0		100
1547	12.0	24.7	12.0		101
1556	12.0	24.0	13.3		101
1609	11.4	22.2	14.3		97
1610	12.0	24.8	11.4		101
1611	12.0	25.3	13.0		104
2287	12.2	23.6	13.8		102
2973	12.0	24.9	12.1		102
2982	11.5	25.6	14.4		104
3024	12.0	24.5	13.3		102
3201	12.0	24.8	12.0		102
Mean		11.9	24.6	12.8	
Coef. Var.		1.9	4.0	8.5	
<b>Coastal Brand Fertilizer 14-14-7</b>					
Guaranteed	14.0	14.0	7.0		
790	14.3	16.6	6.4		107



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
Coastal Brand Fertilizer 7-28-14						Goldenrod Gran-U-Pels 8-8-8					
Guaranteed		7.0	28.0	14.0		Guaranteed		8.0	8.0	8.0	
	813	7.9	28.8	14.5	105		929	8.3	8.7	10.7	109
	2430	8.0	28.0	14.1	103		1032	8.3	8.8	8.8	107
Coastal Brand Fertilizer 16-20-0							1036	8.2	8.5	8.8	105
Guaranteed		16.0	20.0	0.0			1120	8.3	8.8	8.7	107
	789	16.1	22.2	0.0	105		1122	8.2	8.8	8.5	106
	792	15.7	20.6	0.0	100		1274	8.2	8.1	9.0	104
	830	15.7	20.0	0.0	99		1688	8.1	7.9	9.1	103
	1548	16.1	20.2	0.0	101		1689	8.6	8.0	8.6	105
	1551	16.0	20.0	0.0	100		1737	8.0	7.9	8.5	100
	1552	16.0	20.4	0.0	101		1808	8.1	8.2	8.1	101
	1612	16.3	21.2	0.0	104		1915	8.0	8.2	8.1	101
	1613	16.5	20.4	0.0	103		1973	7.8	8.2	8.0	100
	1614	16.4	20.1	0.0	102		2188	8.0	10.7	8.0	111
	1615	16.4	20.9	0.0	103		2373	7.2	8.4	7.5	96
	1616	16.0	20.2	0.0	100		2444	8.2	8.2	8.3	103
	1617	16.2	21.2	0.0	103		2519	8.0	8.5	9.9	106
	2252	16.1	20.0	0.0	100		2943	8.0	8.2	8.7	102
	2888	16.4	22.8	0.0	108	Mean		8.1	8.5	8.6	
	2981	16.5	20.0	0.0	102	Coef. Var.		3.5	7.6	7.4	
	3023	16.6	21.9	0.0	106	Goldenrod Gran-U-Pels 12-12-12					
	3200	16.1	20.2	0.0	101	Guaranteed		12.0	12.0	12.0	
	3223	15.6	19.9	0.0	98		2375	11.5	12.0	11.0	97
Mean		16.2	20.7	0.0		Goldenrod Gran-U-Pels 10-20-0					
Coef. Var.		1.8	4.1	0.0		Guaranteed		10.0	20.0	0.0	
Coastal Brand Fertilizer 16-48-0							1807	10.5	20.2	0.0	103
Guaranteed		16.0	48.0	0.0			2675	12.0	20.0	0.0	109
	1555	16.4	43.8	0.0	95	Goldenrod Gran-U-Pels 6-12-6					
	3046	16.0	48.2	0.0	100	Guaranteed		6.0	12.0	6.0	
Coastal Brand Fertilizer 13-39-0							855	6.1	13.8	6.0	108
Guaranteed		13.0	39.0	0.0			1119	6.0	12.9	6.0	104
	1554	13.0	39.1	0.0	100		1275	6.1	12.6	6.3	104
THE COLORADO FUEL & IRON CORP., DENVER, COLO.							1739	6.1	12.5	6.4	104
DAP Diammonium Phosphate 21-53-0							1806	6.1	12.4	6.2	103
Guaranteed		21.0	53.0	0.0			1914	6.0	12.2	6.4	101
	196	20.4	55.1	0.0	102		1974	6.0	12.4	6.2	102
CONSUMERS FERTILIZER COMPANY, HENDERSON, TEXAS							2190	6.4	12.0	6.3	103
Consumer Brand Perma Gro 8-8-8							2372	6.0	12.0	5.7	99
Guaranteed		8.0	8.0	8.0			2502	6.3	12.0	6.3	103
	1695	7.7	7.3	5.7	90		2590	6.0	12.1	6.0	100
	2610	7.3	8.9	8.1	100	Mean		6.1	12.5	6.2	
Consumers Perma Gro Fertilizer 6-12-6						Coef. Var.		1.6	4.3	3.2	
Guaranteed		6.0	12.0	6.0		Goldenrod Gran-U-Pels 10-20-10					
	605	6.4	12.0	8.2	107	Guaranteed		10.0	20.0	10.0	
	2732	6.9	12.5	6.3	108		1	9.5	20.0	9.6	98
Consumers Perma Gro 10-20-10							42	10.0	19.8	10.0	100
Guaranteed		10.0	20.0	10.0			46	9.7	20.4	10.0	100
	468	8.4	12.5	10.4	76		49	10.0	18.4	10.2	97
	1694	9.4	20.2	10.0	98		55	11.0	19.6	10.0	103
Consumers Brand Perma Gro Lawn Special 10-5-5							95	10.0	20.7	10.0	102
Guaranteed		10.0	5.0	5.0			96	10.7	19.4	9.6	101
	2611	9.5	5.0	8.5	104		151	10.0	19.8	10.2	100
DIXIE FARM SERVICE INC., NEEDVILLE, TEXAS							166	10.0	20.0	10.2	101
Gro-Mo Liquid Fertilizer 15-10-5							313	10.1	19.6	9.6	99
Guaranteed		15.0	10.0	5.0			319	10.1	20.4	9.2	101
	2250	13.6	9.0	5.1	91		356	10.0	20.8	9.2	101
E. I. DUPONT DE NEMOURS & CO. INC., WELLINGTON, DEL.							363	9.8	20.8	9.8	101
Dupont Nugreen Fertilizer Compound 45-0-0							411	10.0	20.0	10.0	100
Guaranteed		45.0	0.0	0.0			412	10.0	20.0	10.2	100
	2839	44.7	0.0	0.0	99		414	10.0	20.2	10.0	101
	2865	44.5	0.0	0.0	99		527	10.0	20.8	10.0	102
EAST TEXAS PRODUCTS CO., TYLER, TEXAS							626	10.1	22.1	9.8	105
Goldenrod Gran-U-Pels 0-20-20							644	10.0	20.1	10.1	100
Guaranteed		0.0	20.0	20.0			773	10.2	20.1	9.7	101
	1068	0.0	21.1	18.3	101		854	10.0	21.0	10.0	103
							928	10.2	20.0	11.3	102
							986	10.0	18.8	10.0	97
							1025	10.0	20.6	9.0	100

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Goldenrod Gran-U-Pels 10-20-10					
	1069	10.0	20.7	10.2	102
	1073	10.0	20.0	10.0	100
	1123	10.3	20.2	10.0	102
	1273	9.8	20.9	9.7	101
	1276	10.0	20.7	9.5	101
	1687	10.4	20.2	9.6	102
	1738	10.0	20.2	10.0	100
	1805	10.0	20.8	8.5	100
	1871	10.0	20.1	9.5	100
	1913	10.0	20.0	9.6	100
	1975	9.9	20.1	9.2	99
	1992	10.4	21.3	9.2	104
	2054	9.8	20.6	10.8	102
	2059	9.8	20.7	10.4	102
	2187	10.0	20.1	10.0	100
	2249	10.2	20.8	8.6	101
	2366	10.1	20.7	8.9	101
	2376	10.2	20.3	9.3	101
	2445	10.0	20.0	9.5	99
	2501	10.0	20.0	10.0	100
	2507	10.0	20.0	10.0	100
	2518	10.0	20.3	10.2	101
	2589	10.2	19.8	10.0	100
	2670	10.0	19.7	9.7	99
	2674	10.0	20.2	8.4	99
	2739	10.0	19.7	9.5	99
	2791	10.0	20.5	9.3	100
	2794	9.8	20.2	9.8	100
	2897	10.1	20.3	10.0	101
	2947	10.5	20.0	10.0	102
	3008	9.8	22.8	9.5	106
	3013	10.0	20.3	9.0	100
	Mean	10.1	20.3	9.7	
	Coef. Var.	2.2	3.2	5.3	
Goldenrod Gran-U-Pels 5-10-10					
	Guaranteed	5.0	10.0	10.0	
	2060	5.7	10.4	11.2	109
	2744	5.4	9.7	9.3	100
	2750	5.2	10.5	10.0	104
Goldenrod Gran-U-Pels 10-20-20					
	Guaranteed	10.0	20.0	20.0	
	2377	10.0	20.8	16.0	97
Goldenrod Gran-U-Pels 5-20-20					
	Guaranteed	5.0	20.0	20.0	
	2189	5.5	20.1	17.7	99
Goldenrod Gran-U-Pels 21-0-0					
	Guaranteed	21.0	0.0	0.0	
	2896	21.0	0.0	0.0	100
Goldenrod Gran-U-Pels 16-20-0					
	Guaranteed	16.0	20.0	0.0	
	2669	14.5	19.9	0.0	95
Ammonium Nitrate 33.5-0-0					
	Guaranteed	33.5	0.0	0.0	
	1121	33.5	0.0	0.0	100
EDNA LIQUID FERTILIZER CO., EDNA, TEXAS					
Texana Brand All Crop Liquid Plant Food 8-24-0					
	Guaranteed	8.0	24.0	0.0	
	1773	7.1	20.8	0.0	87
	3142	8.0	24.5	0.0	101
E. DICKEY, AUSTIN, TEXAS					
Sheep Manure					
	Guaranteed	1.5	1.0	4.5	
	2862	2.0	1.0	1.6	87
EWING & SHERMAN CO., SAN ANTONIO, TEXAS					
Easy Going Sheep Manure 2-1-2					
	Guaranteed	2.0	1.0	2.0	
	2379	2.1	1.0	1.5	96

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
FARMERS FERTILIZER COMPANY, TEXARKANA, TEXAS					
Mule Brand Fertilizer 10-20-0					
	Guaranteed	10.0	20.0	0.0	
	1270	9.8	20.2	0.0	100
Mule Brand Fertilizer 6-12-6					
	Guaranteed	6.0	12.0	6.0	
	14	7.0	12.0	6.3	107
	1046	7.3	12.3	6.8	111
	1165	6.8	13.9	6.6	114
Mule Brand Fertilizer 10-20-10					
	Guaranteed	10.0	20.0	10.0	
	2156	10.5	20.4	10.4	103
Fafco Superphosphates 0-20-0					
	Guaranteed	0.0	20.0	0.0	
	68	0.0	20.5	0.0	103
	1087	0.0	10.0	0.0	100
	1166	0.0	19.4	0.0	97
	1850	0.0	20.1	0.0	100
	1861	0.0	20.0	0.0	100
	2930	0.0	20.1	0.0	100
Fafco Plant Food 8-8-8					
	Guaranteed	8.0	8.0	8.0	
	486	8.2	10.2	8.0	111
	659	8.3	8.6	8.1	104
	1045	8.3	8.1	8.0	102
	1212	8.4	8.0	8.0	103
	1586	9.6	7.3	8.7	109
	1590	8.0	8.1	7.4	99
	1874	8.1	8.3	8.2	102
	2331	8.5	8.0	8.3	104
	2494	8.0	8.4	8.7	103
	2603	8.0	9.0	8.1	104
	Mean	8.3	8.4	8.2	
	Coef. Var.	5.6	9.1	4.6	
Fafco Plant Food 10-20-0					
	Guaranteed	10.0	20.0	0.0	
	1849	9.6	20.0	0.0	98
	2803	8.8	20.0	0.0	95
	2931	9.1	19.8	0.0	96
Fafco Plant Food 6-12-6					
	Guaranteed	6.0	12.0	6.0	
	100	6.7	12.1	7.0	107
	523	7.7	13.3	7.6	120
	1213	6.9	12.4	6.4	108
	1587	8.0	12.0	7.3	115
	1597	6.8	12.3	6.7	108
	2486	7.1	12.0	7.0	109
	2493	6.8	12.0	6.9	107
	2604	7.0	12.3	6.9	109
	Mean	7.1	12.3	7.0	
	Coef. Var.	6.6	3.4	5.2	
Fafco Plant Food 10-20-10					
	Guaranteed	10.0	20.0	10.0	
	15	10.0	19.8	10.6	101
	60	10.3	19.5	10.8	101
	67	10.3	10.8	9.2	100
	99	10.1	20.0	10.8	102
	123	10.4	19.9	10.8	103
	146	10.3	21.6	10.0	106
	263	10.0	20.2	10.0	101
	303	10.3	20.4	10.4	103
	404	9.6	20.4	10.0	100
	539	10.0	20.0	10.0	100
	632	10.2	20.6	10.5	103
	724	10.2	20.5	10.2	102
	803	11.0	21.0	10.2	107
	1044	10.6	19.8	10.6	103
	1163	9.1	15.0	8.0	82

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
Fafco Plant Food 10-20-10											
	1206	10.4	20.0	10.7	103		1815	7.2	13.6	5.8	114
	1211	10.2	20.0	10.0	101		2062	6.1	12.0	6.7	102
	1427	10.2	20.4	10.5	102		2160	7.2	12.7	7.0	113
	1847	10.3	20.0	10.2	101		2451	7.2	12.0	6.9	109
	1860	10.6	20.1	10.1	103		3019	6.2	12.0	6.8	103
	1873	10.0	20.1	10.3	101		Mean	6.5	12.4	6.5	
	2028	10.0	21.2	10.0	103		Coef. Var.	11.2	4.6	8.5	
	2043	10.3	21.0	10.8	105	Texas Longhorn 10-20-10					
	2149	10.5	20.0	10.8	103	Guaranteed	10.0	20.0	10.0		
	2330	10.3	19.8	10.5	101		463	9.7	21.2	10.0	102
	2490	10.1	20.0	11.4	102		785	9.7	20.0	10.2	99
	2500	10.8	20.0	10.4	104		950	8.6	19.6	11.7	96
	2684	10.2	19.8	11.0	102		1691	9.7	20.1	10.0	99
	2918	10.2	20.0	10.6	102		1816	9.7	20.0	9.5	98
	2923	11.0	19.8	10.0	103		2061	10.0	20.1	10.8	101
	2929	10.5	20.2	11.5	104		2071	10.1	20.9	10.3	103
Mean		10.3	20.0	10.4			2162	10.2	20.8	11.1	104
Coef. Var.		3.5	5.2	6.1			2477	10.4	20.2	11.7	104
Fafco Plant Food 16-20-0							2492	10.0	20.0	10.0	100
Guaranteed		16.0	20.0	0.0			2513	10.0	20.2	10.7	101
	1164	14.7	18.2	0.0	91		3012	9.6	20.1	9.8	99
	1269	15.0	20.7	0.0	98		3017	10.0	20.1	10.0	100
	1848	13.2	20.0	0.0	90	Mean		9.8	20.3	10.5	
	1859	15.0	20.2	0.0	97	Coef. Var.		4.4	2.2	6.7	
FERD STAFFEL CO., SAN ANTONIO, TEXAS						JOHN DEERE CHEMICAL COMPANY, PRYOR, OKLAHOMA					
Staffels Lawn & Garden Food 8-12-4						Vitre 45-0-0					
Guaranteed		8.0	12.0	4.0		Guaranteed	45.0	0.0	0.0		
	2734	8.0	12.4	4.0	102		648	44.4	0.0	0.0	99
W. R. GRACE & CO., MEMPHIS, TENNESSEE							1369	45.0	0.0	0.0	100
Grace Urea Prills 45-0-0							2245	45.4	0.0	0.0	101
Guaranteed		45.0	0.0	0.0			2535	45.0	0.0	0.0	100
	2241	45.2	0.0	0.0	101		2885	45.0	0.0	0.0	100
	2900	45.0	0.0	0.0	100		3003	45.0	0.0	0.0	100
	2958	45.1	0.0	0.0	100		3054	45.0	0.0	0.0	100
	3232	45.0	0.0	0.0	100		3089	45.1	0.0	0.0	100
							3236	45.1	0.0	0.0	100
							Mean	45.0	0.0	0.0	
							Coef. Var.	0.5	0.0	0.0	
Davco 3G Granulated Fertilizer 6-12-6						Ozark Ammonium Phosphate Fertilizer 16-48-0					
Guaranteed		6.0	12.0	6.0		Guaranteed	30.0	15.0	0.0		
	3030	6.5	12.0	6.0	103		2431	28.4	15.9	0.0	98
Davco 3G Granulated Fertilizer 7-14-7						Guaranteed	16.0	48.0	0.0		
Guaranteed		7.0	14.0	7.0			3057	16.0	48.1	0.0	100
	3032	7.2	15.7	7.0	107		3170	15.4	48.1	0.0	99
Davco 3G Granulated Fertilizer 10-20-10						P.D.Q. Brand Ozark Mahoning Co. 16-20-0					
Guaranteed		10.0	20.0	10.0		Guaranteed	16.0	20.0	0.0		
	3031	9.5	20.1	9.8	98		3075	16.0	20.0	0.0	100
Davco 3G Granulated Fertilizer 16-20-0							3131	16.2	20.4	0.0	102
Guaranteed		16.0	20.0	0.0		P.D.Q. Brand Ozark Mahoning Co., 16-48-0					
	3033	16.1	20.0	0.0	100	Guaranteed	16.0	48.0	0.0		
GILMER COTTON OIL & FERTILIZER CO., GILMER, TEXAS							3082	16.0	48.4	0.0	101
Texas Longhorn 8-8-8						GOODPASTURE FERTILIZER & MILLING CO., BROWNFIELD, TEXAS					
Guaranteed		8.0	8.0	8.0		Goodpasture Liquid Fertilizer 7-21-0					
	1692	7.8	8.2	8.4	100	Guaranteed	7.0	21.0	0.0		
	1814	7.8	7.7	9.9	101		1342	7.0	21.0	0.0	100
	2161	7.8	9.6	8.4	106		1346	7.2	21.4	0.0	102
	2491	8.2	9.2	9.0	104		1347	7.1	21.0	0.0	100
	2514	8.0	8.6	8.7	104		1348	7.5	21.3	0.0	103
Mean		7.9	8.5	8.9			2404	7.0	21.4	0.0	101
Coef. Var.		2.2	8.4	6.9			2405	7.0	21.7	0.0	102
Texas Longhorn 12-12-12							2406	7.2	21.5	0.0	103
Guaranteed		12.0	12.0	12.0			2407	7.3	22.0	0.0	105
	1817	12.0	14.3	11.7	106		2408	7.3	23.2	0.0	108
Texas Longhorn 6-12-6							2469	7.0	21.7	0.0	102
Guaranteed		6.0	12.0	6.0			2642	7.1	21.2	0.0	101
	975	6.0	12.6	6.7	104		2769	7.6	21.3	0.0	104
	1076	5.2	12.0	5.5	94		2873	6.6	21.4	0.0	99
	1693	6.8	12.1	6.9	107						



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Goodpasture Liquid Fertilizer 7-21-0	3211	7.3	20.2	0.0	99
	3290	7.5	23.6	0.0	111
	Mean	7.2	21.6	0.0	
	Coef. Var.	3.4	3.9	0.0	
Goodpasture Liquid Fertilizer 6-18-6	Guaranteed	6.0	18.0	6.0	
	1720	5.9	19.4	6.4	104
Goodpasture Liquid Fertilizer 13-9-5	Guaranteed	13.0	9.0	5.0	
	1899	13.6	10.9	6.7	112
Goodpasture Liquid Fertilizer 4-10-10	Guaranteed	4.0	10.0	10.0	
	1342	4.6	10.0	10.0	104
	1349	4.1	10.9	10.0	105
	1350	4.0	10.6	10.1	103
	1351	4.0	11.8	9.8	108
	2409	4.0	10.1	10.6	101
	2410	4.0	10.0	11.1	103
	2411	4.0	10.6	10.8	105
	2468	4.0	10.2	10.1	101
	2641	4.3	10.0	9.1	100
	2768	4.5	10.3	10.3	106
	2874	4.2	10.8	9.3	104
	3291	4.5	10.2	8.7	101
	Mean	4.2	10.5	10.0	
	Coef. Var.	5.3	5.0	6.9	
Goodpasture Liquid Fertilizer 32-0-0	Guaranteed	32.0	0.0	0.0	
	2767	32.1	0.0	0.0	100
	3210	32.0	0.0	0.0	100
Sol-U-Phos 7-21-0	Guaranteed	7.0	21.0	0.0	
	3279	7.9	23.2	0.0	111
	3280	7.7	24.5	0.0	114
Sol-U-Phos 4-10-10	Guaranteed	4.0	10.0	10.0	
	3281	4.0	11.9	10.0	109
Goodpasture Liquid Fertilizer Aqua Ammonia 20-0-0	Guaranteed	20.0	0.0	0.0	
	3151	20.0	0.0	0.0	100
<b>GOLDTHWAITE FERTILIZER COMPANY, FT. WORTH, TEXAS</b>					
Goldthwaites Turf Special 10-5-5	Guaranteed	10.0	5.0	5.0	
	459	8.8	6.2	5.0	98
	1294	10.1	5.9	4.4	133
	2716	9.5	7.1	5.7	138
<b>HAYES SAMMONS CHEMICAL COMPANY, MISSION, TEX.</b>					
Mission Brand Fertilizer 14-10-4	Guaranteed	14.0	10.0	4.0	
	528	13.8	10.6	5.0	103
	1411	14.0	11.1	4.1	103
Mission Brand Fertilizer 32-0-0	Guaranteed	32.0	0.0	0.0	
	519	32.0	0.0	0.0	100
Mission Brand Fertilizer 8-24-0	Guaranteed	8.0	24.0	0.0	
	1449	8.0	24.4	0.0	101
Mission Brand Fertilizer 8-20-0	Guaranteed	8.0	20.0	0.0	
	1412	8.3	21.2	0.0	105
<b>B. L. HENDERSON &amp; SONS, HOUSTON, TEXAS</b>					
Shur Crop Brand 12-12-12	Guaranteed	12.0	12.0	12.0	
	1825	12.7	12.9	11.4	105

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Shur Crop Brand 10-20-0	Guaranteed	10.0	20.0	0.0	
	2395	9.4	20.0	0.0	97
	3179	20.0	41.8	0.0	103
Shur Crop BLH Brand 20-40-0	Guaranteed	20.0	40.0	0.0	
	2571	20.0	20.4	21.1	107
Shur Crop Brand 5-20-20	Guaranteed	5.0	20.0	20.0	
	1826	16.0	8.0	0.0	99
Shur Crop Brand 16-8-0	Guaranteed	16.0	8.0	0.0	
	1826	15.1	8.9	0.0	99
	1057	10.2	5.0	7.4	137
Pro Turf Grass Special 10-5-5	Guaranteed	10.0	5.0	5.0	
	2762	10.6	6.8	4.0	141
Shur Crop Brand 25-20-5	Guaranteed	25.0	20.0	5.0	
	2858	24.1	20.1	5.0	98
Shur Crop Brand 16-16-8	Guaranteed	16.0	16.0	8.0	
	912	16.3	15.4	10.7	103
	1999	15.8	18.4	8.0	105
Shur Crop BLH Brand 24-24-12	Guaranteed	24.0	24.0	12.0	
	2572	21.5	24.9	12.1	96
	2723	21.2	28.7	11.1	100
	3071	16.3	24.3	11.0	82
	3186	20.7	24.0	12.3	93
Shur Crop BLH Brand 24-20-8	Guaranteed	24.0	20.0	8.0	
	2859	24.0	21.1	6.2	100
Shur Crop Brand 16-20-0	Guaranteed	16.0	20.0	0.0	
	197	13.9	33.1	0.0	123
	2471	16.0	20.6	0.0	101
	2857	16.6	20.9	0.0	104
	3185	15.8	20.0	0.0	99
Shur Crop Brand 20-25-0	Guaranteed	20.0	25.0	0.0	
	634	20.8	25.7	0.0	103
	2570	20.0	26.1	0.0	102
Green Orbit Brand 10-5-5	Guaranteed	10.0	5.0	5.0	
	219	10.0	5.1	4.3	127
Custom Mix Fertilizer 8-8-4	Guaranteed	8.0	8.0	4.0	
	2969	10.1	12.8	4.5	137
Dal Green 12-8-4	Guaranteed	12.0	8.0	4.0	
	2569	14.1	8.0	4.1	111
Basic G. Brand 12-6-6	Guaranteed	12.0	6.0	6.0	
	220	11.2	6.3	6.0	97
Muriate of Potash 0-0-60	Guaranteed	0.0	0.0	60.0	
	2761	0.0	0.0	61.8	103
<b>HI-YIELD FERTILIZER COMPANY, BONHAM, TEXAS</b>					
Hi-Yield Brand 15-15-0	Guaranteed	15.0	15.0	0.0	
	1846	14.4	15.4	0.0	99
Hi-Yield Brand 8-8-8	Guaranteed	8.0	8.0	8.0	
	7	8.3	9.8	8.2	110
	172	8.3	9.8	8.4	109
	2112	7.4	8.6	8.0	99
	2496	8.5	8.4	7.8	104

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Hi-Yield Brand 10-20-0							2820	14.6	20.6	0.0	97
Guaranteed		10.0	20.0	0.0		Mean		15.4	20.4	0.0	
354		10.4	21.1	0.0	105	Coef. Var.		3.2	2.1	0.0	
1268		9.6	20.3	0.0	99	Hi-Yield Brand 0-20-0					
2085		9.2	20.2	0.0	97	Guaranteed		0.0	20.0	0.0	
Hi-Yield Brand 6-12-6						121		0.0	21.0	0.0	105
Guaranteed		6.0	12.0	6.0		353		0.0	20.4	0.0	102
1067		8.5	14.1	8.0	129	776		0.0	20.8	0.0	104
1264		7.7	15.8	5.0	124	1158		0.0	20.7	0.0	104
1426		7.4	12.8	6.0	112	Hi-Yield Brand 0-46-0					
1972		6.9	12.5	5.0	106	Guaranteed		0.0	46.0	0.0	
Hi-Yield Brand 10-20-10						430		0.0	46.0	0.0	100
Guaranteed		10.0	20.0	10.0		Minor L 10-20-5					
8		10.3	21.3	10.4	105	Guaranteed		10.0	20.0	5.0	
44		10.1	20.8	10.0	103	918		10.0	20.7	5.0	102
62		9.8	22.2	10.0	105	1157		9.7	20.0	6.3	100
85		9.6	21.8	10.8	104	1425		9.5	20.0	5.9	99
119		9.8	20.4	11.6	103	1446		9.4	20.3	5.8	99
120		10.0	22.1	10.0	106	1626		9.6	20.1	6.0	100
171		10.1	20.8	10.8	104	1628		9.4	20.5	6.6	101
177		9.5	20.6	10.0	100	2065		9.6	20.3	5.8	100
178		7.6	18.3	9.2	86	2391		9.2	20.2	5.3	98
284		10.4	21.7	10.4	107	2869		10.6	20.3	6.2	105
302		9.6	20.7	10.2	101	Mean		9.7	20.3	5.9	
329		9.5	20.8	10.2	101	Coef. Var.		4.3	1.1	8.3	
333		9.3	21.6	10.0	102	Ferti-Lome Brand Lawn & Garden 6-10-4					
355		11.1	21.0	10.0	107	Guaranteed		6.0	10.0	4.0	
425		10.2	20.0	10.2	101	1171		6.6	11.7	4.1	113
533		9.4	20.0	10.2	98	1352		6.6	10.5	4.7	108
619		10.3	20.0	10.0	101	1354		6.9	10.0	4.5	108
723		10.3	20.0	10.5	102	2102		6.2	10.4	4.0	103
750		10.0	19.0	10.3	98	2165		6.3	12.0	4.2	112
753		10.0	20.6	10.6	102	2357		6.0	10.9	4.8	106
814		10.3	20.0	10.2	101	Mean		6.4	10.9	4.4	
858		10.0	20.5	10.0	101	Coef. Var.		4.9	7.2	7.6	
885		10.5	20.6	10.5	104	Sunset Lawn & Garden Plant Food 5-10-5					
917		10.1	21.1	11.2	105	Guaranteed		5.0	10.0	5.0	
1066		9.8	20.7	10.7	102	105		5.0	10.3	5.6	103
1082		9.7	19.6	10.9	99	Ferti-Lome Brand Plant Food 10-5-5					
1156		10.0	9.1	10.2	98	Guaranteed		10.0	5.0	5.0	
1267		10.8	20.9	10.8	106	351		11.2	5.8	5.4	145
1424		9.8	20.3	10.1	100	1353		10.0	7.3	5.8	144
1439		9.5	19.8	10.2	98	Act 1 15-5-5					
1870		9.9	20.1	10.1	100	Guaranteed		15.0	5.0	5.0	
1872		9.0	20.1	9.6	96	2453		15.8	7.7	5.5	114
1878		9.6	20.6	10.0	100	Ferti-Lome Brand Tree Food 10-5-5					
1895		8.6	20.5	10.6	97	Guaranteed		10.0	5.0	5.0	
1971		11.9	20.6	11.0	110	349		10.3	6.7	5.5	142
2064		9.5	20.1	11.2	100	Ferti-Lome Bulb Food 6-10-4					
2111		9.6	20.0	10.4	99	Guaranteed		6.0	10.0	4.0	
2327		9.1	19.8	10.6	97	242		5.8	9.6	4.5	98
2361		8.1	20.0	10.2	96	Ferti-Lome Rose Food 6-10-4					
2495		8.5	20.1	11.7	97	Guaranteed		6.0	10.0	4.0	
2594		9.3	20.8	10.4	100	241		5.2	10.4	4.4	97
2790		10.2	20.0	8.8	99	Ferti-Lome Brand Complete Plant Food 6-10-4					
2798		9.7	20.4	10.4	100	Guaranteed		6.0	10.0	4.0	
2819		9.5	20.0	10.0	98	350		7.3	11.9	4.2	119
Mean		9.8	20.2	10.4		352		6.3	11.2	4.2	109
Coef. Var.		7.2	9.2	5.1		593		6.4	9.6	4.8	103
Hi-Yield Brand 16-20-0						HOOKEER CHEMICAL CO., DALLAS, TEXAS					
Guaranteed		16.0	20.0	0.0		Phosphatic Fertilizer Solution 0-54-0					
377		15.8	20.3	0.0	100	Guaranteed		0.0	54.0	0.0	
621		15.5	20.3	0.0	99	2268		0.0	54.0	0.0	100
624		16.1	20.0	0.0	101	INTERNATIONAL MINERAL & CHEMICAL CORPORATION,					
842		15.4	21.3	0.0	101	TEXARKANA, TEXAS					
1155		15.1	20.9	0.0	99	International Fertilizer 0-16-8					
1266		16.1	20.7	0.0	102	Guaranteed		0.0	16.0	8.0	
1845		15.2	20.1	0.0	98	2704		0.0	17.8	9.0	112
2772		15.0	20.0	0.0	97						
2808		15.1	20.0	0.0	97						



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
International Fertilizer 0-20-10					
Guaranteed		0.0	20.0	10.0	
809		0.0	21.5	11.2	108
International Fertilizer 8-8-8					
Guaranteed		8.0	8.0	8.0	
932		8.0	8.0	9.8	104
978		8.7	8.5	11.0	113
1040		8.3	8.4	8.6	105
1117		8.1	9.1	8.7	107
1220		8.0	9.3	8.7	107
1504		9.0	8.4	8.7	109
1594		8.3	8.1	8.0	102
1596		9.0	8.0	8.2	107
1600		8.5	8.0	8.0	103
1607		8.4	8.2	8.0	103
1703		8.2	8.0	6.8	99
1710		8.0	8.8	8.3	104
1979		8.3	8.3	8.0	103
2035		8.0	8.2	8.5	101
2215		8.0	9.0	8.0	104
2329		8.3	8.5	8.4	105
2356		8.0	9.8	8.9	109
2479		8.2	8.0	8.1	101
2483		8.1	8.0	8.6	101
2588		8.5	8.6	8.2	106
Mean		8.3	8.5	8.5	
Coef. Var.		3.6	5.9	9.7	
International Fertilizer 12-12-12					
Guaranteed		12.0	12.0	12.0	
2325		11.8	12.8	13.2	103
International Fertilizer 10-20-0					
Guaranteed		10.0	20.0	0.0	
24		10.0	20.8	0.0	103
540		9.0	20.4	0.0	97
631		10.0	20.1	0.0	100
1454		10.4	20.0	0.0	102
2039		10.6	20.1	0.0	103
2195		10.7	20.0	0.0	103
2922		10.0	20.0	0.0	100
2935		9.8	20.5	0.0	100
3284		9.1	20.0	0.0	96
Mean		10.0	20.2	0.0	
Coef. Var.		5.9	1.4	0.0	
International Fertilizer 6-12-6					
Guaranteed		6.0	12.0	6.0	
102		6.0	13.7	6.8	109
137		6.7	12.3	6.1	106
145		6.4	12.7	6.8	107
883		6.0	12.6	6.4	103
1041		6.0	12.0	6.7	101
1114		6.3	14.6	7.5	116
1202		8.0	12.4	4.4	111
1221		6.5	13.2	6.0	108
1225		6.2	12.2	6.1	102
1432		6.7	12.6	6.4	108
1503		6.9	11.8	6.2	105
1518		6.5	13.7	5.3	109
1601		6.0	12.0	6.9	101
1981		6.0	12.7	6.5	104
2034		6.7	12.1	7.1	107
2070		6.1	12.6	6.5	104
2124		7.5	12.1	6.1	110
2229		6.7	12.9	6.4	109
2355		7.5	12.0	10.8	119
2478		6.7	12.2	7.5	108
2482		7.4	13.1	10.0	122
2504		6.4	12.8	6.9	108
2849		7.7	12.6	6.5	114
3016		7.2	12.4	11.2	120

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
	3262	6.8	14.7	6.0	116
Mean		6.7	12.7	6.9	
Coef. Var.		8.7	6.0	22.5	
International Fertilizer 10-20-10					
Guaranteed		10.0	20.0	10.0	
16		10.0	18.9	13.0	101
17		10.1	20.5	10.8	103
23		10.2	20.4	8.6	100
29		9.6	20.4	10.4	100
43		10.2	20.2	10.6	102
56		9.3	19.0	13.6	100
92		10.1	20.9	11.0	104
97		10.1	21.9	16.0	113
101		9.5	20.2	10.4	100
103		9.9	19.3	10.4	99
130		8.5	17.7	17.0	98
132		10.0	20.8	10.2	103
133		10.0	20.4	10.4	102
136		9.1	20.3	11.2	99
148		9.2	20.4	10.2	99
167		10.4	20.8	11.6	106
184		9.2	20.9	10.8	101
185		9.4	18.2	12.4	97
243		9.7	20.7	11.6	103
244		10.0	21.2	10.2	104
248		10.0	20.8	10.2	103
260		10.1	21.7	10.8	106
278		11.8	20.0	8.0	105
297		9.8	20.0	9.4	99
299		9.8	20.8	10.0	102
318		10.7	20.8	10.4	106
324		10.3	20.4	10.6	103
334		10.0	20.4	10.0	101
402		10.4	20.1	10.0	102
408		9.7	20.8	8.0	99
444		10.6	20.0	10.0	103
487		9.8	20.9	10.2	102
522		10.1	20.8	10.8	104
536		10.0	20.1	10.2	101
543		9.8	20.2	10.0	100
589		10.0	20.8	9.6	100
617		10.0	19.5	10.2	99
686		10.2	20.6	10.5	103
732		10.0	21.1	10.5	103
797		10.0	22.0	10.1	105
931		10.0	19.1	12.0	100
938		9.2	21.2	9.8	100
977		10.2	20.0	10.2	101
981		10.0	20.2	10.5	101
984		9.6	21.0	8.5	99
1037		9.6	20.2	10.4	100
1049		10.0	20.0	10.8	101
1079		10.1	20.2	10.2	101
1115		10.1	20.4	10.3	102
1135		10.0	20.2	9.3	100
1200		10.0	19.8	10.0	100
1203		10.2	19.0	10.4	99
1209		10.0	20.0	10.0	100
1214		9.6	20.6	10.0	100
1215		9.1	19.0	10.0	94
1219		10.1	20.0	10.2	101
1430		10.2	20.7	10.3	103
1434		10.0	20.9	10.6	103
1449		10.3	20.0	10.6	102
1505		10.3	20.1	10.8	102
1579		10.0	19.8	10.5	100
1593		10.2	19.8	10.9	101
1595		10.2	20.1	10.4	102
1602		10.0	20.0	10.7	101
1639		9.5	20.1	9.7	98
1702		9.8	18.7	12.4	99

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
International Fertilizer 10-20-10											
	1706	10.3	21.1	10.5	105		1841	16.5	19.8	0.0	101
	1709	10.4	20.5	10.6	104		1865	15.6	20.1	0.0	99
	1712	10.2	20.0	9.4	100		2038	15.2	20.7	0.0	99
	1866	9.8	20.2	10.5	100		2041	15.1	20.8	0.0	99
	1875	10.1	20.0	10.1	100		2122	14.9	20.2	0.0	97
	1888	10.1	20.5	10.4	102		2359	15.1	20.3	0.0	98
	1977	9.7	20.0	11.1	100		2840	14.4	20.1	0.0	95
	2032	10.1	20.4	11.0	103		2848	13.7	21.1	0.0	95
	2040	10.4	20.5	10.9	104		2941	15.7	20.1	0.0	99
	2044	10.1	20.6	11.0	103		3263	14.0	20.6	0.0	95
	2045	9.8	20.3	10.2	100	Mean		15.0	20.4	0.0	
	2047	10.0	20.0	11.8	102	Coef. Var.		4.8	1.8	0.0	
	2050	10.0	20.0	11.0	101	International Superphosphate 0-20-0					
	2066	10.1	20.5	10.5	102	Guaranteed		0.0	20.0	0.0	
	2068	10.0	20.6	10.6	102	70		0.0	20.5	0.0	103
	2150	10.2	20.0	10.5	101	535		0.0	20.2	0.0	101
	2157	10.0	20.7	10.9	103	633		0.0	20.1	0.0	100
	2213	10.0	20.0	10.6	101	1205		0.0	20.8	0.0	104
	2265	9.0	19.0	9.6	93	1459		0.0	20.0	0.0	100
	2354	9.7	20.4	9.6	99	1506		0.0	20.2	0.0	100
	2487	10.2	20.0	11.0	102	1868		0.0	20.1	0.0	100
	2497	10.0	19.8	10.2	100	Coef. Var.		0.0	1.4	0.0	
	2503	10.0	20.0	11.3	102	International Triple Superphosphate 0-46-0					
	2520	10.0	20.0	10.0	100	Guaranteed		0.0	46.0	0.0	
	2532	9.6	20.6	9.7	100	22		0.0	46.0	0.0	100
	2598	10.0	19.9	10.1	100	International Fertilizer 13-39-0					
	2702	10.1	20.3	10.5	102	Guaranteed		13.0	39.0	0.0	
	2807	10.0	20.3	10.5	101	2531		12.0	33.3	0.0	88
	2919	10.0	20.0	10.4	100	2974		12.2	38.7	0.0	97
	2932	10.0	20.4	10.4	102	International Rainbow Fertilizer 0-16-8					
	2940	10.1	20.0	10.5	101	Guaranteed		0.0	16.0	8.0	
	3011	9.8	22.0	10.1	104	804		0.0	15.6	8.0	98
	3018	9.8	20.4	10.0	100	1501		0.0	16.6	9.1	106
	3102	10.0	20.0	8.9	99	2942		0.0	16.5	9.6	107
	3261	9.0	20.0	5.0	90	International Rainbow Fertilizer 10-10-10					
Mean		10.0	20.3	10.5		Guaranteed		10.0	10.0	10.0	
Coef. Var.		4.0	3.4	12.5		729		9.6	10.5	10.2	100
International Fertilizer 5-10-10						1038		10.1	10.0	10.3	101
Guaranteed		5.0	10.0	10.0		1176		10.1	10.5	10.2	103
168		6.7	10.0	10.6	113	1177		10.0	10.5	10.3	102
730		5.2	10.5	10.0	104	1618		10.0	10.1	10.6	101
1116		5.0	11.8	10.5	109	1713		10.4	10.1	10.5	103
1580		5.8	10.8	10.0	109	1976		10.1	10.2	10.6	102
International Fertilizer 10-20-20						2046		9.8	10.4	10.8	102
Guaranteed		10.0	20.0	20.0		2192		10.0	10.3	10.2	101
317		10.0	22.2	19.5	105	2231		9.6	10.6	9.8	100
1705		8.7	20.3	14.3	90	2484		10.0	11.1	10.6	105
2324		9.7	20.0	26.0	106	2505		9.6	10.6	10.0	100
International Fertilizer 3-12-12						Mean		9.9	10.4	10.3	
Guaranteed		3.0	12.0	12.0		Coef. Var.		2.5	2.9	2.7	
138		3.2	12.0	12.1	102	International Rainbow Fertilizer 7-14-7					
149		3.5	11.7	12.4	103	Guaranteed		7.0	14.0	7.0	
2326		3.4	11.8	12.8	104	209		6.7	14.8	7.4	102
International Fertilizer 5-20-20						443		9.2	14.7	7.2	115
Guaranteed		5.0	20.0	20.0		590		7.3	14.6	6.5	101
685		5.3	20.2	20.9	103	661		7.0	14.2	7.3	101
International Fertilizer 6-24-24						825		7.6	14.1	7.0	104
Guaranteed		6.0	24.0	24.0		869		7.4	14.0	8.0	104
976		5.6	22.4	25.6	97	933		7.1	13.8	8.8	103
International Fertilizer 0-45-0						939		7.1	14.9	7.4	104
Guaranteed		0.0	45.0	0.0		982		7.2	13.6	7.0	100
2123		0.0	45.0	0.0	100	1039		7.1	14.0	7.6	101
International Fertilizer 16-20-0						1050		7.2	15.2	7.8	107
Guaranteed		16.0	20.0	0.0		1080		7.3	14.0	7.9	103
550		15.3	20.4	0.0	99	1178		7.0	14.9	7.0	103
1134		14.7	20.8	0.0	97	1224		7.0	14.0	7.2	100
1201		15.1	20.2	0.0	97	1431		7.2	14.2	7.4	103
						1599		7.4	14.2	7.5	104

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
International Rainbow Fertilizer 7-14-7					
	1608	7.4	15.8	7.7	110
	1633	7.2	13.6	7.8	101
	1689	7.1	14.1	7.8	102
	1764	7.4	14.2	6.7	102
	1978	7.0	14.3	7.4	102
	2033	7.0	14.3	7.5	102
	2069	7.5	14.5	7.8	106
	2125	6.8	14.9	7.0	102
	2151	7.2	14.2	7.8	103
	2159	7.2	14.0	7.4	102
	2191	7.5	14.2	7.6	104
	2230	7.1	14.3	8.2	104
	2521	7.2	13.9	7.6	102
	2530	6.0	13.8	7.5	95
	2703	7.2	14.1	7.0	101
	2806	7.1	14.0	8.5	103
	2816	7.3	14.8	7.3	105
	2850	7.8	16.1	6.5	111
	2920	7.2	14.6	7.4	104
	3265	8.0	15.2	7.3	110
Mean		7.3	14.4	7.5	
Coef. Var.		6.3	3.9	6.4	
International Rainbow Fertilizer 10-20-10					
Guaranteed	10.0	20.0	10.0		
	341	11.3	21.0	10.4	108
	591	10.7	21.7	10.4	107
	660	10.3	20.4	10.6	103
	877	9.5	20.3	10.4	99
	1502	10.7	20.0	10.7	104
	1598	10.1	20.2	10.5	102
	1980	10.0	20.1	10.2	100
	2051	9.6	22.2	11.8	106
	2158	10.0	20.1	10.0	100
	2214	9.5	20.1	10.5	99
	2968	10.0	20.0	10.3	100
	3015	10.0	20.0	9.6	100
	3115	10.3	20.0	10.0	101
Mean		10.2	20.5	10.4	
Coef. Var.		5.0	3.5	4.9	
International Rainbow Fertilizer 6-12-12					
Guaranteed	6.0	12.0	12.0		
	870	6.0	12.0	13.0	102
	2121	6.8	12.1	11.6	104
	2328	6.5	12.0	12.7	104
International Rainbow Fertilizer 5-20-20					
Guaranteed	5.0	20.0	20.0		
	2193	5.8	20.1	19.0	102
	2851	1.3	20.1	16.1	81
International Rainbow Fertilizer 16-8-8					
Guaranteed	16.0	8.0	8.0		
	728	13.2	10.4	8.5	96
International Rainbow Fertilizer 10-20-5					
Guaranteed	10.0	20.0	5.0		
	1204	10.0	20.1	5.9	101
	1453	10.0	20.5	5.4	102
	1460	10.0	20.1	5.5	101
	1634	10.0	20.1	5.3	101
	1765	10.5	20.1	4.6	102
	1867	10.4	20.0	5.6	102
	2126	9.1	20.8	5.5	99
	2921	10.4	20.9	5.2	104
Mean		10.1	20.3	5.4	
Coef. Var.		4.3	1.7	7.0	
International Rainbow Fertilizer 12-20-5					
Guaranteed	12.0	20.0	5.0		
	3264	9.1	20.0	8.9	94
International Rainbow Fertilizer 16-20-0					
Guaranteed	16.0	20.0	0.0		

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
	876	14.8	23.2	0.0	103
	2232	16.0	20.6	0.0	101
INTERNATIONAL MINERALS & CHEMICAL CORP., FT. WORTH, TEXAS					
International Fertilizer 8-8-8					
Guaranteed		8.0	8.0	8.0	
	1014	9.4	8.6	8.6	113
	1254	9.1	8.4	8.8	110
	1484	8.5	8.5	8.0	105
	2617	8.0	8.4	8.2	102
International Fertilizer 10-20-0					
Guaranteed		10.0	20.0	0.0	
	382	9.6	20.2	0.0	99
	384	10.2	19.5	0.0	100
	455	9.8	20.5	0.0	101
	653	10.0	19.1	0.0	97
	1787	10.7	20.5	0.0	104
	1908	10.0	20.1	0.0	100
	2320	9.4	20.2	0.0	98
	2631	9.6	20.2	0.0	99
	2905	10.0	20.0	0.0	100
	2954	10.1	20.6	0.0	102
	3271	8.5	20.2	0.0	94
Mean		9.8	20.1	0.0	
Coef. Var.		5.7	2.2	0.0	
International Fertilizer 6-12-6					
Guaranteed		6.0	12.0	6.0	
	916	5.8	12.4	7.9	104
	1013	6.2	12.0	6.0	105
	1090	6.0	12.1	6.5	101
	1340	6.1	12.7	6.2	104
	1422	6.0	12.7	5.4	101
	1483	7.8	12.4	4.6	110
	1513	6.3	12.9	6.0	106
	1786	6.1	15.1	6.4	114
	1935	6.1	12.1	5.9	100
	2318	6.6	13.0	6.2	108
	2358	6.4	12.3	6.0	104
	2736	6.1	11.7	5.8	99
	2759	5.8	12.9	5.9	102
	3270	7.5	15.2	4.5	120
Mean		6.3	12.8	6.0	
Coef. Var.		9.3	8.2	13.7	
International Fertilizer 10-20-10					
Guaranteed		10.0	20.0	10.0	
	47	10.0	20.5	8.5	100
	53	10.0	21.3	9.8	103
	78	9.8	19.6	6.4	94
	158	8.8	20.0	9.0	95
	203	10.3	22.0	10.2	107
	210	9.1	19.8	10.6	97
	307	10.7	20.2	8.2	101
	323	10.7	20.5	10.0	104
	357	10.3	21.3	8.4	103
	360	15.1	21.2	4.1	115
	497	10.0	20.4	9.6	101
	623	10.3	21.0	9.8	103
	719	10.0	20.6	10.0	102
	1015	10.0	18.8	10.0	97
	1064	10.0	20.0	10.2	100
	1086	10.2	22.0	10.2	106
	1258	9.6	20.3	8.5	97
	1293	10.0	20.0	10.0	100
	1338	10.3	20.3	10.4	102
	1341	10.1	20.0	10.4	101
	1389	9.5	20.3	9.6	98
	1514	10.0	20.2	9.6	100
	1649	9.8	20.0	9.5	99
	1665	9.6	20.3	9.4	99



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
International Fertilizer 10-20-10							1288	12.3	38.7	0.0	98
	1666	10.0	20.3	10.6	102		1290	11.9	39.1	0.0	97
	1791	9.3	20.2	10.5	99		2302	12.1	39.6	0.0	99
	1906	10.0	20.5	9.5	101		2397	11.2	39.8	0.0	97
	1909	10.3	20.1	9.0	100	International Superphosphate 0-20-0					
	1919	9.6	20.2	9.8	99	Guaranteed	0.0	20.0	0.0	0.0	100
	1934	8.3	20.6	8.3	93		385	0.0	20.0	0.0	104
	2090	10.3	20.2	12.1	104		498	0.0	20.8	0.0	100
	2179	9.6	20.2	9.4	98		638	0.0	20.0	0.0	111
	2181	8.9	20.0	7.3	93		1265	0.0	22.1	0.0	100
	2207	9.5	20.1	9.0	97		1300	0.0	20.0	0.0	100
	2301	10.0	20.0	10.0	100		1378	0.0	20.1	0.0	100
	2394	9.8	20.0	9.6	99		1419	0.0	20.0	0.0	100
	2620	9.3	20.0	10.5	98		1647	0.0	20.0	0.0	100
	2709	9.1	20.3	6.8	93		3269	0.0	20.0	0.0	100
	2735	9.6	20.3	9.2	98	Mean	0.0	20.3	0.0		
	2821	9.4	20.9	9.5	99	Coef. Var.	0.0	3.5	0.0		
	3047	9.2	21.1	8.8	98	International Triple Superphosphate 0-46-0					
	3212	9.6	20.0	10.6	99	Guaranteed	0.0	46.0	0.0		
Mean		9.9	20.4	9.4			620	0.0	46.8	0.0	102
Coef. Var.		9.7	2.9	14.4			1292	0.0	46.8	0.0	102
International Fertilizer 5-10-10						International Rainbow Fertilizer 0-16-8					
Guaranteed	5.0	10.0	10.0			Guaranteed	0.0	16.0	8.0		
	2423	5.3	10.6	8.4	101		79	0.0	16.1	8.4	102
	2579	6.0	10.6	6.2	101		500	0.0	17.0	8.0	105
International Fertilizer 5-20-20							1622	0.0	10.2	14.0	88
Guaranteed	5.0	20.0	20.0			International Rainbow Fertilizer 10-10-10					
	322	5.3	20.0	21.6	104	Guaranteed	10.0	10.0	10.0		
International Fertilizer 16-20-0							1253	9.6	10.0	10.0	98
Guaranteed	16.0	20.0	0.0				1917	9.6	10.4	9.7	99
	13	15.8	21.3	0.0	103	International Rainbow Fertilizer 10-20-0					
	32	14.3	20.5	0.0	96	Guaranteed	10.0	20.0	0.0		
	77	11.2	21.3	0.0	87		1541	10.8	20.2	0.0	104
	383	14.3	20.8	0.0	96	International Rainbow Fertilizer 7-14-7					
	426	14.9	20.0	0.0	97	Guaranteed	7.0	14.0	7.0		
	473	15.3	20.0	0.0	98		1012	7.0	13.2	7.4	98
	499	12.9	21.4	0.0	93		1098	7.2	14.1	6.0	100
	571	16.0	20.4	0.0	101		1339	7.2	16.1	6.6	108
	622	13.2	20.0	0.0	90		1390	7.2	14.0	7.4	102
	635	14.6	20.0	0.0	95		1485	7.2	14.1	7.0	101
	652	15.2	22.1	0.0	102		1726	7.1	14.1	6.3	100
	772	15.7	20.1	0.0	99		1790	7.0	15.0	5.1	100
	915	14.6	22.2	0.0	100		1918	7.0	14.0	7.4	118
	1063	16.1	20.2	0.0	101		2089	7.6	14.9	6.3	105
	1291	15.5	24.0	0.0	107		2139	7.0	14.0	7.1	100
	1299	15.5	20.4	0.0	99		2304	7.6	13.7	6.7	101
	1367	16.5	20.0	0.0	102		2319	7.2	14.2	6.6	101
	1368	14.9	21.3	0.0	99		2623	6.7	14.4	6.0	98
	1387	15.3	20.9	0.0	100		2691	14.0	14.3	1.0	128
	1401	15.5	20.1	0.0	99		2906	7.1	15.4	7.0	106
	1420	13.8	20.8	0.0	94		2980	7.5	16.6	7.0	112
	1491	14.8	20.0	0.0	96	Mean	7.6	14.5	6.3		
	1544	16.1	20.6	0.0	102	Coef. Var.	22.6	6.1	24.4		
	1562	15.2	19.9	0.0	97	International Rainbow Fertilizer 10-20-10					
	1648	15.3	20.4	0.0	99	Guaranteed	10.0	20.0	10.0		
	1905	16.3	20.2	0.0	101		1486	10.0	20.0	8.0	98
	2129	15.3	20.0	0.0	98		1542	10.1	20.1	8.4	99
	2134	14.7	20.3	0.0	96		2135	9.5	20.1	10.1	99
	2180	15.0	19.6	0.0	96		2138	9.5	20.8	9.4	99
	2182	15.7	20.1	0.0	99		2307	9.3	19.8	10.7	98
	2305	15.5	23.2	0.0	106		2760	9.4	20.0	8.2	96
	2472	13.7	19.8	0.0	92	Mean	9.6	20.1	9.1		
	2548	16.0	20.2	0.0	100	Coef. Var.	3.4	1.7	12.1		
	2578	13.7	21.1	0.0	95	International Rainbow Fertilizer 10-10-5					
	2648	14.3	20.3	0.0	95	Guaranteed	10.0	10.0	5.0		
	2681	14.0	19.8	0.0	93		2382	9.6	10.8	5.1	101
Mean		14.9	20.7	0.0		International Rainbow Fertilizer 10-20-5					
Coef. Var.		7.3	4.6	0.0		Guaranteed	10.0	20.0	5.0		
International Fertilizer 13-39-0							18	9.2	19.2	5.4	96
Guaranteed	13.0	39.0	0.0								

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
International Rainbow Fertilizer 10-20-5					
	359	8.8	21.6	4.0	98
	642	9.3	19.1	5.5	95
	1377	10.2	20.0	5.6	102
	1421	9.3	20.6	5.4	99
	1470	10.0	19.9	5.6	100
	1517	9.5	18.0	5.5	93
	1543	10.2	20.0	5.5	101
	1621	10.0	20.2	5.6	101
	2133	10.0	20.0	5.3	100
	2622	10.0	19.8	5.1	100
	2632	10.2	20.0	7.5	104
	Mean	9.7	19.9	5.5	
	Coef. Var.	4.9	4.4	14.0	
International Rainbow Fertilizer 16-20-0					
	Guaranteed	16.0	20.0	0.0	
	1471	14.7	20.2	0.0	96
	2306	14.9	20.1	0.0	96
	2621	15.3	20.4	0.0	99
	3042	11.0	20.0	0.0	83
Ammonium Nitrate 33.5-0-0					
	Guaranteed	33.5	0.0	0.0	
	1933	33.5	0.0	0.0	100
JACKSONVILLE FERTILIZER COMPANY, JACKSONVILLE, TEXAS					
Grosco Brand Fertilizer 8-8-8					
	Guaranteed	8.0	8.0	8.0	
	1075	8.0	8.5	8.0	102
	2371	8.3	8.5	8.0	104
Grosco Brand Fertilizer 10-20-10					
	Guaranteed	10.0	20.0	10.0	
	50	10.0	20.0	10.6	101
	311	9.6	21.2	10.2	102
	316	10.0	21.2	10.0	103
	347	9.3	20.6	10.0	99
	641	9.9	22.2	10.1	105
	1704	10.2	20.0	9.8	100
	1995	9.8	21.2	10.9	103
	2370	10.0	20.2	10.7	101
	Mean	9.9	20.8	10.3	
	Coef. Var.	2.9	3.7	3.8	
Jacksonville Ammonium Nitrate 33.5					
	Guaranteed	33.5	0.0	0.0	
	415	33.6	0.0	0.0	101
KELLY WEBER & COMPANY, INC., LAKE CHARLES, LA.					
Weber King Brand Fertilizer Special 8-8-8					
	Guaranteed	8.0	8.0	8.0	
	2228	8.0	14.0	11.1	131
Weber King Brand Fertilizer Special 6-12-6					
	Guaranteed	6.0	12.0	6.0	
	2227	6.4	12.6	7.4	108
	2697	8.6	14.7	6.3	128
	2823	6.0	13.6	6.3	107
Weber King Brand Fertilizer 10-20-10					
	Guaranteed	10.0	20.0	10.0	
	2696	8.5	20.0	10.9	96
MONSANTO CHEMICAL COMPANY, ST. LOUIS, MO.					
Lion Brand Ammonium Nitrate 33.5-0-0					
	Guaranteed	33.5	0.0	0.0	
	58	33.5	0.0	0.0	100
	449	33.5	0.0	0.0	100
	501	33.9	0.0	0.0	101
	688	33.5	0.0	0.0	100
	777	33.5	0.0	0.0	100
	Mean	33.6	0.0	0.0	
	Coef. Var.	0.5	0.0	0.0	
Tri-Una Sol 320 32-0-0					
	Guaranteed	32.0	0.0	0.0	
	421	32.4	0.0	0.0	102

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Phosphatic Fertilizer 0-54-0					
	Guaranteed	0.0	54.0	0.0	
	194	0.0	54.1	0.0	100
	1534	0.0	54.0	0.0	100
OLIN MATHIESON CHEMICAL CORP., HOUSTON, TEXAS					
Mathieson Ammonium Sulfate 21-0-0					
	Guaranteed	21.0	0.0	0.0	
	393	21.0	0.0	0.0	100
	400	21.1	0.0	0.0	101
	437	21.1	0.0	0.0	101
	675	21.0	0.0	0.0	100
	899	21.0	0.0	0.0	100
	1301	20.3	0.0	0.0	97
	1632	21.0	0.0	0.0	100
	2645	21.0	0.0	0.0	100
	2661	21.0	0.0	0.0	100
	2766	20.2	0.0	0.0	96
	3144	21.0	0.0	0.0	100
	Mean	20.9	0.0	0.0	
	Coef. Var.	1.5	0.0	0.0	
Mathieson Urea 45-0-0					
	Guaranteed	45.0	0.0	0.0	
	669	45.0	0.0	0.0	100
	887	45.0	0.0	0.0	100
	898	45.0	0.0	0.0	100
	1309	45.0	0.0	0.0	100
	1363	45.1	0.0	0.0	100
	1898	45.0	0.0	0.0	100
	2663	45.0	0.0	0.0	100
	2962	45.0	0.0	0.0	100
	3050	45.0	0.0	0.0	100
	3063	45.0	0.0	0.0	100
	3076	45.3	0.0	0.0	101
	3213	45.1	0.0	0.0	100
	3282	45.0	0.0	0.0	100
	Coef. Var.	0.0	0.0	0.0	
Mathieson Urea 46-0-0					
	Guaranteed	46.0	0.0	0.0	
	2240	46.3	0.0	0.0	101
Mathieson 0-46-0					
	Guaranteed	0.0	46.0	0.0	
	505	0.0	46.3	0.0	101
	806	0.0	48.5	0.0	105
	1458	0.0	46.5	0.0	101
	1532	0.0	47.6	0.0	103
	1645	0.0	46.5	0.0	101
	Mean	0.0	47.1	0.0	
	Coef. Var.	0.0	2.0	0.0	
Mathieson Ammo Phos 13-13-13 Pelletized Fertilizer					
	Guaranteed	13.0	13.0	13.0	
	273	13.2	14.5	12.4	104
	373	13.0	14.6	13.0	105
	380	12.7	13.7	13.0	101
	561	13.0	15.2	14.2	107
	677	13.4	13.0	13.3	102
	681	13.0	13.3	14.0	102
	689	13.0	13.3	13.4	101
	692	13.4	13.4	13.0	103
	703	13.2	13.0	12.7	100
	780	13.0	13.1	13.9	101
	781	13.0	13.0	14.5	102
	820	13.0	13.8	13.8	103
	888	13.1	13.0	14.3	102
	937	13.0	13.3	13.2	101
	959	13.3	13.1	13.0	101
	1113	13.2	14.5	14.2	106
	1138	13.0	13.8	14.2	104
	1308	13.3	13.7	15.0	106
	1330	13.0	13.2	13.6	101
	1337	13.1	13.2	11.9	99

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Mathieson Ammo Phos 13-13-13 Pelletized Fertilizer											
	1771	12.1	13.5	14.0	99		847	10.0	20.8	11.2	104
	1776	13.0	13.7	13.2	102		853	10.1	21.4	10.8	105
	1904	13.1	14.1	13.5	104		874	10.2	20.0	10.4	101
	2002	12.8	13.3	13.5	101		889	10.1	20.0	11.3	102
	2098	10.1	13.8	20.0	100		930	10.1	20.0	11.8	103
	2203	13.1	13.0	13.7	101		936	10.0	20.1	10.0	100
	2254	13.0	14.6	13.6	105		949	10.0	20.0	10.2	100
	2459	13.0	13.0	14.1	101		960	10.3	20.0	10.0	101
	2614	13.2	13.4	13.9	103		1016	10.1	20.0	11.4	102
	2630	12.7	13.4	13.6	101		1017	10.7	20.0	10.9	104
	2776	12.6	13.4	13.3	100		1029	10.3	20.0	10.3	102
	2831	13.2	16.1	13.1	109		1054	9.5	20.0	10.6	99
	3141	13.0	14.4	13.7	104		1061	10.1	20.0	10.3	101
	3292	13.4	13.3	13.3	103		1106	9.7	20.4	10.4	100
Mean		13.0	13.7	13.7			1130	10.0	20.0	12.5	103
Coef. Var.		4.3	5.2	9.2			1136	10.1	20.0	12.0	103
							1152	9.7	20.0	10.8	100
Mathieson Ammo Phos 15-30-0 Pelletized Fertilizer											
Guaranteed		15.0	30.0	0.0			1263	10.1	21.4	10.4	104
448	15.0	30.4	0.0	101		1306	10.0	20.2	10.2	101	
489	15.1	30.3	0.0	101		1373	10.0	20.2	11.6	103	
503	15.2	30.3	0.0	102		1512	10.6	20.0	10.4	103	
1370	14.4	30.0	0.0	98		1520	10.0	20.0	10.0	100	
1445	15.0	31.2	0.0	102		1570	10.1	20.2	12.3	104	
2615	14.4	30.7	0.0	101		1606	9.4	21.7	9.7	102	
2797	15.4	31.5	0.0	104		1685	10.1	20.9	10.8	104	
3154	15.4	31.8	0.0	105		1690	10.6	20.2	9.6	102	
Mean		15.0	30.8	0.0		1701	10.0	20.1	12.4	103	
Coef. Var.		2.6	2.1	0.0		1711	10.4	20.5	10.6	104	
						1761	10.8	20.8	10.2	105	
Mathieson Ammo Phos 10-20-10 Pelletized Fertilizer											
Guaranteed		10.0	20.0	10.0		1777	10.1	20.0	10.6	101	
9	10.3	23.0	10.2	108		1784	10.4	20.8	11.5	105	
35	10.2	22.6	10.2	108		1823	10.1	20.6	10.0	102	
40	10.6	23.2	10.8	111		1869	10.2	20.2	10.5	102	
48	9.7	21.1	10.2	102		1893	9.8	20.4	10.6	101	
113	9.8	21.1	10.4	103		1982	10.2	20.1	10.8	102	
159	10.0	22.4	10.6	107		2001	10.8	20.1	11.8	106	
164	10.0	21.1	10.2	103		2148	10.0	20.0	10.2	100	
165	11.2	24.2	12.0	118		2163	11.0	20.6	10.4	106	
181	10.5	22.8	10.4	110		2210	10.2	20.6	10.3	103	
183	10.0	20.0	10.4	101		2291	12.0	10.9	10.0	110	
247	10.5	20.8	10.0	104		2341	10.0	20.1	10.2	100	
265	10.1	20.0	10.0	101		2384	10.0	20.0	10.3	100	
285	9.8	20.2	10.0	100		2421	9.7	20.2	10.9	100	
308	10.8	21.7	11.0	109		2458	10.0	20.4	11.4	103	
312	9.7	21.2	9.6	102		2461	10.4	20.2	9.6	102	
331	10.1	20.4	9.0	101		2511	9.6	19.8	11.7	100	
378	10.0	20.0	10.2	101		2552	10.0	19.8	10.6	100	
381	10.1	20.0	10.0	101		2565	10.0	20.2	10.4	101	
407	10.0	21.7	10.1	105		2575	10.0	20.2	10.7	101	
417	10.4	20.4	10.0	103		2593	10.0	20.4	10.3	101	
447	10.3	20.6	10.4	103		2613	10.0	20.6	11.6	104	
475	10.4	20.0	10.0	102		2647	10.1	20.2	12.3	104	
484	11.2	23.7	10.4	115		2679	10.0	20.4	10.8	102	
504	10.0	20.0	10.0	100		2800	10.1	20.0	10.0	100	
534	10.3	20.0	10.0	101		2903	9.8	20.1	10.9	101	
588	10.0	20.5	9.7	101		2939	10.3	22.2	10.5	107	
595	10.8	20.0	10.2	103		3136	10.1	20.0	10.2	101	
613	10.5	20.0	10.6	103		Mean	10.2	20.5	10.6		
654	10.1	20.1	10.5	101		Coef. Var.	3.8	6.5	10.9		
655	10.1	20.1	10.6	101		Mathieson Ammo Phos 12-24-12					
665	10.4	20.0	11.3	103		Guaranteed	12.0	24.0	12.0		
676	10.4	20.1	10.0	107		10	11.8	25.5	12.5	103	
694	10.2	20.0	10.0	101		36	12.2	24.1	12.0	101	
721	10.2	20.1	10.3	101		112	11.7	24.7	11.0	100	
744	10.1	20.2	19.7	100		195	11.2	24.0	14.0	100	
752	10.3	20.8	10.0	103		257	11.7	24.9	12.0	101	
784	8.8	19.3	9.0	93		372	12.0	24.0	13.2	102	
786	10.4	20.2	10.0	102		379	12.0	24.0	13.4	102	
811	10.0	22.0	10.7	106		391	12.0	24.4	12.8	102	
818	10.1	20.7	10.3	103		562	12.0	24.0	12.7	101	
						581	11.4	26.4	12.0	103	



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Mathieson Ammo Phos 12-24-12					
	609	12.0	24.0	12.1	100
	668	12.1	25.1	12.2	103
	672	12.1	25.0	12.3	103
	679	12.0	24.5	12.3	101
	682	12.0	24.1	12.4	101
	695	12.0	24.6	12.7	102
	696	12.0	24.3	13.2	102
	705	12.0	24.1	12.2	100
	710	12.0	25.7	12.5	104
	716	11.7	24.3	12.6	100
	782	12.3	24.0	11.0	100
	824	12.0	24.1	12.7	101
	836	12.1	25.0	12.7	103
	837	12.0	24.5	12.8	102
	840	12.0	25.5	13.3	104
	894	12.2	24.6	12.6	103
	895	12.0	25.2	13.9	104
	896	12.1	24.5	13.4	103
	897	12.0	26.3	13.9	107
	1094	12.1	24.2	12.3	101
	1095	12.0	24.2	13.6	102
	1107	12.0	24.6	12.4	102
	1192	12.1	24.1	12.0	101
	1307	12.0	25.1	12.7	103
	1329	12.0	25.5	12.8	104
	1355	12.0	25.9	12.5	104
	1371	12.0	26.2	11.5	104
	1448	12.0	24.8	12.3	102
	1742	12.0	24.2	12.3	101
	1775	12.0	24.0	12.3	100
	1944	11.7	21.2	12.7	94
	2204	12.2	24.0	12.6	101
	2206	12.0	24.0	12.6	101
	2211	12.3	24.0	12.8	102
	2275	12.4	24.1	12.7	102
	2277	12.0	24.1	12.1	100
	2280	12.5	24.1	12.2	102
	2312	12.0	23.7	13.1	101
	2420	12.0	24.1	12.2	100
	2628	12.0	24.1	12.0	100
	2635	12.0	24.8	12.1	102
	2777	12.0	24.7	12.0	101
	2795	12.0	26.2	13.0	106
	2830	12.0	25.3	12.6	103
	2934	12.2	24.1	11.8	101
	2987	12.0	25.0	12.1	102
	2993	12.0	24.6	12.0	101
	3005	12.1	24.7	13.0	103
	3021	12.0	24.0	13.3	101
	3051	12.0	24.6	13.8	103
	3096	12.0	24.7	13.0	103
	3106	12.0	24.6	12.3	102
	3143	12.0	24.1	12.6	101
	3160	12.0	24.1	12.7	101
	3164	12.1	24.8	12.8	103
	3192	12.0	24.3	12.8	101
	Mean	12.0	24.6	12.6	
	Coef. Var.	1.4	3.1	4.8	
Mathieson Ammo Phos 10-20-20 Pelletized Fertilizer					
	Guaranteed	10.0	20.0	20.0	
	886	10.2	21.1	21.0	104
	996	10.0	20.0	20.0	100
	2550	10.0	20.7	21.4	103
	3175	10.3	20.4	17.0	99
Mathieson Ammo Phos 14-28-14					
	Guaranteed	14.0	28.0	14.0	
	218	14.0	28.9	12.4	101
Mathieson Ammo Phos 6-24-24 Pelletized Fertilizer					
	Guaranteed	6.0	24.0	24.0	

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
	340	6.0	24.9	22.8	101
	502	6.3	24.4	24.8	103
	674	6.0	24.9	23.7	102
	890	6.0	24.0	25.3	101
	1139	6.0	24.0	25.2	101
	1779	5.7	24.2	26.3	102
	2119	7.6	24.2	21.6	103
	2616	6.8	24.9	24.0	105
	2724	6.0	26.4	24.9	106
	2799	6.0	25.5	24.5	104
	Mean	6.2	24.7	24.3	
	Coef. Var.	8.9	3.1	5.5	
Mathieson Ammo Phos 8-32-16 Pelletized Fertilizer					
	Guaranteed	8.0	32.0	16.0	
	891	8.0	32.0	17.2	101
	1524	8.4	32.0	16.0	101
	2428	8.2	32.7	16.8	103
	2778	7.8	34.6	16.4	105
	2781	8.1	32.6	16.4	102
	Mean	8.1	32.8	16.6	
	Coef. Var.	2.8	3.3	2.8	
Mathieson Ammo Phos 16-20-0 Pelletized Fertilizer					
	Guaranteed	16.0	20.0	0.0	
	11	15.8	20.4	0.0	101
	12	16.0	20.0	0.0	100
	114	16.0	20.8	0.0	102
	193	16.0	20.4	0.0	101
	253	16.0	20.8	0.0	102
	256	16.0	19.8	0.0	100
	268	16.0	20.4	0.0	101
	276	15.8	20.0	0.0	100
	286	16.0	20.0	0.0	100
	371	16.0	21.0	0.0	103
	389	16.3	20.0	0.0	101
	392	16.2	20.4	0.0	102
	436	16.2	20.2	0.0	102
	441	16.2	20.6	0.0	102
	476	16.1	20.2	0.0	101
	529	16.4	20.3	0.0	102
	563	16.4	20.2	0.0	102
	608	16.0	20.8	0.0	102
	614	16.3	20.0	0.0	101
	673	16.2	20.0	0.0	101
	680	16.3	20.0	0.0	101
	691	16.2	20.0	0.0	101
	693	16.2	20.4	0.0	102
	704	16.3	20.0	0.0	101
	708	16.1	20.6	0.0	102
	709	16.2	21.6	0.0	104
	712	16.0	20.1	0.0	100
	713	16.3	21.1	0.0	103
	714	16.1	21.1	0.0	103
	715	16.0	20.5	0.0	101
	767	16.0	20.6	0.0	101
	805	16.5	21.5	0.0	105
	816	16.0	21.7	0.0	104
	819	16.3	20.8	0.0	103
	821	16.0	22.3	0.0	105
	822	16.0	21.4	0.0	103
	823	16.3	21.2	0.0	104
	838	16.1	21.7	0.0	104
	839	16.2	20.0	0.0	101
	875	16.0	21.2	0.0	103
	882	16.1	20.2	0.0	101
	892	16.1	22.0	0.0	105
	893	16.5	20.3	0.0	102
	961	16.0	20.0	0.0	100
	995	16.1	20.0	0.0	100
	1018	16.4	20.0	0.0	101
	1062	16.2	20.9	0.0	103

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Mathieson Ammo Phos 16-20-0 Pelletized Fertilizer											
	1093	16.0	20.2	0.0	100		3074	16.0	20.2	0.0	100
	1096	16.0	20.8	0.0	102		3095	16.0	20.2	0.0	100
	1129	16.0	20.9	0.0	102		3116	16.4	21.3	0.0	104
	1137	16.0	21.8	0.0	104		3139	16.1	20.0	0.0	100
	1153	16.0	20.9	0.0	102		3141	16.3	20.6	0.0	102
	1191	16.0	20.9	0.0	102		3155	16.0	20.5	0.0	101
	1302	16.0	21.1	0.0	103		3161	16.0	20.0	0.0	100
	1331	16.2	20.6	0.0	102		3165	16.0	21.1	0.0	103
	1336	16.0	21.0	0.0	102		3171	16.0	20.0	0.0	100
	1345	15.5	20.3	0.0	99		3173	16.2	20.1	0.0	101
	1361	16.0	20.4	0.0	101		3177	16.0	20.0	0.0	100
	1362	16.3	20.8	0.0	103		3178	16.0	20.9	0.0	102
	1364	16.0	21.0	0.0	102		3181	16.1	20.3	0.0	101
	1372	16.0	21.2	0.0	103		3183	16.1	20.0	0.0	100
	1438	15.2	20.9	0.0	99		3242	16.3	20.5	0.0	102
	1468	16.1	20.7	0.0	102		3288	16.0	20.0	0.0	100
	1493	16.0	20.7	0.0	102	Mean		16.1	20.5	0.0	
	1519	16.3	20.1	0.0	101	Coef. Var.		1.4	2.4	0.0	
	1627	16.3	20.0	0.0	101	Mathieson Ammo Phos 11-48-0 Pelletized Fertilizer					
	1630	16.4	20.3	0.0	102	Guaranteed	11.0	48.0	0.0		
	1640	16.1	21.1	0.0	103		192	10.8	48.8	0.0	101
	1644	15.4	20.8	0.0	100		697	13.7	48.0	0.0	106
	1646	16.2	20.6	0.0	102		1252	11.1	48.1	0.0	101
	1664	16.1	20.2	0.0	101		2796	12.6	48.2	0.0	104
	1743	16.5	20.1	0.0	101	Mathieson Ammo Phos 16-48-0 Pelletized Fertilizer					
	1770	16.0	20.2	0.0	100	Guaranteed	16.0	48.0	0.0		
	1784	16.3	20.2	0.0	101		451	16.1	48.1	0.0	101
	1822	16.0	20.6	0.0	101		678	16.7	48.1	0.0	102
	1910	16.5	20.5	0.0	103		698	15.6	48.0	0.0	99
	2086	15.7	20.4	0.0	100		711	16.0	49.2	0.0	102
	2097	16.3	20.7	0.0	103		1831	16.9	48.0	0.0	102
	2099	16.0	20.1	0.0	100		1832	16.0	48.7	0.0	101
	2131	16.0	20.0	0.0	100		3004	16.1	48.3	0.0	101
	2173	16.0	20.0	0.0	100		3043	16.0	48.0	0.0	100
	2196	16.1	20.6	0.0	102		3140	16.0	48.8	0.0	101
	2205	16.0	20.1	0.0	100		3289	16.5	48.1	0.0	101
	2212	16.4	20.5	0.0	103	Mean		16.2	48.3	0.0	
	2255	16.2	20.3	0.0	101	Coef. Var.		2.4	0.9	0.0	
	2264	16.1	20.0	0.0	100	Mathieson Ammo Phos 13-39-0 Pelletized Fertilizer					
	2276	16.1	20.2	0.0	101	Guaranteed	13.0	39.0	0.0		
	2281	16.0	20.1	0.0	100		217	13.1	39.4	0.0	101
	2290	16.0	20.8	0.0	102		258	13.0	39.4	0.0	101
	2303	15.2	20.0	0.0	97		388	13.2	39.4	0.0	102
	2385	16.3	20.3	0.0	102		422	13.0	39.0	0.0	100
	2454	16.1	20.0	0.0	100		482	13.1	39.1	0.0	101
	2524	16.0	20.0	0.0	100		607	13.1	39.0	0.0	100
	2547	16.0	20.5	0.0	101		699	13.0	39.0	0.0	100
	2551	16.0	20.0	0.0	100		766	13.1	40.0	0.0	102
	2574	16.1	20.6	0.0	102		1282	13.3	40.1	0.0	103
	2612	16.0	20.8	0.0	102		1531	13.7	39.0	0.0	102
	2629	16.0	20.3	0.0	101		1631	13.4	40.3	0.0	103
	2646	16.1	19.9	0.0	100		2120	13.2	39.7	0.0	102
	2649	16.0	19.8	0.0	100		3081	13.2	41.1	0.0	104
	2660	16.1	20.7	0.0	102	Mean		13.2	39.6	0.0	
	2678	16.1	20.0	0.0	100	Coef. Var.		1.3	1.6	0.0	
	2770	15.7	20.1	0.0	99	O M High Quality Fertilizer 10-20-10					
	2771	16.4	20.8	0.0	103	Guaranteed	10.0	20.0	10.0		
	2785	16.6	20.1	0.0	102		2549	10.0	19.9	11.7	102
	2829	16.0	21.4	0.0	103		2710	9.6	20.4	10.6	100
	2847	14.9	20.0	0.0	96		2792	10.0	22.3	11.0	107
	2864	16.0	20.1	0.0	100	Mathieson Ammonium Sulfate 21-0-0					
	2933	16.0	20.7	0.0	102	Guaranteed	21.0	0.0	0.0		
	2957	16.5	20.0	0.0	102		3070	21.0	0.0	0.0	100
	2959	16.0	20.8	0.0	102		3092	21.3	0.0	0.0	101
	2992	16.2	20.8	0.0	103		3097	21.0	0.0	0.0	100
	3002	16.2	20.0	0.0	101		3105	21.0	0.0	0.0	100
	3006	16.0	20.0	0.0	100		3147	21.0	0.0	0.0	100
	3022	16.0	20.0	0.0	100		3162	21.0	0.0	0.0	100
	3053	16.0	20.8	0.0	102						
	3069	16.0	20.5	0.0	101						

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Mathieson Ammonium Sulphate 21-0-0					
	3163	21.0	0.0	0.0	100
	3191	21.0	0.0	0.0	100
	3205	21.0	0.0	0.0	100
	3208	20.6	0.0	0.0	100
	3229	21.0	0.0	0.0	100
Mean		21.0	0.0	0.0	
Coef. Var.		0.7	0.0	0.0	
MISSISSIPPI CHEMICAL COMPANY, YAZOO CITY, MISS.					
MCC Brand Ammonium Nitrate Fertilizer 33.5-0-0					
Guaranteed		33.5	0.0	0.0	
	118	33.5	0.0	0.0	100
	749	33.8	0.0	0.0	101
	799	33.9	0.0	0.0	101
	829	33.8	0.0	0.0	101
	1030	33.7	0.0	0.0	101
	1405	33.5	0.0	0.0	100
Mean		33.7	0.0	0.0	
Coef. Var.		0.4	0.0	0.0	
Urea 45-0-0					
Guaranteed		45.0	0.0	0.0	
	1404	45.1	0.0	0.0	100
	2247	44.5	0.0	0.0	99
PHILLIPS PETROLEUM COMPANY, BARTLESVILLE, OKLA.					
Phillips 66 Ammonium Nitrate 33.5-0-0					
Guaranteed		33.5	0.0	0.0	
	93	33.5	0.0	0.0	100
	612	33.8	0.0	0.0	101
	817	33.7	0.0	0.0	101
	1255	33.5	0.0	0.0	100
	1289	33.5	0.0	0.0	100
	1402	33.6	0.0	0.0	100
	1530	33.6	0.0	0.0	100
	2273	33.9	0.0	0.0	101
	2758	33.5	0.0	0.0	100
Mean		33.6	0.0	0.0	
Coef. Var.		0.4	0.0	0.0	
Phillips 66 Ammonium Sulfate 21-0-0					
Guaranteed		21.0	0.0	0.0	
	1001	21.0	0.0	0.0	100
	1526	21.0	0.0	0.0	100
	2016	21.0	0.0	0.0	100
	2143	21.0	0.0	0.0	100
	2536	21.0	0.0	0.0	100
	2984	21.3	0.0	0.0	101
	3020	20.9	0.0	0.0	100
	3049	21.0	0.0	0.0	100
	3094	21.0	0.0	0.0	100
	3099	21.0	0.0	0.0	100
	3117	21.1	0.0	0.0	100
	3209	21.0	0.0	0.0	100
	3233	21.0	0.0	0.0	100
	3235	21.0	0.0	0.0	100
Mean		21.0	0.0	0.0	
Coef. Var.		0.0	0.0	0.0	
Phillips 66 Triple Superphosphate 46%					
Guaranteed		0.0	46.0	0.0	
	428	0.0	46.0	0.0	100
	843	0.0	46.5	0.0	101
	1778	0.0	46.0	0.0	100
Phillips 66 Aqua Ammonium Solution 20-0-0					
Guaranteed		20.0	0.0	0.0	
	1947	20.0	0.0	0.0	100
	2470	19.6	0.0	0.0	98
PITTSBURG FERTILIZER COMPANY, PITTSBURG, TEXAS					
Golden Nugget Brand 8-8-8					
Guaranteed		8.0	8.0	8.0	
	88	10.1	5.9	11.0	111
	856	7.4	10.8	9.7	111

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
	1222	8.9	8.0	10.5	111
	1584	8.1	13.3	9.0	125
	1715	8.0	8.7	8.2	103
	1718	9.5	8.0	8.8	111
	1855	10.2	8.7	8.9	119
	2335	7.4	8.6	9.2	101
	2485	8.3	8.7	8.6	106
Mean		8.7	9.0	9.3	
Coef. Var.		12.4	22.9	9.8	
Golden Nugget Brand 10-20-0					
Guaranteed		10.0	20.0	0.0	
	802	9.5	21.0	0.0	101
Golden Nugget Brand 6-12-6					
Guaranteed		6.0	12.0	6.0	
	857	7.0	15.0	10.0	127
	1223	7.9	12.7	9.7	123
	1397	7.7	15.0	10.0	131
	1429	6.7	12.7	8.7	113
	1716	6.1	12.4	9.8	110
	2037	6.5	12.6	7.9	110
	2154	6.2	12.0	8.8	107
	2197	8.5	12.1	9.5	123
	2336	7.0	12.5	8.8	114
	2340	6.4	12.0	10.8	113
Mean		7.0	12.9	9.4	
Coef. Var.		11.3	8.8	9.0	
Golden Nugget Brand 10-20-10					
Guaranteed		10.0	20.0	10.0	
	126	8.4	19.5	12.0	96
	249	9.3	20.7	11.0	101
	305	10.8	20.8	11.8	108
	469	8.8	21.9	10.8	102
	485	9.0	20.9	10.4	99
	569	9.5	20.1	11.0	100
	801	10.1	21.5	11.7	106
	1396	9.2	20.9	10.9	100
	1428	10.3	20.2	10.6	102
	1582	8.8	21.2	10.0	99
	1714	10.2	20.0	11.0	102
	1717	9.3	18.5	10.8	95
	1854	10.2	20.1	10.6	102
	2168	9.8	19.3	15.0	104
	2928	10.6	20.0	11.9	105
	3009	9.4	21.3	9.3	100
Mean		9.6	20.4	11.2	
Coef. Var.		7.3	4.3	11.1	
Golden Nugget Brand 5-10-10					
Guaranteed		5.0	10.0	10.0	
	169	6.9	12.6	10.8	126
	401	6.8	12.0	10.0	121
	1583	8.3	10.0	10.7	124
Golden Nugget Brand 16-20-0					
Guaranteed		16.0	20.0	0.0	
	800	10.8	23.4	0.0	90
	1395	12.7	21.1	0.0	91
	2938	10.5	20.1	0.0	81
PLANTERS FERTILIZER & SOYBEANS CO., PINE BLUFF, ARK.					
Razorback 6-12-6					
Guaranteed		6.0	12.0	6.0	
	2509	9.7	12.0	11.0	134
Razorback 10-20-10					
Guaranteed		10.0	20.0	10.0	
	2510	7.2	20.2	9.5	89
PLAINSMAN FERTILIZER COMPANY, PLAINVIEW, TEXAS					
Green Phosphoric Acid 0-54-0					
Guaranteed		0.0	54.0	0.0	
	1719	0.0	54.1	0.0	100



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Nitro-Phos 8-24-0							3286	6.0	12.1	5.6	100
Guaranteed		8.0	24.0	0.0		Mean		6.2	12.3	5.9	
3283		6.1	24.6	0.0	94	Coef. Var.		5.1	3.3	13.3	
CARL POOL LABORATORIES, INC., SAN ANTONIO, TEXAS						Red Star Pelleted Super Flo Brand 10-20-10					
Carl Pool Lawn Fungicide 8-18-5						Guaranteed		10.0	20.0	10.0	
Guaranteed		8.0	18.0	5.0		3		9.7	20.8	10.2	101
108		8.7	11.7	5.2	85	64		9.7	20.4	10.0	100
Azalea-Camellia Food & Magic Green 5-20-3						83		10.0	20.4	10.4	102
Guaranteed		5.0	20.0	3.0		90		9.8	19.3	10.2	98
1298		4.7	21.7	3.2	105	94		9.7	21.1	10.6	103
B-R 61 9-59-8						117		9.8	20.0	10.6	100
Guaranteed		9.0	59.0	8.0		124		9.8	20.8	10.8	103
1297		9.5	59.7	7.6	102	134		9.7	20.7	11.0	102
Magic Grow 21-36-9						236		9.7	20.9	10.0	101
Guaranteed		21.0	36.0	9.0		259		9.5	20.0	10.0	98
1296		20.6	36.0	9.2	99	266		9.5	20.9	9.4	100
Ivy Food 16-36-9						298		9.6	20.4	10.0	100
Guaranteed		16.0	36.0	9.0		304		9.7	20.4	10.2	101
1295		16.6	36.5	9.0	102	326		9.7	20.7	10.6	102
RED STAR FERTILIZER CO., SULPHUR SPRINGS, TEXAS						464		9.6	20.0	10.0	99
Red Star Pelleted Super Flo Brand 15-15-0						599		10.0	20.0	10.4	100
Guaranteed		15.0	15.0	0.0		628		10.0	20.8	10.2	101
2142		15.5	18.7	0.0	112	720		10.0	20.1	10.0	100
2537		15.4	17.0	0.0	107	734		10.0	20.0	10.5	101
Red Star Pelleted Super Flo Brand 8-8-8						751		10.0	20.0	10.3	100
Guaranteed		8.0	8.0	8.0		770		10.0	20.0	10.1	100
237		8.5	8.8	10.0	111	862		10.0	20.2	10.4	101
1278		8.5	10.9	9.4	118	956		10.0	21.7	10.2	105
1877		11.5	8.2	11.3	130	987		9.3	21.8	10.0	102
1879		8.2	8.2	7.2	100	1003		10.0	20.3	10.0	101
2152		11.1	8.4	2.3	109	1051		10.2	21.2	10.0	104
Mean		9.6	8.9	8.0		1053		10.1	20.9	9.5	102
Coef. Var.		16.7	12.9	44.0		1272		10.0	20.7	9.4	101
Red Star Pelleted Super Flo Brand 12-12-12						1423		9.7	20.2	10.1	100
Guaranteed		12.0	12.0	12.0		1437		10.1	20.2	10.9	102
955		12.0	12.8	11.7	102	1441		10.2	20.0	9.1	100
1856		12.0	12.0	11.4	99	1852		9.6	20.0	10.3	99
2081		12.3	12.1	12.1	102	1863		9.7	19.8	10.0	98
2258		12.1	12.8	12.7	104	1876		10.1	20.0	10.1	100
2717		11.5	12.2	12.6	99	1887		9.5	20.5	10.5	100
Mean		12.0	12.4	12.1		2036		9.5	20.2	10.2	99
Coef. Var.		2.4	3.1	4.6		2153		9.1	19.7	9.3	95
Red Star Pelleted Super Flo Brand 10-20-0						2636		9.5	20.2	9.2	98
Guaranteed		10.0	20.0	0.0		2686		10.0	20.4	9.5	100
490		9.8	20.2	0.0	100	2814		9.3	20.5	10.2	99
735		10.9	20.4	0.0	105	2924		9.5	21.1	9.7	100
798		10.0	20.6	0.0	102	3287		9.7	20.4	8.9	99
2424		11.2	20.3	0.0	106	Mean		9.8	20.4	10.1	
2804		14.4	22.3	0.0	113	Coef. Var.		2.5	2.5	4.7	
2925		10.4	20.0	0.0	102	Red Star Pelleted Super Flo Brand 12-24-12					
Mean		11.1	20.6	0.0		Guaranteed		12.0	24.0	12.0	
Coef. Var.		15.2	4.1	0.0		1335		12.6	24.1	12.8	103
Red Star Pelleted Super Flo Brand 6-12-6						2256		12.0	20.6	12.8	94
Guaranteed		6.0	12.0	6.0		2915		12.0	24.8	12.0	102
135		6.0	13.3	5.0	104	Red Star Pelleted Super Flo Brand 16-20-0					
238		6.2	13.0	5.3	104	Guaranteed		16.0	20.0	0.0	
250		6.1	12.1	5.2	100	84		16.4	19.5	0.0	101
863		6.0	12.0	6.1	100	141		16.3	20.0	0.0	101
1078		6.4	12.1	6.0	103	251		15.5	20.4	0.0	100
1279		6.4	12.4	6.0	104	254		15.7	20.0	0.0	99
2019		6.6	12.3	6.6	106	598		15.4	20.6	0.0	99
2104		6.6	12.0	6.6	105	610		16.2	20.6	0.0	102
2260		6.7	12.0	8.0	109	636		16.0	20.6	0.0	101
2718		5.6	12.5	5.8	99	733		16.4	20.1	0.0	102
2817		5.8	12.0	5.5	98	748		16.0	20.0	0.0	100
2818		6.1	12.6	5.5	102	771		15.8	20.6	0.0	101
						1002		16.1	20.4	0.0	101
						1334		16.1	20.0	0.0	100
						2018		15.3	21.9	0.0	102
						2103		15.6	20.7	0.0	100

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Red Star Pelleted Super Flo Brand 16-20-0					
	2208	15.8	20.5	0.0	100
	2257	16.0	20.8	0.0	102
	2392	15.0	20.2	0.0	97
	2425	15.1	20.4	0.0	98
	2637	15.5	20.0	0.0	98
	2638	15.3	19.9	0.0	97
	2676	15.3	19.5	0.0	96
	2680	15.6	20.4	0.0	100
	2802	15.8	20.0	0.0	99
	2810	15.6	23.3	0.0	106
	3235	15.5	20.0	0.0	98
Mean		15.7	20.4	0.0	
Coef. Var.		2.5	3.8	0.0	
Red Star Pelleted Super Flo Brand 13-39-0					
Guaranteed		13.0	39.0	0.0	
611		12.0	39.3	0.0	98
Red Star Pelleted Super Flo Brand 5-10-10					
Guaranteed		5.0	10.0	10.0	
1809		6.2	10.7	7.5	106
Red Star Pelleted Super Flo Brand 0-20-0					
Guaranteed		0.0	20.0	0.0	
125		0.0	20.0	0.0	100
252		0.0	20.4	0.0	101
358		0.0	20.0	0.0	100
597		0.0	20.0	0.0	100
627		0.0	20.4	0.0	101
736		0.0	20.6	0.0	103
810		0.0	22.1	0.0	111
988		0.0	20.0	0.0	100
1162		0.0	20.3	0.0	101
1853		0.0	20.1	0.0	100
1864		0.0	20.0	0.0	100
2261		0.0	20.0	0.0	100
2927		0.0	20.8	0.0	104
Mean		0.0	20.4	0.0	
Coef. Var.		0.0	2.9	0.0	
Red Star Pelleted Vi-Ten 10-10-5					
Guaranteed		10.0	10.0	5.0	
63		10.3	10.0	5.0	102
954		10.4	10.7	5.0	105
1052		9.4	12.3	5.9	107
1077		10.3	10.9	5.9	107
1277		9.6	10.1	5.8	100
1388		10.0	10.4	5.5	102
1400		10.3	11.9	6.0	110
2080		8.4	10.5	6.6	96
2209		9.6	10.7	5.7	101
2259		8.6	11.1	6.2	99
2393		9.8	9.8	5.6	99
2677		10.3	10.8	5.1	105
2811		10.3	10.6	5.4	105
2914		9.6	10.5	5.8	101
3285		9.3	10.1	6.5	99
Mean		9.8	10.7	5.7	
Coef. Var.		6.4	6.3	8.5	
SMITH DOUGLASS COMPANY, TEXAS CITY, TEXAS					
Smith Douglass Pelleform 8-8-8					
Guaranteed		8.0	8.0	8.0	
2442		8.1	8.1	7.5	100
Smith Douglass Pelleform 12-12-12					
Guaranteed		12.0	12.0	12.0	
1736		12.5	14.2	11.3	107
1840		12.5	12.4	10.7	101
2005		12.2	13.7	11.4	105
2322		12.0	12.9	12.3	103
2352		13.1	12.0	12.1	105
2608		12.2	12.4	11.0	100
3227		13.2	15.8	11.6	115

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
	Mean	12.5	13.3	11.5	
	Coef. Var.	3.7	10.0	4.9	
Smith Douglass Pelleform 14-14-14					
Guaranteed		14.0	14.0	14.0	
1248		14.0	14.0	13.5	99
1394		14.0	14.7	13.6	101
2006		13.8	15.0	14.0	102
2786		13.7	14.7	13.2	100
3108		14.0	14.0	14.4	100
3110		14.1	14.0	14.3	101
3156		14.2	15.5	14.0	104
3260		14.1	14.9	14.0	103
Mean		14.0	14.6	13.9	
Coef. Var.		1.0	3.8	2.9	
Smith Douglass Pelleform 15-30-0					
Guaranteed		15.0	30.0	0.0	
454		15.0	30.0	0.0	100
1509		15.4	30.3	0.0	102
2398		15.0	33.8	0.0	107
3065		14.3	33.2	0.0	104
3067		14.8	32.6	0.0	104
3087		14.2	30.2	0.0	98
3230		14.3	30.4	0.0	99
Mean		14.7	31.5	0.0	
Coef. Var.		3.0	5.2	0.0	
Smith Douglass Pelleform 6-12-6					
Guaranteed		6.0	12.0	6.0	
2441		8.6	12.2	6.6	118
2443		7.1	13.2	13.0	126
Smith Douglass Pelleform 10-20-10					
Guaranteed		10.0	20.0	10.0	
51		10.8	22.6	11.6	112
72		10.8	23.1	10.2	111
190		10.0	21.7	12.0	107
206		10.0	20.8	13.2	106
294		10.0	20.4	10.2	102
309		10.0	20.0	11.4	103
375		10.2	20.8	10.2	103
494		10.2	21.3	10.6	105
509		10.8	21.4	9.8	107
568		10.0	21.4	10.0	104
574		11.3	21.6	11.3	110
584		10.4	20.1	10.0	101
658		10.6	20.0	10.6	103
663		10.6	20.4	10.3	103
764		11.0	21.8	11.0	110
958		10.3	20.6	10.0	103
983		10.3	21.7	10.0	105
1026		10.5	20.0	10.8	103
1027		10.8	20.9	10.3	106
1104		10.4	20.0	10.2	102
1305		11.5	21.0	12.9	112
1386		11.0	20.5	10.3	105
1392		11.2	21.7	12.7	112
1604		10.1	19.8	10.9	101
1707		10.8	20.5	10.0	104
1708		10.4	20.5	10.0	103
1735		10.7	20.4	9.8	103
1818		10.5	21.0	10.2	105
1926		11.3	20.1	10.2	105
1961		10.7	20.2	11.8	105
2004		12.4	20.0	11.3	111
2198		9.7	20.1	10.7	100
2446		10.8	20.0	10.9	104
2447		8.6	20.9	20.9	111
2607		11.7	20.8	9.1	107
2844		10.8	20.1	9.6	103
3168		10.9	19.9	9.2	102
Mean		10.6	20.8	10.9	
Coef. Var.		6.0	3.8	17.7	

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Smith Douglas Pelleform	12-24-12										
Guaranteed		12.0	24.0	12.0			2728	15.3	20.6	0.0	99
573		12.7	24.0	9.8	100		2783	14.8	20.3	0.0	97
717		12.0	25.2	12.4	103		2784	15.4	20.9	0.0	100
841		12.1	25.5	12.4	104		2813	15.7	20.4	0.0	100
1249		12.0	26.1	12.2	105		2843	16.0	20.6	0.0	101
1830		12.1	24.1	12.1	101		2910	16.0	20.2	0.0	100
1942		12.1	23.2	12.8	99		2971	15.5	20.0	0.0	98
2272		12.0	24.0	12.0	100		3000	16.0	20.0	0.0	100
2729		12.1	27.7	11.2	107		3056	16.0	21.4	0.0	103
2787		12.2	24.7	12.7	103		3066	16.0	20.0	0.0	100
2909		12.0	24.7	13.5	103		3086	16.0	20.0	0.0	100
2972		11.8	24.3	14.0	102		3091	16.0	20.3	0.0	101
2983		12.3	25.4	12.5	104		3109	16.0	20.0	0.0	100
2986		12.5	24.9	12.0	103		3111	16.1	22.3	0.0	106
3093		12.1	23.8	12.5	100		3124	16.1	21.2	0.0	103
3100		12.4	25.2	12.7	104		3157	16.4	20.8	0.0	103
3120		12.6	24.2	12.0	102		3172	15.6	20.0	0.0	99
3138		12.2	24.9	12.0	103		3194	16.0	20.0	0.0	100
3193		12.6	24.6	12.2	103		3202	16.1	20.0	0.0	100
3197		12.5	24.6	12.0	103		3203	16.0	20.0	0.0	100
3248		12.4	24.5	11.5	102		3231	16.1	22.4	0.0	106
3259		12.9	24.1	10.6	102		3253	16.1	20.1	0.0	101
Mean		12.3	24.8	12.2			3257	16.1	20.8	0.0	102
Coef. Var.		2.3	3.8	7.4			3268	16.2	20.5	0.0	102
Mean							Mean	16.0	20.6	0.0	
Coef. Var.							Coef. Var.	2.2	4.4	0.0	
Smith Douglass Pelleform	10-20-20					Smith Douglass Pelleform	11-48-0				
Guaranteed		10.0	20.0	20.0		Guaranteed		11.0	48.0	0.0	
73		10.5	21.0	19.0	103	1525		12.6	48.2	0.0	104
Smith Douglass Pelleform	3-12-12					2402		13.6	49.6	0.0	109
Guaranteed		3.0	12.0	12.0		2465		11.4	48.0	0.0	101
2440		5.6	10.2	9.8	104	Smith Douglass Pelleform	16-48-0				
Smith Douglass Pelleform	5-20-20					Guaranteed		16.0	48.0	0.0	
Guaranteed		5.0	20.0	20.0		2253		16.0	48.0	0.0	100
1257		7.5	22.0	18.4	113	2401		16.0	50.4	0.0	103
2946		6.2	20.0	19.3	104	2887		14.4	48.0	0.0	97
Smith Douglass Pelleform	6-24-24					2911		15.0	48.1	0.0	98
Guaranteed		6.0	24.0	24.0		3090		14.0	48.1	0.0	96
2007		7.8	24.0	21.5	103	3148		16.0	48.5	0.0	101
1605		6.3	24.8	24.8	117	3254		16.0	49.2	0.0	102
Smith Douglass Pelleform	18-9-0					3255		16.1	48.5	0.0	101
Guaranteed		18.0	9.0	0.0		Mean		15.4	48.6	0.0	
2463		17.1	9.0	0.0	96	Coef. Var.		5.5	1.7	0.0	
3198		18.0	9.1	0.0	100	Smith Douglass Pelleform	13-39-0				
3247		18.2	9.0	0.0	101	Guaranteed		13.0	39.0	0.0	
Smith Douglass Pelleform	7-28-14					453		12.6	43.1	0.0	106
Guaranteed		7.0	28.0	14.0		493		13.0	39.0	0.0	100
2464		7.4	28.5	17.0	106	765		13.1	39.4	0.0	101
Smith Douglass Pelleform	16-20-0					1256		13.6	40.5	0.0	104
Guaranteed		16.0	20.0	0.0		1384		13.0	39.0	0.0	100
491		15.8	21.7	0.0	104	1393		11.5	39.8	0.0	98
508		15.7	22.6	0.0	105	1510		13.7	39.0	0.0	102
572		16.0	21.4	0.0	103	2842		13.0	39.0	0.0	100
763		15.5	21.1	0.0	101	2870		13.1	39.9	0.0	102
844		16.0	20.1	0.0	100	2912		13.0	39.7	0.0	101
1385		17.0	20.0	0.0	103	3258		13.4	39.3	0.0	102
1391		16.0	21.1	0.0	103	Mean		13.0	39.8	0.0	
1523		16.2	20.1	0.0	101	Coef. Var.		4.5	3.0	0.0	
1527		16.0	20.1	0.0	100	Smith Douglass Pelleform Fertilizer	0-46-0				
1829		16.4	24.2	0.0	111	Guaranteed		0.0	46.0	0.0	
1960		16.0	20.2	0.0	100	420		0.0	46.2	0.0	101
2014		16.0	20.9	0.0	102	575		0.0	47.0	0.0	102
2091		15.8	20.2	0.0	100	1303		0.0	46.6	0.0	101
2199		16.2	20.0	0.0	101	1522		0.0	46.2	0.0	100
2274		16.2	20.0	0.0	101	1528		0.0	47.6	0.0	103
2282		16.7	19.1	0.0	100	2396		0.0	45.6	0.0	99
2528		16.0	20.2	0.0	100	2462		0.0	46.7	0.0	102
2529		16.0	20.6	0.0	101	Mean		0.0	46.6	0.0	
2584		16.0	19.9	0.0	100	Coef. Var.		0.0	1.4	0.0	



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
Smido 10-20-10	Guaranteed	10.0	20.0	10.0	
	39	10.6	23.5	11.6	113
	71	10.0	20.9	9.8	102
	564	10.2	20.1	10.4	102
	1197	10.5	20.8	10.8	105
Smith Douglass 0-51-0	Guaranteed	0.0	51.0	0.0	
	1529	0.0	51.2	0.0	100
	2466	0.0	51.1	0.0	100
Sacco 8-8-8	Guaranteed	8.0	8.0	8.0	
	2555	13.0	8.2	11.0	138
Sacco 12-12-12	Guaranteed	12.0	12.0	12.0	
	2557	13.2	14.7	13.3	114
	2658	12.6	15.3	12.1	112
Sacco 10-20-0	Guaranteed	10.0	20.0	0.0	
	2399	9.4	20.3	0.0	98
Sacco 6-12-6	Guaranteed	6.0	12.0	6.0	
	2556	9.2	14.8	11.7	144
	2583	12.4	12.3	5.1	140
Sacco 10-20-10	Guaranteed	10.0	20.0	10.0	
	1819	10.5	20.2	10.3	103
	1922	11.0	20.1	10.1	104
	1943	10.7	20.9	10.4	105
	2155	10.3	20.8	11.0	104
	2400	10.9	20.0	16.6	112
	2659	10.4	20.2	13.7	107
	2737	10.4	19.9	10.0	101
	3226	10.5	19.8	10.0	101
	Mean	10.6	20.2	11.5	
	Coef. Var.	2.3	2.0	20.8	
Sacco 16-20-0	Guaranteed	16.0	20.0	0.0	
	2582	16.0	19.9	0.0	100
	2657	16.0	20.5	0.0	101
<b>SOUTH TEXAS FERTILIZER &amp; CHEMICAL CO., EL CAMPO, TEXAS</b>					
Green Dot Liquid Fertilizer 12-12-6	Guaranteed	12.0	12.0	6.0	
	2892	11.8	12.4	5.8	100
	Guaranteed	15.0	10.0	0.0	
Green Dot Liquid Fertilizer 15-10-0	Guaranteed	15.0	10.0	0.0	
	2894	14.9	10.3	0.0	100
	Guaranteed	8.0	24.0	0.0	
Green Dot Liquid Fertilizer 8-24-0	Guaranteed	8.0	24.0	0.0	
	2893	8.0	24.3	0.0	101
	Guaranteed	9.0	9.0	9.0	
Green Dot Liquid Fertilizer 9-9-9	Guaranteed	9.0	9.0	9.0	
	2779	9.1	9.0	8.8	100
	<b>SOUTH TEXAS LIQUID FERTILIZER, KATY, TEXAS</b>				
Superior Brand 12-12-6	Guaranteed	12.0	12.0	6.0	
	2662	12.2	12.0	6.0	101
	Guaranteed	10.0	33.0	0.0	
Superior Brand 10-33-0	Guaranteed	10.0	33.0	0.0	
	671	10.3	36.8	0.0	109
	Guaranteed	8.0	24.0	0.0	
Superior Brand 8-24-0	Guaranteed	8.0	24.0	0.0	

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG	
	670	8.2	26.1	0.0	107	
	2913	7.8	24.7	0.0	101	
<b>SOUTHWEST CHEMICAL, INC., McALLEN, TEXAS</b>						
Top Crop Liquid 10-10-5	Guaranteed	10.0	10.0	5.0		
	1410	10.4	11.2	5.2	107	
	Guaranteed	12.0	15.0	0.0		
Top Crop Liquid 12-15-0	Guaranteed	12.0	15.0	0.0		
	1409	11.6	18.4	0.0	108	
<b>SOUTHERN NITROGEN SUPPLY CO., YAZOO CITY, MISS.</b>						
Ammonium Nitrate 33.5-0-0	Guaranteed	33.5	0.0	0.0		
	1199	33.5	0.0	0.0	100	
	<b>SPENCER CHEMICAL COMPANY, KANSAS CITY, MO.</b>					
Urea Green Nitrogen Solution 28-0-0	Guaranteed	28.0	0.0	0.0		
	3206	28.3	0.0	0.0	101	
	<b>STAUFFER CHEMICAL CO., HOUSTON, TEXAS</b>					
T.C.C. Brand Sterilized Bone Meal Fertilizer 4-22-0	Guaranteed	4.0	22.0	0.0		
	2836	4.0	22.3	0.0	101	
	<b>SWIFT &amp; COMPANY, HOUSTON, TEXAS</b>					
Swift's Red Steer 0-20-16	Guaranteed	0.0	20.0	16.0		
	409	0.0	21.8	16.8	108	
	Swift's Red Steer 8-8-8	Guaranteed	8.0	8.0	8.0	
Swift's Red Steer 8-8-8	Guaranteed	8.0	8.0	8.0		
	1993	8.4	8.9	8.7	108	
	Swift's Red Steer 12-12-12	Guaranteed	12.0	12.0	12.0	
1234		11.5	12.0	12.0	98	
1655		11.6	12.2	12.0	99	
1945		11.3	12.6	11.6	98	
2076		10.5	13.1	11.5	96	
2568		11.3	11.9	12.1	97	
2666		12.0	13.5	11.0	103	
Mean		11.4	12.6	11.7		
Coef. Var.		4.3	5.1	3.5		
Swift's Red Steer 10-20-0		Guaranteed	10.0	20.0	0.0	
		296	9.4	20.8	0.0	100
	1656	10.2	20.4	0.0	102	
	2077	10.9	20.6	0.0	106	
Swift's Red Steer 6-12-6	Guaranteed	6.0	12.0	6.0		
	337	6.2	13.1	5.1	104	
	479	6.8	14.0	5.6	113	
	481	6.7	12.7	5.7	107	
	582	6.6	13.0	6.4	109	
	651	6.9	12.1	6.8	108	
	925	5.6	13.5	6.9	106	
	951	6.5	12.0	6.0	103	
	965	5.6	12.1	6.1	98	
	967	7.0	12.3	6.0	108	
	1190	7.1	13.1	5.7	111	
	1232	6.5	12.8	5.6	106	
	1236	6.9	12.8	5.8	109	
	1286	7.4	13.4	6.2	115	
	1321	6.8	12.6	6.0	108	
1461	6.7	12.3	5.7	105		
1724	6.0	12.1	6.5	101		
1755	6.0	13.3	6.3	106		
1837	7.2	14.3	6.7	119		
1838	8.4	12.6	6.1	118		
1907	6.5	12.6	6.9	108		
1994	6.2	14.0	6.9	111		

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Swift's Reo Steer 6-12-6						Swift's Red Steer 12-24-12					
	2075	6.8	12.6	7.3	110	Guaranteed	200	12.0	24.0	12.0	
	2078	6.1	12.0	5.6	100		2835	11.6	24.6	10.8	99
	2226	6.9	12.5	7.1	110		2853	12.0	24.8	11.5	101
	2295	7.0	12.8	7.5	113		2875	11.7	24.9	12.6	102
	2297	6.2	12.4	6.6	104		2994	12.0	24.6	11.7	101
	2533	6.4	12.2	6.9	105		3038	12.5	24.6	8.3	99
	2553	8.5	14.2	6.3	125		3114	12.7	25.2	11.0	104
	2564	6.6	12.3	6.6	106		3127	12.0	24.7	12.8	102
	2653	6.1	13.1	6.3	106		3278	11.5	24.8	11.0	99
	2725	7.4	12.4	6.4	111	Mean		12.0	24.7	10.9	
	2756	6.5	12.8	6.6	108	Coef. Var.		3.4	1.1	15.1	
	2876	7.5	12.2	6.3	111	Swift's Red Steer 5-10-10					
	2975	6.7	13.9	7.2	115	Guaranteed	2597	5.0	10.0	10.0	
Mean		6.7	12.8	6.3				6.0	10.3	10.0	109
Coef. Var.		9.5	5.1	8.9		Swift's Red Steer 10-20-20					
Swift's Red Steer 10-20-10						Guaranteed	338	10.0	20.0	20.0	
Guaranteed	201	9.1	21.9	8.4	100		1657	10.7	20.4	14.0	97
	230	9.6	20.6	10.2	100			10.4	19.0	12.8	91
	272	9.0	20.0	8.0	94	Swift's Red Steer 12-6-6					
	283	9.8	23.1	8.4	105	Guaranteed	2093	12.0	6.0	6.0	
	339	9.4	22.0	7.8	100			11.7	6.9	6.2	102
	410	10.0	20.1	10.0	101	Swift's Red Steer 16-20-0					
	440	10.0	21.2	8.2	101	Guaranteed	202	16.0	20.0	0.0	
	521	9.7	20.0	10.0	99		229	13.3	23.8	0.0	100
	583	9.2	21.1	9.6	99		282	14.4	20.3	0.0	96
	618	10.0	20.5	10.2	101		439	12.0	23.1	0.0	94
	788	9.3	22.0	10.0	102		520	14.2	22.4	0.0	100
	848	9.5	21.2	11.0	102		520	16.0	19.5	0.0	99
	926	9.0	19.6	11.9	98		2242	15.1	20.0	0.0	97
	952	9.5	21.0	10.0	101		2668	16.0	20.9	0.0	102
	966	9.5	21.7	10.0	102		2854	15.7	20.0	0.0	99
	1056	10.2	20.0	9.0	100		2977	15.7	22.0	0.0	104
	1105	9.3	21.9	9.6	102		3034	16.1	20.1	0.0	101
	1189	10.4	20.3	10.2	103		3077	16.0	20.0	0.0	100
	1233	10.1	20.3	10.0	101		3078	15.8	21.1	0.0	102
	1235	9.8	20.1	9.4	99		3112	15.1	21.4	0.0	100
	1322	10.2	20.6	8.6	100		3182	15.8	19.9	0.0	99
	1462	10.5	20.0	9.1	101		3190	14.9	20.8	0.0	98
	1654	8.8	20.9	10.9	99		3237	15.3	20.6	0.0	99
	1744	9.6	20.0	9.6	98		3246	14.7	20.1	0.0	96
	1745	9.2	21.1	9.5	99		3267	15.0	21.3	0.0	100
	1746	9.2	20.6	9.0	97	Mean		15.1	21.0	0.0	
	1836	9.3	20.6	9.8	99	Coef. Var.		7.1	5.7	0.0	
	1912	10.6	20.6	8.6	102	Swift's Red Steer Fertilizer 13-39-0					
	1946	9.4	20.5	9.8	99	Guaranteed	3234	13.0	39.0	0.0	
	2074	9.5	20.9	10.0	100		3243	10.6	39.0	0.0	94
	2079	9.4	20.1	9.9	98			12.5	39.5	0.0	100
	2094	9.4	20.1	10.3	98	Swift's Red Steer Fertilizer 0-46-0					
	2225	9.4	20.0	10.0	98	Guaranteed	270	0.0	46.0	0.0	100
	2296	10.0	20.0	10.0	100		480	0.0	46.3	0.0	101
	2321	9.2	20.3	10.5	98		1473	0.0	47.0	0.0	102
	2415	10.0	20.6	10.3	102	Minuteman 18-46-0					
	2476	10.2	20.1	10.0	101	Guaranteed	3266	18.0	46.0	0.0	
	2534	9.8	20.0	10.0	99			18.6	48.3	0.0	104
	2544	10.0	20.0	10.0	100	Swift's Minute Man Triple Superphosphate 0-46-0					
	2545	9.0	20.1	10.6	97	Guaranteed	1237	0.0	46.0	0.0	104
	2554	10.0	19.9	10.0	100			0.0	48.0	0.0	
	2667	9.7	19.7	10.3	99	Vigoro for Commercial Growers 10-20-10					
	2699	9.3	23.6	10.4	107	Guaranteed	927	10.0	20.0	10.0	
	2726	9.3	20.5	9.0	97		969	9.5	21.1	11.2	102
	2757	9.6	20.4	8.8	98		1284	9.2	20.6	10.0	99
	2856	9.2	20.0	13.8	102		1365	10.3	22.4	9.5	107
	3010	9.4	20.0	10.3	98		1725	9.6	21.0	10.0	101
	3036	10.6	21.0	6.8	101			9.3	20.2	9.2	97
	3079	10.5	20.3	10.0	103						
	3174	10.8	20.6	10.8	106						
	3238	10.4	21.9	9.7	106						
Mean		9.7	20.7	9.8							
Coef. Var.		5.1	4.0	10.9							

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
Vigoro for Commercial Growers 10-20-10					
	2298	9.6	20.2	9.5	98
	2543	10.1	20.2	10.4	101
	2855	10.1	20.1	9.3	100
	2976	10.3	20.0	9.6	101
	3035	11.1	20.7	10.1	106
	3113	10.0	19.9	8.1	97
Mean		9.9	20.6	9.7	
Coef. Var.		5.5	3.5	8.0	
Brimm 14-14-7					
Guaranteed		14.0	14.0	7.0	
	968	13.4	14.7	7.2	100
	1472	14.1	14.6	8.0	103
	2244	14.0	14.1	6.0	99
	2995	13.5	15.1	7.4	101
	3061	14.0	15.3	7.4	104
	3107	13.5	14.8	7.2	100
	3128	13.1	14.4	7.8	99
	3130	14.0	14.2	7.1	101
	3159	13.5	15.6	7.0	102
	3184	14.1	15.9	7.6	106
	3228	13.1	15.9	7.4	102
	3249	14.0	15.2	6.6	103
	3250	13.7	15.3	7.0	102
Mean		13.7	15.0	7.2	
Coef. Var.		2.6	3.9	7.1	
Blenn 13-13-13					
Guaranteed		13.0	13.0	13.0	
	924	12.2	14.5	13.0	101
	2665	12.5	14.8	13.0	103
	3037	12.0	14.0	13.0	99
Pasturgro 6-24-24					
Guaranteed		6.0	24.0	24.0	
	474	5.2	24.8	24.0	99
	2129	6.2	24.3	24.0	101
	2664	7.1	23.8	21.9	101
	3062	6.8	24.8	23.2	104
	3125	6.0	24.8	23.0	101
Mean		6.3	24.5	23.2	
Coef. Var.		11.8	1.8	3.7	
Vigoro 6-10-4					
Guaranteed		6.0	10.0	4.0	
	970	7.4	10.9	5.2	117
Vitogro 16-8-4					
Guaranteed		16.0	8.0	4.0	
	884	16.7	8.3	4.6	105
	2292	17.0	8.0	3.8	104
Sulphate of Ammonia 21-0-0					
Guaranteed		21.0	0.0	0.0	
	923	21.0	0.0	0.0	100
Certified Formula for Peanuts 5-20-20					
Guaranteed		5.0	20.0	20.0	
	2374	6.8	20.5	18.0	106
Certified Formula for Citrus 12-6-6					
Guaranteed		12.0	6.0	6.0	
	2243	10.9	11.3	6.7	115
Certified Formula for Cotton 12-12-6					
Guaranteed		12.0	12.0	6.0	
	2852	12.6	12.9	7.1	107
SWIFT & COMPANY, SHREVEPORT, LA.					
Swift's Red Steer 8-8-8					
Guaranteed		8.0	8.0	8.0	
	87	7.6	10.4	7.0	106
	188	8.6	8.3	8.0	105
	603	8.3	8.0	8.2	102
	940	8.1	9.0	8.3	105
	1042	8.8	12.8	6.7	122

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
	1589	9.0	7.6	8.3	105
	1698	8.0	8.2	8.0	100
	1884	9.0	8.0	9.0	108
	2115	8.0	8.0	9.0	102
	2580	7.6	9.4	8.8	105
	2948	7.8	9.0	8.9	105
Mean		8.3	9.0	8.2	
Coef. Var.		6.3	16.8	9.4	
Swift's Red Steer 12-12-12					
Guaranteed		12.0	12.0	12.0	
	2116	11.4	12.1	12.6	99
Swift's Red Steer 6-12-6					
Guaranteed		6.0	12.0	6.0	
	727	6.4	12.7	7.0	108
	941	6.6	13.1	5.6	108
	1043	6.7	12.2	9.3	112
	1680	6.0	12.0	6.1	100
	1699	6.1	13.6	6.8	109
	2113	6.0	12.0	6.9	101
	2949	6.6	11.7	8.6	108
Mean		6.3	12.5	7.2	
Coef. Var.		4.7	5.5	18.3	
Swift's Red Steer 10-20-10					
Guaranteed		10.0	20.0	10.0	
	41	9.8	20.5	10.2	101
	153	9.3	21.0	10.0	100
	157	10.0	20.4	9.8	101
	176	9.7	20.8	10.4	102
	186	9.4	20.4	10.0	99
	301	10.0	20.6	10.4	102
	332	9.6	20.4	10.2	100
	365	10.0	21.0	10.0	103
	467	9.7	20.0	10.0	99
	525	10.0	20.0	10.0	100
	604	10.0	20.1	10.4	101
	650	9.4	20.0	10.0	98
	726	9.5	21.1	10.6	102
	737	9.7	20.1	10.6	100
	865	10.0	20.4	10.0	101
	871	10.0	20.6	10.0	102
	1047	10.0	21.3	10.0	103
	1260	9.5	21.3	10.4	102
	1280	10.2	20.3	10.5	102
	1433	10.2	20.0	10.7	102
	1588	10.1	19.7	10.3	100
	1697	10.1	20.0	9.4	100
	2052	10.1	20.0	12.0	103
	2114	10.0	20.9	10.0	102
	2363	10.1	20.8	10.0	102
	2581	9.6	20.1	11.0	100
Mean		9.9	20.5	10.3	
Coef. Var.		2.7	2.2	4.7	
Swift's Red Steer 5-10-10					
Guaranteed		5.0	10.0	10.0	
	1681	5.7	10.3	10.3	107
Swift's Red Steer 6-24-24					
Guaranteed		6.0	24.0	24.0	
	2475	5.4	24.5	25.6	101
Brimm 13-13-13					
Guaranteed		13.0	13.0	13.0	
	86	11.8	13.7	13.0	97
Blenn for Corn 7-14-7					
Guaranteed		7.0	14.0	7.0	
	1048	6.8	14.0	7.8	100
Vitogro 16-8-4					
Guaranteed		16.0	8.0	4.0	
	868	16.6	8.7	5.2	106



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
<b>TAYLOR EVANS INC., AMARILLO, TEXAS</b>											
Green Acres Turf Magic 10-5-5							2741	7.8	8.1	8.0	99
Guaranteed		10.0	5.0	5.0		3045	8.3	9.0	8.7	108	
460		11.0	6.0	4.0	140	Mean	7.9	8.5	8.5		
594		10.0	6.3	5.9	138	Coef. Var.	4.0	6.9	6.6		
2866		8.9	6.9	4.3	100	<b>Lone Star Brand 12-12-12 Fertilizer</b>					
<b>TENNESSEE VALLEY AUTHORITY, SHEFFIELD, ALABAMA</b>											
Liquid Fertilizer 10-35-0						Guaranteed	12.0	12.0	12.0		
Guaranteed		10.0	35.0	0.0		1697	11.0	12.2	12.1	97	
1774		9.6	35.5	0.0	100	1801	11.7	12.0	12.1	99	
Liquid Fertilizer 11-33-0						1813	12.0	12.1	12.0	100	
Guaranteed		11.0	33.0	0.0		2289	12.0	12.8	12.0	102	
2427		10.2	33.0	0.0	98	2538	12.0	12.0	12.0	100	
10-8-34.5-0						2695	12.3	15.6	11.0	110	
Guaranteed		10.0	34.0	0.0		Mean	11.8	12.8	11.9		
1533		10.5	35.2	0.0	100	Coef. Var.	3.8	11.0	3.6		
Ammonium Nitrate 33.5-0-0						<b>Lone Star Brand 10-20-0 Fertilizer</b>					
Guaranteed		33.5	0.0	0.0		Guaranteed	10.0	20.0	0.0		
2248		33.8	0.0	0.0	101	110	9.0	21.5	0.0	100	
3220		34.2	0.0	0.0	102	462	9.8	20.8	0.0	102	
Diammonium Phosphate 21-53-0						1511	9.5	20.2	0.0	98	
Guaranteed		21.0	53.0	0.0		2084	10.0	20.2	0.0	100	
3222		21.7	53.0	0.0	101	2733	8.5	20.7	0.0	96	
Ammonium Phosphate Nitrate 30-10-0						2846	9.4	20.3	0.0	98	
Guaranteed		30.0	10.0	0.0		Mean	9.4	20.6	0.0		
2883		30.0	10.6	0.0	101	Coef. Var.	5.8	2.4	0.0		
3221		30.1	10.1	0.0	101	<b>Lone Star Brand 6-12-6 Fertilizer</b>					
<b>TEXAS AGRICULTURAL CHEMICAL CO., FT. WORTH, TEX.</b>											
Tacco Plant Food 10-20-10						Guaranteed	6.0	12.0	6.0		
Guaranteed		10.0	20.0	10.0		111	6.0	12.3	6.6	103	
2546		9.7	20.0	11.0	100	215	5.7	13.0	6.0	103	
Tacco Plant Food 10-5-5						345	6.0	12.4	6.0	102	
Guaranteed		10.0	5.0	5.0		348	6.0	12.6	6.9	105	
2422		8.8	7.2	3.3	126	461	6.2	12.5	7.0	106	
Tacco Plant Food 8-16-8						566	6.7	13.5	7.3	113	
Guaranteed		8.0	16.0	8.0		779	5.5	12.7	7.2	102	
2898		7.3	16.5	7.1	97	850	6.1	12.2	6.7	100	
<b>TEXAS FARM PRODUCTS COMPANY, NACOGDOCHES, TEXAS</b>											
Lone Star Brand Fertilizer 0-16-8						873	6.0	12.8	6.0	103	
Guaranteed		0.0	16.0	8.0		1023	6.1	11.9	6.7	101	
901		0.0	16.0	9.2	103	1098	6.3	12.0	6.0	101	
1959		0.0	16.0	10.0	105	1198	6.0	13.0	6.3	105	
Lone Star Brand Fertilizer 8-8-8						1379	6.2	12.0	6.6	103	
Guaranteed		8.0	8.0	8.0		1571	6.3	12.1	7.8	106	
214		7.6	9.0	8.0	102	1652	6.0	12.1	6.5	101	
315		8.0	8.0	8.2	101	1678	6.0	12.2	6.3	101	
367		7.4	9.3	8.0	102	1728	6.0	12.2	6.6	102	
514		8.0	9.3	8.6	107	1780	6.0	12.1	6.6	101	
849		8.0	8.9	8.4	105	1798	6.0	12.0	7.0	102	
860		7.8	9.7	8.8	108	1811	6.0	12.6	6.7	104	
1097		7.8	8.9	8.2	103	1965	5.6	12.9	6.6	103	
1572		7.7	8.4	8.6	101	1997	6.1	12.6	6.2	104	
1651		8.1	8.0	7.5	100	2025	6.1	12.2	6.0	101	
1727		7.8	8.2	9.0	101	2109	6.2	13.2	6.7	108	
1781		7.9	8.1	8.1	100	2300	6.9	12.6	5.1	106	
1797		8.1	8.3	8.5	103	2334	6.7	12.6	6.0	107	
1810		7.6	8.3	8.0	99	2351	6.7	12.6	9.0	113	
1924		8.0	8.0	9.4	103	2364	6.0	12.0	6.3	100	
2024		7.6	9.6	8.6	105	2413	6.0	12.9	6.4	105	
2170		8.7	8.1	7.5	104	2434	6.0	12.0	6.0	100	
2333		8.5	8.1	8.7	105	2692	6.4	12.8	6.5	107	
2365		8.0	8.0	9.6	103	2833	6.9	13.3	8.0	115	
2457		7.6	8.1	9.3	100	Mean	6.2	12.5	6.6		
2694		7.4	7.8	8.8	97	Coef. Var.	5.1	3.4	10.7		
						<b>Lone Star Brand 10-20-10 Fertilizer</b>					
						Guaranteed	10.0	20.0	10.0		
						21	9.6	20.8	10.2	101	
						38	9.1	17.4	10.4	91	
						147	10.2	20.8	9.0	102	
						187	9.8	20.4	10.0	101	
						213	9.8	20.4	9.2	100	
						234	9.8	20.2	10.0	100	
						314	10.0	20.0	10.2	101	
						320	9.8	20.7	10.2	102	

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Lone Star Brand 10-20-10 Fertilizer					
	344	10.4	20.0	10.2	102
	346	12.9	20.6	10.4	113
	366	10.0	20.4	10.2	102
	374	10.1	20.2	10.0	101
	470	10.4	20.1	10.0	102
	513	10.0	20.6	10.6	103
	565	10.2	20.1	10.6	102
	592	9.8	20.9	10.4	102
	662	10.0	20.4	10.8	102
	778	10.1	20.0	10.1	100
	783	10.3	20.1	9.3	100
	851	9.7	20.5	10.5	101
	859	10.0	20.3	10.7	102
	900	9.0	20.4	10.4	98
	903	10.0	20.6	11.7	104
	985	10.0	19.3	10.0	98
	1024	11.0	20.0	9.8	104
	1099	10.0	22.0	10.0	105
	1573	10.1	20.5	10.4	102
	1650	10.0	20.1	10.4	101
	1730	9.5	20.0	9.8	98
	1782	10.0	20.0	10.5	101
	1799	10.0	20.1	10.0	100
	1812	10.2	20.0	10.6	102
	1923	9.8	20.0	11.0	100
	1957	10.0	20.0	10.8	101
	1964	10.0	20.1	10.5	101
	1996	10.1	20.7	10.0	102
	1998	10.2	20.6	10.0	102
	2023	10.0	21.3	9.3	102
	2110	10.0	20.0	10.0	100
	2169	10.2	20.6	10.5	103
	2171	10.1	19.7	10.9	101
	2288	9.8	20.0	10.0	99
	2299	10.3	20.3	10.0	102
	2332	10.3	20.2	10.2	102
	2350	9.6	20.0	10.8	100
	2360	10.4	21.2	10.2	105
	2414	10.0	20.9	10.0	102
	2687	9.4	20.8	11.0	101
	2693	9.1	20.0	10.0	97
	2742	10.0	19.7	10.0	99
	2793	9.8	20.2	10.1	100
	2826	9.7	20.0	10.0	99
	2832	9.8	20.1	10.2	100
	2944	9.8	20.2	10.1	100
	3041	10.1	20.8	10.2	102
	3044	10.1	20.0	10.0	100
	3055	10.0	20.0	10.6	101
	3245	10.1	20.3	10.0	101
Mean		10.0	20.3	10.2	
Coef. Var.		5.0	2.8	4.4	
Lone Star Brand 12-24-12 Fertilizer					
Guaranteed	12.0	24.0	12.0		
109	11.7	24.4	11.6	100	
235	11.5	23.6	12.9	99	
902	12.0	25.0	14.0	104	
1834	11.2	24.0	11.0	96	
1958	12.2	23.8	12.2	100	
2828	12.0	27.4	11.5	107	
2834	12.0	27.2	12.8	108	
2838	11.2	24.7	13.6	101	
2889	12.2	24.3	11.5	101	
2890	12.0	24.3	13.4	102	
3040	12.0	24.4	12.0	100	
Mean	11.8	24.8	12.4		
Coef. Var.	3.1	5.2	8.0		
Lone Star Brand Fertilizer 5-10-10					
Guaranteed	5.0	10.0	10.0		
2740	3.9	12.2	12.8	109	

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG
Lone Star Brand 10-20-20 Fertilizer					
Guaranteed	10.0	20.0	20.0		
233	9.6	20.0	20.0	99	
1574	10.0	20.5	19.8	101	
1783	9.0	20.4	19.6	97	
Lone Star Brand Fertilizer 3-12-12					
Guaranteed	3.0	12.0	12.0		
2690	4.5	12.8	13.5	117	
2743	3.7	11.6	11.5	102	
Lone Star Brand 6-24-24 Fertilizer					
Guaranteed	6.0	24.0	24.0		
1729	9.3	24.0	16.8	103	
1796	6.0	24.0	16.2	92	
Lone Star Brand Fertilizer 14-14-7					
Guaranteed	14.0	14.0	7.0		
3027	13.5	15.8	7.0	103	
Lone Star Brand 16-20-0 Fertilizer					
Guaranteed	16.0	20.0	0.0		
904	14.0	17.6	0.0	88	
1833	16.0	20.6	0.0	101	
1956	16.2	20.1	0.0	101	
1966	15.0	20.6	0.0	98	
2271	16.0	20.0	0.0	100	
2805	15.4	20.3	0.0	99	
2812	16.0	20.0	0.0	100	
2845	15.8	20.3	0.0	100	
2891	16.0	20.3	0.0	101	
2985	16.4	20.2	0.0	102	
3039	16.0	20.1	0.0	100	
3060	16.0	20.3	0.0	101	
3064	15.0	20.0	0.0	97	
3119	16.0	21.1	0.0	103	
3169	15.5	21.1	0.0	101	
Mean	15.7	20.2	0.0		
Coef. Var.	3.9	3.9	0.0		
Lone Star Brand Fertilizer 13-39-0					
Guaranteed	13.0	39.0	0.0		
3101	13.0	39.4	0.0	101	
Lone Star Brand Fertilizer 0-20-0					
Guaranteed	0.0	20.0	0.0		
295	0.0	20.4	0.0	102	
512	0.0	20.1	0.0	101	
602	0.0	20.0	0.0	100	
775	0.0	20.6	0.0	103	
1380	0.0	19.8	0.0	99	
1521	0.0	20.1	0.0	100	
1800	0.0	20.0	0.0	100	
Mean	0.0	20.1	0.0		
Coef. Var.	0.0	1.3	0.0		
TEXAS SOIL BUILDERS INC., CENTER, TEXAS					
Chick A Nure 1.5-1-1					
Guaranteed	1.5	1.0	1.0		
1172	2.9	2.3	1.5		
TEXAS SOIL PRODUCTS INC., CENTER, TEXAS					
Green Garden					
Guaranteed	1.8	1.5	1.1		
2448	1.9	1.5	1.3	105	
THOMPSON SALES COMPANY, MONTGOMERY, ALA.					
Calphos Soft Phosphate With Colloidal Clay 20% TPA					
Guaranteed	0.0	20.0T	0.0		
2540	0.0	20.2T	0.0	101	
2782	0.0	20.2T	0.0	101	
TIDE PETROLEUM PRODUCTS, EDINBURG, TEXAS					
Tide Green Liquid Fertilizer 10-20-0					
Guaranteed	10.0	20.0	0.0		
2233	10.0	20.4	0.0	101	

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
Tide Green Liquid Fertilizer	15-10-0						684	6.1	12.2	6.4	102
Guaranteed	15.0	10.0	0.0			742	6.0	12.2	6.1	101	
1287	15.2	10.4	0.0		105	946	6.0	12.0	6.2	100	
2145	15.0	10.3	0.0		101	948	5.3	12.2	5.8	96	
TYLER FERTILIZER COMPANY, TYLER, TEXAS						1684	6.3	12.0	6.2	102	
Gro-Tex Plant Food 8-8-8						1802	6.0	12.0	6.3	100	
Guaranteed	8.0	8.0	8.0			1883	6.3	12.1	6.5	103	
1174	10.2	8.1	8.2		115	2010	6.3	12.5	6.9	106	
2417	8.6	8.4	9.8		109	2031	6.0	12.4	6.4	103	
2605	7.4	8.4	11.7		106	2095	6.2	12.1	6.3	102	
Gro-Tex Plant Food 6-12-6						2178	6.7	12.8	6.6	109	
Guaranteed	6.0	12.0	6.0			2450	6.2	12.0	6.0	101	
274	7.5	11.1	9.0		112	2488	6.0	12.2	6.0	100	
1173	8.4	12.3	6.4		117	2711	6.1	12.2	6.0	101	
2416	4.7	12.7	11.7		107	2774	5.9	12.2	6.0	100	
2609	6.0	12.8	8.5		109	Mean	6.1	12.2	6.2		
Gro-Tex Plant Food 10-20-10						Coef. Var.	5.2	2.8	4.3		
Guaranteed	10.0	20.0	10.0			V-C Fertilizer 10-20-10					
28	9.1	25.8	9.6		111	Guaranteed	10.0	20.0	10.0		
91	10.6	18.7	9.4		99	27	9.7	20.0	11.6	101	
207	10.2	15.7	12.0		93	37	10.0	20.4	10.4	102	
208	8.9	23.2	10.4		105	57	10.0	19.6	10.8	100	
445	11.4	22.4	10.4		112	61	9.8	20.4	10.2	101	
483	8.9	21.5	11.4		102	80	9.3	21.7	10.4	102	
506	10.9	18.2	10.0		99	98	10.0	22.4	10.2	107	
526	10.4	18.2	10.6		98	107	10.0	21.3	10.2	104	
1065	10.1	20.1	10.3		101	122	9.8	21.3	10.2	103	
1175	8.6	23.2	12.4		106	143	10.2	20.0	10.4	102	
1925	9.4	20.6	13.5		104	154	9.3	20.0	10.4	98	
2419	9.7	20.5	10.0		100	160	9.8	20.0	10.4	100	
2526	5.3	20.0	10.3		83	456	9.7	20.0	10.3	100	
2688	9.6	21.1	10.4		102	466	9.8	21.1	10.0	102	
2950	9.0	20.9	14.4		104	488	9.8	20.6	10.0	101	
3133	10.1	20.0	15.2		107	524	9.7	20.1	10.2	100	
Mean	9.5	20.6	11.3			740	9.7	10.0	11.0	100	
Coef. Var.	14.5	11.5	15.5			Mean	9.8	20.6	10.4		
Gro-Tex Plant Food 10-20-20						Coef. Var.	2.3	3.8	3.8		
Guaranteed	10.0	20.0	20.0			V-C Fertilizer 16-20-0					
2418	8.0	19.9	13.2		86	Guaranteed	16.0	20.0	0.0		
Gro-Tex Plant Food 21-0-0						25	16.1	20.2	0.0	101	
Guaranteed	21.0	0.0	0.0			81	14.7	23.0	0.0	103	
743	21.0	0.0	0.0		100	2801	15.1	22.6	0.0	103	
Gro-Tex Plant Food 16-20-0						2936	15.2	22.2	0.0	102	
Guaranteed	16.0	20.0	0.0			2970	16.0	22.7	0.0	106	
275	15.7	18.7	0.0		96	Mean	15.4	22.1	0.0		
1311	15.6	20.8	0.0		100	Coef. Var.	3.9	5.1	0.0		
Gro-Tex Plant Food 18-46-0						V-C 20% Superphosphate 0-20-0					
Guaranteed	18.0	46.0	0.0			Guaranteed	0.0	20.0	0.0		
2926	18.2	46.2	0.0		101	211	0.0	20.9	0.0	105	
Heart Brand 20-20-10						328	0.0	20.4	0.0	102	
Guaranteed	20.0	20.0	10.0			616	0.0	20.8	0.0	104	
1148	18.6	24.1	8.5		102	V-C 45% Triple Superphosphate 0-45-0					
Heart Brand 21-0-0						Guaranteed	0.0	45.0	0.0		
Guaranteed	21.0	0.0	0.0			82	0.0	48.9	0.0	109	
774	21.0	0.0	0.0		100	V-C 46% Granular Triple Superphosphate 0-46-0					
U. S. PHOSPHORIC PROD., TAMPA, FLORIDA						Guaranteed	0.0	46.0	0.0		
DAP Fertilizer 18-46-0						808	0.0	48.0	0.0	104	
Guaranteed	18.0	46.0	0.0			1207	0.0	43.5	0.0	95	
2886	18.5	47.6	0.0		103	V-C Granulated Fertilizer 0-16-8					
VIRGINIA CAROLINA CHEMICAL CORP., SHREVEPORT, LA.						Guaranteed	0.0	16.0	8.0		
V-C Fertilizer 6-12-6						240	0.0	16.6	9.4	107	
Guaranteed	6.0	12.0	6.0			1896	0.0	16.0	7.7	99	
144	6.1	13.1	6.1		106	V-C Granulated Fertilizer 8-8-8					
156	5.5	11.3	6.1		94	Guaranteed	8.0	8.0	8.0		
364	6.1	12.2	6.0		102	155	8.0	8.4	8.0	102	
457	6.7	12.1	6.0		105	216	7.7	9.0	8.0	103	
						741	7.6	8.4	8.3	100	
						944	8.0	8.3	8.0	101	



TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

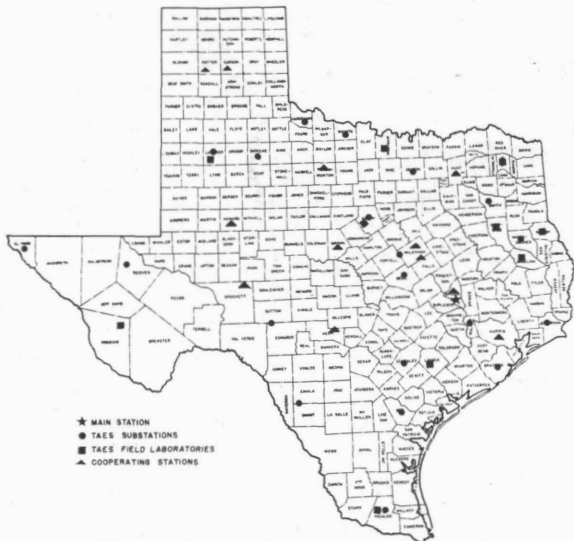
Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phos- phoric acid, %	Potash, %	VF/VG	
V-C Granulated Fertilizer 8-8-8												
	947	7.6	8.3	7.2	97		630	9.6	20.0	10.2	99	
	1100	8.4	9.1	8.5	108		639	13.0	20.6	10.1	113	
	1169	8.0	8.4	8.3	102		643	10.4	20.1	10.3	102	
	1227	8.2	8.1	7.5	100		645	9.6	20.0	10.6	99	
	1481	8.0	8.2	8.1	101		646	10.0	20.1	10.4	101	
	1881	8.1	8.2	8.8	103		649	10.0	20.1	10.5	101	
	2009	8.1	8.4	8.5	103		667	10.0	20.0	10.0	100	
	2030	8.0	8.1	8.0	100		722	9.6	20.8	10.6	101	
	2118	8.0	8.2	8.4	101		807	10.0	21.5	10.0	104	
	2218	8.2	8.5	8.5	104		861	9.6	20.2	10.5	100	
	2251	8.4	7.7	8.6	103		942	10.0	20.0	10.5	101	
	2700	8.1	8.0	8.9	103		943	10.1	20.0	10.0	100	
	2707	8.1	8.3	8.3	103		979	10.0	20.4	10.0	101	
Mean		8.0	8.3	8.2			990	10.0	19.8	9.6	99	
Coef. Var.		2.8	4.0	5.2			999	9.7	20.2	9.6	99	
V-C Granulated Fertilizer 12-12-12							1009	10.0	20.3	10.0	101	
Guaranteed		12.0	12.0	12.0			1031	9.5	20.1	10.3	99	
1319	10.2	13.9	12.1	12.1	98		1084	10.0	20.7	11.0	103	
1677	11.6	12.1	12.2	12.2	99		1103	10.1	21.8	9.7	105	
1804	10.5	16.6	12.2	107	107		1154	10.3	18.8	10.3	99	
1941	10.2	12.6	12.0	94	94		1160	10.0	20.0	10.5	101	
2008	10.7	13.6	12.2	99	99		1168	9.6	21.2	10.0	102	
2167	11.8	12.4	13.7	103	103		1210	9.9	20.7	10.0	101	
2217	12.5	12.3	12.0	103	103		1226	10.1	20.1	9.4	100	
2708	11.5	12.8	12.0	100	100		1250	10.2	20.2	10.2	102	
Mean	11.1	13.3	12.3				1318	9.7	20.3	10.3	100	
Coef. Var.	7.6	11.1	4.6				1474	10.0	20.0	10.0	100	
V-C Granulated Fertilizer 10-20-0							1669	9.3	20.2	9.8	98	
Guaranteed	10.0	20.0	0.0				1676	10.0	19.8	9.8	99	
281	9.8	21.3	0.0	103	103		1683	10.0	20.2	9.3	100	
549	10.0	20.1	0.0	100	100		1803	10.0	21.1	8.0	100	
554	10.2	20.1	0.0	101	101		1880	9.2	20.0	8.8	96	
1085	10.0	21.9	0.0	105	105		1885	10.0	20.0	10.7	101	
1892	10.0	20.7	0.0	102	102		1886	9.7	20.0	10.0	99	
2671	9.8	20.2	0.0	100	100		1894	9.8	21.4	10.1	103	
Mean	10.0	20.7	0.0				1901	10.1	21.0	9.4	102	
Coef. Var.	1.4	3.6	0.0				1940	9.8	20.1	10.1	100	
V-C Granulated Fertilizer 15-30-0							2011	10.0	20.5	12.1	104	
Guaranteed	15.0	30.0	0.0				2029	9.8	20.1	10.1	100	
1186	14.6	30.1	0.0	99	99		2042	10.2	20.1	11.1	103	
V-C Granulated Fertilizer 6-12-6							2063	9.7	20.5	10.5	101	
Guaranteed	6.0	12.0	6.0				2067	10.4	20.6	10.1	103	
336	5.8	13.1	6.0	104	104		2117	10.0	20.1	11.2	102	
980	5.6	12.2	8.7	104	104		2166	10.3	20.1	10.7	102	
1000	6.1	12.4	6.0	102	102		2177	10.4	20.0	10.9	103	
1011	6.1	11.8	6.2	100	100		2186	10.3	20.2	10.3	102	
1101	6.1	14.0	6.6	110	110		2216	10.3	20.0	10.4	102	
1170	6.2	12.9	6.6	106	106		2362	9.5	19.8	10.1	98	
1228	6.3	12.8	6.3	106	106		2489	9.6	20.4	12.0	102	
1251	6.3	12.4	6.5	105	105		2506	10.0	20.0	10.2	100	
1320	6.3	12.7	6.4	106	106		2602	10.0	20.2	10.0	100	
1480	6.2	12.0	6.0	101	101		2672	9.8	19.8	10.1	99	
Mean	6.1	12.6	6.5				2685	9.7	20.3	10.0	100	
Coef. Var.	3.7	4.9	12.2				2689	9.5	20.0	10.3	99	
V-C Granulated Fertilizer 10-20-10							2701	10.3	20.2	9.0	100	
Guaranteed	10.0	20.0	10.0				2706	10.0	20.0	10.6	101	
212	9.4	22.2	9.0	102	102		2748	10.0	20.2	9.3	100	
239	9.5	20.8	10.2	101	101		2788	9.6	20.4	9.2	99	
262	9.5	20.6	9.8	100	100		2815	9.8	20.2	10.0	100	
287	9.7	22.0	10.0	95	95		2937	9.5	20.8	10.6	101	
300	10.0	20.4	10.4	103	103		3014	10.0	20.1	10.0	100	
321	9.7	20.6	9.8	102	102		Mean	9.9	20.4	10.1		
327	10.0	20.8	10.0	100	100		Coef. Var.	4.6	2.6	6.0		
330	9.5	20.8	10.0	102	102		V-C Granulated Fertilizer 12-24-12					
335	9.7	20.8	10.0	100	100		Guaranteed	12.0	24.0	12.0		
537	9.7	20.0	10.6	100	100		189	10.5	24.4	13.1	98	
542	9.2	20.0	10.6	98	98		V-C Granulated Fertilizer 5-10-10					
548	9.4	20.0	10.2	98	98		Guaranteed	5.0	10.0	10.0		
553	9.6	20.2	10.0	99	99		683	5.4	10.0	10.0	103	
							945	5.0	10.3	9.6	100	
							1882	6.0	10.6	11.8	113	

TABLE 7. ANALYSES OF COMMERCIAL FERTILIZERS SAMPLED DURING 1960-61, CONTINUED

Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG	Manufacturer, place of business and brand	Laboratory no.	Nitrogen, %	Available phosphoric acid, %	Potash, %	VF/VG
V-C Granulated Fertilizer	10-20-20					Ura-Green					
Guaranteed	10.0		20.0	20.0		Guaranteed	32.0	0.0	0.0		
1010	8.7		20.8	21.3	99	957	32.0	0.0	0.0		100
V-C Granulated Fertilizer	6-24-24					VALLEY GROWERS CO-OP., MISSION, TEXAS					
Guaranteed	6.0		24.0	24.0		Valley Gro Fertilizer 13-13-13					
2449	6.1		24.4	24.0	101	Guaranteed	13.0	13.0	13.0		
V-C Granulated Fertilizer	16-20-0					2884	13.0	15.3	15.7		109
Guaranteed	16.0		20.0	0.0		Valley Gro Fertilizer 16-20-0					
255	16.0		20.8	0.0	101	Guaranteed	16.0	20.0	0.0		
279	15.6		22.2	0.0	104	1413	16.0	20.7	0.0		102
547	16.0		20.0	0.0	100	Valley Gro Fertilizer 0-20-0					
647	14.1		20.6	0.0	95	Guaranteed	0.0	20.0	0.0		
666	15.7		20.6	0.0	100	1414	0.0	20.8	0.0		104
989	15.4		20.0	0.0	98	Valley Gro Fertilizer 0-46-0					
1008	16.0		20.4	0.0	101	Guaranteed	0.0	46.0	0.0		
1083	16.2		20.7	0.0	102	2238	0.0	46.5	0.0		101
1487	15.0		20.1	0.0	97	Valley Gro Sulfate of Ammonia 21-0-0					
1668	16.0		20.0	0.0	100	Guaranteed	21.0	0.0	0.0		
1891	15.4		21.7	0.0	102	2882	21.1	0.0	0.0		100
1902	16.0		20.6	0.0	101	WARDEN PLANT FOOD CO., AUSTIN, TEXAS					
2087	15.7		20.4	0.0	100	Wardens Bat Guano 8-3-2					
2185	16.0		19.6	0.0	99	Guaranteed	8.0	3.0	2.0		
2673	14.5		20.4	0.0	96	2863	9.6	3.4	1.5		116
2683	15.3		19.8	0.0	97	WESTERN CHEMICAL, PECOS, TEXAS					
Mean	15.6		20.5	0.0		0-30-10					
Coef. Var.	3.8		3.2	0.0		Guaranteed	0.0	30.0	10.0		
V-C Granulated 20% Superphosphate	0-20-0					2656	0.0	31.0	9.1		102
Guaranteed	0.0		20.0	0.0		WESTERN FERTILIZER CO., MULESHOE, TEXAS					
538	0.0		20.0	0.0	100	Wesco Brand Fertilizer 0-20-0					
1028	0.0		20.0	0.0	100	Guaranteed	0.0	20.0	0.0		
1208	0.0		20.2	0.0	101	2433	0.0	20.0	0.0		100
V-C Harvest King	8-8-8					WESTERN FERTILIZER CO. INC., LEVELLAND, TEXAS					
Guaranteed	8.0		8.0	8.0		Bonus Gro Fertilizer—Specialty Grade 5-20-5					
1989	8.0		8.2	8.0	100	Guaranteed	5.0	20.0	5.0		
2049	8.0		8.0	8.4	100	2432	5.3	20.5	5.8		105
V-C Harvest King	12-12-12					WOOD CHEMICAL CO., LUBBOCK, TEXAS					
Guaranteed	12.0		12.0	12.0		Woodgrow Brand 16-20-6					
1991	10.4		14.6	12.1	101	Guaranteed	16.0	20.0	6.0		
V-C Harvest King	10-20-10					2403	15.4	20.3	7.2		100
Guaranteed	10.0		20.0	10.0		WYATT WHOLESALE, INC., SAN ANGELO, TEXAS					
261	9.7		20.4	10.0	100	Wyatts A-M Mixture 10-10-5					
1102	9.6		21.1	9.4	100	Guaranteed	10.0	10.0	5.0		
1990	8.6		20.4	10.0	96	2381	8.0	9.9	3.4		86
2048	10.0		19.9	10.3	100	2619	8.2	10.5	3.0		88
2789	9.4		20.6	9.0	98	Wyatt Turf and Garden Special 10-5-5					
Mean	9.5		20.5	9.7		Guaranteed	10.0	5.0	5.0		
Coef. Var.	5.6		2.1	5.4		2655	10.1	7.2	5.4		143
Ammonium Nitrate	33.5-0-0										
Guaranteed	33.0		0.0	0.0							
1667	33.6		0.0	0.0	100						
V-C Rock Phosphate 30% TPA											
Guaranteed	0.0		30.0T	0.0							
747	0.0		31.7T	0.0							

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

## State-wide Research



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

## ORGANIZATION

IN THE MAIN STATION, with headquarters at College Station, are 13 subject-matter departments, 3 service departments, 3 regulatory services and the administrative staff. Located out in the major agricultural areas of Texas are 20 substations and 10 field laboratories. In addition, there are 13 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 450 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*