

Commercial Fertilizers in Kentucky, 1948

Including a Report on Official Fertilizer Samples
Analyzed

July — December, 1948



Kentucky Agricultural Experiment Station
University of Kentucky
Lexington

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Commercial Fertilizers in Kentucky, 1948

This bulletin contains analyses of official samples of commercial fertilizers made between July 1 and December 31, 1948. Analyses of samples made between January 1, 1948 and June 30, 1948 were published in Regulatory Bulletin 69.

Manufacturers reported that 460,855 tons of commercial fertilizer were sold in Kentucky in 1948. This was an increase of about 14 percent over the tonnage for 1947. In addition, 36,580 tons of 20 percent superphosphate, or equivalent, were distributed in Kentucky under the "Contractual Plan" by the Production and Marketing Administration, Field Service Branch.

SALES BY GRADE, 1948

A summary of fertilizer sales by grade, as reported by manufacturers, is given in Table 1. The total tonnage reported in this table is about 93,000 tons less than that estimated from tag sales.

TABLE 1.—FERTILIZER SOLD IN KENTUCKY, BY GRADE, JAN. 1 TO DEC. 31, 1948
(As reported by the Manufacturers)

Grade	Tons	Grade	Tons
2-12-6	107,277	20% Superphosphate	42,673
3-9-6	76,618	19% Superphosphate	6,787
6-8-6	63,945	18% Superphosphate	11,083
4-12-4	28,311	Triple Superphosphate	10,629
4-12-8	20,467	Phosphate Rock	27,632
0-14-7	9,492	Fla. Waste Pond Phosphate	3,667
3-10-3	6,200	Ammonium Nitrate	9,298
4-10-6	5,707	Cyanamid	3,005
5-10-5	5,614	Basic Slag	1,790
0-14-4	4,947	Nitrate of Soda	1,315
0-12-12	3,034	Sulfate of Potash Magnesia	641
3-12-12	2,407	Muriate of Potash	419
3-12-6	1,513	Sulfate of Potash	279
5-10-10	1,377	Dried Manure	275
3-12-4	1,266	A.N.L. Compound, 20.5% Nitrogen	190
3-16-4	1,011		
4-12-0	686		
4-16-0	237		
8-8-8	218		
3-18-9	124		
Miscel.	721		
	341,172		119,683

PLANT FOODS OR NUTRIENTS

The minimum percentages of guaranteed plant foods, or nutrients, present in a commercial fertilizer are printed on the state tag 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 to be deficient. The element corresponding to phosphoric acid is phosphorus and the element corresponding to potash is potassium.

FERTILIZER GRADE

Grade designates the minimum percentage of nitrogen, available phosphoric acid, and potash in the fertilizer. A 6-8-6 grade means that the fertilizer contains 6 percent nitrogen, 8 percent available phosphoric acid, and 6 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.

LOW-GRADE VERSUS HIGH-GRADE FERTILIZERS

A high-grade or high-analysis mixed fertilizer is defined by this Department as one in which the sum of the percentages of nitrogen, available phosphoric acid, and potassium is at least 20 percent. Plant foods in such fertilizers usually cost less per unit than in low-analysis fertilizer, because costs for mixing, bags, freight, and other incidental costs are the same per bag regardless of the analysis. The amount of plant food in 1,500 pounds of 4-12-8, for example, is the same as in 2,000 pounds of 3-9-6 fertilizer. In using the 4-12-8, however, instead of the 3-9-6, a farmer saves cost of handling, hauling, and spreading 500 pounds of practically inactive material. Lighter applications per acre of the high-analysis fertilizers will supply the same amount of plant food as heavier applications of the low-analysis fertilizers.

FEWER GRADES NEEDED

Fewer grades of fertilizer than are now offered would meet the needs of Kentucky agriculture. Most of these needs can be met with 6-8-6, 8-8-8, 4-12-8, 5-10-10, 3-12-12, and 0-14-7, or 0-12-12 supplemented with straight fertilizers—ammonium nitrate, nitrate of soda, ammonium sulfate, or cyanamid to furnish nitrogen; superphosphate to furnish phosphoric acid; and muriate and sulfate of potash to furnish potash. If cyanamid is used, the manufacturer's directions should be followed closely.

Two grades, 2-12-6 and 3-9-6, constituted 54 percent of the mixed fertilizer sold in Kentucky during 1947. Although 2-12-6 is 20 percent plant food, it is doubtful whether 2 percent nitrogen is enough to be of much benefit in many cases where 2-12-6 is used.

COMPOSITION OF MIXED FERTILIZER

A mixed fertilizer is made up mainly of various chemical salts and compounds, which contain the nutrients as part of the compounds. For instance, a 100-pound bag of 6-8-6 fertilizer contains only 20 pounds of nitrogen, available phosphoric acid, and potash, but the compounds containing these plant foods make up a much larger part of the mixture.

An ordinary superphosphate fertilizer contains from 18 to 20 percent available phosphoric acid. Ammonium sulfate contains 20.5 percent nitrogen; ammonium nitrate contains 32.5 to 33.5 percent nitrogen, and muriate of potash contains 50 to 60 percent potash.

A 6-8-6 fertilizer could thus be made from the following formula:

Ammonium Sulfate, 20.5 percent nitrogen	390 pounds
Ammonium Nitrate, 32.5 percent nitrogen	124 pounds
Superphosphate, 16 percent phosphoric acid	1000 pounds
Muriate of Potash, 60 percent potash	200 pounds
	1714 pounds
Total	1714 pounds

The total weight of materials used is 1714 pounds. To make a ton of fertilizer, 286 pounds of other materials must be added. A material such as sand or dolomitic limestone may be used for this "filler." Sand adds no value to the fertilizer, but dolomitic limestone adds 2 plant nutrients, calcium and magnesium, and neutralizes the potential acidity characteristic of most mixed fertilizers. However, the value of dolomitic limestone in a mixed fertilizer other than as a filler, should not be over emphasized. There are sources of calcium other than dolomitic limestone in most mixed fertilizers, and magnesium is not lacking in most Kentucky soils.

Another good filler is tobacco stems. They help to "condition" the fertilizer and carry some nitrogen and potash. If tobacco stems were used in the above formula, the weight of the nitrogen-bearing and potash-bearing materials could be reduced somewhat. Tobacco stems should be sterilized before using to prevent carrying tobacco diseases. Dolomitic limestone and tobacco stems are not "fillers" in the strict sense, for as has been mentioned, they add some value to the fertilizer.

The above formula illustrates the value of purchasing high-analysis fertilizer. The 6-8-6 grade is not considered a low-grade fertilizer, yet a fertilizer made from this formula could carry 286 pounds of filler. In lower-grade fertilizer the amount of filler is even greater.

FARMERS' SAMPLES

Anyone in Kentucky who buys 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, include a tag from one of the bags, 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.

INFORMATION ON GUARANTY TAG

A state guaranty tag issued by the Kentucky Agricultural Experiment Station, showing the manufacturer's guaranty, must be attached to each bag of fertilizer before it can be lawfully offered for sale in Kentucky. It is a violation of the law to change the tag in any manner, either by addition or erasure. Purchasers of fertilizer should be guided by the information printed on the guaranty tag in selecting a fertilizer. If the fertilizer is not tagged with a state guaranty tag, or if the tag has been changed in any manner, it should be reported to the Agricultural Experiment Station immediately. The following information is printed on the guaranty tag:

Brand name of fertilizer
Name and address of manufacturer

Guaranteed analysis showing:

- Minimum nitrogen percent
- Minimum available phosphoric acid, percent
- Minimum potash, from muriate or sulfate, percent
- Estimated value per 100 pounds

Total phosphoric acid, in place of available phosphoric acid, is guaranteed in bone, tankage, basic slag, and rock phosphate. Official fertilizer labels are required by law to carry the estimated value index per 100 pounds. The estimated value index is used for comparing values of fertilizers of different grades. An additional use of this value is in determining the relationship of the guaranteed analysis and the actual analysis. This relationship is shown in the last two columns of Tables 3 and 4.

The estimated value index should not be confused with the selling price. Selling price is determined by those offering the fertilizer for sale.

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."

It is important therefore that the dealer should protect himself by purchasing from reliable firms who comply with the law. Otherwise, he will lay himself liable for selling fertilizers in violation of the law.

EXPLANATION OF TABLES 2, 3 AND 4

The standings of manufacturers as determined by the results of analysis of official samples are given in Table 2. Purchasers of fertilizer can learn, through a study of this table, how well any manufacturer met his guarantees on the samples analyzed.

It should be noted that the first 3 columns of figures in Table 2 refer to number of *samples* and that the last 3 columns refer to number of analyses of nitrogen, available 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 *analyses* which were equal to guarantee or within the tolerance of $\frac{1}{4}$ of 1 percent (the tolerance of the Kentucky Fertilizer Law).

In some samples a deficiency in one nutrient is accompanied by an over-run 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 on the tag.

The results of analysis of all inspection samples except bone, rock phosphate, and basic slag are given in Table 3. Results of the last three are given in Table 4.

If an analysis shows a deficiency of more than one-fourth of 1 percent below the amount claimed for nitrogen, phosphoric acid, or potash, or if the relative value is 4 percent or more below the guaranty, the result is indicated in the tables in bold-face type.

TABLE 2—SAMPLES EQUAL TO GUARANTY IN ALL RESPECTS, AND ANALYSES WITHIN TOLERANCE, BY MANUFACTURERS, 1948

Company	Number of inspection samples		Equal to guaranty in all respects		Nitrogen, phosphoric acid and potash	
	Number of inspection samples	Percent*	Number	Percent*	Number of analyses made	Equal to guaranty or within tolerance**
American Agricultural Chemical Company.....	93	61	57	61	220	201
American Cyanamid Company.....	10	80	8	80	12	12
Armour Fertilizer Works.....	239	73	174	73	590	556
Louisville Fertilizer Company.....	6	33	2	33	16	13
Morris Fertilizer Company.....	2	55	2	55	4	4
Tennessee Chemical Company.....	22	76	12	76	62	55
Associated Cooperatives.....	29	—	22	—	29	23
Barrett Division, Allied Dye & Chem. Corp.....	1	—	1	—	1	1
Herbert Bryant, Inc.....	1	—	1	—	3	3
Buhner Fertilizer Company.....	38	37	14	37	103	88
Central Chemical Corporation.....	1	—	1	—	1	1
Chilean Nitrate Sales Corporation.....	4	—	4	—	4	4
Cooperative Fertilizer Service.....	70	86	60	86	172	168
Cumberland Chemical Company.....	39	72	28	72	86	77
Danville Hardware & Supply Company.....	1	—	1	—	1	1
Darling and Company.....	1	—	1	—	3	3
Davison Chemical Corporation.....	37	65	24	65	105	99
Hopkins Fertilizer Division.....	72	64	46	64	183	171
Read Phosphate Division.....	9	33	3	33	27	24
Ellis Chemical Company.....	2	—	—	—	2	—
Feed Products & Service Company.....	137	46	63	46	377	327
Federal Chemical Company.....	1	—	—	—	3	2
J. Harris Manure Company.....	7	43	3	43	21	19
Hutson Chemical Company.....	130	64	83	64	310	281
International Minerals & Chemical Corporation.....	4	—	3	—	10	9
Interstate Mills, Inc.....	32	41	13	41	78	60
Kentucky Fertilizer Works.....	121	67	81	67	276	250
Knoxville Fertilizer Company.....	2	—	2	—	2	2
Lion Oil Company.....	5	80	4	80	5	4
Midwestern Phosphate Corporation.....	144	40	58	40	396	309
North American Fertilizer Company.....	12	58	7	58	36	31
National Chemical Company.....	54	70	38	70	154	145
Price Chemical Company.....	5	100	5	100	13	13
Consolidated Chemical Company.....	8	100	8	100	24	24
Ralston Purina Company.....	1	—	1	—	3	3
Robertson Chemical Corporation.....	1	—	—	—	—	—

TABLE 2—SAMPLES EQUAL TO GUARANTY IN ALL RESPECTS, AND ANALYSES WITHIN TOLERANCE, BY MANUFACTURERS, 1948—(Continued)

Company	Number of inspection samples	Equal to guaranty in all respects		Nitrogen, phosphoric acid and potash		
		Number	Percent*	Number of analyses made	Equal to guaranty or within tolerance**	
					Number	Percent*
Ruhm Phosphate & Chemical Company	9	1	11	9	2	22
Schrock Fertilizer Service	8	5	62	9	6	67
O. M. Scott and Sons	2	2	—	6	6	—
Southern Fertilizer & Chemical Company	1	1	—	3	3	—
Spencer Chemical Company	2	2	—	2	2	—
Swift & Company Plant Food Division	58	19	33	167	135	81
Tennessee Coal, Iron & Railroad Company	1	1	—	1	1	—
Tennessee Corporation	53	33	62	133	122	92
Thompson Sales Company	3	1	—	3	1	—
Thomson Phosphate Company	12	7	58	24	19	79
Valley Counties of Kentucky Cooperative	6	4	67	6	4	67
Virginia-Carolina Chemical Corporation	89	78	88	208	202	97
Wallace Guano Company	1	—	—	3	3	—
Woodward & Dickerson, Inc.	2	2	—	6	6	—
	1587	986	62.2	3912	3495	89.3

* Percent is not indicated when number of samples is less than 5.

** "Tolerance" is $\frac{1}{4}$ of 1 percent.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
The American Agricultural Chemical Co., Cincinnati, Ohio							
2-12-6 (Muriate)							
2074	Caulk Hardware Co., Campbellsville.....	2.00	12.58	5.98	—	32.4	33.1
2118	J. W. Davidson, Science Hill.....	1.96	12.18	6.08	—	32.4	32.6
2206	T. S. Roberts, Mill Springs.....	2.01	12.63	6.01	—	32.4	33.2
2207	J. H. Fedders and Son, Covington.....	2.03	12.85	5.96	—	32.4	33.4
2208	M. H. Sidwell, Monticello.....	1.98	12.03	6.33	—	32.4	32.7
2303	Rowland's Hdw. & Feed Store, Owensboro.....	2.19	12.43	5.95	—	32.4	33.3
2304	Oldham Feed & Supply Co., Buckner.....	1.91	12.10	6.24	—	32.4	32.6
2333	Caulk Hardware Co., Campbellsville.....	2.02	12.50	6.07	—	32.4	33.1
2384	Norris Hdw. & Seed Co., Henderson.....	2.01	12.70	6.16	—	32.4	33.4
2169	Dairyman's Feed & Supply Co., Mayfield.....	1.98	12.45	5.80	—	33.4	32.7
2481	Woodson Lewis and Son, Greensburg.....	2.04	12.40	5.93	—	32.4	32.9
0-14-7 (Muriate)							
2450	Morganfield Hardware Co., Morganfield.....	—	14.50	7.18	—	29.8	30.6
0-12-12 (Muriate)							
2119	J. W. Davidson, Science Hill.....	—	12.00	12.37	—	32.4	32.8
2120	Woodson Lewis and Son, Greensburg.....	—	12.00	11.80	—	32.4	32.2
2209	T. S. Roberts, Mill Springs.....	—	12.00	12.08	—	32.4	32.5
18% Superphosphate							
2121	J. W. Davidson, Science Hill.....	—	18.60	—	—	23.4	24.2
2122	C. C. Hdw., Feed and Seed Co., Hartford.....	—	18.10	—	—	23.4	23.5
2170	Dairyman's Feed & Supply Co., Mayfield.....	—	18.10	—	—	23.4	23.5
2210	M. H. Sidwell, Monticello.....	—	18.63	—	—	23.4	24.2
2305	Rowland's Hdw. & Feed Store, Owensboro.....	—	18.33	—	—	23.4	23.8
2306	Walters & Thompson, Shelbyville.....	—	18.65	—	—	23.4	24.3
2482	Woodson Lewis & Son, Greensburg.....	—	18.75	—	—	23.4	24.4
2524	Baughman Milling Co., Stanford.....	—	19.28	—	—	23.4	25.1
2075	Caulk Hardware Co., Campbellsville.....	—	18.20	—	—	23.4	23.7
American Cyanamid Company, New York 20, N. Y.							
Cyanamid Granular 20.60% of "Aero Brand"							
1604	Cayce Yost Company, Hopkinsville.....	20.40	—	—	—	49.4	49.0
1605	Green's Department Store, Sandy Hook.....	20.54	—	—	—	49.4	49.3
2123	W. S. Allen, Liberty.....	20.68	—	—	—	49.4	49.6
2262	Southern States Cooperative, Frankfort.....	20.56	—	—	—	49.4	49.3
2342	Upton Hardware Co., Upton.....	20.76	—	—	—	49.4	49.8
2483	Barren County Hdw. Co., Glasgow.....	21.00	—	—	—	49.4	50.4
Armour Fertilizer Works, Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.							
6-8-6 (Muriate) "Big Crop Brand"							
2171	Farmers Gin Co., Clinton.....	5.98	7.98	6.44	—	35.6	36.0
2525	J. S. Whittinghill Feed Store, Fordsville.....	5.76	8.45	6.08	—	35.6	35.7
6-8-6 (Sulfate) Armour's							
1606	Barber Hardware Co., Springfield.....	5.98	8.20	6.08	Yes	35.6	35.9
1607	Farmers Supply Co., Eminence.....	5.72	8.70	6.22	Yes	35.6	36.1
1608	Denton Hdw. Co., Madisonville.....	5.82	8.60	6.11	Yes	35.6	36.1
1609	R. R. Boggs, Blaine.....	5.93	8.85	6.08	Yes	35.6	36.6
1610	O'Rear Hardware Co., Mt. Sterling.....	5.78	8.40	6.33	Yes	35.6	36.0
1611	Cogar Rumley Co., Midway.....	5.66	9.35	6.05	No ¹	35.6	36.6
2263	Shay Hinton, Flemingsburg.....	5.71	8.75	5.85	Yes	35.6	35.8
2484	Farmers Gin Co., Clinton.....	5.20	9.50	6.06	No ²	35.6	35.9
2572	Carlisle Mill & Supply Co., Carlisle.....	5.94	8.75	5.92	Yes	35.6	36.3
2580	H. B. McClary, Auburn.....	5.99	8.28	6.29	Yes	35.6	36.2
2581	J. S. Whittinghill Feed Store, Fordsville.....	5.72	8.35	6.10	No ³	35.6	35.6
2582	W. C. Blount, Tollesboro.....	5.93	8.60	5.93	Yes	35.6	36.1
2583	J. F. Bertram & Son, Vanceburg.....	5.90	8.98	5.87	Yes	35.6	36.5
2588	L. D. Flanagan, Russell Springs.....	5.79	9.60	6.39	Yes	35.6	37.5
2589	Carl Brewer, Hazel Green.....	6.21	8.45	6.50	Yes	35.6	37.1
2590	John J. Carter, Waynesburg.....	5.96	8.55	6.21	Yes	35.6	36.4
2591	Saufley & Bell, Stanford.....	5.94	8.68	6.24	Yes	35.6	36.5
5-10-5 (Muriate) "Velvetgreen Brand"							
1612	London Hardware Co., London.....	5.25	10.97	5.21	—	35.0	36.9
1613	Anderson & Spilman, Danville.....	5.11	10.35	5.39	—	35.0	36.0
1614	Butler Bros., Independence.....	5.14	10.05	5.17	—	35.0	35.5
1615	Burl Spurlock, West Prestonsburg.....	5.24	10.90	5.55	—	35.0	37.1

¹ Excess muriate equivalent to 0.79 percent potash.
² Excess muriate equivalent to 0.52 percent potash.
³ Excess muriate equivalent to 0.52 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Armour Fertilizer Works—Continued							
5-10-5 (Muriate) "Velvetgreen Brand"—Continued							
1616	M. G. Pruitt Implement Co., Bowling Green	5.33	10.50	5.00	—	35.0	36.3
1617	Sphar and Co., Winchester	5.53	10.35	5.25	—	35.0	36.7
1618	Butterworth Seed Co., Mayfield	5.29	11.00	5.01	—	35.0	36.8
1619	Southern States Cooperative, Frankfort	5.01	10.60	4.76	—	35.0	35.5
1620	Salyersville Grocery, Salyersville	5.28	11.00	5.21	—	35.0	37.0
1621	Willoughby Supply Co., Richmond	5.18	10.53	5.23	—	35.0	36.2
1622	J. C. Everett & Co., Maysville	5.30	10.70	5.44	—	35.0	36.9
1904	L. C. McLoney & Sons, Cynthiana	5.23	11.23	5.20	—	35.0	37.1
1905	Duncan and Thiess, LaGrange	5.05	10.55	5.07	—	35.0	35.8
2573	Farmers Supply Co., Hodgenville	5.16	10.40	5.48	—	35.0	36.3
5-10-5 (Muriate) "Velvageen Brand"							
2485	Butterworth Seed Co., Mayfield	5.09	10.85	5.12	—	35.0	36.3
2486	Barren County Hdw. Co., Glasgow	5.18	10.68	5.33	—	35.0	36.5
4-12-8 (Sulfate) Armour's							
1906	Guy Armes Implement Co., Hardinsburg	3.76	12.03	8.54	Yes	38.4	38.5
1907	Ravenna Grocery, Ravenna	4.37	12.70	7.96	Yes	38.4	39.9
1908	Ryle and Hambrick, Burlington	4.08	13.40	8.04	Yes	38.4	40.3
1909	Penn Mercantile Co., Mannsville	4.04	12.20	8.60	Yes	38.4	39.3
2264	Shay Hinton, Flemingsburg	3.84	12.45	6.11	Yes	38.4	36.7
2265	Central Grocery Co., Morehead	4.05	12.75	8.23	Yes	38.4	39.6
4-12-4 (Muriate) "Old Black Joe"							
1623	Lyle's General Store, Brewers	4.17	12.15	4.10	—	34.4	35.0
1624	Big 4 Feed & Impl. Co., Scottsville	3.86	12.10	4.10	—	34.4	34.3
2076	H. B. McClary, Auburn	3.95	12.33	4.11	—	34.4	34.8
2124	L. D. Flanagan, Russell Springs	3.75	12.78	3.91	—	34.4	34.8
2125	Hartford Lumber Co., Hartford	3.85	12.13	4.06	—	34.4	34.3
2309	Kent Miller's Store, Sacramento	4.02	11.90	4.25	—	34.4	34.6
2310	S. E. Hale & Son, Greenville	3.88	12.28	4.35	—	34.4	34.9
2343	R. A. Wilson Hdw. Store, Russellville	3.91	12.20	4.05	—	34.4	34.5
2386	Slaughters Mercantile Co., Slaughters	3.91	12.28	4.38	—	34.4	34.9
2387	Birmingham Milling Co., Benton	3.78	12.00	3.92	—	34.4	33.9
2526	H. B. McClary, Auburn	4.03	11.90	4.19	—	34.4	34.5
2584	H. B. McClary, Auburn	4.04	12.55	4.08	—	34.4	35.2
4-12-4 (Muriate) "Big Crop Brand"							
1625	Keller Hay & Grain Co., Newport	3.58	12.25	4.40	—	34.4	34.3
1626	Blackey Supply Co., Blackey	3.97	13.15	4.43	—	34.4	36.2
1910	Henderson & Hardy, Shepherdsville	3.75	12.05	4.02	—	34.4	35.0
1911	Jellico Grocery, Barbourville	4.00	12.00	4.01	—	34.4	34.4
4-12-4 (Sulfate) Armour's							
1627	Globmyer Lumber & Coal Co., Carrollton	4.05	11.78	4.97	Yes	34.4	35.2
1628	Marattay Bros., Taylorsville	4.56	12.65	4.11	Yes	34.4	36.4
1629	Wrigley Mercantile Co., Wrigley	3.88	12.55	4.11	Yes	34.4	34.9
1912	Burgin Supply Company, Burgin	4.36	12.68	4.13	Yes	34.4	36.1
4-10-6 (Muriate) "Big Crop Brand"							
1913	Saufley and Bell, Stanford	4.03	10.18	6.04	—	34.0	34.3
4-8-8 (Muriate) "Big Crop Brand"							
1630	M. G. Pruitt and Co., Bowling Green	4.41	8.60	7.43	—	33.6	34.6
3-12-12 (Muriate) "Big Crop Brand"							
2344	Bale Hardware Co., Horse Cave	2.91	12.78	12.29	—	40.4	41.5
3-9-6 (Muriate) "Big Crop Brand"							
1631	S. E. Hale & Son, Greenville	2.91	9.35	6.52	—	30.8	31.6
1632	Davis & Wells, Sandy Hook	3.07	9.67	6.15	—	30.8	31.9
1633	Bullock & Bullock, Mt. Vernon	3.17	9.23	6.24	—	30.8	31.7
1634	W. D. Bryant, Williamsburg	3.20	10.15	5.86	—	30.8	32.4
1635	G. R. Crabtree & Co., Bowen	3.16	9.45	6.10	—	30.8	31.8
1636	Lyle's General Store, Brewers	3.07	9.33	6.17	—	30.8	31.5
2211	Page & Goulder, Barlow	2.91	9.55	5.63	—	30.8	30.9
2212	D. H. Tate, Monticello	2.55	9.50	5.84	—	30.8	30.3
2388	Birmingham Milling Co., Benton	2.97	9.05	6.13	—	30.8	30.9
2389	Gid Hollingsworth, Tompkinsville	3.27	9.88	5.96	—	30.8	32.4
2457	Kuttawa Milling Co., Kuttawa	3.50	10.95	6.29	—	30.8	34.4
2487	Butterworth Seed Co., Mayfield	3.48	9.25	5.91	—	30.8	32.0

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Armour Fertilizer Works—Continued							
3-9-6 (Sulfate) Armour's							
1637	Goodman Bros. & Co., Shelbyville	2.99	9.58	5.94	Yes	30.8	31.4
1638	S. E. Hale & Son, Greenville	3.22	9.10	5.98	Yes	30.8	31.3
1639	M. F. Bryant & Son, Sebree	3.26	9.80	6.05	Yes	30.8	32.3
1640	Jerome Glass, Grayson	3.13	10.05	6.17	Yes	30.8	32.5
1641	Bale Hdw. & Impl. Co., Horse Cave	3.20	9.78	6.61	Yes	30.8	32.8
1642	Bryant's Mill, Caneyville	3.11	9.67	6.33	No ⁴	30.8	32.2
1914	S. E. Hale and Son, Greenville	3.00	9.90	6.08	Yes	30.8	32.0
1915	George Ginter, College Hill	2.97	9.63	6.08	Yes	30.8	31.6
1916	Guy Armes Impl. Co., Hardinsburg	3.04	9.73	5.96	Yes	30.8	31.7
1917	F. B. Marksbury, Lancaster	2.89	9.53	6.06	Yes	30.8	31.3
1918	Jellico Grocery, Barbourville	2.81	9.23	6.14	Yes	30.8	30.8
2592	Jasper Produce Co., Science Hill	2.99	9.18	6.11	No ⁵	30.8	31.1
2-12-6 (Muriate) "Old Black Joe"							
1643	Jellico Grocery, Corbin	2.07	12.28	6.22	---	32.4	33.1
1644	Bryant's Mill, Caneyville	2.04	12.25	9.52	---	32.4	36.3
1645	Guy Armes Impl. Co., Hardinsburg	1.95	12.00	6.42	---	32.4	32.7
1646	John B. Penn, Georgetown	1.89	12.25	6.53	---	32.4	33.0
1919	John Adams, Jeff	1.97	12.55	6.44	---	32.4	33.4
1920	Kent Miller's Store, Sacramento	2.01	12.20	6.16	---	32.4	32.8
1921	Kuttawa Milling Co., Kuttawa	2.07	12.00	6.29	---	32.4	32.8
2172	London Hardware Co., London	2.01	12.25	6.39	---	32.4	33.1
2173	M. G. Parman, London	1.93	12.10	6.21	---	32.4	32.7
2213	D. H. Tate, Monticello	1.94	12.00	6.58	---	32.4	32.9
2126	Anderson and Spilman, Danville	2.09	12.15	6.18	---	32.4	33.9
2488	Fountain Run Milling Co., Fountain Run	1.99	12.00	5.99	---	32.4	32.4
2489	H. D. Jones, Glasgow	2.06	12.00	6.40	---	32.4	32.9
2527	Saufley & Bell, Stanford	2.08	12.48	6.42	---	32.4	33.6
2543	Somerset Produce Co., Somerset	2.03	12.85	6.24	---	32.4	33.7
2-12-6 (Muriate) "Big Crop Brand"							
2214	J. C. Everett & Co., Maysville	2.08	12.08	6.08	---	32.4	32.7
2266	Central Grocery Co., Morehead	2.08	12.25	6.14	---	32.4	33.0
2311	Kent Miller's Store, Sacramento	2.37	12.00	5.78	---	32.4	32.9
2345	Farmers Supply Co., Hodgenville	2.26	11.65	6.11	---	32.4	32.6
2346	Bale Hardware Co., Horse Cave	2.11	12.00	6.41	---	32.4	33.0
2347	R. A. Wilson Hdw. Co., Russellville	2.00	12.40	6.04	---	32.4	32.9
2390	Wilson Farm Supply, Trenton	2.09	12.15	6.11	---	32.4	32.9
2391	M. F. Bryant & Son Mfg. Co., Sebree	2.12	12.00	6.08	---	32.4	32.7
2392	L. C. Orndorff, Adairville	1.68	13.90	4.84	---	32.4	32.9
1922	S. E. Hale & Son, Greenville	2.04	12.48	6.66	---	32.4	33.7
2458	Forbes Hdw. Co., Hopkinsville	2.20	11.90	6.06	---	32.4	32.7
2459	Jasper Produce Co., Science Hill	2.17	12.03	6.41	---	32.4	33.2
2490	Bray and Company, Gamaliel	2.25	11.78	6.32	---	32.4	33.0
2491	Gid Hollingsworth, Tompkinsville	1.95	12.00	6.36	---	32.4	32.7
2528	R. A. Wilson & Co., Russellville	1.90	12.85	5.46	---	32.4	32.7
2529	H. B. McCleary, Auburn	2.72	11.60	5.65	---	32.4	33.0
0-14-7 (Muriate) "Big Crop Brand"							
1647	G. W. Rock, Munfordville	---	14.65	7.35	---	29.8	30.9
1648	Ralph Highfield, Trinity	---	14.23	7.69	---	29.8	30.8
1649	J. B. Hatcher & Co., Park City	---	14.70	7.60	---	29.8	31.2
1923	Kent Miller's Store, Sacramento	---	14.13	7.19	---	29.8	30.2
1924	Ryle and Hambrick, Burlington	---	14.58	7.47	---	29.8	31.0
1925	Kuttawa Milling Co., Kuttawa	---	13.60	6.79	---	29.8	29.1
2077	Kuttawa Milling Co., Kuttawa	---	14.55	6.99	---	29.8	30.5
2078	H. B. McClary, Auburn	---	14.53	6.11	---	29.8	29.7
2127	U. L. Rogers, Columbia	---	14.05	7.47	---	29.8	30.3
2128	Anderson and Spilman, Danville	---	14.00	7.50	---	29.8	30.3
2215	J. C. Everett and Co., Maysville	---	14.03	7.27	---	29.8	30.1
2216	D. H. Tate, Monticello	---	14.03	7.49	---	29.8	30.3
2267	Shay Hinton, Flemingsburg	---	14.43	6.83	---	29.8	30.2
2268	Central Grocery Co., Morehead	---	14.23	7.60	---	29.8	30.7
2312	S. E. Hale & Son, Greenville	---	15.03	6.86	---	29.8	30.9
2313	Guy Armes Implement Co., Hardinsburg	---	14.00	7.61	---	29.8	30.4
2348	R. A. Wilson Hdw. Store, Russellville	---	14.95	7.34	---	29.8	31.3
2349	Upton Hardware Co., Upton	---	14.00	7.50	---	29.8	30.3

⁴ Excess muriate equivalent to 1.16 percent potash.

⁵ Excess muriate equivalent to 0.26 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Armour Fertilizer Works—Continued							
0-14-7 (Muriate) "Big Crop Brand"							
2393	Hatter Hardware Co., Franklin	15.25	6.98	—	29.8	31.3	
2394	L. C. Orndorff, Adairville	14.88	7.14	—	29.8	31.0	
2460	Kuttawa Milling Co., Kuttawa	13.55	6.72	—	29.8	29.0	
2492	Holland Mills, Holland	14.45	7.08	—	29.8	30.4	
2574	V. C. James, Gradyville	13.70	7.86	—	29.8	30.3	
0-14-4 (Muriate) "Big Crop Brand"							
1650	L. C. Orndorff, Adairville	14.90	4.38	—	26.8	28.3	
0-12-12 (Muriate) "Big Crop Brand"							
2217	J. C. Everett & Co., Maysville	12.28	12.36	—	32.4	33.1	
20% Superphosphate, "Big Crop Brand"							
1651	Bullock and Bullock, Mt. Vernon	20.77	—	—	26.0	27.0	
1652	Ravenna Grocery, Ravenna	20.48	—	—	26.0	26.6	
1653	Globmyer Lumber & Coal Co., Carrollton	20.90	—	—	26.0	27.2	
1926	Penn & Ratcliffe, Campbellsville	20.10	—	—	26.0	26.1	
1927	Carlisle Mill & Supply Co., Carlisle	20.70	—	—	26.0	26.9	
2079	Forbes Hdw. Co., Hopkinsville	21.35	—	—	28.0	27.8	
2080	G. M. Haycraft & Son, Leitchfield	20.13	—	—	26.0	26.2	
2129	Anderson and Spilman, Danville	20.63	—	—	26.0	26.8	
2130	L. D. Flanagan, Russell Springs	19.78	—	—	26.0	25.7	
2174	London Hardware Co., London	20.00	—	—	26.0	26.0	
2175	M. G. Parman, London	20.08	—	—	26.0	26.1	
2218	D. H. Tate, Monticello	20.30	—	—	26.0	26.4	
2219	McWhorter Produce Co., Albany	20.15	—	—	26.0	26.2	
2269	Willoughby Supply Co., Richmond	19.88	—	—	26.0	25.8	
2270	Central Grocery Co., Morehead	19.55	—	—	26.0	25.4	
2314	Guy Armes Impl. Co., Hardinsburg	20.10	—	—	26.0	26.1	
2315	G. M. Haycraft & Son, Leitchfield	20.20	—	—	26.0	26.3	
2316	S. E. Hale & Son, Greenville	19.43	—	—	26.0	25.3	
2317	Kent Miller's Store, Sacramento	19.20	—	—	26.0	25.0	
2350	Ideal Hdw. Co., Glasgow	20.65	—	—	26.0	26.9	
2493	Penn & Ratcliffe, Campbellsville	20.38	—	—	26.0	26.5	
2494	Farmers Supply Co., Hodgenville	19.98	—	—	26.0	26.0	
2530	Bale Hdw. & Impl. Co., Horse Cave	20.05	—	—	26.0	26.1	
2544	McWhorter Produce Co., Albany	20.20	—	—	26.0	26.3	
18% Superphosphate, Armour's							
1654	D. H. Tate, Monticello	18.53	—	—	23.4	24.1	
1928	Farmers Supply Co., Hodgenville	17.60	—	—	23.4	22.9	
16% Nitrate of Soda, Armour's							
1656	Jerome Glass, Grayson	16.04	—	—	48.0	48.1	
1657	Home Fruit Co., Harlan	16.08	—	—	48.0	48.2	
Associated Cooperatives, Inc., Sheffield, Alabama							
Superphosphate 46%							
1659	Ballard County Cooperative, LaCenter	47.28	—	—	59.8	61.5	
2081	Southern States Cooperative, Glasgow	46.20	—	—	59.8	60.1	
2132	Southern States Cooperative, Somerset	45.20	—	—	59.8	58.8	
2222	Ballard County Cooperative, LaCenter	44.77	—	—	59.8	58.2	
2321	Southern States Cooperative, Shelbyville	46.25	—	—	59.8	60.1	
2351	Southern States Cooperative, Bowling Green	45.98	—	—	59.8	59.8	
2400	Farmers Cooperative, Madisonville	44.65	—	—	59.8	58.1	
2401	Southern States Cooperative, Hawesville	46.55	—	—	59.8	60.5	
2402	W. C. Turner, Greensburg	46.55	—	—	59.8	60.7	
2496	W. C. Turner, Greensburg	45.78	—	—	59.8	59.5	
Superphosphate 47%							
2399	Southern States Cooperative, Campbellsville	46.08	—	—	61.1	59.9	
2461	Farmers Supply Co., Paintsville	45.95	—	—	61.1	59.7	
2495	Southern States Cooperative, Sheffield	46.30	—	—	61.1	60.2	
Ammonium Nitrate 33%							
2133	Southern States Cooperative, Harrodsburg	33.48	—	—	66.0	67.0	
2223	Dunnville Farm Supply, Dunnville	33.40	—	—	66.0	66.8	
2462	Farmers Supply Co., Monticello	33.60	—	—	66.0	67.2	
2545	Southern States Hdw. Co., Harrodsburg	32.96	—	—	66.0	65.9	
Ammonium Nitrate 32.50%							
1660	Powell Farmers Supply, Clay City	33.28	—	—	65.0	66.6	
1932	Graves County Soil Asso., Mayfield	33.04	—	—	65.0	66.1	
2403	I. K. Miller & Son, Campbellsville	33.48	—	—	65.0	67.0	

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Herbert Bryant, Inc., Alexandria, Virginia							
5-10-5 (Muriate)							
1933	C. M. Warner, Nancy	5.10	10.35	5.32	—	35.0	35.9
Buhner Fertilizer Company, Seymour, Indiana							
6-8-6 (Muriate) Buhner's							
1934	Shepherdsville Feed Mill, Shepherdsville	5.29	8.85	6.60	—	35.6	35.8
1935	Robert A. Heady, Glendale	5.79	8.73	6.36	—	35.6	36.4
4-12-4 (Muriate) Buhner's							
1936	Edgewood Feed Store, R. 7, Louisville	3.82	11.98	5.02	—	34.4	35.0
1937	Buhner & Co., Louisville	3.99	12.00	4.25	—	34.4	34.6
3-9-6 (Muriate) Buhner's							
1938	I. L. Hancock, Jr., Middletown	3.09	9.43	6.09	—	30.8	31.6
2322	Irvington Feed & Coal Co., Irvington	2.86	8.58	7.09	—	30.8	31.1
2-12-6 (Muriate) Buhner's							
1939	Edgewood Feed Store, Louisville	1.91	12.15	6.75	—	32.4	33.2
2082	Allison Shipp, Campbellsville	2.15	12.08	6.25	—	32.4	33.1
2134	Ohio County Hatchery and Feed Store, Beaver Dam	2.05	11.70	6.01	—	32.4	32.2
2135	Rizer Brothers, Bardstown	2.10	12.00	6.08	—	32.4	32.7
2323	Buhner & Co., Louisville	1.97	11.68	6.50	—	32.4	32.5
2324	Irvington Feed & Coal Co., Irvington	2.18	12.03	6.27	—	32.4	33.1
2402	Bryant's Mill, Caneyville	2.29	11.83	6.52	—	32.4	33.3
2405	Allison Shippe, Campbellsville	2.20	11.75	6.35	—	32.4	32.9
2546	Shipp & Allen, Campbellsville	2.11	11.38	6.07	—	32.4	32.0
0-14-7 (Muriate) Buhner's							
2083	Allison Shipp, Campbellsville	—	12.83	8.08	—	29.8	29.5
2547	Shipp & Allen, Campbellsville	—	14.15	7.65	—	29.8	30.6
0-12-12 (Muriate)							
2325	Buhner and Co., Louisville	—	11.38	12.37	—	32.4	32.0
Central Chemical Corporation, Hagerstown, Maryland							
Superphosphate 20%							
1940	Stagg Brothers, Vanceburg	—	20.65	—	—	26.0	26.9
1970	Farmers Supply Co., Danville	—	21.23	—	—	26.0	27.6
Chilean Nitrate Sales Corporation, New York, N. Y.							
16% Nitrate of Soda—Champion Brand Chilean							
1941	A. O. McQueen, Bond	16.24	—	—	—	48.0	48.7
Consolidated Chemical Co., Div. Fricke Chemical Co., Louisville, Ky.							
6-8-6 (Muriate) Camel Brand							
1753	Farmers Exchange, Burkesville	6.01	8.85	6.49	—	35.6	37.1
0-14-7 (Muriate) with 200 lbs. tobacco							
2378	W. E. Reed and Son, Hodgenville	—	14.68	7.28	—	29.8	30.9
0-14-4 (Muriate) Camel Brand							
1754	C. W. Thompson's Store, Loretto	—	14.65	3.78	—	26.0	27.4
Cooperative Fertilizer Service, Richmond, Va., Winchester, Ky.							
3-12-6 (Muriate)							
1661	Pike County Hatchery, Paintsville	3.06	12.65	6.16	—	34.4	35.5
2-9-6 (Muriate 3, Sulfate 3) Open Formula							
1662	Farmers Supply Co., Paintsville	3.32	10.65	6.36	Yes	30.8	33.8
1942	Farmers Cooperative Store, Owensboro	3.01	9.45	6.02	No ⁶	30.8	31.4
1943	Southern States Cooperative, Carlisle	3.28	9.75	6.21	Yes	30.8	32.5
1944	Southern States Cooperative, LaGrange	3.27	9.65	6.22	Yes	30.8	32.3
1945	Southern States Cooperative, Shelbyville	2.99	9.33	6.29	Yes	30.8	31.5
1946	Southern States Cooperative, Marion	3.27	10.00	6.32	Yes	30.8	34.1
1947	Southern States Cooperative, Campbellsville	3.07	9.40	6.34	Yes	30.8	31.8
1948	Clay County Farm Service, Manchester	3.06	9.10	6.29	Yes	30.8	31.3
1949	Southern States Cooperative, Lebanon	3.05	9.45	6.14	No ⁷	30.8	31.6
1950	Southern States Cooperative, Hopkinsville	3.13	9.60	6.44	No ⁸	30.8	32.2

⁶ Excess muriate equivalent to 1.49 percent potash.⁷ Excess muriate equivalent to 1.46 percent potash.⁸ Excess muriate equivalent to 1.83 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Cooperative Fertilizer Service—Continued							
3-9-6 (Muriate 3, Sulphate 3) Open Formula							
1951	Southern States Cooperative, London.....	3.13	9.50	6.29	No ⁹	30.8	32.0
1952	Southern States Cooperative, Somerset.....	3.05	9.55	6.08	Yes	30.8	31.6
1953	Southern States Cooperative, Frankfort.....	3.08	9.60	6.29	No ¹⁰	30.8	32.0
1954	Slaughters Mercantile Co., Slaughters.....	3.15	9.25	6.44	Yes	30.8	31.8
1955	Anderson Ice Co., Lawrenceburg.....	3.33	9.75	6.19	Yes	30.8	32.6
2-12-6 (Muriate)							
1663	Southern States Cooperative, Frankfort.....	2.27	12.48	6.42	.....	32.4	33.9
1664	Calloway County Soil Improvement Assoc., Murray.....	1.83	13.45	5.61	.....	32.4	33.4
1665	Graves County Soil Assoc., Mayfield.....	1.94	13.05	5.98	.....	32.4	33.5
1666	Simpson Farmers Cooperative, Franklin.....	2.16	12.48	6.84	.....	32.4	34.1
1667	Southern States Cooperative, Ashland.....	2.29	12.43	6.39	.....	32.4	33.9
1956	R. B. McCollum, Eubank.....	2.19	11.23	5.25	.....	32.4	31.1
2136	Farmers Cash Store, Liberty.....	2.07	12.65	6.29	.....	32.4	33.6
2137	Southern States Cooperative, Somerset.....	2.12	12.55	6.33	.....	32.4	33.6
1957	Manufacturer's warehouse, Winchester.....	2.18	13.33	6.32	.....	32.4	34.7
2072	Southern States Cooperative, Leitchfield.....	2.15	12.55	6.36	.....	32.4	33.7
2084	Columbia Bldg. & Supply Co., Columbia.....	1.99	12.30	6.29	.....	32.4	33.0
2085	Southern States Cooperative, Hopkinsville.....	2.00	12.38	6.32	.....	32.4	33.2
2224	Warren's Feed Barn, Salem.....	2.02	12.63	6.23	.....	32.4	33.4
2225	Clinton Farmers Supply Co., Albany.....	2.00	12.40	6.16	.....	32.4	33.0
2226	Farmers Supply Co., Monticello.....	2.07	12.35	6.19	.....	32.4	33.2
2227	Southern States Cooperative, Maysville.....	2.05	12.65	6.19	.....	32.4	33.5
2406	Southern States Cooperative, Henderson.....	2.06	12.50	6.27	.....	32.4	33.4
2463	Crab Orchard Grocery & Hdw. Co., Crab Orchard.....	2.10	12.50	6.19	.....	32.4	33.4
2497	Southern States Cooperative, Glasgow.....	2.03	13.38	6.24	.....	32.4	34.4
2535	Southern States Cooperative, Bowling Green.....	2.16	12.38	6.38	.....	32.4	33.6
2548	Southern States Cooperative, Harrodsburg.....	2.18	12.75	6.39	.....	32.4	34.1
2549	Southern States Cooperative, Campbellsville.....	2.15	12.88	6.33	.....	32.4	34.1
0-12-12 (Muriate) "Quality Brand"							
2086	Columbia Bldg. & Supply Co., Columbia.....	.....	12.40	12.06	.....	32.4	32.9
2087	Southern States Cooperative, Marion.....	.....	12.43	13.07	.....	32.4	34.0
2138	W. C. Turner, Greensburg.....	.....	12.13	12.29	.....	32.4	32.9
2228	Farmers Supply Co., Monticello.....	.....	12.35	12.40	.....	32.4	33.2
2271	Anderson Ice Co., Lawrenceburg.....	.....	12.50	12.01	.....	32.4	33.0
2272	Manufacturer's warehouse.....	.....	12.58	12.60	.....	32.4	33.7
2407	Farmers Exchange, Burkesville.....	.....	12.68	12.18	.....	32.4	33.4
2536	Southern States Cooperative, Bowling Green.....	.....	12.38	12.41	.....	32.4	33.3
2550	Southern States Cooperative, Harrodsburg.....	.....	13.48	11.97	.....	32.4	34.2
0-12-12 (Muriate) "Super Brand" with 3 pounds of Borax per 100 pounds							
2139	Southern States Cooperative, Campbellsville.....	.....	12.53	12.78	.....	32.4	33.8
2498	Southern States Cooperative, Lebanon.....	.....	12.60	12.06	.....	32.4	33.2
2273	Manufacturer's warehouse, Winchester.....	.....	12.65	12.16	.....	32.4	33.3
2274	Southern States Cooperative, Frankfort.....	.....	12.70	12.34	.....	32.4	33.6
2408	Farmers Exchange, Burkesville.....	.....	12.53	12.72	.....	32.4	33.8
20% Superphosphate							
1668	Southern States Cooperative, Bowling Green.....	.....	20.50	.....	.....	26.0	26.7
1669	Farmers Supply Co., Paintsville.....	.....	21.10	.....	.....	26.0	27.4
1670	Archer & Redwine, Sandy Hook.....	.....	21.03	.....	.....	26.0	27.3
1958	Manufacturer's warehouse.....	.....	20.65	.....	.....	26.0	26.9
1959	Gibson's Farm & Home Service, Barbourville.....	.....	20.65	.....	.....	26.0	26.9
2275	Manufacturer's warehouse.....	.....	19.45	.....	.....	26.0	25.3
2276	Southern States Cooperative, Winchester.....	.....	20.03	.....	.....	26.0	26.0
2352	Edmonson Farmers Cooperative, Brownsville.....	.....	20.08	.....	.....	26.0	26.1
2537	Southern States Cooperative, Bowling Green.....	.....	20.58	.....	.....	26.0	26.8
Cumberland Chemical Company, Hopkinsville, Ky.							
2-12-6 (Muriate) Cumberland							
2088	Trenton Hdw. Co., Trenton.....	2.76	12.13	5.08	.....	32.4	33.2
2089	Cayce-Yost Co., Hopkinsville.....	2.49	12.53	5.12	.....	32.4	33.1
2140	Smith & Reynolds Co., Slaughters.....	2.54	12.60	5.09	.....	32.4	33.3
2409	Fox Hardware Co., Madisonville.....	2.43	12.60	5.51	.....	32.4	33.5
2410	Todd County Implement Co., Elkton.....	2.12	12.45	6.65	.....	32.4	33.8
2515	Smith & Reynolds Co., Slaughters.....	1.90	13.15	6.07	.....	32.4	33.7

⁹ Excess muriate equivalent to 1.69 percent potash.

¹⁰ Excess muriate equivalent to 1.63 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Cumberland Chemical Company—Continued							
0-14-7 (Muriate) Cumberland							
2090	Cayce-Yost Co., Hopkinsville.....	14.90	5.80	-----	29.8	29.7	
2411	Todd County Implement Co., Elkton.....	14.10	9.10	-----	29.8	32.0	
2456	Cayce-Yost Co., Hopkinsville.....	14.35	8.90	-----	29.8	32.1	
20% Superphosphate, Cumberland							
2091	Cayce-Yost Co., Hopkinsville.....	19.98	-----	-----	26.0	26.0	
2092	Western Kentucky Experiment Sub-Station, Princeton.....	21.18	-----	-----	26.0	27.5	
2141	Smith & Reynolds Co., Slaughters.....	20.20	-----	-----	26.0	26.3	
2412	Todd County Implement Co., Elkton.....	20.33	-----	-----	26.0	26.4	
2516	Smith & Reynolds Co., Slaughters.....	20.48	-----	-----	26.0	26.6	
18% Superphosphate, Cumberland							
2093	Trenton Hardware Co., Trenton.....	21.43	-----	-----	23.4	27.9	
Danville Hdw. & Supply Co., Danville, Ky.							
Ammonium Nitrate 33%							
2557	Manufacturer's warehouse.....	33.12	-----	-----	66.0	66.2	
Darling and Company, Chicago and East St. Louis, Ill.							
2-12-6 (Muriate) "Crop King Brand"							
1960	Bardwell Sweet Feed Co., Bardwell.....	2.26	13.00	6.08	-----	32.4	34.2
The Davison Chemical Corporation, Hopkins Fert. Div., New Albany, Ind.							
6-8-6 (Muriate) Hopkins Old Time Brand							
1961	C. D. Baldwin, Annville.....	5.65	8.48	5.91	-----	35.6	35.4
1962	The Big Store, Harrodsburg.....	5.93	8.63	6.03	-----	35.6	36.3
2177	G. C. McPhetridge, London.....	5.87	8.20	6.68	-----	35.6	36.3
2326	Buechel Produce Exchange, Buechel.....	5.78	8.20	6.70	-----	35.6	36.1
3-9-6 (Muriate) Hopkins Old Time Brand							
1963	C. D. Baldwin, Annville.....	2.70	9.40	5.45	-----	30.8	30.1
3-9-6 (Muriate 3, Sulfate 3) Hopkins Old Time Brand							
1964	Rural Supply Co., Shively.....	2.92	9.08	6.53	Yes	30.8	31.3
1965	Farmers Feed & Supply Co., London.....	3.01	9.00	6.63	Yes	30.8	31.5
2-12-6 (Muriate) Hopkins Old Time Brand							
1966	C. D. Baldwin, Annville.....	1.97	11.95	5.88	-----	32.4	32.2
2094	R. D. Reynolds, Cave City.....	1.99	12.38	6.10	-----	32.4	32.9
2178	G. C. McPhetridge, London.....	1.92	12.28	5.98	-----	32.4	32.6
2277	Jewell & Hayden Hdw. Co., Bardstown.....	2.06	12.53	6.32	-----	32.4	33.5
2327	Duncan & Theiss, LaGrange.....	2.18	11.70	5.95	-----	32.4	32.4
2328	Buechel Produce Exchange, Buechel.....	2.17	11.85	6.00	-----	32.4	32.6
2413	Henderson Feed & Commission Co., Henderson.....	2.04	12.20	6.11	-----	32.4	32.8
20% Superphosphate, Hopkins Old Time Brand							
1967	C. D. Baldwin, Annville.....	19.95	-----	-----	26.0	25.9	
2329	Duncan & Theiss, LaGrange.....	20.48	-----	-----	26.0	26.6	
The Davison Chemical Corporation, Nashville, Tenn.							
6-8-6 (Sulfate) Davco Red Diamond Brand							
2593	W. D. Cunningham, Webbs Cross Roads.....	6.16	8.00	5.98	Yes	35.6	35.9
4-12-4 (Muriate) Davco Red Diamond Brand							
2142	Henry Durham, Greensburg.....	3.66	12.30	4.35	-----	34.4	34.4
2179	Butterworth Seed Co., Mayfield.....	3.85	12.38	4.30	-----	34.4	34.9
2180	Marshall County Soil Improvement Assoc., Benton.....	3.56	12.48	4.29	-----	34.4	34.4
2414	I. K. Miller & Son, Campbellsville.....	3.86	12.35	4.30	-----	34.4	34.8
2415	Farmers Cooperative, Madisonville.....	3.88	12.15	4.56	-----	34.4	34.9
3-9-6 (Muriate) Davco Red Diamond							
2095	I. K. Miller & Son, Campbellsville.....	2.87	8.85	6.18	-----	30.8	30.5
2353	E. S. Ferrell & Son, Buffalo.....	2.92	9.20	6.01	-----	30.8	30.9
2-12-6 (Muriate) Davco Red Diamond							
1871	W. D. Cunningham, Webbs Cross Roads.....	2.37	12.35	5.77	-----	32.4	33.3
1872	Guenther Hdw. Co., Owensboro.....	2.07	12.00	6.48	-----	32.4	33.0
1873	E. A. Cohen & Son, Greenville.....	2.14	12.60	6.27	-----	32.4	33.7
2096	Buckhorn Coal Co., Campbellsville.....	1.99	12.00	6.00	-----	32.4	32.4
2143	W. D. Cunningham, Webbs Cross Roads.....	1.90	12.90	5.65	-----	32.4	32.9

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
The Davison Chemical Corporation—Continued							
2-12-6 (Muriate) Davco Red Diamond							
2181	Calloway County Soil Imp. Assoc., Murray	2.12	12.08	6.17	-----	32.4	32.9
2182	Marshall County Soil Imp., Assoc., Benton	1.96	12.45	6.08	-----	32.4	32.9
2229	Nelson's Feed Store, Marion	2.15	12.00	6.57	-----	32.4	33.3
2354	Brown's Seed Cleaning Co., Bowling Green	2.39	11.30	6.10	-----	32.4	32.4
2355	E. S. Ferrell and Son, Buffalo	2.24	11.83	6.32	-----	32.4	33.0
2416	Hall's Hdw. Co., Elkton	2.46	12.00	5.49	-----	32.4	32.8
2517	Fulkerson Bros., Sonora	2.26	12.00	6.18	-----	32.4	33.1
0-14-7 (Muriate) Davco Red Diamond							
2144	Farmers Supply Co., Danville	-----	14.55	7.30	-----	29.8	30.8
2417	D. K. Hurt, Elkton	-----	14.08	6.98	-----	29.8	29.9
20% Superphosphate—Davco Granulated							
2097	Eldred Hdw. Co., Princeton	-----	20.80	-----	-----	26.0	27.1
2145	Farmers Supply Co., Danville	-----	20.93	-----	-----	26.0	27.2
2183	Butterworth Seed Co., Mayfield	-----	20.93	-----	-----	26.0	27.2
2230	Nelson's Feed Store, Marion	-----	20.63	-----	-----	26.0	26.8
2231	W. D. Cunningham, Webbs Cross Roads	-----	20.60	-----	-----	26.0	26.8
2356	R. D. Reynolds, Cave City	-----	20.45	-----	-----	26.0	26.6
2499	Clay, Johnson & Co., Fountain Run	-----	18.60	-----	-----	26.0	24.2
2500	I. K. Miller & Son, Campbellsville	-----	20.05	-----	-----	26.0	26.1
2501	Haydon Mill & Grain Co., Lebanon	-----	20.10	-----	-----	26.0	26.1
Ellis Chemical Co., New Albany, Ind.							
6-8-6 (Muriate)							
1671	Davidson's Supermarket, Raceland	5.86	8.00	5.86	-----	35.6	35.2
1968	Dudgeon & Robinson, Campbellsville	5.31	8.93	5.49	-----	35.6	34.8
2-12-6 (Muriate)							
1969	Roy Clark, Big Hill	1.85	12.63	5.88	-----	32.4	32.7
Federal Chemical Co., Inc., Louisville, Ky.							
6-8-6 (Muriate) Federal							
1857	Vine Street Feed Store, Lexington	5.18	9.15	5.79	-----	35.6	35.1
2551	M. T. Riley Seed Co., Paducah	5.69	8.83	6.08	-----	35.6	36.1
2575	Galbraith & Son, Carlisle	5.95	8.50	6.07	-----	35.6	36.2
4-12-8 (Muriate) Federal							
2594	Morris Brothers, Hazel Green	3.53	11.95	7.50	-----	38.4	36.9
2595	Youngblood Brothers, Mayfield	4.09	11.98	8.60	-----	38.4	39.2
2596	Wm. R. Sewell, Daysboro	3.77	12.58	7.65	-----	38.4	38.3
4-12-8 (Sulfate) Federal							
2576	Ruddell's Produce Co., Carlisle	3.63	13.00	7.41	Yes	38.4	38.3
2597	John J. Carter, Waynesburg	3.96	12.35	7.53	Yes	38.4	38.3
2598	Wm. R. Sewell, Daysboro	4.04	12.03	8.12	No ¹¹	38.4	38.6
4-12-4 (Muriate) Federal							
1858	Clinton Gin Co., Clinton	4.11	12.05	4.42	-----	34.4	35.1
2146	U. L. Rogers, Columbia	2.99	12.38	5.24	-----	34.4	34.1
2232	Cleo M. Wilson, Nancy	3.75	12.20	4.32	-----	34.4	34.5
2357	H. D. Jones, Glasgow	3.99	12.08	4.10	-----	34.4	34.6
2502	H. B. Leneane & Son, Golden Pond	4.02	12.00	4.19	-----	34.4	34.6
2577	Ruddell's Produce Co., Carlisle	3.73	12.40	4.14	-----	34.4	34.5
3-12-12 (Muriate) Federal							
2503	Clinton Hatchery, Clinton	3.10	10.95	11.65	-----	40.4	39.0
3-9-6 (Muriate) Federal							
2184	Murray Milling Co., Murray	2.96	7.15	5.77	-----	30.8	28.3
2185	Farmers Feed & Supply Co., Arlington	2.69	9.30	6.05	-----	30.8	30.6
2186	Ford-Richardson & Son, Mayfield	3.04	9.03	6.34	-----	30.8	31.3
3-9-6 (Muriate 3, Sulfate 3) Federal							
1859	Vine Street Feed Store, Lexington	3.02	8.93	6.13	Yes	30.8	30.9
1860	Floyd G. Barlow, Cynthia	3.09	9.25	5.62	Yes	30.8	30.9
1861	A. C. Bogie, Winchester	2.98	9.15	5.99	No ¹²	30.8	30.9
2-12-6 (Muriate) Federal							
1862	J. L. Taggart Gen. Mdse., Depoy	2.28	12.33	5.92	-----	32.4	33.3
2098	Ideal Hardware Co., Glasgow	1.92	12.45	5.80	-----	32.4	32.6

¹¹ Excess muriate equivalent to 0.79 percent potash.¹² Excess muriate equivalent to 0.27 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Federal Chemical Co., Inc.—Continued							
2-12-6 (Muriate) Federal							
2147	U. L. Rogers, Columbia	2.30	11.98	6.22	—	32.4	33.2
2148	L. D. Flanagan, Russell Springs	2.03	12.10	6.19	—	32.4	32.8
2187	Fiechter Hdw. Co., London	2.23	12.10	6.13	—	32.4	33.1
2188	Murray Milling Co., Murray	2.42	12.00	5.96	—	32.4	33.2
2189	Farmers Feed & Supply Co., Arlington	2.28	12.00	6.16	—	32.4	33.1
2233	Cleo M. Wilson, Nancy	2.19	12.00	5.90	—	32.4	32.7
2234	R. C. Taylor, Monticello	2.17	12.18	5.95	—	32.4	32.9
2278	Porter Beckett, Mt. Carmel	2.14	12.13	6.13	—	32.4	33.0
2279	Cecilian Milling Co., Elizabethtown	2.01	13.13	5.66	—	32.4	33.4
2330	Fern Creek Feed & Hdw. Co., Buechel	2.19	12.20	6.36	—	32.4	33.4
2331	Grayson County Supply Co., Leitchfield	2.16	11.85	6.14	—	32.4	32.7
2332	Hancock Feed Store, Middletown	2.13	13.10	6.03	—	32.4	34.0
2358	H. D. Jones, Glasgow	2.17	11.85	6.11	—	32.4	32.7
2418	Cook and Moore, Tompkinsville	2.01	12.35	6.11	—	32.4	33.0
2452	J. B. Barnes, Somerset	2.01	12.00	5.98	—	32.4	32.4
2504	Carter Sparks, Edmonton	2.04	12.38	6.01	—	32.4	33.0
2505	Thomerson Milling Co., Glasgow	2.00	12.20	6.44	—	32.4	33.1
2518	Allen & Jenkins, Bowling Green	2.18	12.40	5.88	—	32.4	33.1
2552	Lee Flynn & Son, Somerset	2.10	11.88	6.39	—	32.4	32.9
0-14-7 (Muriate) Federal							
1863	Cooke Wholesale Feed Co., Louisville	—	13.88	7.17	—	29.8	29.8
1864	Robert James Feed Store, Franklin	—	14.20	7.28	—	29.8	30.3
1865	H. D. Jones, Glasgow	—	13.75	7.76	—	29.8	30.3
2149	U. L. Rogers, Columbia	—	13.70	8.13	—	29.8	30.6
2190	Fiechter Hardware Co., London	—	13.70	7.40	—	29.8	29.8
2235	Alonzo Mitchell, Somerset	—	14.70	6.77	—	29.8	30.4
2236	Cleo M. Wilson, Nancy	—	13.70	7.98	—	29.8	30.4
2359	H. D. Jones, Glasgow	—	13.98	7.25	—	29.8	30.0
2360	Allen & Jenkins, Bowling Green	—	14.20	6.60	—	29.8	29.6
0-14-4 (Muriate) Federal							
1866	Monarch Milling Co., Mt. Sterling	—	13.83	4.02	—	26.8	26.6
1867	Wooten Grocery & Feed Store, Dwarf	—	14.18	4.79	—	26.8	27.8
1868	Elliott & Witt, Irvine	—	14.00	4.60	—	26.8	27.4
1869	Beckham Garland, Bimble	—	14.20	4.25	—	26.8	27.3
1870	Amon Tucker, Windsor	—	14.00	4.00	—	26.8	26.8
2237	Alonzo Mitchell, Somerset	—	13.30	4.67	—	26.8	26.6
2419	U. L. Rogers, Columbia	—	13.55	4.27	—	26.8	26.5
20% Superphosphate—Federal							
2333	Hall Seed Co., Louisville	—	20.38	—	—	26.0	26.5
2361	Allen & Jenkins, Bowling Green	—	19.00	—	—	26.0	24.7
2420	Thomas Warren, Guthrie	—	19.25	—	—	26.0	25.0
2421	Cook & Moore, Tompkinsville	—	19.90	—	—	26.0	25.9
Hutson Chemical Company, Murray, Ky.							
4-12-8 (Muriate) Hutson's							
1699	Claude Pillow, Crutchfield	3.90	12.58	8.30	—	38.4	39.2
1700	G. B. Bailey, Murray	3.74	11.85	9.29	—	38.4	39.0
2191	Manufacturer's warehouse	4.02	11.75	9.73	—	38.4	39.9
2506	Manufacturer's warehouse	3.95	11.85	8.54	—	38.4	38.7
2-12-6 (Muriate) Hutson's							
1701	T. D. Johnson, Murray	1.98	12.23	6.60	—	32.4	33.2
1972	Water Valley Milling Co., Water Valley	2.28	11.63	6.67	—	32.4	33.2
International Minerals and Chemical Corporation, Cincinnati, Ohio							
6-8-6 (Muriate 2, Sulfate 4)							
1672	Gulley and Pettit, Burlington	5.87	9.30	6.36	Yes	35.6	37.3
1673	Lawson Hardware Co., Greenup	6.07	8.05	6.60	Yes	35.6	36.4
1674	Earl Miller, Owingsville	6.04	8.70	6.39	Yes	35.6	36.9
2192	L. F. Thurmond Feed Store, Murray	3.89	10.50	5.80	No ¹³	35.6	34.2
5-10-10 (Muriate)							
1973	Young Lumber Co., Beaver Dam	4.48	11.10	10.15	—	40.0	40.4
1974	Bi-County Farm Bureau Co-op., Erlanger	4.67	11.45	9.81	—	40.0	40.9
5-10-10 (Muriate 5, Sulfate 5)							
1675	Harlan Fruit Co., Harlan	5.06	10.73	10.01	Yes	40.0	41.0
1676	Ralph Berry, Port Royal	5.02	10.45	9.89	Yes	40.0	40.5

¹³ Excess muriate equivalent to 1.01 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
International Minerals and Chemical Corporation—Continued							
5-10-10 (Muriate 5, Sulphate 5)							
1677	Richardson and Stewart, Mt. Sterling	5.06	10.15	9.62	Yes	40.0	39.9
1975	Simpson & Johnson, Walton	5.25	10.75	9.96	Yes	40.0	41.4
1976	Ice's Produce Co., Bardstown	4.98	10.40	9.93	Yes	40.0	40.4
1977	Young Lumber Co., Beaver Dam	5.64	10.10	10.17	Yes	40.0	41.6
2193	L. F. Thurmond Feed Store, Murray	3.80	11.58	7.06	Yes	40.0	36.6
5-10-5 (Muriate)							
1678	Champion Store No. 71, Jenkins	4.75	10.30	5.26	—	35.0	35.1
1978	Lewis Wholesale Co., Whitesburg	5.03	10.25	5.48	—	35.0	35.8
4-16-0							
1679	Farmers Supply Store, Wilmore	3.88	16.40	—	—	33.2	33.4
4-12-8 (Muriate)							
1680	Sutton Supermarket, Williamsburg	4.00	12.05	8.05	—	38.4	38.5
1979	Taylor Lumber Co., Berea	4.15	12.10	8.19	—	38.4	39.0
1980	Farmers Co-op. Store, Owensboro	3.78	12.45	7.93	—	38.4	38.4
1981	Smith-Reynolds Co., Slaughters	3.86	13.05	7.47	—	38.4	38.9
4-12-8 (Sulfate)							
1982	Stanley Galbraith & Son, Carlisle	4.03	12.25	8.27	Yes	38.4	39.0
1983	Booneville Wholesale Co., Booneville	4.04	12.43	8.49	Yes	38.4	39.5
1984	Young Lumber Co., Beaver Dam	4.45	12.25	7.93	No ¹⁴	38.4	39.5
1985	Allen's Coal Service, Brandenburg	4.27	12.05	8.05	No ¹⁵	38.4	39.1
2194	L. F. Thurmond Seed Store, Murray	4.07	11.50	7.33	No ¹⁶	38.4	37.3
4-12-8 (Muriate 4, Sulfate 4)							
1681	Ice's Produce Co., Bardstown	3.91	12.60	8.62	No ¹⁷	38.4	39.6
1682	Lawson Hardware Store, Greenup	4.11	13.05	8.52	Yes	38.4	40.4
1683	Ralph Hovious, Hustonville	3.89	13.85	8.47	Yes	38.4	40.9
1684	Gulley & Pettit, Burlington	3.77	12.68	8.61	Yes	38.4	39.4
3-12-12 (Muriate)							
1685	G. W. Rock, Munfordville	3.13	12.00	12.09	—	40.4	40.8
1686	Gulley and Pettit, Burlington	3.14	12.60	12.86	—	40.4	42.3
2-12-12 (Muriate)							
2099	Buckhorn Coal Co., Campbellsville	1.92	12.75	11.98	—	38.4	39.1
2239	Bi-County Farm Bureau Co-op., Erlanger	1.91	12.15	12.59	—	38.4	39.0
2281	Jett Coal & Supply Co., Jett	2.02	11.98	12.14	—	38.4	38.6
2334	Farmers Cooperative, Owensboro	1.90	12.45	11.95	—	38.4	38.7
2464	Lawson Hardware Store, Greenup	1.96	12.05	11.62	—	38.4	38.0
2465	Hobert & Milton Roberts, Monticello	1.89	12.00	14.32	—	38.4	40.5
2519	Smith & Reynolds Co., Slaughters	1.80	12.33	12.12	—	38.4	38.5
2-12-6 (Muriate)							
1687	Denton Mercantile Co., Hillsboro	2.15	12.53	6.50	—	32.4	33.8
1986	Ruark Truck Lines, Morganfield	2.77	12.68	6.02	—	32.4	34.8
1987	M. G. Williams Implement Co., Hopkinsville	2.34	12.30	6.85	—	32.4	34.3
2100	Buckhorn Coal Co., Campbellsville	1.91	12.03	6.52	—	32.4	32.8
2238	Stinson Cundiff, Faubush	1.93	12.10	6.13	—	32.4	32.5
2280	Cass and Cash, Brodhead	2.20	12.55	6.42	—	32.4	33.9
2362	Sweet Feed Mills, Bowling Green	2.04	12.23	6.19	—	32.4	33.0
2422	C. L. Cook Feed Store, Hanon	2.06	12.10	6.35	—	32.4	33.0
2423	Coomer Feed Store, Columbia	2.10	11.60	7.43	—	32.4	33.6
2466	R. S. Ruark Truck Line, Morganfield	1.95	12.13	5.92	—	32.4	32.4
2507	Woodson Lewis, Greensburg	2.16	12.38	6.29	—	32.4	33.5
2553	J. W. Davidson, Science Hill	2.03	11.13	6.75	—	32.4	32.2
2554	C. M. Warner, Nancy	1.91	12.15	6.39	—	32.4	32.8
2-12-6 (Sulfate)							
1688	V. B. Nuckols, Elkton	2.42	12.03	6.42	No ¹⁸	32.4	33.7
0-14-7 (Muriate)							
1689	Ralph Berry, Port Royal	—	14.25	7.38	—	29.8	30.5
1988	Hagan, Landrum & Stone, Tompkinsville	—	14.68	6.94	—	29.8	30.6
2150	W. S. Allen, Liberty	—	14.28	7.40	—	29.8	30.4
2151	Cundiff & Squires, Cane Valley	—	14.40	7.37	—	29.8	30.7
2195	L. F. Thurmond Feed Store, Murray	—	13.73	7.64	—	29.8	30.1
2240	Roy Burris, Zula	—	13.93	7.28	—	29.8	30.0
2282	Cass and Cash, Brodhead	—	13.85	7.60	—	29.8	30.2
2283	Cecilian Milling Co., Elizabethtown	—	13.50	7.79	—	29.8	30.0

¹⁴ Excess muriate equivalent to 7.93 percent potash.

¹⁵ Excess muriate equivalent to 0.55 percent potash.

¹⁶ Excess muriate equivalent to 1.48 percent potash.

¹⁷ Excess muriate equivalent to 0.47 percent potash.

¹⁸ Excess muriate equivalent to 6.42 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
International Minerals and Chemical Corporation—Continued							
0-12-12 (Muriate)							
1690	Cundiff and Squires, Cane Valley	12.90	12.70	—	—	32.4	34.2
2152	Farmers Supply Co., Somerset	11.88	13.09	—	—	32.4	33.4
2241	Hobart and Milton Roberts, Monticello	11.40	13.74	—	—	32.4	33.4
2234	Jett Coal & Supply Co., Jett	11.58	12.64	—	—	32.4	32.5
2335	Woodford Feed Co., Versailles	12.78	11.97	—	—	32.4	33.3
2508	Springfield Grain & Feed Co., Springfield	12.25	12.65	—	—	32.4	33.4
Superphosphate 20%							
1691	Bi-County Farm Bureau, Erlanger	20.40	—	—	—	26.0	26.5
1692	Danville Hdw. & Supply Co., Danville	21.60	—	—	—	26.0	28.1
1693	R. S. Ruark Truck Lines, Morganfield	21.28	—	—	—	26.0	27.7
1989	M. G. Williams Impl. Co., Hopkinsville	21.65	—	—	—	26.0	28.2
1990	J. H. Meyers, Ewing	22.50	—	—	—	26.0	29.3
1991	Will Bloyd, Magnolia	23.25	—	—	—	26.0	30.2
2101	Buckhorn Coal Co., Campbellsville	20.48	—	—	—	26.0	26.6
2153	Robinson Milling Co., Somerset	21.18	—	—	—	26.0	27.5
2154	Cundiff & Squires, Cane Valley	21.10	—	—	—	26.0	27.4
2155	Woodson Lewis and Son, Greensburg	20.30	—	—	—	26.0	26.4
2156	Danville Hdw. & Supply Co., Danville	21.00	—	—	—	26.0	27.3
2157	W. S. Allen, Liberty	20.78	—	—	—	26.0	27.0
2285	Cecilian Milling Co., Elizabethtown	21.45	—	—	—	26.0	27.9
2286	Jett Coal & Supply Co., Jett	20.30	—	—	—	26.0	26.4
2424	Coomer Feed Store, Columbia	20.55	—	—	—	26.0	26.7
2467	Farmers Supply Co., Somerset	18.50	—	—	—	26.0	24.1
2520	Boone Feed Store, Stanford	21.23	—	—	—	26.0	27.6
16% Nitrate of Soda							
1694	Lawson Hdw. Store, Greenup	16.04	—	—	—	48.0	48.1
21.50% Sulfate of Potash Magnesia							
1695	Willoughby Supply Co., Richmond	—	—	22.26	Yes	43.0	44.5
1696	Earl Miller, Owingsville	—	—	22.00	Yes	43.0	44.0
1697	F. W. Rickard, Winchester	—	—	22.04	Yes	43.0	44.1
1992	M. G. Williams Impl. Co., Hopkinsville	—	—	21.98	Yes	43.0	44.0
1993	Woodford Feed Co., Versailles	—	—	21.94	Yes	43.0	43.9
1994	Fonthill Milling Co., Fonthill	—	—	22.16	Yes	43.0	44.3
Interstate Fertilizer Company, Cairo, Ill.							
6-8-6 (Muriate) Interstate Brand							
1995	Clinton Gin Co., Clinton	6.30	8.35	6.31	—	35.60	36.9
1996	Yopp Seed Co., Paducah	6.10	9.10	5.68	—	35.6	36.8
4-12-4 (Muriate) Interstate Brand							
1997	Mayfield Sweet Feed Mill, Mayfield	3.79	12.05	5.68	—	34.4	35.7
20% Superphosphate—Interstate Brand							
1998	Mayfield Sweet Feed Mill, Mayfield	—	21.20	—	—	26.0	27.6
Kentucky Fertilizer Works, Winchester, Ky.							
6-8-6 (Muriate) "P.P.F. Brand"							
1702	Homer Patrick, Ezel	6.34	8.58	6.09	—	35.6	37.1
6-8-6 (Sulfate) "P.P.F. Brand"							
1703	West Liberty Wholesale Co., W. Liberty	5.50	7.68	6.10	Yes	35.6	34.3
1704	Robinson & Turley, Richmond	5.55	7.98	5.98	Yes	35.6	34.7
1854	Ellis & Cammack Imp. Co., Lawrenceburg	5.29	8.05	6.85	Yes	35.6	35.1
2586	Farmers Supply Co., Mt. Sterling	5.82	8.25	6.09	Yes	35.6	35.6
5-10-5 (Sulfate) "P.P.F. Brand"							
1705	Farmers Supply Co., Mt. Sterling	4.77	10.00	5.23	Yes	35.0	34.8
1706	Farmers Supply Co., Paintsville	4.69	10.28	5.20	Yes	35.0	34.9
1707	R. C. Taylor, Monticello	4.54	11.00	5.23	Yes	35.0	35.5
3-9-6 (Muriate) "P.P.F. Brand"							
1708	McCauley Bros. Seed Co., Versailles	3.07	9.03	6.32	—	30.8	31.3
1709	The Peoples Store, Owingsville	2.71	9.20	6.19	—	30.8	30.7
1710	M. D. Royse, Winchester	2.57	9.65	6.60	—	30.8	31.3
1855	Danville Hdw. & Supply Co., Danville	2.71	8.45	6.32	—	30.8	29.9
3-9-6 (Sulfate) "P.P.F. Brand"							
1711	Cut Rate Grocery, Olive Hill	3.69	8.35	6.18	Yes	30.8	31.6
20% Superphosphate—"P.P.F. Brand"							
1903	Lewis Whitt & Co., Wrigley	—	21.40	—	—	26.0	27.8
2287	Manufacturer's warehouse	—	20.05	—	—	26.0	26.1

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Kentucky Fertilizer Works—Continued							
16% Nitrate of Soda—"P.P.F. Brand"							
1714	Farmers Supply Co., Mt. Sterling	16.00	—	—	—	48.0	48.0
1856	Centers & Terrell, Campton	16.12	—	—	—	48.0	48.4
32.50% Ammonium Nitrate—"P.P.F. Brand"							
1712	R. T. Little, Pomeroyton	33.44	—	—	—	65.0	66.9
1713	Sphar & Co., Winchester	32.88	—	—	—	65.0	65.8
2102	Sphar & Co., Winchester	33.48	—	—	—	65.0	67.0
21% Sulfate of Potash Magnesia—"P.P.F. Brand"							
2103	Sphar & Co., Winchester	—	—	21.78	Yes	42.0	43.6
Knoxville Fertilizer Co., Knoxville & Nashville, Tennessee; London, Ky.							
6-8-6 (Muriate) Knox Pulverized							
1999	Steve Rose Market, Campton	6.09	9.00	6.34	—	35.6	37.3
5-10-5 (Muriate) Knox Pulverized							
1715	John Adams, Jeff	5.23	10.48	5.60	—	35.0	36.6
1716	Long & Lawson, Pine Knot	4.91	10.30	5.40	—	35.0	35.6
1717	H. B. McCleary, Auburn	5.13	10.85	5.39	—	35.0	36.7
4-12-4 (Muriate)							
1718	Ruby H. Guffy, Morgantown	4.27	12.98	4.37	—	34.4	36.5
1719	Brock Bros. Grain Co., Maysville	4.12	12.50	4.30	—	34.4	35.5
1720	Tom Craft, E. Bernstadt	4.20	12.50	4.27	—	34.4	35.7
2000	Eastern State Hospital, Lexington	3.77	12.80	4.42	—	34.4	35.3
2196	Farmers Feed & Supply Co., London	3.96	12.45	4.41	—	34.4	35.3
2242	Hobart & Milton Roberts, Monticello	4.20	12.60	4.48	—	34.4	36.0
2243	Arnold Weddle, Nancy	3.92	12.40	4.40	—	34.4	35.1
2363	Farmers Feed Market, Bowling Green	3.24	12.55	4.13	—	34.4	33.7
2555	Milton & Hobert Roberts, Monticello	4.07	12.75	4.27	—	34.4	35.7
4-12-0 Pulverized							
1721	McCauley Bros. Seed Co., Versailles	3.64	11.80	—	—	28.4	27.4
3-12-4 (Muriate) "Special"							
1722	Foster Fertilizer Co., Hopkinsville	3.70	12.40	4.07	—	32.4	34.4
2001	Lonnie Deweese, Cave City	2.70	12.73	4.29	—	32.4	33.0
2002	Curtis & McComas, Burkesville	2.85	12.40	4.01	—	32.4	32.6
2003	Allen County Mills, Scottsville	2.93	13.23	4.22	—	32.4	34.0
2104	Jack Shirley, Edmonton	2.45	12.80	3.67	—	32.4	31.9
2425	W. B. Robertson, Adairville	2.88	11.70	4.06	—	32.4	31.9
3-9-6 (Muriate)							
1723	Harris Feed Company, Franklin	2.88	10.45	6.01	—	30.8	32.3
2004	Fitzpatrick's Grocery, Mt. Sterling	3.08	9.60	5.98	—	30.8	31.7
2158	C. M. Langdon, Science Hill	2.93	9.20	6.36	—	30.8	31.3
2244	Hobart & Milton Roberts, Monticello	2.93	9.25	6.42	—	30.8	31.4
2538	Lancaster Coal & Feed Co., Lancaster	2.86	9.20	6.28	—	30.8	31.1
3-9-6 (Muriate 4, Sulfate 2)							
1724	Foster Fertilizer Co., Hopkinsville	3.02	10.40	6.16	Yes	30.8	32.7
1725	Globmyer Lumber & Coal Co., Carrollton	3.03	10.40	6.32	Yes	30.8	32.9
1726	Denton Mercantile Co., Hillsboro	3.10	10.90	5.87	Yes	30.8	33.2
1727	Babb & Robertson, Adairville	3.25	9.80	6.14	Yes	30.8	32.4
2005	Manufacturer's warehouse	3.17	9.60	6.44	Yes	30.8	32.3
2006	Laurel Grocery, East Bernstadt	3.16	9.33	6.30	Yes	30.8	31.8
2-12-6 (Muriate)							
2007	Jellico Grocery, Harlan	2.17	13.40	6.33	—	32.4	34.8
2008	Nay Chesnut, London	2.14	12.73	6.54	—	32.4	34.1
2009	Nay Chesnut, London	1.89	12.85	6.95	—	32.4	34.2
2105	Planters Hardware Co., Hopkinsville	2.31	11.68	6.00	—	32.4	32.6
2106	Harris Feed Store, Franklin	1.98	12.33	5.65	—	32.4	32.4
2159	C. M. Langdon, Science Hill	1.97	12.70	6.29	—	32.4	33.5
2197	Farmers Feed & Supply Co., London	1.99	12.50	6.60	—	32.4	33.6
2245	Brock Brothers Grain Co., Maysville	2.03	13.63	5.68	—	32.4	34.1
2283	Mt. Vernon Produce Co., Mt. Vernon	1.97	12.43	6.42	—	32.4	33.3
2364	G. H. Bowles & Son, Glasgow	1.53	13.10	4.87	—	32.4	31.7
2365	Farmers Feed Market, Bowling Green	1.95	13.08	5.48	—	32.4	33.1
2426	Allen County Mill, Scottsville	2.12	12.05	6.19	—	32.4	32.9
2539	Farmers Feed Market, Bowling Green	2.00	12.23	5.88	—	32.4	32.6

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Knoxville Fertilizer Company—Continued							
0-14-7 (Muriate) Knox							
2289	F. J. Snider Implement Co., Elizabethtown	14.35	7.09	---	---	29.8	30.3
2366	G. H. Bowles & Son, Glasgow	14.10	6.60	---	---	29.8	29.5
2367	Morrison & Wallace, Hodgenville	14.98	6.93	---	---	29.8	30.9
2427	Gid Hollingsworth, Tompkinsville	14.40	7.06	---	---	29.8	30.3
2540	Thornhill Service Station, Frankfort	14.70	7.93	---	---	29.8	31.6
2541	Nay Chesnut, London	15.05	8.10	---	---	29.8	32.2
0-14-4 (Muriate) Basic							
1728	Farmers Feed Market, Bowling Green	14.75	4.73	---	---	26.8	28.4
1729	Foster Fertilizer Co., Hopkinsville	14.95	4.94	---	---	26.8	28.9
2010	Farmers Feed & Supply Co., London	15.00	4.61	---	---	26.8	28.6
2011	Foster Fertilizer Co., Hopkinsville	14.83	4.59	---	---	26.8	28.4
2012	A. C. McQueen, Bond	14.70	4.45	---	---	26.8	28.1
2013	Jellico Grocery, Harlan	13.45	3.96	---	---	26.8	26.1
2014	A. C. McQueen, Bond	15.18	4.55	---	---	26.8	28.8
2015	Manufacturer's warehouse	14.95	4.19	---	---	26.8	28.1
2107	Farmers Feed Market, Bowling Green	15.20	4.87	---	---	26.8	29.1
2368	Farmers Feed Market, Bowling Green	14.15	4.36	---	---	26.8	27.3
2369	G. H. Bowles & Son, Glasgow	14.45	4.02	---	---	26.8	27.4
2428	Allen County Mill, Scottsville	14.25	4.82	---	---	26.8	27.9
2509	Gid Hollingsworth, Tompkinsville	14.20	4.44	---	---	26.8	27.5
20% Superphosphate—Knox Pulverized							
1730	C. M. Langdon, Science Hill	22.20	---	---	---	26.0	28.9
1731	Babb & Robertson Impl. Co., Adairville	20.50	---	---	---	26.0	26.7
1732	Wyndall's Feed & Hdw. Store, Owensboro	20.70	---	---	---	26.0	26.9
1733	Brock Brothers Grain Co., Maysville	21.45	---	---	---	26.0	27.9
1734	A. C. Butts & Son, Fulton	20.10	---	---	---	26.0	26.1
1735	S. E. Hale & Son, Hdw. Co., Greenville	20.08	---	---	---	26.0	26.1
2016	Delbert York, Anville	20.98	---	---	---	26.0	27.3
2017	A. C. McQueen, Bond	21.13	---	---	---	26.0	27.5
2018	Manufacturer's warehouse	21.03	---	---	---	26.0	27.3
2108	Kenneth Cundiff, Columbia	20.00	---	---	---	26.0	26.0
2109	Planters Hardware Co., Hopkinsville	19.83	---	---	---	26.0	25.8
2160	C. M. Langdon, Science Hill	20.70	---	---	---	26.0	26.9
2161	W. G. Turner, Greensburg	19.75	---	---	---	26.0	25.7
2198	Jellico Grocery, Corbin	20.30	---	---	---	26.0	26.4
2246	Arnold Weddle, Nancy	20.65	---	---	---	26.0	26.9
2336	Grayson County Supply Co., Leitchfield	20.63	---	---	---	26.0	26.8
2370	Farmers Feed Market, Bowling Green	20.30	---	---	---	26.0	26.4
2429	Elkton Cash Grocery, Elkton	20.05	---	---	---	26.0	26.1
2430	Allen County Mill, Scottsville	18.73	---	---	---	26.0	24.4
2471	Planters Hardware Co., Hopkinsville	18.35	---	---	---	26.0	23.9
2472	Hobert & Milton Roberts, Monticello	20.65	---	---	---	26.0	26.9
2556	Hobert & Milton Roberts, Monticello	21.00	---	---	---	26.0	27.3
32.50% Ammonium Nitrate							
2199	Craft Grocery, Manchester	33.92	---	---	---	65.0	67.8
2431	Allen County Mill, Scottsville	34.04	---	---	---	65.0	68.1
20.60% Calcium Cyanamid							
2247	Arnold Weddle, Nancy	20.88	---	---	---	49.4	50.0
Lion Oil Co., El Dorado, Ark.							
32.50% Ammonium Nitrate, Lion Brand							
2371	E. S. Ferrell & Son, Buffalo	32.96	---	---	---	65.0	65.9
2432	I. K. Miller & Son, Campbellsville	32.88	---	---	---	65.0	65.8
Louisville Fertilizer Co., Div. Armour & Co., Cincinnati, O.; Nashville, Tenn.; Jeffersonville, Ind.							
6-8-6 (Muriate) Louisville							
2220	Yopp Seed Co., Paducah	6.02	8.20	6.34	---	35.6	36.2
4-12-4 (Muriate) Old Black Joe							
1929	Yopp Seed Co., Paducah	3.75	11.65	4.74	---	34.4	34.2
2221	Yopp Seed Co., Paducah	3.87	12.88	4.53	---	34.4	35.7
2531	Tichenor Bros. Grocery, Calhoun	3.93	11.73	4.32	---	34.4	34.3
Midwestern Phosphate Corporation, Madison 1, Wis.							
20% Superphosphate							
1737	Robinson & Turley, Richmond	20.00	---	---	---	26.0	26.0
2290	Robinson & Turley, Richmond	19.63	---	---	---	26.0	25.5
2542	Spears-Kiser Co., Paris	20.00	---	---	---	26.0	26.0

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Morris Fertilizer Co., Div. Armour & Co., Cincinnati, O.; Nashville, Tenn.; Jeffersonville, Ind.							
20% Superphosphate							
2131	Young Lumber Co., Beaver Dam	21.30	-----	-----	-----	26.0	27.7
National Chemical Co., Div. North American Fertilizer Co., Louisville, Ky.							
4-10-6 (Muriate 3, Sulfate 3) "Big Pay Brand"							
1738	Roy Vice, Owingsville	3.93	11.33	5.15	Yes	34.0	34.6
4-10-6 (Muriate) "Big Pay Brand"							
1899	Central State Hospital, Lakeland	3.91	10.00	6.55	-----	34.0	34.4
2-12-6 (Muriate) "Big Pay Brand"							
1900	Wyndall's Feed & Hdw. Co., Owensboro	2.47	12.72	5.98	-----	32.4	34.2
1901	Joe Burnett, Steubenville	2.40	12.47	6.46	-----	32.4	34.2
1902	Stout Feed Store, Mt. Washington	2.42	12.82	6.32	-----	32.4	34.5
North American Fertilizer Co., Louisville, Ky.							
6-8-6 (Sulfate) N. Am.							
1874	General Coal & Supply Co., Lexington	4.87	9.55	6.24	No ¹⁹	35.6	35.4
1875	Fletcher Taylor, Nicholasville	5.17	8.40	7.25	No ²⁰	35.6	35.7
2073	Morgan Farmers Store, West Liberty	4.96	9.15	7.48	No ²¹	35.6	36.4
2291	Southern States Cooperative, Frankfort	5.57	12.15	4.20	No ²²	35.6	37.9
2337	McCauley Bros. Co., Versailles	5.84	8.93	5.57	Yes	35.6	36.0
2433	Southern States Cooperative, Henderson	5.69	8.53	6.61	Yes	35.6	36.2
2448	Harp & Bramlett, Stamping Ground	5.03	7.90	8.92	No ²³	35.6	36.5
2449	Gus B. Glass, Stamping Ground	5.94	8.55	5.45	Yes	35.6	35.6
2558	Farmers Feed Store, Lexington	4.70	8.93	7.57	No ²⁴	35.6	35.7
2559	Rainbow Coal Co., Versailles	6.24	8.48	5.98	Yes	35.6	36.6
2560	Southern States Cooperative, Campbellsville	5.60	9.00	7.58	No ²⁵	35.6	37.6
6-8-6 (Muriate 3, Sulfate 3) N. Am.							
2521	Spears-Kiser Co., Paris	5.28	8.75	6.89	Yes	35.6	36.0
2561	W. A. Donovan, Carlisle	6.07	8.48	9.44	Yes	35.6	40.0
2562	Woodford Feed Co., Versailles	5.81	8.13	7.71	Yes	35.6	37.1
2563	J. H. Meyers, Ewing	5.98	8.28	6.18	Yes	35.6	36.1
2578	Dorsey Brothers & Fisher, Carlisle	6.04	8.70	6.81	Yes	35.6	37.3
2599	Deaton Brothers, Jackson	5.59	9.90	5.85	Yes	35.6	36.9
4-12-4 (Muriate) N. Am.							
1876	Rowan Farmers Supply, Morehead	5.25	12.05	3.49	-----	34.4	36.5
4-12-4 (Muriate) Blue Tag Brand							
1877	Thompson Wholesale Grocery, Booneville	3.57	12.60	4.94	-----	34.4	35.2
4-10-6 (Muriate) Blue Tag Brand							
1878	J. H. Meyers, Ewing	4.62	10.05	7.23	-----	34.0	36.5
1881	Farmers Cooperative, Madisonville	3.35	10.45	6.65	-----	34.0	33.9
4-10-6 (Muriate) N. Am.							
1879	Western Kentucky State Hospital, Hopkinsville	4.05	10.30	6.41	-----	34.0	34.9
1880	Eastern State Hospital, Lexington	4.03	10.33	6.44	-----	34.0	34.9
1882	Kentucky Training Home, Frankfort	3.83	9.93	6.50	-----	34.0	34.1
2453	Cayce-Yost Co., Hopkinsville	3.74	9.60	5.91	-----	34.0	32.9
2600	Kennedy Supply Store, Liberty	4.37	9.60	6.94	-----	34.0	35.2
4-10-6 (Muriate 3, Sulfate 3) N. Am.							
2522	J. R. Prather, Maysville	4.09	10.20	6.98	Yes	34.0	35.4
2564	W. A. Donovan, Carlisle	4.19	10.08	6.97	Yes	34.0	35.5
2565	J. H. Meyers, Ewing	4.07	10.08	6.52	Yes	34.0	34.8
2566	Gentry McCauley, Versailles	4.40	10.00	6.29	Yes	34.0	35.1
2601	Deaton Brothers, Jackson	4.20	10.15	6.46	Yes	34.0	35.0
4-10-6 (Muriate 3, Sulfate 3) Blue Tag Brand							
2602	W. D. Cunningham, Webbs Cross Roads	4.36	9.60	6.23	Yes	34.0	34.5

¹⁹ Excess muriate equivalent to 1.30 percent potash.

²⁰ Excess muriate equivalent to 0.90 percent potash.

²¹ Excess muriate equivalent to 0.78 percent potash.

²² Excess muriate equivalent to 0.29 percent potash.

²³ Excess muriate equivalent to 1.83 percent potash.

²⁴ Excess muriate equivalent to 0.85 percent potash.

²⁵ Excess muriate equivalent to 0.54 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
North American Fertilizer Company—Continued							
3-12-12 (Muriate) N. Am.							
2567	Farmers Feed Store, Lexington.....	3.26	12.00	11.06	-----	40.4	40.0
3-10-3 (Muriate) N. Am.							
1883	M. J. Basham, Irvington.....	3.23	9.88	3.60	-----	29.0	29.8
1884	Cornelius Motor Co., Beattyville.....	2.87	10.38	3.57	-----	29.0	29.8
1885	Caulk Hardware Co., Campbellsville.....	2.86	9.95	3.24	-----	29.0	28.9
1886	Calhoun Sweet Feed Mill, Calhoun.....	3.39	10.68	3.27	-----	29.0	30.9
3-9-6 (Muriate) N. Am.							
1887	J. H. Meyers, Ewing.....	2.81	9.18	6.85	-----	30.8	31.5
1888	Shearen's Grocery, Shelby City.....	3.42	9.58	6.19	-----	30.8	32.5
2568	Bell Milling Co., Monticello.....	2.16	9.18	4.32	-----	30.8	27.7
3-9-6 (Sulfate) N. Am.							
1889	Southern States Cooperative, Frankfort.....	2.73	8.90	7.09	Yes	30.8	31.2
1890	Risner Wholesale Grocery, Lee City.....	2.94	10.38	5.31	No ²⁶	30.8	31.7
1891	H. & H. Wholesale Grocery, Hyden.....	3.57	9.98	5.80	Yes	30.8	32.9
1892	Cornelius Motor Co., Beattyville.....	2.82	9.83	6.55	Yes	30.8	32.0
3-9-6 (Muriate 3, Sulfate 3)							
1893	Wyndall's Feed & Hdw. Co., Owensboro.....	2.73	10.15	6.16	Yes	30.8	31.8
1894	Wilson Produce Co., Columbia.....	3.27	9.18	6.14	Yes	30.8	31.7
1895	Richmond Coal & Feed Co., Richmond.....	3.07	10.00	6.54	Yes	30.8	32.7
2-12-6 (Muriate) N. Am.							
1896	Ravenna Grocery, Ravenna.....	2.26	13.35	5.75	-----	32.4	34.3
1897	W. L. Anderson & Son, Caneyville.....	2.39	12.52	6.57	-----	32.4	34.4
2162	Frank Price, Summersville.....	2.04	12.03	6.34	-----	32.4	32.9
2163	Grigsby and Co., Bardstown.....	2.04	12.30	6.25	-----	32.4	33.1
2248	Henderson Hybrid Seed Corn Co-op., Henderson.....	2.24	12.53	6.94	-----	32.4	34.5
2249	Ned Owens, Russell Springs.....	2.38	13.25	7.45	-----	32.4	36.1
2292	Grigsby and Co., Bardstown.....	2.37	11.45	7.66	-----	32.4	34.1
2293	Fred Price, Eubank.....	2.22	12.53	6.45	-----	32.4	33.9
2372	Wood Mercantile Co., Smith's Grove.....	2.05	11.23	6.36	-----	32.4	31.9
2373	Bond and Bond Impl. Co., Russellville.....	2.15	12.50	6.42	-----	32.4	33.7
2374	Lindsey & Reed, Brownsville.....	1.91	12.53	5.28	-----	32.4	32.1
2374	Lindsey & Reed, Brownsville.....	2.21	12.05	6.36	-----	32.4	33.2
2434	Wilson Produce Co., Columbia.....	2.01	12.55	6.49	-----	32.4	33.6
2435	Dudgeon & Robinson, Campbellsville.....	2.01	12.55	6.49	-----	32.4	33.6
2510	Frank Ballard, Springfield.....	1.62	13.75	4.62	-----	32.4	32.4
2569	Ned Owens, Russell Springs.....	3.95	10.48	5.18	-----	32.4	33.7
0-14-4 (Muriate) N. Am.							
2338	Gentry McCauley, Versailles.....	-----	12.00	4.22	-----	26.8	24.6
20% Superphosphate, N. Am.							
1898	W. D. Cunningham, Webbs Cross Roads.....	-----	20.77	-----	-----	26.0	27.0
2250	Ned Owens, Russell Springs.....	-----	19.00	-----	-----	26.0	24.7
2294	Grigsby and Co., Bardstown.....	-----	20.05	-----	-----	26.0	26.1
2339	Gentry McCauley, Versailles.....	-----	20.88	-----	-----	26.0	27.1
2375	Lindsey and Reed, Brownsville.....	-----	18.53	-----	-----	26.0	24.1
2436	Dudgeon & Robinson, Campbellsville.....	-----	21.20	-----	-----	26.0	27.6
2437	Caulk Hardware Co., Campbellsville.....	-----	20.25	-----	-----	26.0	26.3
2454	John B. Carter, Waynesburg.....	-----	18.75	-----	-----	26.0	24.4
2523	Grigsby and Co., Bardstown.....	-----	19.53	-----	-----	26.0	25.4
48% Sulfate of Potash—N. Am.							
2376	Farmers Feed Market, Bowling Green.....	-----	-----	48.22	Yes	52.8	53.0
2579	Bourbon Hatchery, Paris.....	-----	-----	47.08	Yes	52.8	51.8
2603	Southern States Co-op., Harrodsburg.....	-----	-----	47.20	Yes	52.8	51.9
Price Chemical Company, Louisville, Ky.							
6-8-6 (Muriate) Price							
1739	Flaherty Hardware Co., Vine Grove.....	6.31	9.75	6.36	-----	35.6	38.7
1740	St. Matthews Produce Exchange, St. Matthews.....	6.20	8.85	6.19	-----	35.6	37.2
1741	Foster Fertilizer Co., Hopkinsville.....	6.17	8.75	6.46	-----	35.6	37.3
2019	Brewer's Grocery, Beattyville.....	6.00	9.03	6.35	-----	35.6	37.2
2468	Foster Fertilizer Co., Hopkinsville.....	5.42	9.33	6.67	-----	35.6	36.7
6-8-6 (Muriate 3, Sulfate 3) Price							
1742	Charlie Ward, Ezel.....	6.35	8.98	6.63	Yes	35.6	38.1

²⁶ Excess muriate equivalent to 0.85 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Price Chemical Co.—Continued							
4-12-4 (Muriate) Price							
1743	Gish Hardware Store, Central City	3.83	12.53	4.31	—	34.4	35.0
2020	Central State Hospital, Lakeland	3.77	12.63	4.66	—	34.4	35.4
4-12-0 Price							
2021	J. A. Oldfield, Mize	3.96	13.43	—	—	28.4	30.0
3-9-6 (Muriate) Price							
1744	Flaherty Hardware Co., Flaherty	3.45	9.95	6.13	—	30.8	33.0
1745	Frank J. Murphy, Valley Station	3.37	10.20	5.78	—	30.8	32.8
1746	Hinton Feed Store, Bowling Green	2.70	10.10	6.32	—	30.8	31.8
1747	Charlie Ward, Ezel	3.23	9.85	5.88	—	30.8	32.2
1748	Caulk Hardware Co., Campbellsville	3.11	10.60	5.52	—	30.8	32.5
2022	Brewer's Grocery, Beattyville	3.85	9.98	5.86	—	30.8	33.5
2110	Foster Fertilizer Co., Hopkinsville	2.79	10.48	5.90	—	30.8	32.1
2295	Monarch Milling Co., Mt. Sterling	3.09	10.15	7.71	—	30.8	34.1
3-9-6 (Muriate 3, Sulfate 3) Price							
1749	J. A. Oldfield, Mize	3.84	9.60	6.00	Yes	30.8	33.2
2023	Monarch Milling Co., Mt. Sterling	3.56	10.23	5.90	Yes	30.8	33.3
2-12-6 (Muriate) Price							
1750	J. A. Oldfield, Mize	2.33	13.70	5.54	—	32.4	34.6
1751	Flaherty Hdw. Co., Vine Grove	2.30	12.58	6.35	—	32.4	34.1
2024	Brewer's Grocery, Beattyville	2.18	12.95	5.66	—	32.4	33.6
2111	Caulk Hdw. Co., Campbellsville	2.74	12.05	6.23	—	32.4	34.2
2340	St. Matthews Produce Exchange, St. Matthews	2.17	13.65	6.19	—	32.4	34.9
2341	Flaherty Hdw. Co., Vine Grove	2.18	13.00	6.95	—	32.4	34.9
2377	Hinton's Feed Store, Bowling Green	2.35	13.10	6.86	—	32.4	35.3
2438	W. L. Anderson & Sons, Caneyville	2.04	14.00	5.69	—	32.4	34.6
2439	Norton Garth, Trenton	2.30	13.50	6.39	—	32.4	35.2
2469	Oscar Bise, Eubank	2.46	13.23	6.49	—	32.4	35.3
2511	A. L. Hazle Gen. Store, Hodgenville	2.30	13.55	5.66	—	32.4	34.5
0-14-7 (Muriate) with 200 lbs. tobacco stems—Price							
1752	Monarch Milling Co., Mt. Sterling	—	14.20	7.74	—	29.8	30.8
2112	Caulk Hardware Co., Campbellsville	—	15.20	7.29	—	29.8	31.5
2296	Hardin County Milling Co., Elizabethtown	—	14.55	7.57	—	29.8	31.0
Ralston Purina Company, St. Louis, Missouri							
5-10-5 (Muriate 2.50, Sulfate 2.50) "Purina Plant Food"							
1755	Checkerboard Feed Store, Louisville	4.93	10.60	5.80	Yes	35.0	36.4
1756	Goodman Bros. Co., Shelbyville	4.99	10.85	5.72	Yes	35.0	36.7
1757	Purdy's Farm Store, Dawson Springs	4.93	10.43	5.85	Yes	35.0	36.2
1758	Haydon Mill & Grain Co., Springfield	4.99	10.55	5.54	Yes	35.0	36.2
2025	Farmers Supply Co., Morganfield	5.94	10.55	5.77	Yes	35.0	38.3
Robertson Chemical Corporation, Norfolk, Virginia							
3-12-12 (Muriate)							
2026	Monarch Milling Co., Mt. Sterling	3.26	12.63	13.06	—	40.4	42.7
Schrock Fertilizer Service, Congerville, Ill.							
0-12-12 (Muriate) Schrock							
2031	Roscoe Morris, Somerset	—	11.23	13.14	—	32.4	32.6
Muriate of Potash 60%							
2251	W. D. Cunningham, Webb's Cross Roads	—	—	61.36	—	54.0	55.2
2512	Marshall Co. Soil Improvement Assoc., Benton	—	—	60.40	—	54.0	54.4
Sulfate of Potash 50%							
2252	L. D. Flanagan, Russell Spring	—	—	52.52	Yes	55.0	57.7
O. M. Scott and Sons Co., Marysville, Ohio							
8-7-3 (Muriate) Scott's							
1759	Jack Dayton & Son, Louisville	8.99	7.55	3.01	—	35.4	38.1
Southern Fertilizer & Chemical Co., Savannah, Ga.							
2033	Ruark Truck Lines, Morganfield	3.95	13.25	4.51	—	34.4	36.3

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Swift and Company Plant Food Division, National Stock Yards, Ill.							
4-12-8	(Muriate) "Brimm"						
1760	Sunshine Stores, Paducah	4.00	11.35	7.51	—	38.4	37.1
1761	J. W. Settle Feed Store, Frankfort	4.02	11.38	7.63	—	38.4	37.3
2034	Farmers Supply Co., Harrodsburg	3.98	12.00	7.45	—	38.4	37.8
2164	Jewell & Hayden, Bardstown	3.95	12.55	5.23	—	38.4	36.2
2253	Yopp Seed Co., Paducah	4.02	12.25	7.93	—	38.4	38.7
2604	Calloway County Soil Improvement Association, Murray	4.17	12.23	8.15	—	38.4	39.2
4-12-4	(Muriate) Red Steer Brand						
1762	Kratzer Supply Co., Mt. Sterling	4.01	12.45	4.66	—	34.4	35.6
1763	Fields Grain & Feed Co., Cumberland	4.13	12.70	4.04	—	34.4	35.5
2570	Cooper Seed & Feed Co., Bandana	3.86	11.85	4.64	—	34.4	34.6
4-12-4	(Muriate) "Vigoro Brand"						
1764	Farmers Cooperative Store, Owensboro	4.00	11.45	4.36	—	34.4	34.1
1765	L. F. Thurmond, Murray	3.91	10.73	3.84	—	34.4	32.5
1766	Lawson Hardware Store, Greenup	4.01	10.43	4.53	—	34.4	33.1
2035	Ben Williamson Hdw. Co., Ashland	3.96	10.40	4.51	—	34.4	32.9
2165	Jewell & Hayden Hdw. Co., Bardstown	3.89	12.48	3.96	—	34.4	34.7
2254	Yopp Seed Co., Paducah	3.90	12.00	4.28	—	34.4	34.5
2513	Calloway County Soil Improvement Association, Murray	4.23	10.75	2.23	—	34.4	31.6
2605	Farmers Supply Co., Danville	3.65	12.40	4.12	—	34.4	34.3
2606	Graves County Soil Improvement Association, Mayfield	3.96	11.73	3.84	—	34.4	33.8
3-12-12	(Muriate) "Blenn"						
2255	Hickman Hardware Co., Hickman	2.92	12.35	11.33	—	40.4	40.0
2256	Yopp Seed Co., Paducah	2.95	11.70	11.54	—	40.4	39.5
2455	Morganfield Hdw. Co., Morganfield	3.11	11.75	11.39	—	40.4	39.7
2607	Hickman Hardware Co., Hickman	3.01	12.50	11.16	—	40.4	40.2
3-12-6	(Muriate) Red Steer Brand						
2257	Sunshine Stores, Paducah	2.88	12.25	6.29	—	34.4	34.8
2258	Hickman Hardware Co., Hickman	2.96	11.43	6.47	—	34.4	34.1
3-9-6	(Muriate) Red Steer Brand						
1767	Kratzer Supply Co., Mt. Sterling	2.91	9.53	6.15	—	30.8	31.4
1768	J. W. Settle Feed Store, Frankfort	2.97	10.15	6.25	—	30.8	32.4
1769	Hickman Hardware Co., Hickman	2.89	9.77	6.21	—	30.8	31.7
1770	Cooper Seed and Feed Co., Bandana	2.96	9.80	6.04	—	30.8	31.7
2036	Farmers Supply Co., Harrodsburg	2.96	9.73	5.80	—	30.8	31.4
2037	Farmers Gin Co., Clinton	2.95	9.90	6.18	—	30.8	32.0
2038	Stagg Brothers, Vanceburg	2.95	9.63	6.26	—	30.8	31.7
3-9-6	(Muriate 2, Sulfate 4) "Blenn"						
1771	Field's Grain & Feed Co., Cumberland	3.14	9.15	6.06	No ²⁷	30.8	31.3
2-12-6	(Muriate) Red Steer Brand						
1772	Harry Applegate, Ribolt	2.59	12.40	5.66	—	32.4	33.7
1773	Morganfield Hardware Co., Morganfield	2.28	12.05	6.08	—	32.4	33.1
1774	Farmers Gin Co., Clinton	2.03	12.50	5.99	—	32.4	33.1
20%	Superphosphate Red Steer Brand						
1775	Field's Grain & Feed Co., Cumberland	—	19.58	—	—	26.0	25.5
2259	Cooper's Seed & Feed Co., Banada	—	20.00	—	—	26.0	26.0
Tennessee Chemical Co., Div. Armour & Co., Cincinnati, O.; Nashville, Tenn.; Jeffersonville, Ind.							
6-8-6	(Muriate) Ox Brand						
2318	Harralson Feed Store, Owensboro	5.87	8.30	6.08	—	35.6	35.8
2395	Henderson Feed and Commission Co., Henderson	5.96	8.03	6.04	—	35.6	35.6
2396	Farm Service Cooperative, Henderson	5.98	8.25	5.96	—	35.6	35.8
2532	W. L. Ambrose Gen. Mdse. Store, Beech Grove	5.60	8.30	6.55	—	35.6	35.7
6-8-6	(Sulfate) Ox Brand						
2533	W. L. Ambrose Gen. Mdse. Store, Beech Grove	5.89	8.35	6.25	No ²⁸	35.6	36.1
2585	H. W. Duvall, Park City	5.92	8.40	6.27	Yes	35.6	36.2

²⁷ Excess muriate equivalent to 1.19 percent potash.²⁸ Excess muriate equivalent to 0.37 percent potash.

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Tennessee Chemical Co., Division Armour & Co.—Continued							
4-12-4 (Muriate) Ox Brand							
2069	Harralson Feed Store, Owensboro.....	3.64	11.33	5.32	.....	34.4	34.2
2397	W. H. Arnold & Co., Madisonville.....	4.31	11.63	4.02	.....	34.4	34.6
2398	N. T. Nuckols, Elkton.....	3.91	11.60	4.40	.....	34.4	34.1
2534	W. L. Ambrose Gen. Mdse. Store, Beech Grove.....	4.11	11.85	3.94	.....	34.4	34.4
3-9-6 (Muriate) Ox Brand							
2070	Harralson Feed Store, Owensboro.....	2.96	10.45	5.98	.....	30.8	32.4
2319	Harralson Feed Store, Owensboro.....	3.37	9.73	5.72	.....	30.8	30.1
2-12-6 (Muriate) Ox Brand							
1658	L. C. Orndorf, Adairville.....	2.10	13.25	6.58	.....	32.4	34.7
1930	H. T. Adcock Gen. Mdse., Nortonville.....	1.97	12.25	6.42	.....	32.4	33.1
2320	Harralson Feed Store, Owensboro.....	2.13	12.00	6.17	.....	32.4	32.8
Superphosphate 19% Ox Brand							
2071	Harralson Feed Store, Owensboro.....	.....	20.25	.....	.....	24.7	26.3
Superphosphate 18% Ox Brand							
1931	H. T. Adcock Gen. Mdse., Nortonville.....	.....	18.35	.....	.....	23.4	23.9
Tennessee Corporation, Lockland, Ohio and New Albany, Ind.							
5-10-5 (Muriate) "Loma Brand"							
1776	Lester Lynd, Ashland.....	5.19	10.90	5.13	.....	35.0	36.6
4-12-8 (Muriate) "Superior Quality Brand"							
1777	C. H. Fannin, Little Sandy.....	4.00	13.23	8.20	.....	38.4	40.1
1778	J. E. Whitt, Frenchburg.....	3.94	13.13	8.52	.....	38.4	40.2
1779	U. L. Rogers, Columbia.....	4.03	12.98	8.26	.....	38.4	39.9
1780	Harlan Fruit Co., Harlan.....	4.05	13.10	8.25	.....	38.4	40.1
1781	Knight Brothers, Pleasureville.....	4.07	12.83	8.42	.....	38.4	40.0
1782	Roy Vice, Owingsville.....	4.00	12.70	8.39	.....	38.4	39.6
1783	A. F. Brown, Liberty.....	4.06	12.45	8.44	.....	38.4	39.5
4-12-8 (Muriate 4, Sulfate 4) "Superior Brand"							
1784	General Supply & Coal Co., Lexington.....	4.11	12.80	8.24	Yes	38.4	39.8
2040	H. T. Roberts, Frenchburg.....	3.85	12.63	8.26	Yes	38.4	39.1
2041	W. C. Howk, Cynthiana.....	3.84	12.70	8.12	Yes	38.4	39.0
3-18-9 (Muriate) "Superior Quality Brand"							
1785	Ryle & Hambrick, Burlington.....	3.11	17.75	9.71	.....	44.6	45.2
1786	Keller Hay & Grain Co., Newport.....	3.10	17.80	9.66	.....	44.6	45.2
3-16-4 (Muriate) "Superior Quality Brand"							
1787	Pulaski Feed Co., Somerset.....	3.05	16.78	4.27	.....	37.2	38.5
1788	I. K. Miller & Son, Campbellsville.....	3.08	16.63	4.20	.....	37.2	38.3
1789	C. H. Fannin, Little Sandy.....	3.11	16.18	4.66	.....	37.2	38.3
1790	H. T. Roberts, Frenchburg.....	3.09	16.48	4.17	.....	37.2	38.1
1791	Melvin Cash Store, Paintsville.....	3.18	16.90	4.17	.....	37.2	38.8
2-12-6 (Muriate)							
1792	Farmers Feed Market, Bowling Green.....	1.96	12.33	6.06	.....	32.4	32.8
2042	I. L. Hancock, Jr., Middletown.....	2.04	12.20	5.65	.....	32.4	32.4
2043	J. W. Davidson, Science Hill.....	2.11	12.30	6.08	.....	32.4	33.1
2044	Oscar McKenzie, West Liberty.....	2.33	12.53	5.69	.....	32.4	33.4
2045	Irvington Truck Lines, Irvington.....	2.21	12.73	5.71	.....	32.4	33.4
2046	Hoagland's Hardware Store, Sacramento.....	2.13	12.30	6.23	.....	32.4	33.3
2113	I. K. Miller & Son, Campbellsville.....	2.07	12.33	5.79	.....	32.4	32.7
2166	Holmon Lewis, Summersville.....	2.17	12.40	5.88	.....	32.4	33.1
2260	Pulaski Feed Co., Somerset.....	2.04	12.85	5.98	.....	32.4	33.5
2379	Farmers Supply Co., Hodgenville.....	2.10	12.53	6.70	.....	32.4	33.9
2440	K. W. Buchanan, Manitou.....	2.11	12.08	5.90	.....	32.4	32.6
2441	E. G. Hampton, Pembroke.....	2.10	12.00	5.80	.....	32.4	32.4
2470	Cayce-Yost Co., Hopkinsville.....	2.10	11.88	6.10	.....	32.4	32.6
45% Superphosphate							
1793	J. E. Whitt, Frenchburg.....	.....	43.43	.....	.....	58.5	56.5
1794	Farmers Supply Co., Hodgenville.....	.....	45.70	.....	.....	58.5	59.4
1795	Coomer Feed Store, Columbia.....	.....	44.73	.....	.....	58.5	58.2
1796	Cayce-Yost Co., Hopkinsville.....	.....	43.78	.....	.....	58.5	56.9
1797	Lester Lynd, Ashland.....	.....	44.10	.....	.....	58.5	57.3
1798	Ryle & Hambrick, Burlington.....	.....	45.20	.....	.....	58.5	58.8
2047	Farmers Cooperative, Madisonville.....	.....	44.80	.....	.....	58.5	58.2
2048	Bryant's Mill, Caneyville.....	.....	43.55	.....	.....	58.5	56.6

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Tennessee Corporation—Continued							
20% Superphosphate "Superior Quality Brand"							
1799	Knight Brothers, Pleasureville	21.65	—	—	—	26.0	28.2
1800	Brown Supply Co., Vine Grove	21.05	—	—	—	26.0	27.4
2049	Southern States Cooperative, Harrodsburg	21.05	—	—	—	26.0	27.4
2050	Lester Lynd, Ashland	20.40	—	—	—	26.0	26.5
Valley Counties of Kentucky Cooperatives, Murray, Ky.							
47% Superphosphate							
2261	Paducah Hatchery and Feed Store, Paducah	47.18	—	—	—	61.1	61.3
46% Superphosphate							
1806	Paducah Hatchery & Feed Store, Paducah	46.00	—	—	—	59.8	59.8
1807	Calhoun County Soil Improvement Association, Murray	46.55	—	—	—	59.8	60.5
33% Ammonium Nitrate							
2473	Southern States Cooperative, Hopkinsville	33.60	—	—	—	66.0	67.2
Virginia-Carolina Chemical Corporation, Cincinnati, O.; Mt. Pleasant, Tenn.; Atlanta, Ga.; Richmond, Va.							
8-8-8 (Muriate) V-C							
2054	Cottingham Grain Co., Henderson	7.88	8.75	8.29	—	41.6	42.6
6-8-6 (Muriate) V-C							
1808	J. R. Bowman Hdw. Store, E. Bernstadt	6.06	8.40	6.08	—	35.6	36.3
2474	Robinson Implement Co., Princeton	5.35	8.60	5.47	—	35.6	34.5
6-8-6 (Muriate 3, Sulfate 3) V-C							
1809	Dyche Jones, London	5.99	9.18	6.03	Yes	35.6	37.0
1810	Barnett, Sullivan and Co., Harrodsburg	6.30	8.25	6.18	Yes	35.6	36.7
1811	Vance Evans, Mt. Sterling	6.04	8.88	6.14	Yes	35.6	36.9
1812	Brown Supply Co., Vine Grove	6.06	8.95	5.95	Yes	35.6	36.8
5-10-5 (Muriate)							
1813	Inland Steel Co., Wheelwright	4.97	11.28	4.86	—	35.0	36.3
1814	Frank P. Hall, Weeksbury	4.98	10.98	4.93	—	35.0	36.1
1815	Farmers Supply Co., Williamson, W. Va.	5.01	11.28	5.00	—	35.0	36.6
4-12-8 (Muriate 4, Sulfate 4)							
1816	Big 4 Feed & Implement Co., Scottsville	3.72	12.60	8.94	Yes	38.4	39.5
1817	Vance Evans, Mt. Sterling	4.26	12.95	8.33	Yes	38.4	40.4
2055	Miss Agnes Davis, Russellville	4.12	12.53	7.51	Yes	38.4	38.8
4-12-4 (Muriate) V-C							
1818	Ferry Wholesale Co., Hazard	4.25	12.63	4.07	—	34.4	35.7
1819	Carl Bremer, Hazel Green	4.23	12.25	3.98	—	34.4	35.1
2056	J. L. Dotson, Phelps	4.12	12.05	4.07	—	34.4	34.8
4-12-0 V-C							
1820	Shelby Feed & Seed Co., Shelbyville	4.03	13.70	—	—	28.4	30.5
1821	Casey County Hatchery, Liberty	3.96	12.58	—	—	28.4	29.0
1822	Denton Mercantile Co., Hillsboro	3.92	12.13	—	—	28.4	28.4
3-12-6 (Muriate) V-C							
1823	G. F. Johnson, Virgie	3.21	13.13	6.07	—	34.4	36.3
1824	Gibson Supply Co., Virgie	3.20	13.20	5.86	—	34.4	36.1
2057	Third Street Feed Store, Lexington	3.06	12.75	6.15	—	34.4	35.6
2058	M. G. Pruitt Impl. Co., Bowling Green	3.12	12.00	6.25	—	34.4	34.9
2059	Shelby Feed & Seed Co., Shelbyville	3.05	12.50	6.58	—	34.4	35.7
2060	W. L. Rice, Rice Station	3.07	12.58	6.11	—	34.4	35.4
2061	Greenup Milling Co., Ashland	3.06	12.85	6.36	—	34.4	35.9
3-12-6 (Muriate 3, Sulfate 3)							
2062	Baughman Milling Co., Stanford	3.20	12.55	6.04	Yes	34.4	35.5
3-9-6 (Muriate) V-C							
2063	Bell County Supply Co., Middlesboro	3.09	9.33	6.27	—	30.8	31.7
2203	Bell County Supply Co., Middlesboro	3.31	9.38	6.21	—	30.8	32.1
2-12-6 (Muriate) V-C							
1825	Denton Mercantile Co., Hillsboro	2.55	12.70	5.90	—	32.4	34.2
1826	M. G. Williams Impl. Co., Hopkinsville	2.21	12.65	6.31	—	32.4	33.9
1827	D. K. Hurt, Elkton	2.20	12.50	6.26	—	32.4	33.7
1828	U. L. Rogers, Columbia	2.11	12.40	6.10	—	32.4	33.2

TABLE 3—ANALYSES OF INSPECTION SAMPLES OF MIXED FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS.—Continued

Station No.	Manufacturer, Brand Name and Guaranty, and From Whom Obtained	Total Nitrogen	Phosphoric Acid Available	Potash	Sulfate Guar. Met	Index of Relative Value	
						Guar.	Found
Virginia-Carolina Chemical Corporation—Continued							
2-12-6 (Muriate) V-C							
2064	Knox County Supply Co., Barbourville.....	2.20	11.98	6.11	—	32.4	32.9
2065	Robinson Implement Co., Princeton.....	1.98	12.40	6.26	—	32.4	33.1
2115	Farmers Supply Co., Morganfield.....	2.04	12.65	6.10	—	32.4	33.4
2167	U. L. Rogers, Columbia.....	2.11	12.90	6.11	—	32.4	33.8
2168	Young Lumber Co., Beaver Dam.....	2.10	12.20	6.00	—	32.4	32.8
2300	Hardin County Milling Co., Elizabethtown.....	1.95	12.65	6.00	—	32.4	33.1
2380	Miss Agnes Davis, Russellville.....	1.92	13.00	5.98	—	32.4	33.4
2444	W. I. Smith General Store, Sebree.....	2.01	12.58	5.93	—	32.4	33.1
2475	S. M. Roberson, South Shore.....	1.85	12.10	6.08	—	32.4	32.3
2476	M. G. Williams Impl. Co., Hopkinsville.....	1.92	12.85	5.75	—	32.4	33.0
0-14-7 (Muriate) V-C							
1829	Miss Agnes Davis, Russellville.....	—	14.50	7.02	—	29.8	30.4
2116	Miss Agnes Davis, Russellville.....	—	14.75	6.99	—	29.8	30.7
2445	W. I. Smith General Store, Sebree.....	—	15.23	6.73	—	29.8	31.0
0-12-12 (Muriate) V-C							
2117	Miss Agnes Davis, Russellville.....	—	12.85	11.72	—	32.4	33.1
20% Superphosphate V-C							
1830	The May Grocery Co., West Liberty.....	—	21.10	—	—	26.0	27.4
1831	Denton Mercantile Co., Hillsboro.....	—	20.73	—	—	26.0	27.0
1832	Dyche Jones, London.....	—	21.00	—	—	26.0	27.3
1833	Farm and Home Service, Williamsburg.....	—	21.05	—	—	26.0	27.4
1834	Farmers Supply Co., Morganfield.....	—	20.60	—	—	26.0	26.7
2066	Richard Parks, Richmond.....	—	20.78	—	—	26.0	27.0
2301	Gorman-Brown Hdw. Co., Flemingsburg.....	—	20.68	—	—	26.0	26.9
2302	Hardin County Milling Co., Elizabethtown.....	—	20.45	—	—	26.0	26.6
2381	Miss Agnes Davis, Russellville.....	—	20.95	—	—	26.0	27.2
2382	Wood Mercantile Co., Smiths Grove.....	—	21.28	—	—	26.0	27.7
2446	U. L. Rogers, Columbia.....	—	20.08	—	—	26.0	26.1
2447	Cottingham Grain Co., Henderson.....	—	20.55	—	—	26.0	26.7
2477	M. G. Williams Impl. Co., Hopkinsville.....	—	20.68	—	—	26.0	26.9
2514	Mayes & Helm, Perryville.....	—	20.08	—	—	26.0	26.1
2571	Casey County Hatchery, Liberty.....	—	20.83	—	—	26.0	27.1
18% Superphosphate V-C							
1835	Bell County Supply Co., Middlesboro.....	—	20.40	—	—	23.4	26.5
2204	Bell County Supply Co., Middlesboro.....	—	20.53	—	—	23.4	26.7
16% Nitrate of Soda V-C							
2205	Bell County Supply Co., Middlesboro.....	15.96	—	—	—	48.0	48.0
Wallace Guano Company, Smithfield, N. C.							
3-12-12 (Muriate 4, Sulfate 8)							
1836	Clarence LeBus, Cynthia.....	3.13	13.20	12.40	No ²⁹	40.4	42.5
Woodward and Dickerson, Philadelphia, Pa.							
4-12-8 (Muriate) "Woodward Brand"							
2067	Crafton Brothers, Henderson.....	4.58	13.80	8.49	—	38.4	42.2
3-12-12 (Muriate) "Woodward Brand"							
2068	Crafton Brothers, Henderson.....	3.39	13.78	12.06	—	40.4	43.4

²⁹ Excess muriate equivalent to 0.30 percent potash.

TABLE 4.—ANALYSES OF INSPECTION SAMPLES OF ROCK PHOSPHATE, BONES, BASIC SLAG, MANURES

	Nitro- gen	Phosphoric Acid		Potash	Index of Rela- tive Value
		Avail- able	Total		
The American Agricultural Chemical Co., Cincinnati, Ohio					
Ground Phosphate Rock					
2307 Oldham Feed & Supply Co., Buckner	---	3.65	31.15	---	15.6
2451 Farmers Supply Co., Somerset	---	3.40	31.05	---	15.5
	<i>Guaranty</i>	---	3.00	---	15.5
American Cyanamid Company, New York 20, N. Y.					
Florida Natural Phosphate, "Aero-Phos" Brand					
2308 Brown & Jones, Shepherdsville	---	3.95	32.85	---	16.4
2385 Slaughters Mercantile Co., Slaughters	---	4.75	33.60	---	16.8
	<i>Guaranty</i>	---	3.00	---	16.5
Armour Fertilizer Works, Cincinnati, O.; Nashville, Tenn.; Jeffersonville, Ind.					
Sheep Manure					
1655 Home Fruit Co., Harlan	1.39	---	1.20	1.95	11.5
	<i>Guaranty</i>	1.50	---	2.50	12.5
Feed Products & Service Co., St. Louis 1, Missouri					
Florida Waste Pond Phosphate					
1698 H. W. Duvall, Park City	---	---	19.70	---	9.9
1971 Buhner & Co., Louisville	---	---	19.25	---	9.6
	<i>Guaranty</i>	---	20.00	---	10.0
Knoxville Fertilizer Company, Knoxville and Nashville, Tenn.; London, Ky.					
Raw Bone Meal					
1736 Babb & Robertson, Adairville	3.68	---	16.20	---	38.3
	<i>Guaranty</i>	3.70	---	21.50	43.7
Ruhm Phosphate & Chemical Co., Mt. Pleasant, Tenn.					
Phosphate Rock "Ruhm's Red Seal Brand"					
2027 Sherman Adams, Paint Lick	---	---	29.30	---	14.6
2028 Calloway County Soil Improvement Association, Murray	---	---	28.70	---	14.4
2029 Farmers Supply Co., Danville	---	---	29.20	---	16.6
2030 Richard Parks, Richmond	---	---	29.10	---	14.6
2200 Farmers Feed & Supply, Arlington	---	---	29.10	---	14.6
2201 Knox County Supply Co., Barbourville	---	---	29.20	---	14.6
2297 Glenn Houston, Brodhead	---	---	29.75	---	14.9
2587 Farmers Supply Co., Morganfield	---	---	30.70	---	15.4
	<i>Guaranty</i>	---	30.00	---	15.0
Schrock Fertilizer Service, Congerville, Ill.					
Phosphate Rock					
2032 Irvington Truck Lines, Irvington	---	---	33.40	---	16.7
2608 L. D. Flanagan, Russell Springs	---	---	33.55	---	16.8
	<i>Guaranty</i>	---	33.00	---	16.5
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.					
Low Grade Open Hearth Basic Slag					
2039 Allison Shipp, Campbellsville	---	---	11.10	---	11.1
	<i>Guaranty</i>	---	8.00	---	8.0
Thompson Sales Company, Montgomery, Ala.					
Florida Waste Pond Rock Phosphate					
1801 E. K. Hurt, Elkton	---	---	18.25	---	9.1
1802 Charles Hogan, Park City	---	---	17.80	---	8.9
2202 Farmers Gin Co., Clinton	---	---	20.70	---	10.4
	<i>Guaranty</i>	---	20.00	---	10.0
Thomson Phosphate Co., Chicago, Ill.					
Rock Phosphate Powdered "Top Yield Brand"					
1803 H. D. McKeehan, Rockhold	---	4.20	31.50	---	15.8
2051 Henderson Hybrid Seed Corn Co-op., Henderson	---	4.55	30.95	---	15.5
	<i>Guaranty</i>	---	2.00	---	15.5
Rock Phosphate Powdered "Four Leaf Brand"					
1804 Louis L. Williams, Scottsville	---	2.30	30.90	---	15.5
1805 Simpson Farmers Cooperative, Franklin	---	2.60	27.40	---	13.7
2053 Simpson Farmers Cooperative, Franklin	---	2.95	27.90	---	14.0
2114 C. E. Ford, Campbellsville	---	2.70	27.70	---	13.9
2442 George Butler, Kirkmansville	---	2.75	27.70	---	13.9
2443 K. W. Buchanan, Manitou	---	2.35	26.05	---	13.0
	<i>Guaranty</i>	---	2.00	---	15.0
Rock Phosphate Powdered (Florida "Four Leaf Brand")					
2298 F. W. Rickard, Winchester	---	4.00	30.85	---	15.5
2052 Louisa Supply Co., Louisa	---	4.60	31.10	---	15.6
2299 Virgil Eldridge, Morehead	---	4.25	31.20	---	15.6
	<i>Guaranty</i>	---	2.00	---	15.5

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