# Commercial Fertilizers in Kentucky, 1957

Including a Report on Official Fertilizer Samples Analyzed

July-December, 1957



University of Kentucky
Agricultural Experiment Station
Lexington

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This bulletin contains analyses of commercial fertilizers made between July 1 and December 31, 1957. Analyses of samples made between January 1, 1957 and June 30, 1957 were published in Regulatory Bulletin 141.

#### TONNAGE OF FERTILIZER SOLD

Manufacturers reported that more than 539,000 tons of commercial fertilizer were sold in Kentucky during 1957. This was a slight increase over 1956.

The tonnage of commercial fertilizer sold during 1957, as reported by manufacturers, is given in tables A, B, and C.

#### PLANT FOODS OR NUTRIENTS

The minimum percentages of guaranteed plant foods, or nutrients, present in commercial fertilizer are printed on the bag as nitrogen, available phosphoric acid, and potash. These are the nutrients needed by plants in largest amounts and also those in which the soil is most likely deficient. The element corresponding to phosphoric acid is phosphorus and the element corresponding to potash is potassium. Boron may also be guaranteed.

#### FERTILIZER GRADE

Grade designates the minimum percentage of nitrogen, available phosphoric acid, and potash, in the fertilizer. A 5-10-15 grade means that the fertilizer contains 5 percent nitrogen, 10 percent available phosphoric acid, and 15 percent potash. The nutrients are always listed in this order. A 0-20-0 grade refers to a superphosphate fertilizer containing 20 percent available phosphoric acid. A 0-0-60 grade refers to a potash fertilizer containing 60 percent potash.

### NUMBER OF GRADES NEEDED IN KENTUCKY

The Departments of Agronomy and Horticulture of the Kentucky Agricultural Experiment Station consider that nine ratios and minimum grades of mixed fertilizer, together with superphosphate, nitrogen and potash salts will answer the present needs of Kentucky agriculture.

A list of the nine ratios and minimum grades and corresponding higher analysis grades recommended for field crops are shown below:

Ratio	Mimumum Grade	Higher Analysis Grade
0-1-1 0-1-2 0-2-1 1-1-1 1-1-3	0-20-20 0-10-20 0-16-8 10-10-10 6-6-18	0-24-24, 0-30-30, 0-20-40 0-20-10 12-12-12, 14-14-14
1-2-2 1-2-3 1-3-2 1-4-4	5-10-10 5-10-15 4-12-8 3-12-12	6-12-12, 8-16-16, 10-20-20 6-12-18, 9-18-27 8-24-16, 10-30-20 4-16-16, 5-20-20

Higher grades of any ratio also are both recommended and encouraged. None of the recommended minimum grades of mixed fertilizer contain less than 20 units of plant food. Low grade fertilizers are less economical because costs of mixing, bags, freight and other incidental costs are the same per bag regardless of analysis.

There also is a distinct advantage to the manufacturer to hold the number of grades to a minimum, since a smaller number of grades can be mixed and distributed more economically.

The Agronomy Department suggests grades in the following ratios for tobacco: 1-2-3, 1-2-2, 1-1-3. Apply needed potash as sulfate of potash for tobacco. The other ratios listed are for general field crops, meadows and pastures.

More detailed suggestions for fertilizing field crops, using the above ratios and grades, are contained in Miscellaneous Circular 10 from this Station.

#### REFUNDS

When a sample of fertilizer is below the guaranteed analysis more than 0.8 units of nitrogen, 1.0 units of available phosphoric acid or 1.5 units of potash, or the combined relative value index shows the product deficient more than \$2.00 per ton, the manufacturer of the fertilizer and the dealer from whom the sample was obtained are given a special notice.

It is suggested to the manufacturer that a proportionate refund be made to all purchasers of the stock of fertilizer whose names can be obtained from the dealer. If names of purchasers cannot be obtained, the refund may be made to charity in the county where the fertilizer was sold.

If the shipment has not been sold at the time the notice is received, it must be either relabeled so as to show the correct analysis or returned to the manufacturer for reworking. A deficiency in one element as outlined above may not be offset by an overage in another element in determining whether or not a refund, relabeling or reworking is required.

#### FARMERS' SAMPLES

Anyone in Kentucky who buys a commercial fertilizer for his own use may submit samples for free analysis to the Department of Feed and Fertilizer, Agricultural Experiment Station, Lexington 29, Kentucky.

- 1. Samples taken according to provisions of K. R. S. No. 250, 360 through No. 250, 480 (Kentucky Fertilizer Law.) To make the sample official it should be taken according to Section No. 250, 440 of the statute referred to above. This section of the statute requires that witnesses be present when the sample is taken. Copies of the statute may be obtained from the Department of Feed and Fertilizer.
- 2. Unofficial samples. If an analysis is wanted for the purchaser's information only, samples of fertilizer may be taken in the following manner:

Take portions (each about a handful) from 10 percent of the bags, unless this requires portions from more than 20 bags. If there are less than 10 bags, sample all. Take samples from as far down in the bags as possible. Place all portions on a clean paper and mix well. Place about one quart in a tight container, mark the container with name and address of the sender and send to the Department of Feed and Fertilizer, Agricultural Experiment Station, University of Kentucky, Lexington 29, Kentucky.

State in a letter the amount of fertilizer on hand, the number of bags sampled, and the reason for wanting analysis. If analysis is materially below guaranty, a representative of the Feed and Fertilizer Department may be sent to take an inspector's sample.

#### FERTILIZER GUARANTY

The statute regulating the sale of commercial fertilizers in Kentucky was amended at the 1952 session of the Kentucky Legislature. In accord with the amendment to the statute, the official tag formerly issued by this Department to be attached to each bag of fertilizer is no longer required.

Before a manufacturer can sell fertilizer in Kentucky, he must register each brand or grade he proposes to sell with the Kentucky Agricultural Experiment Station in a manner prescribed by the Director. This registration is the guaranty of the manufacturer. This information must be printed on each bag of fertilizer offered for sale in Kentucky or on a label attached to each bag supplied by the manufacturer. The information is as follows:

Brand name of fertilizer
Name and address of manufacturer
Guaranteed analysis showing:
Nitrogen, percent
Available phosphoric acid, percent
Potash, from muriate or sulfate, percent

Total phosphoric acid is guaranteed in bone, dried manures and basic slag. Both total and available phosphoric acid are guaranteed in rock phosphate and in fused tricalcium phosphate.

#### PENALTIES FOR VIOLATING THE FERTILIZER LAW

Any manufacturer, firm, dealer, or vendor who sells or exposes for sale in Kentucky commercial fertilizer without complying with the provisions of the fertilizer law is subject to a fine of from \$100.00 to \$500.00 for each offense. Furthermore, if a fertilizer is short in net weight or short in the essential plant-food nutrients, a manufacturer, firm or dealer may not only be fined \$100.00 to \$500.00 for violating the fertilizer law, but "shall be liable for reasonable damages sustained by the purchaser of such fertilizer."

## DISTRIBUTION OF FERTILIZER SALES IN KENTUCKY BY COUNTIES

Reports showing sales of fertilizer by grades by counties are now available for six months periods beginning July 1, 1954. These data were compiled from copies of invoices supplied by shippers of fertilizer. Copies may be had by writing to the Department of Feed and Fertilizer, Kentucky Agricultural Experiment Station.

TABLE A. - Mixed Fertilizer Sales by Grades, Calendar Year, January 1 thru December 31, 1957, Kentucky. (Based upon Tonnage reports from Companies).

	January 1 thru	July 1 thru	m-+-1
GRADE	June 30, 1957	December 31, 1957	Total
	(Tons)	(Tons)	(Tons)
0-10-20	164	58	222
0-12-12	698	145	843
0-14- 7		22	22
0-14-14	47	81	128
0-20-10	71	17	88
0-20-20	6,082	1,880	7,962
0-30-30	1,949	512	2,461
2-12- 6	11,373	1,435	12,808
3- 9- 6	12,721	744	13,465
3- 9-18	467	55	522
3-12- 6	7,352	703	8,055
3-12-12	29,519	7,509	37,028
4- 8-12	515	36	551
4-12- 4	711	50	761
4-12- 4	72,829	25,346	98,175
4-16-16	4,498	1,165	5,663
5-10- 5	1,971	141	2,112
5-10-10	14,029	1,131	15,160
5-10-15	94,286	3,306	97,592
5-20-20	8,235	4,305	12,540
6- 6-18	9,647	265	9,912
6- 8- 6	24,617	929	25,546
6-10- 4	637	58	695
6-12-12	20,998	4,448	25,446
	3,512	175	3,687
6-12-18	104	128	232
6-24-24	680	76	756
8- 8- 8	978	1,159	2,137
8-24-16	27,891	3,436	31,327
10-10-10	261	72	333
0-20-20	595	698	1,293
10-30-20	4,446	594	5,040
12-12-12	2,200	274	2,474
14-14-14	9,232	3,525	12,757
Miscellaneous*	7,232		,,,,,,
COTAL MIXED	373,315	64,478	437,793

<sup>\*</sup> Grades registered by fewer than three companies and miscellaneous grades with low tonnage.

TABLE B. - Fertilizer Sold as Straight Materials and Miscellaneous Products by Types, Calendar Year, January 1 thru December 31, 1957, Kentucky. (Based on Tonnage reports from Companies.)

Material	January 1 thru June 30, 1957	July 1 thru December 31, 1957	Total
	(Tons)	(Tons)	(Tons)
Nitrate of Soda, 16%	1,369	200	1,569
Ammonium Nitrate Lime, 20.5%	11		11
Ammonium Sulfate, 20-21%	480	32	512
Cyanamid, 20-21%	326	992	1,318
Nitrogen Solutions, 24-49%	1,362	226	1,588
Ammonium Nitrate, 32.5-33.5%	28,661	9,608	38,269
Anhydrous Ammonia, 82%	1,253	837	2,090
Urea	81	6	87
Total Nitrogen Material	33,543	11,901	45,444
Soft Phosphate, 20% Total	1,235	575	1,810
Ground Rock Phosphate, 30-33% Total	5,306	4,694	10,000
Basic Slag, 8% Total	200	47	247
Superphosphate, 18-20% Available	17,404	2,499	19,903
Triple Superphosphate, 45-50% Available	1,318	181	1,499
Calcium Metaphosphate, 60-63% Available	4,943	1,784	6,727
Total Phosphate Material	30,406	9,780	40,186
5 15 1 1 W 1 20 F 20%	744	180	924
Sulfate of Potash Magnesia, 20.5-22%	5,584	106	5,690
Sulfate of Potash, 48-52%	7,039	2,028	9,067
Muriate of Potash, 60-62%		2,314	15,681
Total Potash Material	13,367	2,314	13,001
Dried Manures	281	80	361
Bone Meal	47	31	78
Sewage Sludge	82	100	182
Miscellaneous	42	87	129
Total Miscellaneous	452	298	750
TOTAL MATERIALS	77,768	24,293	102,061

TABLE C. - Summary of all fertilizer sold in Kentucky from January 1 thru December 31, 1957

Type	January 1 thru June 30, 1957	July 1 thru December 31, 1957	Total
	(Tons)	(Tons)	(Tons)
Mixed Fertilizers Straight Materials	373,315 77,768	64,478 24,293	437,793 102,061
TOTAL	451,083	88,771	539,854

# EXPLANATION OF "STANDING OF MANUFACTURERS"

The standings of manufacturers as determined by the results of analysis of official samples are given on pages 10 and 11. Purchasers of fertilizer can learn through a study of this how well any manufacturer met his guarantee on the samples analyzed.

It should be noted that the first 3 columns of figures refer to number of samples and that the last 3 columns refer to number of analysis of nitrogen, phosphoric acid and potash. Attention is directed to the third column of figures which gives for each manufacturer, the percentage of samples which are equal to guaranty in all respects, and to column 6, which gives the percentage of analysis which are equal to guaranty or within the tolerance. This tolerance is on a sliding scale varying with the guarantee as follows:

Percent Guarantee in Nitrogen, Phosphoric Acid or Potash	Tolerance
0- 9	0.2
10-19	0.3
20-25	0.4
26-34	0.5
35-39	0.6
40-49	0.7
50-59	0.8
60 or more	0.9

## EXPLANATION OF TABLES 1, 2 & 3

In some samples a deficiency in one nutrient is accompanied by an overrun in another nutrient. This is evidence of improper mixing or weighing by the manufacturer. Extreme variations of this kind cannot be attributed to separation of materials (segregation) though this may be a minor factor. Excess of one nutrient cannot compensate for deficiency of another nutrient. The purchaser is entitled to receive the full guaranty in all nutrients as expressed by the manufacturer's guaranty.

The results of analysis of all inspection samples are given in Tables, 1, 2 and 3. If an analysis shows a deficiency of more than the tolerance in the above table, the amount claimed for nitrogen, phosphoric acid, or potash, or if the percent of the relative value is 98 or less, the result is indicated in the tables by an asterisk by the figures.

## COMPANIES REPRESENTED BY SAMPLES REPORTED IN THIS BULLETIN

- Allied Chemical & Dye Corporation Nitrogen Division 40 Rector St., New York, N. Y.
- Aluminum & Chemical Corporation 1167 Red River St. Clarksville, Tennessee
- American Agricultural Chemical Co. 50 Church St., New York, N. Y.
- American Cyanamid Company 30 Rockefeller Plaza, New York, N. Y.
- Armour Fertilizer Works
  350 Hart Bldg., Atlanta, Georgia
- Associated Cooperative, Inc. 312 Montgomery Ave., Sheffield, Ala.
- Bartlett & O'Bryan Fertilizer Company. 108 River Road, Owensboro, Ky.
- Bluegrass Plant Foods, Inc. Cynthiana, Kentucky
- Buhner Fertilizer Company, Inc. Louisville, Kentucky
- Bunton Seed Company 300-312 E. Jefferson, Louisville, Ky.
- Burley Belt Plant Food Works Lexington, Kentucky
- Commonwealth Fertilizer Company, Inc. Morgantown Rd., Russellville, Ky.
- Cooperative Fertilizer Service S. S. Bldg., Richmond, Virginia
- Darling & Company Chicago, Illinois
- Davison Chemical Corporation Baltimore, Maryland
- E. I. Du Pont de Nemours & Company Wilmington 99, Delaware
- Farmers Exchange
  Burkesville, Kentucky
- Farmers Fertilizer Company Smiths Grove, Kentucky
- Federal Chemical Company
  Starks Bldg., Louisville, Ky.
- Hutson Chemical Company Murray, Kentucky
- International Minerals & Chemical Corp. Lockland Station, Cincinnati, Ohio

- Knoxville Fertilizer Company Knoxville, Tennessee
- Land O Nan Warehouse Sturgis, Kentucky
- Louisville Fertilizer Company Box 1088, Nashville, Tennessee
- Monsanto Chemical Company 1700 S. Second St., St. Louis, Mo.
- North American Fertilizer Company Preston St. at Bergman, Louisville, Ky.
- Olin Mathieson Chemical Corporation Houston, Texas
- Price Chemical Company
  Miller's Lane, Louisville, Kentucky
- Robin Jones Phosphate Company 804 Church St., Nashville, Tennessee
- Ruhm Phosphate & Chemical Company 813 Garden St., Columbia, Tennessee
- O. M. Scott & Sons Company Marysville, Ohio
- Schrock Fertilizer Service Congerville, Illinois
- Southern Nitrogen Supply Yazoo City, Mississippi
- Spencer Chemical Company Box 604, Pittsburg, Kansas
- Swift & Company Union Stock Yards, Chicago, Illinois
- Tennessee Chemical Company
  (See Armour Fertilizer Works)
- Tennessee Corporation

  Lockland Station, Cincinnati, Ohio
- Tri-State Chemical Company Henderson, Kentucky
- Valley Counties of Kentucky Box 351, Murray, Kentucky
- Virginia-Carolina Chemical Corporation Richmond, Virginia
- West Kentucky Liquid Fertilizer Company Hopkinsville, Kentucky
- Zircon Products Company Indianapolis Indiana

Standing of Manufacturers Based on Samples Equal to Guaranty in All Respects and Analyses Within Tolerance - 1957

		Samples		nitrogen.	Analyses	s of acid and potash
COMPANY			o guaranty		Equal	to guaranty or
	Total		respects	Total Number	Number	rerent*
	1	Number 1	Percent*	Number 3	3	
Aluminum & Chemical Corporation Allied Chemical & Dye Corp.	12	12	100	24	24	100
American Agricultural Chemical	125	91	73	400	367	92
American Cyanamid	10	7	70	10	10	100
Armour Fertilizer Works	577	304	53	1,747	1,536	88
Louisville Fertilizer Co.	11	5	45	35	27	77
Tennessee Chemical Company	18	9	50	54	42	78
Associated Cooperative	32	27	84	53	51	96
Bartlett & O'Bryan Fertilizer Co		7	23	83	60	72
Bluegrass Plant Foods	96	57	59	288	258	90 93
Buhner Fertilizer Company	48	35	73	148	137 11	
Bunton Seed Company	4	2	38	12 86	74	86
Burley Belt Plant Foods Works	26	10	30 	3	2	
California Spray Chemical Corp.	1 2	2		2	2	
Chilean Nitrate Sales Corp.	45	21	47	129	107	83
Commonwealth Fertilizer Company Consolidated Chemical Company	45	21	77			
(See Price Chemical Company)						
Cooperative Fertilizer Service	475	298	63	1,381	1,263	91
Darling & Company	49	26	53	134	106	79
Davison Chemical Company	319	122	38	960	744	78
E. I. DuPont DeNem. & Company	1	1		1	1	
E'Town Fertilizer Company	21	16	76	64	60	94
Farmers Exchange Company	1			3	3	
Farmers Fertilizer Company	12	8	67	33	29	88
Federal Chemical Company	357	126	35	1,083	824	76
Fertilene Corp. of America	1			1		<b></b>
Grace Chemical Company	8	8	100	8	8	100
Hutson Chemical Company	30	10	33	80	60	75
Hydroponic Chemical Company	1	1		3	3	
International Min. & Chem. Corp.	195	94	48	584	494	85
Kentucky Fertilizer Works	28	20	71	96	90	94
Knoxville Fertilizer Company	191	106	55	575	484	84
Land-O-Nan Warehouse	34	11	32	89	64	72
Louisville Fertilizer Company						
(See Armour Fertilizer Works)				3	3	
J. A. McCarty Seed Company	1 8	1 8	100	8	8	100
Mid-South Chemical Company		1		1	1	
Mississippi Chemical Corporation	4	4		4	4	
Mississippi River Chemical Corp. Missouri Plant Food	17	14	82	46	44	96
Monsanto Chemical Company	5	5	100	5	5	100
Morrison & Wallace	1	1		3	3	
Na-Churs Plant Food Company	3	3		9	9	
Nitro-Form Agricultural Chem.	1	1		1	1	
North American Fertilizer Co.	170	88	52	520	446	86
Ohio Valley Fertilizer Corp.	34	11	32	111	89	80
Olin Mathieson Chemical Corp.	7	7	100	17	17	100
Phillips Petroleum Company	3	3		3	3	
Plant Marvel Laboratories	1	1		4	4	
Price Chemical Company	71	48	68	221	202	91
Consolidated Chemical	17	9	53	58	51	88
Ra-Pid-Gro Corporation	2			7	5	
Republic Steel Corporation	1	1		1	1	
Robin Jones Phosphate Company	6	5	83	12	11	92
Ruhm Phosphate & Chemical Co.	7	2	29	10	4	40
Schrock Fertilizer Service	6	5	83	6	5	83
Scope Chemicals	1	1 3	50	3	3 13	93
	6			14		

 $<sup>\</sup>star$  Percent is not indicated when number of samples is less than 5  $\star\star$  See "Tolerance Scale" on page 8

Standing of Manufacturers Based on Samples Equal to Guaranty in All Respects and Analyses Within Tolerance - 1957

and	Analy	ses With	in Tolerand	e - 1957		
		Analyses of				
		Samples		nitrogen,		cid and potasl
COMPANY			o guaranty			guaranty or
	Total		respects	Total		olerance**
	Number	Number	Percent*	Number	Number	Percent*
Sewerage Comm. of Milwaukee	3	2		6	5	
	1	1		3	3	
The Smith Agricultural Chem. Co.	1	ī		1	ī	
Southern Nitrogen Supply						
Southern States	- \					
(See Cooperative Fertilizer Se	1.)	1		3	3	
Southern States Clark County Coo	9	9	100	9	9	100
Spencer Chemical Company	9	1		3	3	
Stadler Fertilizer Company	- L	23	42	172	139	81
Swift & Company	55	23	42	1/2	139	01
Tennessee Chemical Company						
(See Armour Fertilizer Works)			26	297	242	81
Tennessee Corporation	95	34	36		4	
Thompson Sales	2	2		4	97	87
Tri-State Chemical Company	40	22	55	112		
U. S. Steel Corporation	3	3		3	3	72
Valley Counties of Kentucky	63	29	46	132	95	89
Virginia-Carolina Chemical Corp.	185	115	62	559	497	
West Kentucky Liquid Fertilizer	15	3	20	45	33	73
Harold Willett	1	1		3	3	
Zircon Products Company	1	11		3	3	
TOTAL	3,610	1,907	53	10,594	9,016	85

A comparison of the totals in the above table with those for the year 1956 follows:

	1956	1957
Number of samples, Total Samples equal to guaranty in all respects Percent Analyses, Total Equal to guaranty or within tolerance Percent	3,082 1,758 57 8,295 7,057	3,610 1,907 53 10,594 9,016 85
Tercent		

The decrease in percentage of samples equal to guaranty in all respects in 1957 as compared with 1956 is largely explained by a change in method of calculation. Beginning in 1957 a sample was not considered as equal to guaranty in all respects if the guaranty as to source of potash was not met. Previously this had not been considered in making this calculation.

<sup>\*</sup> Percent is not indicated when number of samples is less than 5 \*\* See "Tolerance Scale" on page 8

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	ALLIED CHEM & DYE CORP NIT DIV	(Percent)	(Percent)	(Percent)	
7052 1338	12 12 12M SANDERS SUPPLY GILLISPIE SEED COMPANY	123	123	12.7	103
203	33 5 AMMONIUM NITRATE SOUTHERN STATES FRANKFORT COOP FARM & HOME STORE	33.8 33.9			101
	ALUMINUM & CHEMICAL CORPORATION				
390	4 8 8M TODD COUNTY SEED COMPANY	43	79	8.4	103
	AMERICAN AGRICULTURAL CHEMICAL CO				
164 176	O 20 20M LEBANON CARRIAGE & IMPLEMENT COMPANY WALTERS & THOMPSON		20.1	21.5	103
163	0 20 20M WITH 3 LBS BORAX PER 100 (1) LEBANON CARRIAGE & IMPLEMENT COMPANY		20.7	199	102
147	3 12 12M WALTERS & THOMPSON AMERICAN AGRI CHEM WHSE LEXINGTON	3.0 3.1	13.1	12.0	105 102
375 053	4 12 8M WOODSON LEWIS R E HUTTON AMERICAN AGRI CHEM WHSE LEXINGTON	3.9 4.0 4.0	123 125 122	8.4 8.1 7.9	102 103 101
054	6 12 12M CHRISTOPHER FARM SUPPLY	59	122	1 2.1	100
060	60 MURIATE OF POTASH AMERICAN AGRI CHEN WHSE LEXINGTON			60.0	100
	AMERICAN CYANAMID COMPANY				
221	21 CALCIUM CYANAMID GALLOWAY SEED COMPANY TRIGG COUNTY TRADING COMPANY CARROLL COUNTY FARM BUREAU COOP	20.8 20.8 20.8			99 99 99
461	33 5 ANMONIUM NITRATE FARMERS COOPERATIVE STORE OWENSBORO	33.6			100

<sup>(1)</sup> SEE BORON TABLE - PAGE 34

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	ARMOUR FERTILIZER WORKS	(Percent)	(Percent)	(Percent)	
6146	O 20 20M A C BUTTS & SON TRIMBLE COUNTY FARM BUREAU COOP FARMERS SUPPLY COMPANY EMINENCE JEWELL & HAYDON HARDWARE		20.1 20.6 20.4 19.9	20.8 19.0 • 19.7 20.2	102 100 101 100
	O 20 20M WITH 3 LBS BORAX PER 100 (1) HUNT BROTHERS BIG FOUR FEED & IMPLEMENT COMPANY		202 183•		100
8287	O 20 20M WITH 5 LBS BORAX PER 100 (2) IDEAL HARDWARE COMPANY		202	206	102
8361	3 9 6M NUMAN BLACKWELL	29	9.1	62	99
5299 5481 5482 7014 7029	3 12 6M WALLACES HARDWARE A C BUTTS & SON SLAUGHTERS MERCANTILE COMPANY BROOKS SERVICE STATION C E HERRIN GIBSON PRODUCE COMPANY ALLEN COAL COMPANY	3.0 3.1 3.1 3.1 3.1 2.2	122 138 122 120 120 123 123	64 63 63 64 62 62	102
6153 6155 6209 6215 8277 8303 8382	HUNT BROTHERS T F KEENE & SONS JEWELL & HAYDON HARDWARE T F KEENE & SONS SPRINGFIELD FEED & GRAIN COMPANY NUMAN BLACKWELL ALLEN COAL COMPANY ADAIR MILLING COMPANY J C EVERETT COMPANY INC	3.1 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	12.6 12.1 12.5 12.3 12.1 13.4 12.4 12.2 12.0	12.7 12.5 12.6 12.7 14.0 12.7 12.7 12.5	103
52494 553894 61668 6123551838888 83375888888333368125 882283888333368125 8833775		2.3	113 127 123 123 123 124 124 124 115 123 125 120 121	7.6 8.3 8.0 8.4 8.5 7.9 8.1 8.0 8.2	102 101 101 101 102 103 101 102 960
8286	4 12 8M WITH 5 LBS BORAX PER 100 (3) IDEAL HARDWARE COMPANY	3.6	• 12.1	82	98•
8365	4 24 12M FARMERS MILL & SUPPLY CO BROWNSVILLE	E 4.0	23.8	120	99

<sup>(1)</sup> SEE BORON TABLE - PAGE 34 (2) SEE BORON TABLE - PAGE 34 (3) SEE BORON TABLE - PAGE 34

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	ARMOUR FERTILIZER WORKS CONTINUED	(Percent)	(Percent)	(Percent)	
5300	5 10 10M GALLOWAY SEED COMPANY A C BUTTS & SON KUTTAWA MILLING COMPANY GIBSON PRODUCE COMPANY	5.1 4.7* 4.9 5.4	10.4 10.5 10.1 10.4	9.8 9.9 10.0 10.0	102 100 100 104
7013 7028 7062 8284 8331 9046	5 20 20M PRENTISS MARTIN C E HERRIN GIBSON PRODUCE COMPANY MCWHORTER PRODUCE COMPANY FARMERS MILL & SUPPLY CO BROWNSVILLE IDEAL HARDWARE COMPANY SAM RYLE CREENUP MILLING COMPANY	4.8 4.7* 4.7* 5.1 4.7* 4.7* 5.1	21.6 20.9 18.6 • 18.4 • 18.2 • 19.5 • 19.2 •	18.1 • 18.6 • 21.1 21.5 20.1 21.1 20.0 20.9	101 99 970 980 950 950 99
8285	5 20 20M WITH 5 LBS BORAX PER 100 (1) IDEAL HARDWARE COMPANY	450	18.4 *	20.0	940
5322 5379 5495 6161	A C BUTTS & SON ROSS SEED COMPANY CADIZ HARDWARE COMPANY AUSTIN & AUSTIN SEED COMPANY A C BUTTS & SON LORETTO MILL COMPANY N T NUCKOLS	5.7 ¢ 5.8 5.8 6.2 5.9 5.7 ¢ 5.8	122 126 120 119	119 120 125 127 125 124 123	99 100 102 102 100 100
5253	8 8 SM DENTON HARDWARE COMPANY	5.6	75 •	192	106
5367	8 24 16M HUNT BROTHERS BIRMINGHAM MILLING COMPANY CADIZ HARDWARE COMPANY GLASGOW TRADING CENTER FARMERS FEED & SUPPLY CO BROWNSVILLE	7.5 ¢ 7.7 ¢ 7.4 ¢ 7.5 ¢ 7.4 ¢	24.9 24.6 24.0	16.0 16.2 16.1 15.7 16.4	96 • 101 99 98 • 98 •
5514	10 6 4M HARRALSON SEED COMPANY	95 •	6.8	6.1	105
5366 7063	10 10 10M KUTTAWA MILLING COMPANY MCWHORTER PRODUCE COMPANY	7.6 ¢		8.1 ¢ 1 1.0	95¢ 94¢
5443 5515	12 12 12M YOPP SEED COMPANY HARRALSON SEED COMPANY	11.9	12.8	124	102
9066	33 5 AMMONIUM NITRATE BRENT & COMPANY	33.7			101
5364 5409 5412 6233	20 SUPERPHOSPHATE A C BUTTS & SON KUTTAWA MILLING COMPANY PAUL GARDNER GENERAL MERCHANDISE CADIZ HARDWARE COMPANY JACOBS COAL & TRANSFER COMPANY ALLEN COAL COMPANY		203 199 20.1 19.1 19.9 20.1	ı	102 98• 100 95• 100 100
6166	60 MURIATE OF POTASH HARRALSON SEED COMPANY SPRINGFIELD FEED & GRAIN COMPANY JA BENNETT HARDWARE			60.0 59.5 59.4	100 99 99

<sup>(1)</sup> SEE BORON TABLE - PAGE 34

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957.

(Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk. Footnotes show amount of excess muriate when sulfate guaranty not met.)

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	ASSOCIATED COOPERATIVE INC	(Percent)	(Percent)	(Percent)	
5317 5368 5436	14 14 14M GALLOWAY CO SOIL IMPROVEMENT ASSN MARSHALL CO SOIL IMPROVEMENT ASSN K R MCKINNEY & SON	142 14.0 14.1	1 4.0 1 4.5 1 3.8	135 • 14.1 14.7	100 101 101
5358	33 5 AMMONIUM NITRATE T C EDWARDS HANCOCK COUNTY FARM SUPPLY MOORE SEED & GRAIN COMPANY BARDWELL MILLING COMPANY	33.4 33.5 33.5 33.0			100 100 100 99
5293	61 CALCIUM METAPHOSPHATE T C EDWARDS		619		102
5250	62 CALCIUM METAPHOSPHATE SOUTHERN STATES MORGANFIELD COOP FARMERS COOPERATIVE MADISONVILLE HANCOCK COUNTY FARM SUPPLY BARDWELL MILLING COMPANY		633 619 622 619		102 100 100 100
	BARTLETT & O BRYAN FERTILIZER CO				
5270	0 20 20M BARTLETT & 0 BRYAN FERTILIZER CO		203	20.4	102
5272	3 12 12M BARTLETT & O BRYAN FERTILIZER CO	2.8	11.6 *	12.7	980
5273	4 12 8M BARTLETT & O BRYAN FERTILIZER CO	4.0	123	9.0	104
5274	4 16 16M BARTLETT & O BRYAN FERTILIZER CO	4.0	15.9	1 7.0	101
5275	5 20 20M BARTLETT & O BRYAN FERTILIZER CO	4.8	199	19.0	980
5276	6 12 12M BARTLETT & O BRYAN FERTILIZER CO	5.9	12.0	125	100
5277	10 10 10M BARTLETT & O BRYAN FERTILIZER CO	92	• 109	10.7	100
5278	BARTLETT & O BRYAN FERTILIZER CO	1 1 .7	12.4	122	100
5271	20 SUPERPHOSPHATE I BARTLETT & O BRYAN FERTILIZER CO		19.0	•	950
	BLUEGRASS PLANT FOODS INC				
620	3 12 12M 7 BLUEGRASS PLANT FOODS DANVILLE O BLUEGRASS PLANT FOODS CYNTHIANA	32 32		<ul><li>12.1</li><li>12.7</li></ul>	

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

(Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk. Footnotes show amount of excess muriate when sulfate guaranty not met.)

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	BLUEGRASS PLANT FOODS INC CONTINUED	<sup>D</sup> ercent)	(Percent)	(Percent)	
6174	4 12 8M BLUEGRASS PLANT FOODS DANVILLE PATRICK STORE BLUEGRASS PLANT FOODS CYNTHIANA	3.70 3.70 4.3	12.0 11.8 11.4 •	85	100 980 100
6206	6 8 6M BLUEGRASS PLANT FOODS DANVILLE	5.9	8.1	6.8	102
9067	10 10 10M BLUEGRASS PLANT FOODS CYNTHIANA	100	9.6 •	102	99
9069	20 SUPERPHOSPHATE BLUEGRASS PLANT FOODS CYNTHIANA		19.0 •		950
	BUHNER FERTILIZER COMPANY				
6224	O 20 20M BUHNER & COMPANY BUHNER & COMPANY CLARKSON FEED STORE		199 189 196	199 205 199	100 970 99
6179	3 12 12M FERN CREEK FEED & HARDWARE	35	12.8	132	110
6214	4 12 8M SHEPHERDSVILLE FEED MILL SPRINGFIELD FEED & GRAIN COMPANY CLARKSON FEED STORE	4.7 4.6 4.6	129 126 122	8 <i>9</i> 9 <i>2</i> 8 <i>5</i>	111 110 106
6186 6225	4 16 16M BUHNER & COMPANY BUHNER & COMPANY	4.8 5.0	162 159	175 16.6	107 106
6182	5 20 20M BUHNER & COMPANY	5.7	199	20.7	103
6192	6 8 6M W C SIEGEL HARDWARE	62	9.6	65	111
6184	6 24 24M BUHNER & COMPANY	53+	24.0	252	99
6226	10 10 10M FERN CREEK FEED & HARDWARE	99	102	10.7	101
6185	60 MURIATE OF POTASH BUHNER & COMPANY			60.0	100
	BUNTON SEED COMPANY				
	10 12 6M BUNTON SEED COMPANY	9.7	125	62	101

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	BURLEY BELT PLANT FOOD WORKS	(Percent)	(Percent)	(Percent)	
6200	0 9 27M KENTUCKY STATE REFORMATORY		9.1	27.7	102
9061	4 12 8M BURLEY BELT PLANT FOOD WORKS	3.9	122	8.1	100
9063	5 10 15S BURLEY BELT PLANT FOOD WORKS	49	1 0.1	150	100
9062	10 10 10M BURLEY BELT PLANT FOOD WORKS	99	1 0.1	9.8	100
	COMMONWEALTH FERTILIZER COMPANY				
5326 8281	O 20 20M C & C HARDWARE MARKHAM & MCCARLEY		20.0	22.0	103
5490	4 12 8M C & C HARDWARE J R WALLACE J R WALLACE COMMONWEALTH FERTILIZER SERVICE	3.70 3.50 3.9 4.2	119	7.61	980 950 970 980
8280	6 12 12M COMMONWEALTH FERTILIZER SERVICE	521	122	125	970
8279	20 SUPERPHOSPHATE NOBLE LANIER		195		98•
	COOPERATIVE FERTILIZER SERVICE				
6150 6205 7023 7057 8256 8270 8290	(1) C S MCCULLY SOUTHERN STATES GEORGETOWN COOP SOUTHERN STATES GEORGETOWN COOP FARMERS SUPPLY & PRODUCE MONTICELLO SOUTHERN STATES LONDON COOP FARMERS SERVICE TOMPKINSVILLE SOUTHERN STATES SIMPSON COOP SOUTHERN STATES GLASGOW COOP SOUTHERN STATES HOPKINSVILLE COOP		20.0 19.8 19.4 20.0 19.8 20.2 19.5 20.3 21.1	392 40.0 373 39.8	97 99 100 97 99 100
5448 5486 6212 7025 7039 7041 7051 8344	O 30 30M SOUTHERN STATES MORGANFIELD COOP PHELPS BROTHERS FARM SERVICE C S MCCULLY SOUTHERN STATES BARDSTOWN COOP FARMERS SUPPLY & PRODUCE MONTICELLO WHITLEY COUNTY FARM SUPPLY RALPH HOVIOUS LINCOLN FARM SERVICE SOUTHERN STATES BOWLING GREEN COOP SOUTHERN STATES FLEMINGSBURG COOP		2931 305 294 300 300 301 2901 311 310 303	29.0 30.1 30.0 29.1 30.0	100

<sup>(1)</sup> SEE BORON TABLE - PAGE 34

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number		Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	COOPERATIVE FERT SERVICE CONTINUED	(Percent)	(Percent)	(Percent)	
5213 54407 5417 5427 6171 6197 6198 6218 7025 83043 9055	3 12 12M SOUTHERN STATES MORGANFIELD COOP HICKORY BILLS FARM STORE PRINCETON FARM SERVICE SOUTHERN STATES CRITTENDEN COOP SOUTHERN STATES BARDSTOWN COOP SOUTHERN STATES LAGRANGE COOP TRIMBLE COUNTY FARM BUREAU COOP CARROLL COUNTY FARM BUREAU COOP SOUTHERN STATES BARDSTOWN COOP TRIMBLE COUNTY FARM BUREAU COOP FARMERS SERVICE TOMPKINSVILLE FARMERS SERVICE TOMPKINSVILLE SOUTHERN STATES CAMPBELL COOP SOUTHERN STATES CYNTHIANA COOP	3.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	119 120 119 117 119 120 122 116* 119 123 115* 120 119	122 130 12.7 13.0 12.4 12.4 12.4 12.5 12.6 12.9 11.1 12.8 13.0 12.7	100 104 103 103 100 100 102 104 99 102 98 99 102 98
5357 5369 54012 61582 6195 6196 70120 70045 70058 83168 83168 83885 90048	4 12 8M HANCOCK COUNTY FARM SUPPLY MARSHALL CO SOIL IMPROVEMENT ASSN HICKORY BILLS FARM STORE SOUTHERN STATES CRITTENDEN COOP SOUTHERN STATES BARDSTOWN COOP SOUTHERN STATES LEBANON COOP SOUTHERN STATES OWENTON COOP TRIMBLE COUNTY FARM BUREAU COOP GIBSON FARM & HOME SERVICE MCWHORTER BROTHERS WHITLEY COUNTY FARM SUPPLY MURPHY & PHILLIPS SOUTHERN STATES LONDON COOP HARRISON FARM SUPPLY SOUTHERN STATES GLASGOW COOP SOUTHERN STATES GLASGOW COOP SOUTHERN STATES LEITCHFIELD COOP FARMERS SUPPLY COMPANY MORGANTOWN FARMERS SERVICE TOMPKINSVILLE SOUTHERN STATES CAMPBELL COOP PIKE COUNTY HATCHERY C D WILLIAMS SOUTHERN STATES CARLISLE COOP	43111444444444444444444444444444444444	122 116 121 11.7 12.7 12.5 12.9 12.8 12.0 12.0 11.8 12.0 11.7	88.1.3.0 88.8.7.8.7.2.7.4.4.2.4.3.4.8.0.9.0 88.8.8.9.8.8.8.8.8.8.9.8.9.8.9.8.9.8.9.	103 102 101 100 106 104 105 107 103 105 102 99 101 100 100
7018	4 12 12M HARLAN FARMERS SUPPLY	42	12.6	12.7	105
7017 7059	5 10 10M HARLAN FARMERS SUPPLY HARLAN FARMERS SUPPLY	5.1 4.9	1 0.5 1 0.1	10.7	104
6175 6185 6215 7015 7044 7044 7045	S SOUTHERN STATES SHELBYVILLE COOP SOUTHERN STATES LOUISVILLE COOP TRIMBLE COUNTY FARM BUREAU COOP SOUTHERN STATES LAGRANGE COOP	4.8 5.0 5.0 5.2 5.3 5.2 5.3	203 183 183 188 195 195 194 194 196 196 197 197 197	21.5 17.4 20.5 20.7 20.7 20.7 21.1 20.7 21.1 21.6 21.6 21.6 21.6 21.6 21.6	102 98 103 97 100 99 100 100
544 551 701 702 830	6 12 12M 5 SOUTHERN STATES MORGANFIELD COOP 9 PHELPS BROTHERS FARM SERVICE 7 SOUTHERN STATES OWENSBORO COOP 2 TAYLOR FARM SERVICE 6 FARMERS SUPPLY & PRODUCE MONTICELLO 9 SOUTHERN STATES LEITCHFIELD COOP 4 SOUTHERN STATES CAMPBELL COOP 7 SOUTHERN STATES MAYSVILLE COOP	6.1 6.3 5.8 6.2 5.8 6.0 5.8	12.0 11.6 12.0 11.9 11.8 11.9	12.7 12.5 12.7 12.3 12.2 12.5 12.5	101 100 101

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample	,	Nite	Available	Potash	Percent of
Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Phosphoric Acid	Polasn	Relative Value Found
	COOPERATIVE FERT SERVICE CONTINUED	(Percent)	(Percent)	(Percent)	
5518 5523 6169	10 10 10M HICKORY BILLS FARM STORE SOUTHERN STATES OWENSBORO COOP SOUTHERN STATES HENDERSON COOP SOUTHERN STATES HARRODSBURG COOP FARMERS SUPPLY & PRODUCE MONTICELLO LINCOLN FARM SERVICE SOUTHERN STATES LEITCHFIELD COOP	1 0.5 1 0.6 1 0.4 1 0.0 9.4 1 0.5 1 0.4	102 100 100 122 123 10.1	10.5 10.5 10.7 9.1 12.6 10.1 10.3	104 104 103 106 109 103
7016	10 20 20M HARLAN FARMERS SUPPLY	105	21.7	18.1 •	103
5437	10 30 20M K R MCKINNEY & SON	10.1	31.0	193*	101
5524	20 52 0 SOUTHERN STATES HENDERSON COOP	20.0	525		101
6193	20 SUPERPHOSPHATE SOUTHERN STATES OWENSBORO COOP SOUTHERN STATES OWENTON COOP SOUTHERN STATES FRANKFORT COOP SOUTHERN STATES LONDON COOP HARLAN FARMERS SUPPLY SOUTHERN STATES CYNTHIANA COOP SOUTHERN STATES FLEMINGSBURG COOP		199 20.7 20.1 20.3 199 18.8		99 103 100 101 99 94•
6149	60 MURIATE OF POTASH SOUTHERN STATES GEORGETOWN COOP			60.0	100
5399	62 MURIATE OF POTASH HICKORY BILLS FARM STORE			62.8	101
	DARLING & COMPANY				
5386 5394	0 25 25M FARMERS GIN COMPANY CLINTON CLINTON HATCHERY		25.1 28.0	26.5 25.5	102
5370 5380	6 12 12M T C EDWARDS LYNN GROVE FEED & SEED COMPANY MARSHALL CO SOIL IMPROVEMENT ASSN AUSTIN & AUSTIN SEED COMPANY MOORE SEED & GRAIN COMPANY	6.0 5.9 6.1 6.0 5.9	125 123 120 119 119	12.0 12.4 13.5 13.2 12.5	102 101 103 102 100
5290 5383 5496	8 24 16M HUNT BROTHERS MOORE SEED & GRAIN COMPANY AUSTIN & AUSTIN SEED COMPANY	6.5 7.7 8.2	23.4 23.4 23.4	• 17.0	94* 99 100
5294 5382 5393	60 MURIATE OF POTASH T C EDWARDS MOORE SEED & GRAIN COMPANY CLINTON HATCHERY			60.5 60.0 60.0	101 100 100

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957 (Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk. Footnotes show amount of excess muriate when sulfate guaranty not met.)

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	DAVISON CHEMICAL CORPORATION	(Percent)	(Percent)	(Percent)	
5258	O 12 12M BENNETT FARM SUPPLY		12.0	12.1	100
8336	O 20 20M SIMPSON COUNTY SEED COMPANY		199	21.1	102
8265	O 20 20M WITH 2 LBS BORAX PER 100 (1) ALLEN COUNTY FARMERS SERVICE (2)		20.0	19.7	100
8264	3 9 18M WITH 2 LBS BORAX PER 100 ALLEN COUNTY FARMERS SERVICE	29	8.6 •	193	100
5242 5462 6178 6211 6229	3 12 12M HENDERSON FEED & COMMISSION COMPANY FARMERS COOPERATIVE MADISONVILLE DAVISON CHEMICAL CO WHSE OWENSBORO FLOORES FEED STORE JEWELL & HAYDON HARDWARE HALL SEED COMPANY FARMERS SUPPLY GLASGOW C S BRENT SEED COMPANY	3.6 3.6 4.0 4.1 3.0 3.7	11.8 12.1 12.6 132 14.0 11.9 11.9	132 125 127 132 127 121 121 128	106 103 108 115 118 100 100
5259 5314 5331 5463 5501 6177 7043 8263 8329 8373	4 12 8M FARMERS COOPERATIVE MADISONVILLE BENNETT FARM SUPPLY CALLOWAY CO SOIL IMPROVEMENT ASSN FELTY PRODUCE COMPANY DAVISON CHENICAL CO WHSE OWENSBORO MARSHALL CO SOIL IMPROVEMENT ASSN FLOORES FEED STORE TARTER FEED MILL ALLEN COUNTY FARMERS SERVICE GILLISPIE SEED COMPANY FARMERS SUPPLY GLASGOW ENGLANDS FEED STORE ADAIR MILLING COMPANY JOE SHELLY FEED COMPANY	39 44.0 3.8 3.6.1 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.6	123 11.8 12.6 11.4 11.9 122 11.1	82 79 8.0 8.4 7.8 8.5 10.6 8.0 8.1 7.5	98* 99 98* 95* 102 100 110 97* 101
5335	4 16 16M E C RUMMAGE & SON	4.4	15.5	16.0	100
5336 5347 5464 5526 8333	5 20 20M FARMERS COOPERATIVE MADISONVILLE E C RUMMAGE & SON CRAFTON & DUNCAN DAVISON CHEMICAL CO WHSE OWENSBORO WABASH ELEVATOR COMPANY SIMPSON COUNTY SEED COMPANY YOUNG SEED HOUSE	5.1 5.6 4.8 5.4 4.9 4.6		18.9 192 20.8 182 17.9	81 98 101 95 94
5260	6 8 6M HENDERSON FEED & COMMISSION COMPANY BENNETT FARM SUPPLY BUECHEL PRODUCE EXCHANGE C S BRENT SEED COMPANY	5.6 6.2 5.5 5.6	<ul><li>8.3</li><li>8.2</li></ul>		102 104 101 116
5465	6 12 12M 6 FARMERS COOPERATIVE MADISONVILLE 7 DAVISON CHEMICAL CO WHSE OWENSBORO 7 SMITH & REYNOLDS 7 SIMPSON COUNTY SEED COMPANY	5.9 6.1 5.9 5.7	119	122	
5261	8 8 8M BENNETTS FARM SUPPLY	7.4	• 79	8.1	961

<sup>(1)</sup> SEE BORON TABLE - PAGE 34 (2) SEE BORON TABLE - PAGE 34

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	DAVISON CHEM CORP CONTINUED	(Percent)	(Percent)	(Percent)	
5480	8 24 16M GEORGE PATMORE & SON SMITH & REYNOLDS ENGLANDS FEED STORE	7.7 ° 7.6 ° 7.5 °	23.7		980
5262 5337 5385 6221 6231	10 10 10M FARMERS COOPERATIVE MADISONVILLE BENNETTS FARM SUPPLY E C RUMMAGE & SON MOORE SEED & GRAIN COMPANY BUECHEL PRODUCE EXCHANGE HALL SEED COMPANY SIMPSON COUNTY SEED COMPANY	85 ° 98 ° 86 ° 10.1 ° 8.8 ° 93 ° 1	11.9 10.3 10.9 11.6 9.6 11.2	954 103 954 99 108 12.7 924	980 101 950 980 101 103
5466 6145 6222 6230 9052	12 12 12M DAVISON CHEMICAL CO WHSE OWENSBORO BUECHEL PRODUCE EXCHANGE BUECHEL PRODUCE EXCHANGE HALL SEED COMPANY C S BRENT SEED COMPANY	12.1 1134 12.7 122 13.0	12.7	124	98• 100 101 100 103
5492	20 SUPERPHOSPHATE JARVIS SWEET FEED MILL		21.0		105
5241	60 MURIATE OF POTASH FARMERS COOPERATIVE MADISONVILLE			60.0	100
5478	E I DUPONT DE NEMOURS & COMPANY  45 NU GREEN FEDERAL CHEMICAL CO WHSE HENDERSON E TOWN FERTILIZER COMPANY	45.4			101
8319	2 20 20M E TOWN FERTILIZER COMPANY	24	20.0	202	102
8316	3 12 12M E TOWN FERTILIZER COMPANY	33	12.1	12.7	104
8315	4 12 8M E TOWN FERTILIZER COMPANY	4.4	12.0	8.5	104
8320	4 16 16M E TOWN FERTILIZER COMPANY	45	16.0	1 7.1	104
8304	5 10 10M CANN BROTHERS	52	102	102	103
8317	5 20 20M E TOWN FERTILIZER COMPANY	5.8	19.4	21.1	103
8318	10 10 10M E TOWN FERTILIZER COMPANY	9.9	114	11.1	106

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	FARMERS EXCHANGE COMPANY	(Percent)	(Percent)	(Percent)	
8242	5 10 5M FARMERS EXCHANGE COMPANY BURKESVILLE	4.8	119	5.1	108
	FARMERS FERTILIZER COMPANY				
8272	12 12 12M FARMERS EXCHANGE BURKESVILLE	11.9	12.1	13.4	102
	FEDERAL CHEMICAL COMPANY (1)				
8291	0 9 27 WITH 5 LBS BORAX PER 100 ARVIN MCCAIN		92	27.7	102
8268	O 20 20M FEDERAL CHEMICAL CO WHSE HENDERSON J W EDWARDS & SON ARVIN MCCAIN		20.1 21.3 20.0	20.7 19.8 20.4	102 104 101
8243	3 9 18M WITH 4 LBS BORAX PER 100 (2). J W EDWARDS & SON	3.4	9.0	18.1	103
5473	3 9 27M FEDERAL CHEMICAL CO WHSE HENDERSON	3.0	9.0	272	100
5395 5404 5472 7048	3 12 12M WYNDALLS FARM STORE CLINTON HATCHERY W C BROOKS FEDERAL CHEMICAL CO WHSE HENDERSON BAUGHMAN MILLING COMPANY ARVIN MCCAIN	3.2 4.3 3.2 3.2 3.3 2.9	12.0 11.5 11.9 11.9 11.9 11.5	12.6 12.8 12.7 12.5	101 108 103 102 103 97•
5280 5328 5333 5376 5396 5483 6172 8297 8333	4 12 8M  P KUTTAWA FEED & SEED COMPANY  WYNDALLS FARM STORE  B CARLISLE & ABNER  B EVERETT WOOSLEY GENERAL STORE  TO YOUNGBLOOD BROTHERS  CLINTON HATCHERY  B BROOKS SERVICE STATION  MAYES HELM & COYLE  ARVIN MCCAIN  UPTON SWEET FEED MILL  D A L WEAVER GENERAL STORE  MEADE & COMPANY	3.9 4.1 4.0 4.0 4.0 4.6 4.2 4.2 4.3 4.3	12.0 12.1 11.5 11.9 11.7 12.0 11.8	8.1 8.0 9.0 8.5 8.1	102 98* 102 102 102 102
5474	4 16 16M 7 WYNDALLS FARM STORE 4 FEDERAL CHEMICAL CO WHSE HENDERSON 2 ARVIN MCCAIN	4.2 4.4 4.3	162	16.0 16.1 17.1	103
5475 5520 8295	5 20 20M 4 W C BROOKS 5 FEDERAL CHEMICAL CO WHSE HENDERSON 0 FEDERAL CHEMICAL CO WHSE HENDERSON 5 ARVIN MCCAIN 0 H D JONES	4.9 5.4 5.0 5.0	18.8 18.8 20.0	* 20.7 * 20.4 20.2	100 97* 100

<sup>(1)</sup> SEE BORON TABLE - PAGE 34 (2) SEE BORON TABLE - PAGE 34

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

		l l	Available		Percent of
Sample Number		Nitrogen	Phosphoric Acid	Potash ·	Relative Value Found
	FEDERAL CHEMICAL COMPANY CONTINUED	(Percent)	(Percent)	(Percent)	
5388 5405 5454	6 8 6M JACKSON BROTHERS W C BROOKS KUTTAWA FEED & SEED COMPANY	5.6 * 5.1 * 4.9 *	8.1 8.3 9.1	7.5 8.5 9.0	101 101 105
5406 5497 8249	6 12 12M CLINTON HATCHERY W C BROOKS YOUNGBLOOD BROTHERS ARVIN MCCAIN ARVIN MCCAIN	6.3 6.0 6.2 6.0 6.3	1120	125 126 123	101 102 99 99 103
5476	6 24 12M FEDERAL CHEMICAL CO WHSE HENDERSON	6.4	202•	12.6	930
5477	8 16 16M FEDERAL CHEMICAL CO WHSE HENDERSON	0.8	14.8 *	165	970
5334	8 24 16M W C BROOKS EVERETT WOOSLEY GENERAL STORE YOUNGBLOOD BROTHERS CLINTON HATCHERY KUTTAWA FEED & SEED COMPANY GILLISPIE SEED COMPANY	7.1 * 7.8 * 7.9 * 8.0 * 7.0 *	232 • 205 • 22.0 • 25.1	16.0 16.2 15.9 15.1 •	101
5521 6188 6227	10 10 10M W C BROOKS WYNDALLS FARM STORE FEDERAL CHEMICAL CO WHSE HENDERSON HALL SEED COMPANY FERN CREEK FEED & HARDWARE ARVIN MCCAIN ARVIN MCCAIN TODD COUNTY GRAIN COMPANY	85* 73* 9.6* 10.0 10.1 95* 9.8 9.8	105 123 100 105 109 99 103 101	10.6 11.5 10.6 10.5 10.7 10.8 10.3	950 970 99 103 105 99 101
5522	12 12 12M FEDERAL CHEMICAL CO WHSE HENDERSON				
6173	20 SUPERPHOSPHATE WYNDALLS FARM STORE MAYES HELM & COYLE HALL SEED COMPANY		19.6 20.0 19.3		98 • 100 97 •
5218	60 MURIATE OF POTASH KUTTAWA FEED & SEED COMPANY			60.5	101
	HUTSON CHEMICAL COMPANY				
5307	4 12 8M W L FARRIS HUTSON CHEMICAL COMPANY WINGO FEED & SUPPLY	3.9 3.7 • 3.9		8.6	98¢ 95¢ 99
	5 20 20M GEORGE PATMOR & SON	430	1760	16.9 •	870
5305	6 12 12M HUTSON CHEMICAL COMPANY	5.7 •	11.9	12.4	99
5499	12 12 12M HUTSON CHEMICAL COMPANY	126	12.1	109	101
5306	49 TRIPLE SUPERPHOSPHATE HUTSON CHEMICAL COMPANY		483		99
	60 MURIATE OF POTASH GRAVES COUNTY SOIL ASSOCIATION HUTSON CHEMICAL COMPANY			61.0 60.0	102 100

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

(Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	INTERNATIONAL MINERAL & CHEM CORP	(Percent)	(Percent)	(Percent)	
8266	2 12 6M J W EDWARDS & SON	2.1	123	6.7	104
7066 8385	3 12 12M FARMERS SUPPLY COMPANY SOMERSET U L ROGERS & SON	3.0 3.0	12.0 11.9	12.8	101
5319 5329 7046 8267	4 12 8M PRINCETON MILLS ROSS SEED COMPANY FELTY PRODUCE COMPANY W S ALLEN COMPANY J W EDWARDS & SON WOODSON LEWIS OWINGSVILLE FARMERS SUPPLY	4.0 4.1 3.9 3.8 4.1 3.7 3.6	11.5	7.7 ° 8.4 8.1 • 8.7	102 100 98* 100 100 98* 97*
8384	5 20 20M U L ROGERS & SON	4.6	19.6	19.6	97*
	8 24 16M R D SANDERFUR FELTY PRODUCE COMPANY R D SANDERFUR	75 79 79	21.8	* 16.0	96 <b>*</b> 95 <b>*</b> 96 <b>*</b>
5488 8332	12 12 12M B E C RUMMAGE & SON 2 J W EDWARDS & SON	1 1.8 1 2.0			
523- 532. 704	20 SUPERPHOSPHATE 4 PRINCETON MILLS 3 CADIZ HARDWARE COMPANY 7 W S ALLEN COMPANY		193 20. 18.	0	100
906	60 MURIATE OF POTASH 4 WOODFORD SPEARS & SONS			605	101
	KNOXVILLE FERTILIZER COMPANY				
535	0 12 12M 33 YOUNG FEED & GRAIN COMPANY		12	3 122	2 102
70-	O 12 12M WITH 3 LBS BORAX PER 100 <sup>(1)</sup> 31 HOBART & MILTON ROBERTS		12	2 11.	8 101
	2 12 12M WITH 3 LBS BORAX PER 100 (2) 54 YOUNG FEED & GRAIN COMPANY 59 FARMERS FEED HARDWARE BOWLING GREEN		.8 1 ā		0 107 4 112
53	3 12 12M 55 YOUNG FEED & GRAIN COMPANY	3	3 11	19 11	.6 * 101
70 82	3 12 12M WITH 3 LBS BORAX PER 100 3 33 HOBART & MILTON ROBERTS 74 SHIPP SEED HOUSE		12 1	2.2 12 2.1 11	
53 70 70 70	4 12 8M 56 YOUNG FEED & GRAIN COMPANY 91 BUGG BROTHERS FEED & SUPPLY COMPAN 92 HOBART & MILTON ROBERTS 61 CLAY COUNTY FARM SERVICE 65 HOBART & MILTON ROBERTS 976 SHIPP SEED HOUSE 943 FARMERS FEED HARDWARE BOWLING GREE	Y	1.0 1 4.0 1 3.7 • 1 3.8 1	2.2 8 2.2 8 1.9 8 1.7 9	12 10 3.1 10 3.5 10 3.5 10 3.5 10 3.1 10 3.4 10

<sup>(1)</sup> SEE BORON TABLE - PAGE 34 (2) SEE BORON TABLE - PAGE 34 (3) SEE BORON TABLE - PAGE 34

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

(Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk. Footnotes show amount of excess muriate when sulfate guaranty not met.)

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	KNOXVILLE FERTILIZER CO CONTINUED	(Percent)	(Percent)	(Percent)	
5458	5 10 5M WYNDALLS FARM STORE	5.1	1 0.1	5.6	103
7030	5 20 20M HOBART & MILTON ROBERTS	49	19.1 *	19.9	970
82 <b>4</b> 4 8260	5 20 20M WITH 5 LBS BORAX PER 100 FARMERS FEED HARDWARE BOWLING GREEN FARMERS FEED HARDWARE BOWLING GREEN	4.1 * 4.8	16.6 <b>*</b> 19.4 <b>*</b>	15.7 • 21.6	82*
5392	6 12 12M BUGG BROTHERS FEED & SUPPLY COMPANY	5.9	12.1	12.7	101
7064	8 24 16M HOBART & MILTON ROBERTS	6.3 •	239	16.6	95•
8275 8369	10 10 10M SHIPP SEED HOUSE SHIPP SEED HOUSE	9.4 * 8.6 *		102 10.1	99 97•
5350	33 5 AMMONIUM NITRATE YOUNG FEED & GRAIN COMPANY	33.6			100
5352	20 SUPERPHOSPHATE YOUNG FEED & GRAIN COMPANY		20.0		100
5351	62 CALCIUM METAPHOSPHATE YOUNG FEED & GRAIN COMPANY		62.0		100
7053	60 MURIATE OF POTASH SANDERS SUPPLY COMPANY			615	103
	LAND O NAN WAREHOUSE				
5263	0 20 20M LAND O NAN WAREHOUSE		182	245	102
5264	0 20 40M LAND O NAN WAREHOUSE		19.9	382	98•
	O 30 30M LAND O NAN WAREHOUSE LAND O NAN WAREHOUSE		32.1 25.4 •	736	034
5266 5426	3 12 12M LAND O NAN WAREHOUSE LAND O NAN WAREHOUSE	3.6 3.4	10.4 •	13.8 13.0	99 104
5267 5429	5 20 20M LAND O NAN WAREHOUSE BILL CLEMENTS	5.5 6.2		202	
5427	6 8 GM LAND O NAN WAREHOUSE	62	1 0.0	7.8	116
5268	6 12 12M LAND O NAN WAREHOUSE	62	119	13.7	104
5428	10 10 10M LAND O NAN WAREHOUSE	10.1	6.7	11.1	91 •
5269	10 20 20M LAND O NAN WAREHOUSE	9.7	20.0	193	98•

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	LOUISVILLE FERTILIZER COMPANY	(Percent)	(Percent)	(Percent)	
5438	3 12 12M PESTICIDE(1) YOPP SEED COMPANY	3.6	11.9	125	105
5439	6 8 6M YOPP SEED COMPANY	5.9	8.7	65	104
	J A MCCARTY SEED COMPANY				
5519	10 10 10M AUSTREW FEED SERVICE	10.0	9.9	102	100
	MISSISSIPPI CHEMICAL CORPORATION				
5233	33 5 AMMONIUM NITRATE COOPER SEED & FEED STORE	33.7			101
	MISSISSIPPI RIVER CHEMICAL COMPANY				
5315	33 5 AMMONIUM NITRATE CALLONAY CO SOIL IMPROVEMENT ASSN	34.0			101
	MISSOURI PLANT FOOD COMPANY INC				
5232	0 20 20M COOPER SEED & FEED STORE		199	20.0	100
5450	3 12 12M COOPER SEED & FEED STORE	3.4	122	124	104
5231 5440	60 MURIATE OF POTASH COOPER SEED & FEED STORE YOPP SEED COMPANY			60.2	100
	MONSANTO CHEMICAL COMPANY				
524	33 5 AMMONIUM NITRATE 7 FARMERS COOPERATIVE MADISONVILLE	33.8	3		101
	NORTH AMERICAN FERTILIZER COMPANY				
6190	O 12 12M D BUNTON SEED COMPANY		14.4	12.7	115
620	0 20 20M 1 GEORGE FREND JR		203	20.0	101
	3 12 12M O HANCOCKS FEED STORE 9 SIMPSON FEED MILL		0 11.4		

<sup>(1)</sup> ALDRIN GUARANTEED 0.50%----FOUND 0.38%

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

	by asterisk. Footnotes show amount of excess muriate when sulfate g	uaranty not	1		I D
Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	NORTH AMERICAN FERT CO CONTINUED	(Percent)	(Percent)	(Percent)	
	4 12 8M YOUNG SEED HOUSE SIMPSON FEED MILL	4.0 3.8	113	8.3 8.5	980
6228	10 10 10M BUNTON SEED COMPANY	99	99	9.9	101
8380	20 SUPERPHOSPHATE SIMPSON FEED MILL		20.1		100
	OLIN MATHIESON CHEMICAL CORPORATION				
5302	16 NITRATE OF SODA A C BUTTS & SON	162			101
	PRICE CHEMICAL COMPANY				
9056	0 20 20M MONARCH MILLING COMPANY		175	• 154	. 84.
8323	3 12 12M HARDIN COUNTY MILLING COMPANY	3.4	119	122	103
6216	4 12 8M HAYDON COAL & OIL COMPANY	3.5	• 12.6	8.5	100
6191 8322	10 10 10M VALLEY FARM STORE HARDIN COUNTY MILLING COMPANY	8.0 9.4			
6208 8324 9057	20 SUPERPHOSPHATE WOODFORD FEED COMPANY HARDIN COUNTY MILLING COMPANY MONARCH MILLING COMPANY		17.8 20.2 20.4		89 <b>•</b> 101 102
	SCHROCK FERTILIZER SERVICE				
5348	60 MURIATE OF POTASH CRAFTON & DUNCAN			60.0	100
	O M SCOTT & SONS CO				
6181	20 10 5M JACK DAYTON & SONS	19.4	. 11.7	5.1	103
5209	UREA HENDERSON FARMERS SUPPLY COMPANY	245	,		100
	SOUTHERN NITROGEN SUPPLY				
5451	33 5 AMMONIUM NITRATE COOPER SEED & FEED STORE	332	5		100

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	SOUTHERN STATES SEE COOP FERT SER	(Percent)	(Percent)	(Percent)	
	SPENCER CHEMICAL COMPANY				)
5257 9065	33 5 AMMONIUM NITRATE W C BROOKS WOODFORD SPEARS & SONS	339 335			101
	SWIFT & COMPANY				
5460	0 19 19M WITH 5 LBS BORAX PER 100 BAKER PHOSPHATE & FERTILIZER SERVICE	2	179	21.0	100
5282	0 25 25M MORGANFIELD HARDWARE COMPANY		20.8	22.7	86•
5283 5441	3 12 12M MORGANFIELD HARDWARE COMPANY YOPP SEED COMPANY	3.1 3.6			103
8342	4 12 8M FARMERS FEED & HARDWARE	4.7	129	8.9	111
5431	4 16 16M MORGANFIELD HARDWARE COMPANY	4.4	16.4	16.1	104
5284	5 20 20M MORGANFIELD HARDWARE COMPANY	5.0	195	• 19.6	98•
6151	6 10 4M 1 J W SETTLE FEED STORE 2 J W SETTLE FEED STORE	5.5 6.5			108 105
5442	8 8 8 M PESTICIDE (2) YOPP SEED COMPANY	. 74	2.0 9.0	8.8	101
544	4 YOPP SEED COMPANY	75	50 93	8.8	104
528 529	10 10 10M 5 MORGANFIELD HARDWARE COMPANY 7 T C EDWARDS		3 · 112		
544	12 12 12M 6 YOPP SEED COMPANY	11.	8 11.5	12.6	100
544	15 10 10M 5 YOPP SEED COMPANY	14.	2 102	9 10.1	98

<sup>(1)</sup> SEE BORON TABLE - PAGE 34 (2) ALDRIN GUARANTEED 0.50%----FOUND 0.44%

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

(Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk. Footnotes show amount of excess muriate when sulfate guaranty not met.)

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	TENNESSEE CHEMICAL COMPANY	(Percent)	(Percent)	(Percent)	
5507	O 20 20M HARRALSON SEED COMPANY		202	20.8	102
5508	HARRALSON SEED COMPANY	3.1	122	125	103
	4 12 8M BROOKS SERVICE STATION HARRALSON SEED COMPANY	4.1 3.9	119	9.0 7.3 •	103
5510	4 16 16M HARRALSON SEED COMPANY	4.0	1560	1450	96•
5511	5 20 20N HARRALSON SEED COMPANY	450	19.1 *	203	96*
5512	6 12 12M HARRALSON SEED COMPANY	5.1 •	12.1	10.8	930
5506	20 SUPERPHOSPHATE HARRALSON SEED COMPANY		1920		96*
	TENNESSEE CORPORATION				
8376	O 20 20M WITH 10 LBS BORAX PER 100 HR SQUIRES		1950	205	99
8326	2 12 6M COOPER BROTHERS	2.0	123	6.0	102
8367	3 12 12M COOPER BROTHERS I K MILLER & SON COOPER BROTHERS	3.0 3.2 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	10.4 e 10.7 e 10.4 e	128	93¢ 98¢ 93¢
8307 8368 8377	4 12 8M CANN BROTHERS I K MILLER & SON H R SQUIRES	4.8 4.1 4.1	10.10	8.5	101 930 910
8305	5 20 20M CANN BROTHERS	150	20.0	195•	85•
8306	10 10 10M CANN BROTHERS	99	9.6 •	10.5	99
	TRI STATE CHEMICAL COMPANY				
5339	O 20 20M TRI STATE CHEMICAL COMPANY		199	20.0	100
5340 5467	3 12 12M TRI STATE CHEMICAL COMPANY JOHN ROYSTER	3.D 2.9	11.9	122	100

<sup>(1)</sup> SEE BORON TABLE - PAGE 34

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

(Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk. Footnotes show amount of excess muriate when sulfate guaranty not met.)

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative /alue Found
	TRI STATE CHEMICAL CO CONTINUED	(Percent)		(Percent)	
5341	4 12 8M TRI STATE CHEMICAL COMPANY	39	.12.0	9.6	103
5342	4 16 16M TRI STATE CHEMICAL COMPANY	3.7*	162	165	100
5468	5 15 10H TRI STATE CHEMICAL COMPANY	4.8	1450	10.6	98•
5343 5469	5 20 20M TRI STATE CHEMICAL COMPANY TRI STATE CHEMICAL COMPANY	56 36•	185*	20.0	101
5470 5487	6 12 12M TRI STATE CHENICAL COMPANY CRAFTON FARM STORE	5.9 5.8	12.0	12.4	100
5344	10 10 10M TRI STATE CHENICAL COMPANY	9.7	99	10.1	98•
5345	12 12 12M TRI STATE CHEMICAL COMPANY	120	12.7	125	103
5336	60 MURIATE OF POTASH 3 TRI STATE CHEMICAL COMPANY			60.0	100
	VALLEY COUNTIES OF KENTUCKY COOP INC	<u>c</u>			
5316	O 30 30M CALLOWAY CO SOIL IMPROVEMENT ASSN VALLEY COUNTIES OF KENTUCKY COOP B T R AKRIDGE LIVINGSTON COUNTY COOP SOIL IMP ASS	N	38.8 31.8 30.9 31.6	22.8 • 28.7 • 29.8 30.0	
522 537	4 12 8M 8 BALLARD COUNTY COOPERATIVE 5 GRAVES COUNTY SOIL ASSOCIATION	4.0			99 99
	6 12 12M 3 GRAVES COUNTY SOIL ASSOCIATION 2 CALLOWAY CO SOIL IMPROVEMENT ASSN 2 BALLARD COUNTY COOPERATIVE	5.5 5.4 5.7	12.0		101 99 97•
530	6 24 24M 2 GRAVES COUNTY SOIL ASSOCIATION 8 HUTSON CHEMICAL COMPANY 3 BALLARD COUNTY COOPERATIVE 7 GEORGE PATMOR & SON	61 51 61 41	2121	23.0 28.7 22.6 21.4	109
524	8 24 16M 8 FARMERS COOPERATIVE MADISONVILLE	84	25.7	149	103
522	10 20 20M 24 GRAVES COUNTY SOIL ASSOCIATION	10.	0 20.9	18.8	• 101
524 531 531 531	10 30 20M 25 GRAVES COUNTY SOIL ASSOCIATION 49 FARMERS COOPERATIVE MADISONVILLE 13 CALLOWAY CO SOIL IMPROVEMENT ASSN 14 MARSHALL CO SOIL IMPROVEMENT ASSN 15 SOUTHERN STATES CRITTENDEN COOP 16 MARSHALL CO SOIL IMPROVEMENT ASSN 17 MARSHALL CO SOIL IMPROVEMENT ASSN 18 SOUTHERN STATES CRITTENDEN COOP 19 MARSHALL CO SOIL IMPROVEMENT ASSN 17 FARMERS SUPPLY COMPANY MORGANTOWN	9. 9. 10. 9. 10. 10.	9 30.5 2 30.9 9 30.4 .0 32.1 .1 30.8	189 201 205 161 194 167	• 100 102 101 • 100 • 101 • 97

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957

Sample Number	Manufacturer, Grade, From Whom Obtained		Available Phosphoric Acid	Potash	Percent of Relative Value Found
	VALLEY COUNTIES OF KY COOP CONTINUED	(Percent)	(Percent)	(Percent)	
5362	33 5 AMMONIUM NITRATE BALLARD COUNTY COOPERATIVE LYON COUNTY SOIL IMPROVEMENT ASSN MARSHALL CO SOIL IMPROVEMENT ASSN LIVINGSTON COUNTY COOP SOIL IMP ASSN	33.8 33.5 33.7 33.5			101 100 101 100
5227 5229	61 CALCIUM METAPHOSPHATE GRAVES COUNTY SOIL ASSOCIATION BALLARD COUNTY COOPERATIVE		62.5 62.4		103
5361 5372	62 CALCIUM METAPHOSPHATE CALLOWAY CO SOIL IMPROVEMENT ASSN LYON COUNTY SOIL IMPROVEMENT ASSN MARSHALL CO SOIL IMPROVEMENT ASSN TRIGG COUNTY SOIL IMPROVEMENT COOP LIVINGSTON COUNTY COOP SOIL IMP ASSN	,	62.6 62.3 62.6 62.8 62.2		101 100 101 101 100
5360	60 MURIATE OF POTASH CALLOWAY CO SOIL IMPROVEMENT ASSN LYON COUNTY SOIL IMPROVEMENT ASSN MARSHALL CO SOIL IMPROVEMENT ASSN LIVINGSTON COUNTY COOP SOIL IMP ASSN	•		60.0 60.5 60.0 60.0	100 101 100 100
	VIRGINIA CAROLINA CHEMICAL CORP				
5236	0 20 20M ROBINSON IMPLEMENT & MOTOR COMPANY (1)		182	18.4	91•
5237 7034 8298	O 20 20M WITH 5 LBS BORAX PER 100 ROBINSON IMPLEMENT & MOTOR COMPANY DUNNINGTON MILLING COMPANY VIRGINIA CAROLINA CHEMICAL CORP		202 21.7 162	19.0 ¢ 20.0 153 ¢	109
5251	2 12 6M FOX HARDWARE COMPANY	23	119	64	103
	3 12 12M 5 DUNNINGTON MILLING COMPANY 5 VIRGINIA CAROLINA CHEMICAL CORP 7 VIRGINIA CAROLINA CHEMICAL CORP	3.1 3.1 3.1	119	157	106 100 103
5238 532. 5414 550. 7030 8240 8290 8340	4 12 8M 2 FOX HARDWARE COMPANY B ROBINSON IMPLEMENT & MOTOR COMPANY 1 TRIGG COUNTY TRADING COMPANY 4 RATLIFF HARDWARE COMPANY 3 E L BARNES & SON 6 DUNNINGTON MILLING COMPANY 8 T R AKRIDGE 9 VIRGINIA CAROLINA CHEMICAL CORP 10 BIG FOUR FEED & IMPLEMENT COMPANY 10 VIRGINIA CAROLINA CHEMICAL CORP 11 VIRGINIA CAROLINA CHEMICAL CORP 12 VIRGINIA CAROLINA CHEMICAL CORP 13 VIRGINIA CAROLINA CHEMICAL CORP 14 CORP	3.9 4.1 4.1 4.1 4.2 3.6 3.6 4.0 4.0	12.0 12.6 12.1 12.4 12.3 11.6 11.6 12.7 12.7	8.4 82 82	103 102 103 104 99 101 104 102
	5 20 20M 7 FARMERS COOPERATIVE MADISONVILLE 9 T R AKRIDGE 8 VIRGINIA CAROLINA CHEMICAL CORP	4.5 5.4 5.4		20.0	101
550	6 8 6M 4 E L BARNES & SON	5.	6 \$ 8.7	6.1	101
0 7 4	6 12 12M 8 FARMERS COOPERATIVE MADISONVILLE 6 VIRGINIA CAROLINA CHEMICAL CORP 0 VIRGINIA CAROLINA CHEMICAL CORP		0 119 9 123 0 125	157	101

TABLE 1.— Analyses of Inspection Samples of Mixed Fertilizers, Superphosphate, and Fertilizer Salts, July-December, 1957 (Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk. Footnotes show amount of excess muriate when sulfate guaranty not met.)

Sample Number	Manufacturer, Grade, From Whom Obtained	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	VIRGINIA CAROLINA CHEM CONTINUED	(Percent)	(Percent)	(Percent)	
5416 8247	8 24 16M R D SANDERFUR ROBINSON IMPLEMENT & MOTOR COMPANY VIRGINIA CAROLINA CHEMICAL CORP BIG FOUR FEED & IMPLEMENT COMPANY	7.4 8.1 7.7 8.3	24.0 24.4	16.0 15.9 15.3 (	95 • 100 99 101
7037	10 10 10M ROBINSON IMPLEMENT & MOTOR COMPANY DUNNINGTON MILLING COMPANY VIRGINIA CAROLINA CHEMICAL CORP	1 0.4 9.4 1 0.1	• 112	102 105 103	102
	20 SUPERPHOSPHATE TRIGG COUNTY TRADING COMPANY E I. BARNES & SON		20.1	Y	102 100
	WEST KENTUCKY LIQUID FERTILIZER CO				
8356	4 11 11M WEST KENTUCKY LIQUID FERTILIZER CO	3.7	• 10.0	10.6	93•
8253 8357	4 11 11M WITH BORAX (1) NEVILLE UTLEY WEST KENTUCKY LIQUID FERTILIZER CO	4.A 4.8	11.1	9.7	100
8251 8351 8352	4 12 8M LELAND BOSWELL WEST KENTUCKY LIQUID FERTILIZER CO WEST KENTUCKY LIQUID FERTILIZER CO	4.7 4.1 4.0	11.1 11.5 11.7	8.4	101 99 99
8353	6 12 8M WITH BORAX WEST KENTUCKY LIQUID FERTILIZER CO	6.0	12.0	8.0	100
8252	7 14 7M WEST KENTUCKY LIQUID FERTILIZER CO	6.4	• 11.1	7.1	87*
	12 6 6M WEST KENTUCKY LIQUID FERTILIZER CO WEST KENTUCKY LIQUID FERTILIZER CO	124	6.2 5.8	6.0 5.8	103
	ZIRCON PRODUCTS COMPANY				
8392	5 10 5M METCALFE COUNTY FARMERS SUPPLY	62	1 0.6	53	113

<sup>(1)</sup> SEE BORON TABLE - PAGE 34 (2) SEE BORON TABLE - PAGE 34

TABLE 2 - Analyses of Inspection Samples of Rock Phosphate, Basic Slag, Fused Tricalcium Phosphate, July-December, 1957

(Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk.)

		P	hospho	ric Aci	d	Percent of
Station	Manufacturer, Brand Name, and		lable		otal	Relative
Number	From Whom Obtained	Guar.	Found	Guar.	Found	Value Found
		(Per	cent)	(Per	cent)	
	ROBIN JONES PHOSPHATE COM	PANY				
	Rock Phosphate					
5295	T. C. Edwards Company	3.0	3.0	30.0	30.0	100
5346	Tri-State Chemical Company	3.0	2.6	30.0	30.3	101
	RUHM PHOSPHATE & CHEMICAL	ь сом	PANY			
	Rock Phosphate					
5505	Baker's Phosphate & Fertilizer Ser			30.0	24.5*	82*
5459	Baker's Phosphate & Fertilizer Ser			30.0	23.9*	79*
5525	Baker's Phosphate & Fertilizer Ser			30.0	23.2*	77*
	SCHROCK FERTILIZER SERVICE	Ĺ				
	Rock Phosphate					
5349	Crafton, Duncan & Sinkhorn			33.0	33.5	102
5430	Shaffer Phosphate Service			33.0	33.7	102
5491	James A. Logsdon			33.0	33.5	102

TABLE 3 - Analyses of Inspection Samples of Bones, Dried Manures, etc., July-December, 1957

(Analyses deficient more than tolerance shown on page 8 and relative values of 98 percent or less indicated by asterisk.)

			Total		Percent of
Station Number	Manufacturer, Brand Name, and From Whom Obtained	Nitrogen	Phosphoric Acid		Relative Value Found
		(Percent)	(Percent)	(Percent	t)

#### THE SEWERAGE COMMISSION OF MILWAUKEE

5.5-4-0 Milorganite

5447 Yopp Seed Company 5.8 3.4\* --- 103

TABLE 4 - Boron Analysis of Samples reported as shown on previous pages

Page	Sample	Boron Guaranteed	Boron Found
12	6163	.33	.35
13	5286	.34	.10
13	8262	.34	.63
	8287	.56	.53
	8286	.56	.37
14	8285	.56	.64
17	5485	.45	.37
1,	6150	.45	.42
	6205	.45	.51
	7023	.45	.39
	7057	.45	.41
	8256	.45	.45
	8270	.45	.36
	8290	.45	.37
	8358	.45	.51
20	8265	.23	.22
20	8264	.23	.19
22	8291	.56	.47
22	8243	.45	.06
04	7031	.34	.28
24	5354	.34	.32
	8259	.34	.33
	7033	.34	.38
	8274	.34	.44
0.5	8244	.67	.51
25	8260	.57	.85
00	5460	.57	.45
28	8376	1.13	1.12
29	5237	.57	.54
31	7034	.57	.49
	8298	.57	.33
20	8253	.57	.57
32	8357	.5,	.15
	8357		.45