

Kentucky Agricultural Experiment Station

UNIVERSITY OF KENTUCKY

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COMMERCIAL FERTILIZERS IN KENTUCKY
IN 1940

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The results of inspection and the analyses of official samples of commercial fertilizer sold in Kentucky during 1940 are presented in this bulletin. Approximately 117,000 tons of fertilizer were sold, estimated from the number of tags issued, which is an increase of about 6 percent over the tonnage of the preceding year. About 55 percent of this was mixed fertilizer, the rest being superphosphate and other fertilizer materials. In addition, about 41,500 tons of 20-percent superphosphate and 58,000 tons of 47-percent superphosphate were distributed to Kentucky farmers by the Agricultural Adjustment Administration of the U. S. Department of Agriculture.

The analyses as a whole showed that the manufacturers met their guaranties well. Deficiencies were mostly of a minor nature. It should be noted, however, that the records of a few

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manufacturers are very poor. Records of the companies and the results of the analyses are given in Tables 1, 2, and 3 in the back part of this bulletin.

LOW-GRADE FERTILIZERS

This department considers that any mixed fertilizer which has a total plant-food content of less than 16 percent (sum of nitrogen, phosphoric acid, and potash guaranteed) is a low-grade fertilizer. If the total plant-food content is 16 to 19 percent, inclusive, the fertilizer is classed as medium grade; if the total plant-food content is 20 percent or more, the fertilizer is classed as high grade.

During 1940, approximately 15,000 tons of mixed fertilizer, or 23 percent of the total mixed fertilizer sold in Kentucky, was low grade, 54 percent was medium grade, and 23 percent was high grade. Such a large percentage of low- and medium-grade fertilizer represents a large loss to the farmers of the state. It is uneconomical to buy low-grade fertilizer, because certain fixed charges incident to the production and distribution of mixed fertilizers are the same for a ton, irrespective of the grade. Some of these fixed charges are cost of handling, mixing, bags, plant overhead, freight, and tax. To these the manufacturer must add his profit. When these charges are added to the wholesale price of the fertilizer ingredients, the resulting retail price of the low-grade fertilizer is relatively high per unit of plant food, as compared with the high-grade fertilizer. The saving in buying high-grade fertilizer may amount to 10 to 20 percent. For example, it takes 3 tons of a 2-8-4 fertilizer to supply the same amount of nitrogen, phosphoric acid and potash that are contained in 2 tons of a 3-12-6 fertilizer. The cost of these at the prevailing retail prices in Kentucky in 1940 was—

3 tons of 2-8-4 at \$25.00 a ton.....	\$75.00
2 tons of 3-12-6 at \$31.30 a ton.....	\$62.60

Thus the saving in buying the 3-12-6 fertilizer was \$12.40, or 16.5 percent, and the buyer handles only 2 tons instead of 3 tons. If a larger proportion of high-grade fertilizer were sold in Kentucky the saving would be greater.

LOW-GRADE FERTILIZERS NOT RECOMMENDED

The Fertilizer Department does not recommend the purchase of a mixed fertilizer with a total plant food of less than 16 percent. By the same token, it is believed that a total of 18 to 20 percent, or even more, would be more economical because in this way a farmer can get the same amount of plant food in less tonnage and save the extra cost in freight on fillers, spreading, and costs incident to the manufacture and handling. It is further of the opinion that if a farmer's soil needs the three primary nutrients, nitrogen, phosphorus, and potassium, it would be uneconomical to buy a fertilizer with less than 3 percent nitrogen, 8 percent phosphoric acid, and 4 percent potash, for the same reason of cost.

Farmers could save even more on their fertilizer bills by buying higher grades such as 4-8-4, 4-10-6, 4-12-8, 5-10-5, 6-12-6, and similar combinations. Advice to the contrary is not sound and reliable. If farmers buy on price instead of quality the results will be loss and disappointment. The net savings to farmers annually in buying high-grade fertilizers instead of low-grade fertilizers would be very great.

USE OF COMMERCIAL FERTILIZERS

Intelligent use of commercial fertilizer involves (1) knowledge of the principles of soil management and improvement, (2) knowledge of the condition of the land on which a crop is to be grown, (3) knowledge of the requirements of the crop for nutrients. The farmer should know the teachings of the Agronomy Department of this Station in regard to soil management and improvement. This information can be obtained from the following Kentucky publications: Extension Circulars No. 350, "Save the Soil and Improve It"; No. 54, "Soils, An Elementary Treatise"; and No. 272, "Soil Management for Kentucky"; and Station Bulletins No. 374, "Legumes in Cropping Systems"; No. 379, "Soil Management and Fertilization for Tobacco"; and No. 397, "Soil Management Experiments."

The advice of the Agronomy Department for improvement of the soil and maintenance of fertility includes the following: (1) the growth and proper use of legumes; (2) the proper

saving and use of manure and crop residues; (3) prevention of erosion by keeping the land covered as much of the time as possible with a dense cover, and by contour cultivation and strip cropping on sloping land. As the soil is improved, crop yields are increased and therefore the amounts of nutrients taken from the soil are increased. Thus the amount of nutrients returned to the soil must be increased by returning more crop residues and manure, and often by the use also of mixed fertilizers or fertilizer materials.

For crops of high money value, such as tobacco or truck-garden crops, liberal use of commercial fertilizers may be more advantageous than in general farming. On land which has not attained high productivity but on which crops are to be grown immediately, irrespective of proper farm practices, fertilizers are essential.

NUTRIENTS NECESSARY FOR GROWTH OF PLANTS

Besides carbon, hydrogen, and oxygen, which are supplied mainly from air and water, plants require for normal growth and development a number of other elements which are obtained from the soil. Among the elements which have been found essential for plant nutrition are nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, boron, copper, and zinc. Nitrogen, phosphorus, and potassium are the ones usually guaranteed in commercial fertilizers. Others may be present in considerable amounts tho not guaranteed. For instance, ordinary superphosphate, in addition to supplying phosphorus, is a carrier of calcium and sulfur. Potash salts usually contain some magnesium. The other elements are required by plants in varying, but usually small amounts. Under our present knowledge, it is believed they are present in most Kentucky soils in sufficient amounts.

EXPLANATION OF PLANT NUTRIENTS

The percentages of guaranteed nutrients present in a commercial fertilizer are printed on the state tag as nitrogen, phosphoric acid, and potash. The results of many investigations indicate that certain nutrients perform definite functions in the

growth and development of plants, but no plants will grow and properly develop if the soil is deficient in any essential nutrient or plant-food element. The nutrients must not only be *present* in the soil, but they must be in proper amounts and in available form.

Some of the functions performed by the nutrients are the following:

Nitrogen promotes leaf and stem development, produces rapid early growth and, in proper amount, aids in maturing the plant. In excessive amount, it may delay maturity. The principal sources of water-soluble nitrogen in fertilizers are ammonium sulfate, ammonia liquors, sodium nitrate, calcium cyanamid, and urea. The sources of water-insoluble nitrogen are bone, tankage and similar materials. Most of the nitrogen in mixed fertilizers is water soluble.

Phosphorus promotes general growth, especially root formation and growth, aids maturity of plants, fruiting, and increases the ratio of grain and fruit to the plant stalk. It is usually present in fertilizers in various forms of calcium and ammonium phosphates. It is guaranteed and reported as phosphoric acid (P_2O_5) of which 43.7 percent is phosphorus. Available phosphoric acid is that part of this plant nutrient in a fertilizer which can be readily utilized by plants. The percentage of *available* phosphoric acid in mixed fertilizers and superphosphate is guaranteed and printed on the guaranty tag. The percentage of *total* phosphoric acid in bone, tankage, rock phosphate, basic slag, and similar materials is guaranteed and printed on the guaranty tag.

Potassium is usually present in fertilizers as potassium chloride or potassium sulfate and is guaranteed and reported as potash (K_2O), of which 83 percent is potassium. It aids in the general growth of the plant, in resistance to disease, and the development of sugar and starch, and it improves the quality of the plant and fruit. Potash in fertilizers is soluble in water.

FARMERS' SAMPLES

The Kentucky fertilizer law provides that any person in the state not a dealer in or agent for the sale of any fertilizer, who may purchase fertilizer, for his own use, and not for sale, may

have it analyzed free of charge by the Kentucky Agricultural Experiment Station. However, the law further provides that in order for such analysis to be made the sample must be taken in a prescribed way. If a farmer desires to have his fertilizer analyzed by the Experiment Station, he should write the Department of Feed and Fertilizer Control for instructions. This is important, for no analysis of fertilizer will be made unless proper procedure in taking the sample is followed.

INFORMATION AND 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 Department 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. At the bottom of the tag must be a stamp on which is printed the net weight of the fertilizer in the package and authorization by the Director, of its sale. The estimated value is used for comparing values of fertilizers of different grades, and it should not be confused with the selling price. Selling price can not be accurately estimated because of the many factors, some of them variable, which are included in it.

The estimated value, or index of relative value, is determined by giving a value to each component, which value represents the cost of that component to the manufacturer plus an

equitable share of the total cost of placing the fertilizer on the market. The values of the components are:

	<i>Value per pound, cents</i>	<i>Value per unit, dollars</i>
Nitrogen	17.5	3.5
Available phosphoric acid in mixed fertilizers and superphosphates	6.0	1.2
Total phosphoric acid in bone	5.0	1.0
Potash in all fertilizers	6.0	1.2

A unit is 20 pounds, or 1 percent of a ton. If the unit value of each component is multiplied by the percent of the component in the fertilizer and all the results are added, the estimated value per ton, or index of relative value, is obtained. This valuation is used in comparing the value of samples analyzed with the manufacturers' guaranties. The valuation depends upon the actual content of the fertilizer components and should not be confused with the crop-producing power of the fertilizer.

Calculation for a 4-12-4 fertilizer:

Nitrogen	4 x 3.5 equals	14.0
Available phosphoric acid	12 x 1.2 equals	14.4
Potash	4 x 1.2 equals	4.8
Index of relative value		33.2

POINTS A FARMER SHOULD CONSIDER IN BUYING FERTILIZER

1. Ascertain the needs of the soil and what will supply them. No fertilizer will give proper results if it does not contain the plant nutrients in which the soil is deficient. If in doubt as to the kind of fertilizer the soil needs, consult the county agent or the Experiment Station.
2. Be guided by the information given on the state guaranty tag.
3. Buy no fertilizer that is not registered and tagged with a state official tag. If it is not tagged with a state guaranty tag, it is being sold in violation of the law and it should be refused.
4. High-grade fertilizers are most economical. Too many farmers buy on price rather than on quality. This is false economy.

POINTS A DEALER SHOULD CONSIDER

1. Handle no fertilizer that is not registered and tagged with a state guaranty tag at the time of purchase.

2. Handle only high-grade fertilizers—fertilizers that will most economically serve your customers.

3. Buy only from reputable manufacturers who have good records and are complying with the fertilizer law and will assist you in complying with the law.

4. Have definitely in mind the kinds of fertilizer your trade needs, and buy only fertilizers that will meet these needs.

5. It is the practice of some manufacturers to place tags in the truck or car with the shipment of fertilizer without attaching them to the bags, or to claim that they were put in. This often results in confusion and failure to tag at all, as the tags may be misplaced or lost. The tags should be attached to the bags when the shipment is made.

POINTS A MANUFACTURER SHOULD CONSIDER

Before a manufacturer sells or offers fertilizer for sale to farmers or dealers in Kentucky, he should carefully consider and comply with the following:

1. Sell or offer no fertilizer for sale in Kentucky until it is registered and labeled according to the requirements of the law so that all concerned will be within the law and properly protected.

2. Every brand must be registered and bear a state official tag showing the manufacturer's guaranty.

3. The state official tag contains the only legal guaranty, and any statements on private tags or containers to the contrary are not within the requirements of the law.

4. No alteration, either by additions or erasures, of the official tag, is permissible under the law, and any alterations made are in violation of the law.

5. All fertilizers must equal or exceed the guaranties made by the manufacturers. An excess of one plant nutrient does not compensate for a deficiency of another.

6. A state official tag must be attached to each and every package of fertilizer. Do not make shipments to dealers or farmers in Kentucky without properly attaching tags, for you would thereby subject your customers to embarrassment in handling fertilizers not labeled according to law.

7. Check weights of ingredients in mixed fertilizers carefully, and mix thoroly. Prepare as nearly as possible mixtures that will not segregate. Many analyses made by this Department show one nutrient to be considerably above guaranty while another nutrient is far below guaranty. This may be caused by insufficient mixing or by segregation.

8. Consider the needs of the farmers; cooperate with and help them to get high-grade fertilizers suitable to the needs of their soils; unite with one another in reducing the multiplicity of brands and in eliminating low-grade fertilizers because of their high and uneconomical cost in productiveness; cooperate with the Experiment Station in teaching that the important constituents cost less in high-grade fertilizers than in the low grades, and that their intelligent use means better agriculture, larger use of fertilizers, and better and more successful living for the farmer. Could not and should not every progressive manufacturer who has at heart the interest of the fertilizer business as a whole, as well as his own, and of the farmers who support this business, and of the State, get behind a progressive program of this sort?

EXPLANATION OF THE TABLES

Table 1 gives the standing of manufacturers as determined by the results of analysis of official samples. Table 2 gives results of analysis of all inspection samples except bones, rock phosphate, and basic slag, which are given in Table 3.

If an analysis is 10 percent or more 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 by **bold-face type**. If chlorine is excessive, the result is also printed in bold-face type.

If potash is claimed from sulfate, the percent of chlorine is given in the column next to the potash analysis. The amount

of chlorine allowed in sulfate of potash is 2.5 percent. The amount of chlorine allowed in a mixed fertilizer in which potash is claimed from sulfate is calculated by multiplying the percent of potash found by .05 and adding 0.5. *Example:* If 8 percent of potash is found, .05 times 8 plus 0.5 equals 0.9 percent chlorine allowed. If part of the potash in a mixed fertilizer is claimed from sulfate and part from muriate, the total percent of chlorine is stated and the permissible amount of chlorine is given in a footnote.

TABLE 1.—STANDING OF MANUFACTURERS, BASED ON OFFICIAL SAMPLES ANALYZED IN 1940

	Number of inspection samples	Number equal to guaranty in value	Number 4 per cent or more low in value	Number 10 per cent or more low in one component*
American Agricultural Chemical Company	78	72	0	1
American Cyanamid Company	4	2	0	0
Armour Fertilizer Works	93	78	1	0
W. H. Brock and Company	2	0	1	0
Buhner Fertilizer Company	19	16	1	0
Chemical Products Corporation	8	7	0	0
Colloidal Phosphate Sales Company	1	1	0	0
Consolidated Chemical Company	14	13	0	0
Cumberland Chemical Company	31	29	1	0
Darling and Company	1	0	1	0
Davison Chemical Corporation:				
Hopkins Fertilizer Division	40	37	1	0
Read Phosphate Division	52	36	4	1
Federal Chemical Company	121	85	9	7
Hutson Chemical Company	6	4	0	0
International Agricultural Corporation	45	39	0	1
Knoxville Fertilizer Company	55	42	3	0
Louisville Fertilizer Company	2	1	0	0
Merchants Fertilizer Company	4	3	0	0
Morris Fertilizer Company	3	2	0	0
National Chemical Company	11	5	4	0
North American Fertilizer Company	26	5	12	4
M. R. Porter Company	2	2	0	0
Price Chemical Company	43	39	0	1
Ruhm Phosphate and Chemical Company	2	1	0	0
Standard Wholesale Phosphate and Acid Works	3	2	0	0
Swift and Company Fertilizer Works	25	25	0	0
Tennessee Chemical Company	15	15	0	0
Tennessee Coal, Iron and Railroad Company	2	2	0	0
Virginia-Carolina Chemical Corporation	59	54	1	0
Totals	767	617	39	15

* Results are equal to guaranty in value or less than 4 percent low in value. Deficiency not considered unless result is as much as 0.5 low in guaranty.

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
The American Agricultural Chemical Co., Cincinnati, O.		
3256	20% Superphosphate	J. E. Bryant, Scottsville.....
3257		V. H. Towles, Pike View.....
3258		Lebanon Carriage & Implement Co., Lebanon
3512		Farmers Mill, Clay.....
3795		Baughman Milling Co., Stanford.....
3796		Triplett Store, S. Corbin.....
3797		Robert James, Franklin.....
3906		Norris Hardware & Seed Co., Henderson.....
3907		Watson Coal & Feed Co., Princeton.....
3259	0-10-4 (Muriate)	Davidson & Crawford, Science Hill.....
3798		Robert James, Franklin
3908	0-12-12 (Muriate)	Cayce-Yost Co., Hopkinsville.....
3260	0-14-6 (Muriate)	Cayce-Yost Co., Hopkinsville.....
3909		Cayce-Yost Co., Hopkinsville.....
3261	2-8-4 (Muriate)	C. B. Goering, Hawesville.....
3262		J. L. Bennett, Livia.....
3263		Woodson Lewis, Greensburg.....
3264		C. P. Clark & Son, Owensboro.....
3799		Woodford Lewis & Son, Greensburg.....
3910		C. B. Carden, Hartford
3152	2-10-4 (Muriate).....	Howard Mercantile Co., Olive Hill.....
3513		Farmers Supply Co., Catlettsburg.....
3514		J. R. Williams Hardware Co., Beaver Dam
3265	2-12-6 (Muriate)	B. E. Roberts & Son, Mill Spring.....
3800		Robert James, Franklin.....
3801		J. W. Schoolcraft, Somerset.....
3802		Davidson & Crawford, Science Hill.....
3153	3-8-6 (Muriate)	L. F. Wellman, Louisa.....
3266		J. R. Williams Hardware Co., Beaver Dam
3267		Lebanon Carriage & Implement Co., Lebanon
3268		J. E. Bryant, Scottsville.....
3515		W. M. Humphreys, Nuckols.....
3516		E. O. Stuart, Gracey.....
3911		C. B. Carden, Hartford
3912		Denton Hardware Co., Madisonville.....
3517	3-8-6 (Sulfate)	Bedford & Tuttle, Winchester.....
3518		S. V. Conrad, Cloverport.....
3519		Chas. P. Houchen, Mt. Olivet.....
3269	3-8-10 (Muriate)	J. W. Hicks, Upton.....
3270		Cayce-Yost Co., Hopkinsville.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
-----	-----	20.60	-----	-----	24.0	24.7	3256
-----	-----	20.50	-----	-----	-----	24.6	3257
-----	-----	20.05	-----	-----	-----	24.1	3258
-----	-----	20.55	-----	-----	-----	24.7	3512
-----	-----	20.05	-----	-----	-----	24.1	3795
-----	-----	20.30	-----	-----	-----	24.4	3796
-----	-----	20.50	-----	-----	-----	24.6	3797
-----	-----	20.15	-----	-----	-----	24.2	3906
-----	-----	20.35	-----	-----	-----	24.4	3907
-----	-----	10.10	4.48	-----	16.8	17.5	3259
-----	-----	11.00	4.02	-----	-----	18.0	3798
-----	-----	12.40	13.13	-----	28.8	30.6	3908
-----	-----	14.10	6.22	-----	24.0	24.4	3260
-----	-----	14.30	6.65	-----	-----	25.1	3909
1.95	2.07	9.05	3.97	-----	21.4	22.9	3261
1.86	1.96	8.70	3.80	-----	-----	21.9	3262
1.85	1.96	8.70	4.01	-----	-----	22.1	3263
1.76	1.90	8.05	4.00	-----	-----	21.1	3264
1.98	2.09	7.95	4.24	-----	-----	21.9	3799
1.84	1.96	7.95	4.61	-----	-----	21.9	3910
1.83	1.98	10.50	4.17	-----	23.8	24.5	3152
1.98	2.14	10.30	4.21	-----	-----	24.9	3513
1.82	1.99	9.95	4.60	-----	-----	24.4	3514
1.85	1.98	12.35	5.74	-----	28.6	28.6	3265
2.05	2.25	12.35	6.37	-----	-----	30.3	3800
1.96	2.08	12.00	6.13	-----	-----	29.0	3801
1.99	2.13	12.00	6.65	-----	-----	29.8	3802
2.94	3.04	8.50	6.20	-----	27.3	28.3	3153
2.82	2.92	8.20	5.90	-----	-----	27.1	3266
2.89	2.97	8.65	6.27	-----	-----	28.3	3267
3.00	3.09	8.80	6.10	-----	-----	28.7	3268
2.83	2.92	8.25	6.13	-----	-----	27.5	3515
2.89	2.98	8.30	6.09	-----	-----	27.7	3516
2.84	2.95	8.75	5.96	-----	-----	28.0	3911
3.03	3.13	8.10	6.75	-----	-----	28.8	3912
2.94	3.02	8.35	6.00	-----	27.3	27.8	3517
2.77	2.98	8.30	6.19	-----	-----	27.9	3518
2.65	2.82	8.90	5.89	-----	-----	27.6	3519
3.06	3.16	9.15	9.37	-----	32.1	33.3	3269
3.03	3.09	8.60	10.03	-----	-----	33.2	3270

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
The American Agricultural Chemical Co., Cincinnati, O.—Continued		
3520	3-8-16 (Muriate 8, Sulfate 8).....	J. S. Snodgrass, New Castle.....
3521		Farm Bureau Store, Carrollton.....
3154	3-10-3 (Muriate)	Osborne & Crawley, Poole.....
3271		J. W. Hicks, Upton.....
3272		Lebanon Carriage & Implement Co., Lebanon
3273		S. A. Montgomery, McKinney.....
3522		Young & Conway, Morganfield.....
3523		Norris Hardware Co., Henderson.....
3803		Lebanon Carriage & Implement Co., Lebanon
3804		J. W. Schoolcraft, Somerset.....
3913		Henderson & Hardy Co., Shepherdsville
3155	3-10-6 (Muriate)	Feeders Supply Co., Catlettsburg.....
3274		Denton Hardware Co., Madisonville.....
3275		C. P. Clark & Son, Owensboro.....
3524		J. W. Schoolcraft, Somerset.....
3525	4-8-4 (Muriate)	W. H. Brock & Co., Maysville.....
3526		Chas. P. Houchen, Mt. Olivet.....
3156	4-8-6 (Muriate)	Paintsville Grocery, Paintsville.....
3276	4-10-4 (Muriate)	C. P. Clark & Son, Owensboro.....
3277	4-10-6 (Sulfate)	Lebanon Carriage & Implement Co., Lebanon
3278		J. E. Bryant, Scottsville.....
3279		J. W. Hicks, Upton.....
3280		J. H. McClure, Springfield.....
3157	4-12-0	E. T. Walker, Glendale.....
3281		J. R. Russell, Hartford.....
3158	4-12-8 (Sulfate)	Harlan Fruit Co., Harlan.....
3282		Thompson's Hardware Co., Trenton.....
3527	4-16-4 (Muriate)	J. R. Williams Hardware Co., Beaver Dam
3159	5-10-5 (Muriate)	Harlan Fruit Co., Harlan.....
3160		L. F. Wellman, Louisa
3528	6-8-6 (Sulfate)	S. V. Conrad, Cloverport.....
3529		W. R. Jones, Utica.....
3530	"Agrinite" Tankage 8.50%.....	Geo. W. Hill, Covington.....
3532	Sulfate of Ammonia 20.50%.....	J. W. Schoolcraft, Somerset.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
2.84	2.89	8.20	15.39	6.36 ^a	39.3	38.4	3520
2.95	3.00	8.25	15.96	6.42 ^a	.....	39.6	3521
2.96	3.09	11.05	3.16	.....	26.1	27.9	3154
2.93	3.07	10.90	3.36	.....	.....	27.9	3271
2.81	2.92	10.20	3.41	.....	.....	26.6	3272
2.83	2.99	10.65	3.51	.....	.....	27.5	3273
2.72	2.84	9.95	3.51	.....	.....	26.1	3522
2.76	2.85	9.95	3.45	.....	.....	26.1	3523
3.03	3.22	10.00	3.59	.....	.....	27.6	3803
3.01	3.18	10.20	3.74	.....	.....	27.9	3804
3.10	3.25	10.45	3.53	.....	.....	28.2	3913
3.00	3.07	10.85	5.72	.....	29.7	30.6	3155
2.92	3.02	10.30	6.05	.....	.....	30.2	3274
2.89	2.98	10.35	6.24	.....	.....	30.3	3275
2.96	3.05	10.10	6.01	.....	.....	30.0	3524
4.14	4.27	9.10	4.57	.....	28.4	31.4	3525
3.88	4.01	8.95	4.11	.....	.....	29.7	3526
3.93	4.07	8.45	6.13	.....	3.08	31.7	3156
3.62	3.76	10.45	4.07	.....	.....	30.6	3276
3.95	4.10	10.60	6.23	.....	33.2	34.6	3277
3.89	4.03	10.30	6.64	.....	.....	34.4	3278
3.86	4.07	10.35	6.03	.....	.....	33.9	3279
3.88	4.07	10.35	6.41	1.34	.....	34.4	3280
3.92	4.25	12.70	.....	.....	28.4	30.1	3157
3.65	4.00	12.60	.....	.....	.....	29.1	3281
3.91	4.03	12.30	8.40	1.74	38.0	39.0	3158
4.08	4.25	12.25	8.14	.....	.....	39.3	3282
3.64	3.82	16.60	4.52	.....	38.0	38.7	3527
4.86	4.98	10.45	5.70	.....	35.5	36.8	3159
4.87	5.05	10.55	5.34	.....	.....	36.7	3160
5.96	6.02	8.20	6.08	.....	37.8	38.2	3528
5.28	5.36	8.25	6.50	2.28	.....	36.5	3529
.....	8.58	.....	.....	.....	42.5	42.9	3530
.....	20.88	.....	.....	.....	36.9	37.6	3532

^a 6.92 percent chlorine allowed.

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
The American Agricultural Chemical Co., Cincinnati, O.—Continued		
3533	Muriate of Potash 50%.....	J. W. Schoolcraft, Somerset.....
3283	4-10-6 (Muriate)	Denton Hardware Co., Madisonville.....
3284		W. E. Bibb, Sacramento.....
3531		Ross Feed Co., Murray.....
American Cyanamid Co., New York, N. Y.		
3534	21% "Aero" Cyanamid Granular.....	Joe Fister, Lexington.....
3805		J. H. Maholland, Franklin.....
3806		Lebanon Carriage & Implement Co., Lebanon
3914		Craig's Feed Store, Owensboro.....
Armour Fertilizer Works, Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.		
3285	Armour's 4-12-8 (Sulfate)	T. E. Clausen, Bonnierville.....
3535		J. W. Schoolcraft, Somerset.....
3536		Robinson & Turley, Richmond.....
3537		Carlisle Mill & Supply Co., Carlisle.....
3161	Armour's 3-8-6 (Sulfate).....	Jellico Grocery, Barbourville.....
3286		Giltner Seed & Feed Co., Eminence.....
3287		T. E. Clausen, Bonnierville.....
3288		E. T. Ford, Cave City.....
3289		Taylor County Supply Co, Campbellsville
3538		J. C. Everett & Co., Maysville.....
3162	Armour's 4-8-4 (Sulfate)	Hatter Hardware Co., Franklin.....
3290		Walter McGlasson, Horse Cave.....
3539		J. B. Penn, Georgetown.....
3540		Carlisle Mill & Supply Co., Carlisle.....
3163	Big Crop 4-12-8 (Muriate)	G. C. Cornett, Cumberland.....
3291		Forbes Manufacturing Co., Hopkinsville.....
3541		The T. J. Turley Co., Owensboro.....
3542		Horace Emmick, Lewisport.....
3543		J. C. Everett & Co., Maysville.....
3164	Big Crop 3-8-6 (Muriate).....	Mountain Wholesale Grocery, Lothair..
3292		Wilson, Miles & Co., Russellville.....
3544		Robinson & Turley, Richmond.....
3545		Kidd & Co., Livermore.....
3807		J. W. Schoolcraft, Somerset.....
3808		Taylor County Supply Co., Campbellsville
3915		Henderson & Hardy Co., Shepherdsville
3165	Big Crop 4-8-4 (Muriate).....	Powell Hackney Grocery, Jackson.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
-----	-----	-----	51.20	-----	45.0	46.1	3533
3.87	4.04	10.90	6.61	-----	33.2	35.2	3283
3.53	3.68	10.90	5.72	-----	-----	32.8	3284
4.11	4.24	10.55	6.30	-----	-----	35.1	3531
-----	21.12	-----	-----	-----	44.1	44.4	3534
-----	21.12	-----	-----	-----	-----	44.4	3805
-----	20.76	-----	-----	-----	-----	43.6	3806
-----	20.64	-----	-----	-----	-----	43.3	3914
2.98	3.87	12.25	8.98	-----	38.0	39.0	3285
3.12	4.04	11.55	9.04	-----	-----	38.9	3535
3.28	4.06	12.75	8.80	-----	-----	40.1	3536
2.94	3.82	12.85	9.17	-----	-----	39.8	3537
2.17	2.98	8.10	7.70	-----	27.3	29.4	3161
2.11	2.85	8.25	6.38	-----	-----	27.5	3286
2.17	2.85	8.50	6.88	-----	-----	28.4	3287
2.12	2.83	8.10	6.32	-----	-----	27.2	3288
2.30	3.06	8.00	6.13	-----	-----	27.7	3289
2.35	3.04	7.95	7.20	-----	-----	28.8	3538
3.11	4.01	9.85	4.86	1.10	28.4	31.7	3162
2.92	3.82	7.95	4.25	-----	-----	28.0	3290
3.01	3.94	7.95	5.66	-----	-----	30.1	3539
3.06	3.97	8.15	4.55	-----	-----	29.1	3540
3.70	4.02	12.90	8.13	-----	38.0	39.3	3163
3.71	3.97	12.15	7.97	-----	-----	38.0	3291
3.80	4.07	12.10	8.47	-----	-----	38.9	3541
3.72	3.97	12.35	8.09	-----	-----	38.4	3542
3.55	3.85	12.40	8.63	-----	-----	38.7	3543
2.75	3.13	8.55	6.03	-----	27.3	28.5	3164
2.65	2.96	8.35	5.96	-----	-----	27.5	3292
2.64	2.98	8.90	5.90	-----	-----	28.2	3544
2.72	2.98	8.15	5.98	-----	-----	27.4	3545
2.67	3.04	8.50	6.54	-----	-----	28.7	3807
2.82	3.12	8.35	6.46	-----	-----	28.7	3808
2.85	3.17	7.90	6.98	-----	-----	29.0	3915
3.67	4.04	8.20	4.27	-----	28.4	29.1	3165

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained	
Armour Fertilizer Works, Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.,—Continued			
3166	Old Black Joe 2-10-4 (Muriate)	Ravenna Grocery, Ravenna.....	
3293		Borders Hardware Co., Lebanon.....	
3294		Wilson Hardware Co., Auburn.....	
3295		M. C. Creekmore, Pine Knot.....	
3546		Jake Tapp & Son, Corydon.....	
3547		White Front Store, Whitesville.....	
3809		J. C. Everett & Co., Maysville.....	
3810		Taylor County Supply Co., Campbellsville	
3916		Scottsville Feed Co., Scottsville.....	
3167		Big Crop 4-16-4 (Muriate)	Jellico Grocery, Barbourville.....
3296	Ed. Allen, Smiths Grove.....		
3548	E. W. Simpson, Owenton.....		
3917	J. R. Williams Hardware Co., Beaver Dam		
3168	Big Crop 4-12-4 (Muriate)	Wisconsin Steel Co., Benham.....	
3811		J. C. Everett & Co., Maysville.....	
3169	Big Crop 5-10-5 (Muriate)	Powell-Hackey Grocery, Hazard.....	
3170		Home Fruit Co., Harlan.....	
3171	Big Crop 6-8-6 (Muriate)	R. C. Poage Milling Co., Ashland.....	
3549		Farm & Dairy Supply Co., Lexington...	
3550	Big Crop 9-18-18 (Muriate)	The T. J. Turley Co., Owensboro.....	
3297	Big Crop 0-10-4 (Muriate)	J. H. Peterson, Hiseville.....	
3298		McWhorter & Thrasher, Albany.....	
3551		L. C. Ornsdorf, Adairville.....	
3812		J. W. Schoolcraft, Somerset.....	
3813		Taylor County Supply Co., Campbellsville	
3814		Wilson-Miles & Co., Russellville.....	
3172		Big Crop 2-8-4 (Muriate)	G. M. Haycraft & Son, Leitchfield.....
3299	Taylor County Supply Co., Campbellsville		
3552	Flemingsburg Mills, Flemingsburg.....		
3553	H. Singleton, Brodhead.....		
3815	J. W. Schoolcraft, Somerset.....		
3816	Thomas Emerson, Eubank.....		
3918	Sam Hays, Clarkson.....		
3919	Scottsville Feed Co., Scottsville.....		
3920	Huff Bros., Caneyville.....		
3554	Big Crop 2-12-6 (Muriate)		E. W. Simpson, Owenton.....
3555			Robinson & Turley, Richmond.....
3556			Farm & Dairy Supply Co., Lexington...
3817		J. C. Everett & Co., Maysville.....	
3818		Taylor County Supply Co., Campbellsville	

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
1.88	2.15	10.05	4.05	-----	23.8	24.5	3166
1.74	2.08	10.20	4.13	-----	-----	24.5	3293
1.58	1.92	10.25	3.98	-----	-----	23.8	3294
1.59	1.98	10.25	4.09	-----	-----	24.1	3295
1.69	2.00	9.80	4.15	-----	-----	23.7	3546
1.68	1.98	9.80	3.96	-----	-----	23.4	3547
1.59	2.05	10.45	4.52	-----	-----	25.1	3809
1.63	2.03	10.35	4.44	-----	-----	24.9	3810
1.50	1.89	9.70	4.03	-----	-----	23.1	3916
3.73	4.09	16.40	4.32	-----	38.0	39.2	3167
3.86	4.12	16.00	4.19	-----	-----	38.7	3296
3.32	3.71	16.10	4.68	-----	-----	37.9	3548
3.79	4.16	16.95	4.25	-----	-----	40.0	3917
3.61	3.95	12.15	4.20	-----	33.2	33.5	3168
3.68	4.16	12.75	5.02	-----	-----	35.9	3811
4.56	4.81	10.15	5.20	-----	35.5	35.3	3169
4.57	4.83	10.00	5.17	-----	-----	35.1	3170
5.67	5.92	8.15	5.92	-----	37.8	37.6	3171
5.34	5.65	8.05	5.97	-----	-----	36.6	3549
8.21	8.54	18.30	17.96	-----	74.7	73.4	3550
-----	-----	11.00	4.21	-----	16.8	18.3	3297
-----	-----	10.55	4.06	-----	-----	17.5	3298
-----	-----	10.30	4.02	-----	-----	17.2	3551
-----	-----	11.55	4.56	-----	-----	19.3	3812
-----	-----	10.45	4.49	-----	-----	17.9	3813
-----	-----	10.85	4.28	-----	-----	18.2	3814
1.64	1.90	8.00	3.90	-----	21.4	20.9	3172
1.73	1.97	8.20	4.00	-----	-----	21.5	3299
1.58	2.01	8.65	3.86	-----	-----	22.1	3552
1.60	1.87	7.85	3.82	-----	-----	20.6	3553
1.54	2.01	8.35	4.10	-----	-----	22.0	3815
1.61	2.02	8.30	4.54	-----	-----	22.5	3816
1.57	1.95	8.35	4.43	-----	-----	22.2	3918
1.55	1.93	8.15	4.60	-----	-----	22.1	3919
1.72	2.06	8.65	4.67	-----	-----	23.2	3920
1.80	2.12	11.95	6.18	-----	28.6	29.2	3554
1.59	2.05	11.80	6.07	-----	-----	28.6	3555
1.61	2.06	11.70	6.34	-----	-----	28.9	3556
1.62	2.05	12.00	6.52	-----	-----	29.4	3817
1.57	2.01	12.05	6.44	-----	-----	29.2	3818

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Armour Fertilizer Works, Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.—Continued		
3557	Big Crop 3-10-3 (Muriate).....	Duncan & Theiss, La Grange.....
3558		M. G. Parman, London.....
3819		M. G. Parman, London.....
3300	Armour's 20% Superphosphate.....	Barren County Hardware Co., Glasgow
3301		W. J. Ford Produce Co., Greensburg...
3302		V. L. Cantrell, Magnolia.....
3559		J. W. Schoolcraft, Somerset.....
3560		Marion Coal Co., Marion.....
3820		Jasper Produce Co., Science Hill.....
3821		Robinson & Turley, Richmond.....
3822		M. G. Parman, London.....
3823		Hatter Hardware Co., Franklin.....
3921		J. H. Peterson, Hiseville.....
3922		C. E. Martin & Co., Greenville.....
3923		Barren County Hardware Co., Glasgow
3303	Nitrate of Soda 16%.....	E. T. Ford, Cave City.....
3561		M. G. Parman, London.....
3562	Armour's Muriate of Potash 50%.....	Flemingsburg Mills, Flemingsburg.....
3563	Armour's Sulfate of Potash 50%.....	Flemingsburg Mills, Flemingsburg.....
3564	Armour's 4-8-6 (Muriate).....	Farm & Dairy Supply Co., Lexington....
3566	Armour's 10-8-6 (Muriate).....	Farm & Dairy Supply Co., Lexington....
3565		Farm & Dairy Supply Co., Lexington....
3567	Armour's 5-15-5 (Muriate).....	Farm & Dairy Supply Co., Lexington....
3825	Armour's 3-18-9 (Muriate).....	J. C. Everett & Co., Maysville.....
3924	"Big Crop" 10-6-4 (Muriate)*.....	Yopp Seed Co., Paducah.....
W. H. Brock & Co., Maysville, Ky.		
3568	Brock's 3-8-6 (Muriate).....	Manufacturer
3569	Brock's 20% Superphosphate.....	Manufacturer
The Buhner Fertilizer Co., Seymour, Ind.		
3570	Buhner's 4-12-8 (Muriate).....	Joe Fister, Lexington.....
3571	Buhner's 4-10-6 (Muriate).....	Joe Fister, Lexington.....
3826	Buhner's 4-10-4 (Muriate).....	E. C. Miller, Buechel.....
3173	Buhner's 4-8-6 (Muriate).....	St. Matthews Produce Exchange, St. Matthews

* Not registered.

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
2.53	2.84	9.05	3.17	-----	26.1	24.6	3557
2.39	2.96	10.50	3.01	-----	-----	26.6	3558
2.41	3.02	10.05	3.34	-----	-----	26.6	3819
-----	-----	20.20	-----	-----	24.0	24.2	3300
-----	-----	20.05	-----	-----	-----	24.1	3301
-----	-----	20.25	-----	-----	-----	24.3	3302
-----	-----	19.95	-----	-----	-----	23.9	3559
-----	-----	20.35	-----	-----	-----	24.4	3560
-----	-----	19.80	-----	-----	-----	23.8	3820
-----	-----	19.75	-----	-----	-----	23.7	3821
-----	-----	19.90	-----	-----	-----	23.9	3822
-----	-----	20.40	-----	-----	-----	24.5	3823
-----	-----	20.00	-----	-----	-----	24.0	3921
-----	-----	20.25	-----	-----	-----	24.3	3922
-----	-----	19.80	-----	-----	-----	23.8	3923
-----	16.12	-----	-----	-----	44.8	45.1	3303
-----	16.08	-----	-----	-----	-----	45.0	3561
-----	-----	-----	52.44	-----	45.0	47.2	3562
-----	-----	-----	50.04	-----	55.0	55.0	3563
3.79	3.95	7.80	6.29	-----	30.8	30.7	3564
9.69	9.84	8.95	6.01	-----	51.8	52.4	3566
10.11	10.26	8.25	6.62	-----	-----	53.8	3565
5.09	5.25	15.60	5.84	-----	41.5	44.1	3567
2.74	3.17	18.25	9.99	-----	42.9	45.0	3825
10.21	10.88	7.25	5.14	-----	47.0	53.0	3924
2.29	2.49	8.45	5.37	-----	27.3	25.3	3568
-----	-----	19.50	-----	-----	24.0	23.8	3569
3.75	4.00	11.90	8.91	-----	38.0	39.0	3570
3.69	4.02	9.50	6.09	-----	33.2	32.8	3571
3.69	3.96	10.20	4.89	-----	30.8	32.0	3826
3.89	4.14	8.20	5.57	-----	30.8	31.0	3173

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
The Buhner Fertilizer Co., Seymour, Ind.—Continued		
3925	Buhner's 3-10-3 (Muriate)	Oscar Farmer & Sons, Louisville
3174	Buhner's 3-8-6 (Muriate)	E. C. Miller, Buechel
3827		E. C. Miller, Buechel
3926		Oscar Farmer & Sons, Louisville
3304	Buhner's 2-8-4 (Muriate)	Allison Shipp, Campbellsville
3305		Beck & Harris, Jamestown
3828		Allison Shipp, Campbellsville
3829		E. C. Miller, Buechel
3927		Oscar Farmer & Sons, Louisville
3928		Aaron L. Moore, Leitchfield
3306	Buhner's 0-10-4 (Muriate)	Beck and Harris, Jamestown
3307	Buhner's 20% Superphosphate	E. C. Miller, Buechel
3929		Oscar Farmer & Sons, Louisville
3572	Buhner's 4-12-0	Joe Fister, Lexington
3573	Nitrate of Soda 16%	Joe Fister, Lexington
Chemical Products Corporation, Cincinnati, O.		
3574	Preferred Brand 5-10-5 (Sulfate)	J. H. Fedders & Son, Covington
3575	Square Brand 4-12-4 (Muriate)	Tony Bezold, Newport
3576		J. H. Fedders & Son, Covington
3577	Square Brand 3-8-6 (Muriate)	J. H. Fedders & Son, Covington
3578		Baker & Hulley, Grants Lick
3579	Special Brand 3-8-6 (Sulfate)	Tony Bezold, Newport
3580	20% Superphosphate	J. H. Fedders & Son, Covington
3175	Sulfate of Ammonia 20.50%	Tony Bezold, Newport
Consolidated Chemical Co., Louisville, Ky.		
3581	Camel Brand 6-8-6 (Sulfate)	Star Roller Mills, Cloverport
3582	Camel Brand 4-12-8 (Sulfate)	Star Roller Mills, Cloverport
3308	Camel Brand 4-12-0	Thompson Store, Loretto
3583	Camel Brand 4-8-4 (Sulfate)	Star Roller Mills, Cloverport
3309	Camel Brand 3-10-3 (Muriate)	Stockton Bros., Albany
3310	Camel Brand 3-8-6 (Muriate)	White Front Store, Fordsville
3584		Star Roller Mills, Cloverport
3311	Camel Brand 3-8-6 (Sulfate)	Thompson Store, Loretto
3585		Star Roller Mills, Cloverport

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
2.76	3.11	9.15	3.55	-----	26.1	26.1	3925
2.71	2.99	8.35	7.35	-----	27.3	29.3	3174
3.30	3.60	8.00	6.03	-----	-----	29.4	3827
2.94	3.13	7.95	5.88	-----	27.3	27.6	3926
2.04	2.20	8.90	4.93	-----	21.4	24.3	3304
1.89	2.05	8.45	4.90	-----	-----	23.2	3305
1.69	1.98	8.00	4.07	-----	-----	21.4	3828
1.72	2.29	10.30	6.32	-----	-----	28.0	3829
1.93	2.18	7.75	4.42	-----	-----	22.2	3927
1.90	2.13	8.05	4.19	-----	-----	22.1	3928
-----	-----	10.50	5.01	-----	16.8	18.6	3306
-----	-----	19.20	-----	-----	-----	23.0	3307
-----	-----	20.35	-----	-----	-----	24.4	3929
3.39	3.73	12.25	-----	-----	28.4	27.8	3572
-----	16.12	-----	-----	-----	44.8	45.1	3573
4.37	5.04	10.15	5.16	-----	35.5	36.0	3574
3.62	4.07	12.45	4.61	-----	33.2	34.7	3575
3.59	3.98	12.00	4.09	-----	-----	33.2	3576
2.81	3.06	8.10	6.01	-----	27.3	27.6	3577
2.63	3.06	8.40	6.13	-----	-----	28.2	3578
2.64	2.98	8.00	5.95	-----	27.3	27.2	3579
-----	-----	20.60	-----	-----	24.0	24.7	3580
-----	21.08	-----	-----	-----	36.9	37.9	3175
6.58	7.05	8.25	6.50	-----	37.8	42.4	3581
3.77	4.22	12.75	8.33	-----	38.0	40.1	3582
3.23	4.24	12.30	-----	-----	28.4	29.6	3308
3.77	4.19	8.90	4.60	-----	28.4	30.9	3583
2.75	3.19	9.75	3.66	-----	26.1	37.3	3309
2.64	3.10	8.30	6.00	-----	27.3	28.0	3310
2.86	3.21	8.25	6.01	-----	-----	28.4	3584
2.53	2.97	8.95	6.72	1.24	27.3	29.2	3311
2.83	3.22	8.55	6.46	1.16	-----	29.3	3585

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Consolidated Chemical Co., Louisville, Ky.—Continued		
3586 3587	Camel Brand 2-8-4 (Muriate)	White Front Store, Whitesville..... Star Roller Mills, Cloverport.....
3312	Camel Brand 0-20-0	Thompson Store, Loretto..... Henderson Feed & Commission Co., Henderson
3588 3830		J. S. Squires & Co., Cane Valley.....
Cumberland Chemical Co., Hopkinsville, Ky.		
3313 3589	Cumberland 9-18-18 (Muriate)	Young Hardware Co., Hopkinsville..... C. W. Buckner, Pembroke.....
3314	Cumberland 4-12-8 (Muriate)	Fox Hardware Store, Madisonville.....
3315 3316 3317	Cumberland 4-10-4 (Muriate)	W. S. Allen & Co., Liberty..... Mose Dunning, Crofton..... W. L. Kimbrough and Son, Guthrie.....
3590	Cumberland 3-10-3 (Muriate)	Sturgis Impl. & Hdw. Co., Sturgis.....
3318 3930 3931 3932	Cumberland 0-10-4 (Muriate)	The Planters Hardware Co., Hopkinsville
3319 3320 3591 3933 3934	Cumberland 20% Superphosphate	W. G. Putman, Nortonville..... Mose Dunning, Crofton..... Trigg County Trading Co., Cadiz..... Fox Hardware Store, Madisonville..... Ratliff Hardware Co., Princeton.....
3592	Chilean Nitrate of Soda 16%	The Planters Hardware Co., Hopkinsville
3321	48% Sulfate of Potash	Miss Agnes Davis, Russellville.....
3176	Sulfate of Ammonia 20.50%	C. W. Buckner, Pembroke.....
3177 3322 3323	Cumberland 3-8-6 (Muriate)	Ratliff Hardware Co., Princeton..... Mose Dunning, Crofton..... W. L. Kimbrough & Son, Guthrie.....
3593 3594 3935	Cumberland 2-12-6 (Muriate)	Economy Feed Store, Murray..... Clark & Vaughn, Clay..... Economy Feed Store, Murray.....
3324	Cumberland 2-10-4 (Muriate)	Mose Dunning, Crofton

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
2.22	2.58	8.25	4.48	.....	21.4	24.3	3586
1.90	2.26	8.20	4.16	.....	.....	22.7	3587
.....	.....	20.00	.....	.....	24.0	24.0	3312
.....	.....	20.55	.....	.....	.....	24.7	3588
.....	.....	19.75	.....	.....	.....	23.7	3830
8.85	9.02	18.70	19.02	.....	74.7	76.8	3313
8.66	9.00	18.60	18.40	.....	.....	75.9	3589
4.16	4.25	12.65	8.87	.....	38.0	40.7	3314
4.09	4.26	10.20	4.55	.....	30.8	32.6	3315
3.71	3.99	10.60	4.64	.....	.....	32.3	3316
3.84	4.15	10.50	4.06	.....	.....	32.0	3317
2.87	3.15	10.75	3.14	.....	26.1	27.7	3590
.....	.....	10.00	4.90	.....	16.8	17.9	3318
.....	.....	10.05	3.98	.....	.....	16.8	3930
.....	.....	10.05	3.30	.....	.....	16.0	3931
.....	.....	10.00	4.48	.....	.....	17.4	3932
.....	.....	20.45	.....	.....	24.0	24.5	3319
.....	.....	20.60	.....	.....	.....	24.7	3320
.....	.....	21.05	.....	.....	.....	25.3	3591
.....	.....	19.70	.....	.....	.....	23.6	3933
.....	.....	19.95	.....	.....	.....	23.9	3934
.....	16.12	.....	.....	.....	44.8	45.1	3592
.....	.....	.....	48.48	.....	52.8	53.3	3321
.....	20.60	.....	.....	.....	36.9	37.1	3176
3.05	3.18	8.50	6.75	.....	27.3	29.1	3177
2.81	2.96	8.75	6.21	.....	.....	28.3	3322
2.93	3.08	8.55	5.99	.....	.....	28.2	3323
1.93	2.10	12.50	6.22	.....	28.6	29.8	3593
1.90	2.11	12.40	6.26	.....	.....	29.8	3594
1.82	2.03	12.25	5.88	.....	.....	28.9	3935
2.06	2.28	10.50	4.09	.....	23.8	25.5	3324

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Cumberland Chemical Co., Hopkinsville, Ky.—Continued		
3325	Cumberland 2-8-4 (Muriate).....	W. S. Allen & Co., Liberty.....
3326		Green River Milling Co., South Carrollton
3327		Mose Dunning, Crofton.....
3595		Phoenix Milling Co., Providence.....
3328	Cumberland 0-14-7 (Muriate).....	Miss Agnes Davis, Russellville.....
Darling & Company, Chicago, Ill., and E. St. Louis, Ill.		
3596	Darling's 20% Superphosphate....	Albert Wallace & Co., Cadiz.....
The Davison Chemical Corporation, Hopkins Fertilizer Division, New Albany, Ind.		
3178	Old Time 6-8-6 (Muriate).....	Buechel Produce Exchange, Buechel....
3329		Lenn Webb, Hawesville
3330		R. W. Lafferty, Rowletts.....
3597		Blue Grass Produce Co., Carlisle.....
3831		Buechel Produce Exchange, Buechel....
3331	Old Time 5-10-5 (Muriate).....	S. D. Harlin & Co., Gamaliel.....
3332	Old Time 4-12-0.....	Farmers Supply Co., Eminence.....
3598	Old Time 4-10-6 (Muriate).....	Craig's Feed Store, Owensboro.....
3179	Old Time 4-10-4 (Muriate).....	Buechel Produce Exchange, Buechel....
3333		McFarland Implement & Seed Co., Bowling Green
3832		Buechel Produce Exchange, Buechel....
3180	Old Time 4-8-6 (Muriate).....	Buechel Produce Exchange, Buechel....
3334		R. W. Lafferty, Rowletts.....
3833		Buechel Produce Exchange, Buechel....
3181	Old Time 4-8-4 (Muriate).....	G. C. McPhetridge, London.....
3335		Climax Roller Mills, Shelbyville.....
3182	Old Time 3-10-3 (Muriate).....	G. C. McPhetridge, London.....
3336		W. S. Allen & Co., Liberty.....
3834		Duncan & Theiss, La Grange.....
3599	Old Time 3-8-10 (Muriate).....	Buechel Produce Exchange, Buechel....
3183	Old Time 3-8-6 (Muriate)	G. C. McPhetridge, London.....
3337		Lenn Webb, Hawesville
3338		Conner Hayden Co., Bardstown.....
3600		Craig's Feed Store, Owensboro.....
3835		Buechel Produce Exchange, Buechel....
3836	Old Time 2-12-6 (Muriate).....	Buechel Produce Exchange, Buechel....
3339	Old Time 2-10-4 (Muriate).....	Keene Ice Co., Scottsville.....
3340		T. T. Coe, Jamestown.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
2.03	2.20	8.30	4.21	.....	21.4	22.7	3325
1.86	2.09	8.45	4.33	.....	.....	22.7	3326
1.93	2.26	8.40	3.90	.....	.....	22.7	3327
1.86	2.06	8.55	4.28	.....	.....	22.6	3595
.....	.....	14.20	7.73	.....	25.2	26.3	3328
.....	.....	19.10	.....	.....	24.0	22.9	3596
4.98	5.46	8.90	6.01	.....	37.8	37.0	3178
5.55	5.97	8.30	6.05	.....	.....	38.1	3329
5.74	6.20	8.80	6.34	.....	.....	39.9	3330
5.11	5.56	8.45	5.90	.....	.....	36.7	3597
6.02	6.41	8.65	6.69	.....	.....	41.0	3831
4.46	4.66	10.95	7.30	.....	35.5	38.2	3331
3.90	4.18	12.70	.....	.....	28.4	29.9	3332
3.70	4.16	10.40	6.59	.....	33.2	35.0	3598
3.75	4.29	10.50	4.83	.....	30.8	33.4	3179
3.73	4.09	10.95	4.56	.....	.....	32.9	3333
3.87	4.33	10.70	4.52	.....	.....	33.4	3832
3.60	3.99	8.60	6.57	.....	30.8	32.2	3180
4.08	4.48	8.45	6.23	.....	.....	33.3	3334
4.02	4.35	8.65	6.31	.....	.....	33.2	3833
3.64	3.99	9.25	4.31	.....	28.4	30.2	3181
3.65	3.99	9.05	4.52	.....	.....	30.3	3335
2.88	3.32	9.95	3.48	.....	26.1	27.7	3182
3.07	3.40	10.15	3.20	.....	.....	27.9	3336
2.81	3.29	9.40	3.71	.....	.....	27.3	3834
2.72	3.06	8.50	10.84	.....	32.1	33.9	3599
2.78	3.12	8.35	6.53	.....	27.3	28.8	3183
2.89	3.20	8.60	6.21	.....	.....	29.0	3337
2.67	2.95	9.25	6.32	.....	.....	29.1	3338
2.75	3.12	8.60	6.92	.....	.....	29.5	3600
2.51	2.90	8.10	6.60	.....	.....	28.0	3835
1.95	2.40	12.70	6.43	.....	28.6	31.4	3836
1.41	1.62	11.70	5.87	.....	23.8	26.8	3339
1.87	2.17	10.95	4.62	.....	.....	26.8	3340

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
The Davison Chemical Corporation, Hopkins Fertilizer Division New Albany, Ind.—Continued		
3341	Old Time 2-8-4 (Muriate).....	A. L. Harmon & Son, Junction City.....
3601		J. H. Mitchell, Corbin.....
3837		Buechel Produce Exchange, Buechel...
3936		Hardin County Milling Co., Elizabethtown
3184	Old Time 3-8-16 (Muriate 6, Sulfate 10)	Buechel Produce Exchange, Buechel...
3509		Buechel Produce Exchange, Buechel...
3342	Old Time 20% Superphosphate.....	Keene Ice Co., Scottsville.....
3838		G. C. McPhetridge, London.....
3343	Old Time Nitrate of Soda 16%....	Climax Roller Mills, Shelbyville.....
3344	Old Time 0-10-4 (Muriate).....	W. S. Allen & Co., Liberty.....
3345	Old Time 0-10-10 (Muriate).....	V. R. Sanders, Rocky Hill.....
The Davison Chemical Corporation, Read Phosphate Division, Nashville, Tenn		
3346	Read 2-8-4 (Muriate).....	W. M. Jasper, West Somerset.....
3602		O. M. Holloway, Sedalia.....
3839		Wm. Jasper, West Somerset.....
3840		Henry Durham, Greensburg.....
3938		E. S. Ferrill & Son, Buffalo.....
3939		Corbett Hardware Co., Elizabethtown..
3940	Read 2-10-4 (Muriate)	Sam Terry, Big Clifty.....
3347	Read 3-8-6 (Muriate).....	Farmers Supply Co., Lebanon.....
3348		O. F. Shearer, Monticello.....
3349		Fulkerson Bros., Sonora.....
3350	Read 3-10-3 (Muriate).....	O. F. Shearer, Monticello.....
3841		Wm. Jasper, West Somerset.....
3842		Henry Durham, Greensburg.....
3351	Read 4-8-4 (Muriate).....	Farmers Supply Co., Lebanon.....
3603		Guenther Hardware Co., Owensboro...
3604		C. S. Brent & Co., Lexington.....
3352	Read 4-12-8 (Muriate).....	W. M. Jasper, West Somerset.....
3605		Guenther Hardware Co., Owensboro...
3353	Read 5-10-5 (Muriate).....	Hagen-Landrum-Cook & Co., Tompkinsville
3606	Read 6-8-6 (Muriate).....	Cadiz Hardware Co., Cadiz.....
3354	Read 0-10-4 (Muriate).....	J. B. Hatcher & Co., Park City.....
3843		Wm. Jasper, West Somerset.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
1.85	2.10	9.30	4.03	.....	21.4	23.4	3341
1.76	2.06	8.15	5.69	.....	.....	23.8	3601
2.08	2.46	8.30	5.26	.....	.....	24.9	3837
1.73	2.11	8.40	4.05	.....	.....	22.3	3936
2.76	2.98	8.35	12.32	4.50 ^a	39.3	35.3	3184
3.03	3.20	8.70	15.65	4.52 ^a	.....	40.4	3509
.....	.....	20.30	.....	.....	24.0	24.4	3342
.....	.....	20.05	.....	.....	.....	24.1	3838
.....	16.20	.....	.....	.....	44.8	45.4	3343
.....	.....	11.05	4.54	.....	16.8	18.7	3344
.....	.....	11.55	9.37	.....	24.0	25.1	3345
1.96	2.14	8.15	4.96	.....	21.4	23.2	3346
1.99	2.19	8.20	5.35	.....	.....	23.9	3602
1.96	2.16	8.85	4.04	.....	.....	23.0	3839
2.03	2.24	8.25	4.00	.....	.....	22.5	3840
2.09	2.24	8.10	4.12	.....	.....	22.5	3938
1.67	2.04	8.05	4.25	.....	.....	21.9	3939
1.73	2.15	10.35	5.23	.....	23.8	26.2	3940
3.01	3.27	8.50	5.80	.....	27.3	28.6	3347
3.11	3.34	8.70	5.94	.....	.....	29.3	3348
3.02	3.37	8.55	6.59	.....	.....	30.0	3349
2.98	3.25	10.20	3.38	.....	26.1	27.7	3350
1.64	1.82	11.55	2.85	.....	.....	23.7	3841
3.12	3.36	9.15	4.17	.....	.....	27.7	3842
4.15	4.38	8.50	4.25	.....	28.4	30.6	3351
3.84	4.09	8.55	4.70	.....	.....	30.2	3603
3.80	4.01	8.25	4.75	.....	.....	29.6	3604
3.65	3.75	11.20	8.65	.....	38.0	37.0	3352
3.30	3.41	12.20	7.51	.....	.....	35.6	3605
5.16	5.33	10.35	4.53	.....	35.5	36.5	3353
5.40	5.65	8.20	6.13	.....	37.8	37.0	3606
.....	.....	10.80	4.27	.....	16.8	18.1	3354
.....	.....	9.80	4.47	.....	.....	17.1	3843

^a 5.50 percent chlorine allowed.

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
The Davison Chemical Corporation, Read Phosphate Division, Nashville, Tenn.—Continued		
3355	Read 0-10-10 (Muriate)	Thompson's Hardware Co., Trenton
3356	Read 20% Superphosphate	N. E. West, Gamaliel
3357		V. C. Cooksey & Co., Fountain Run
3607		Garfield Mercantile Co., Garfield
3844		Henry Durham, Greensburg
3845		Wm. Jasper, West Somerset
3941		E. A. Cohen, Greenville
3942		E. T. Meador, Scottsville
3608	Sulfate of Ammonia 20.50%	C. S. Brent & Co., Lexington
3610	Muriate Potash 50%	C. S. Brent & Co., Lexington
3185	Davco Granulated 20% Super-phosphate	Marion Milling Co., Marion
3359		Farmers Supply Co., Lebanon
3360		Hughes Hardware Co., Franklin
3611		C. S. Brent & Co., Lexington
3612		Lambert-Grisham Hdw. Co., Henderson
3943		E. S. Ferrill and Son, Buffalo
3944		Guenther Hardware Co., Owensboro
3945		Eldred Hardware Co., Princeton
3186	Davco Granulated 3-8-6 (Muriate)	Farmers Supply Co., Ashland
3361		Hughes Hardware Co., Franklin
3613		Garrard Mills, Lancaster
3614		C. S. Brent & Co., Lexington
3362	Davco Granulated 4-8-4 (Muriate)	Geo. P. Taylor Co., Burnside
3615		Garrard Mills, Lancaster
3187	Davco Granulated 6-8-6 (Muriate)	Farmers Supply Co., Ashland
3616		H. B. Willoughby, Richmond
3617	Davco Granulated 6-8-6 (Sulfate)	C. S. Brent & Co., Lexington
3363	Nitrate of Soda 16%*	Robert James, Franklin
Federal Chemical Co., Inc., Louisville, Ky.		
3364	Federal 2-10-4 (Muriate)	Burnside Milling Co., Burnside
3365		W. A. Robinson, Bremen
3618		William L. Howard, Whitesville
3619		W. H. Brock & Co., Winchester
3366	Federal 2-12-6 (Muriate)	W. A. Robinson, Bremen

* Not registered.

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
.....	.....	10.30	9.80	.....	24.0	24.1	3355
.....	.....	19.70	.....	.....	24.0	23.6	3356
.....	.....	20.30	.....	.....	.....	24.4	3357
.....	.....	20.20	.....	.....	.....	24.2	3607
.....	.....	20.10	.....	.....	.....	24.1	3844
.....	.....	18.60	.....	.....	.....	22.3	3845
.....	.....	19.55	.....	.....	.....	23.5	3941
.....	.....	18.65	.....	.....	.....	22.4	3942
.....	20.88	.....	.....	.....	36.9	37.6	3608
.....	.....	.....	50.88	.....	45.0	45.8	3610
.....	.....	19.50	.....	.....	24.0	23.4	3185
.....	.....	19.30	.....	.....	.....	23.2	3359
.....	.....	19.65	.....	.....	.....	23.6	3360
.....	.....	19.35	.....	.....	.....	23.2	3611
.....	.....	19.80	.....	.....	.....	23.8	3612
.....	.....	19.85	.....	.....	.....	23.8	3943
.....	.....	20.25	.....	.....	.....	24.3	3944
.....	.....	19.90	.....	.....	.....	23.9	3945
2.98	3.03	8.20	5.90	.....	27.3	27.5	3186
3.09	3.18	8.50	6.32	.....	.....	28.9	3361
3.07	3.17	8.40	6.31	.....	.....	28.8	3613
3.17	3.30	8.15	5.79	.....	.....	28.3	3614
3.28	3.39	8.50	5.43	.....	28.4	28.6	3362
4.01	4.14	8.00	4.65	.....	.....	29.7	3615
6.06	6.14	8.05	6.22	.....	37.8	38.6	3187
5.47	5.60	8.00	6.31	.....	.....	36.8	3616
5.86	5.97	8.00	5.91	1.24	37.8	37.6	3617
.....	16.20	.....	.....	.....	44.8	45.4	3363
1.74	2.00	10.20	4.19	.....	23.8	24.3	3364
1.83	2.02	10.85	4.09	.....	.....	25.0	3365
1.82	2.08	10.20	3.88	.....	.....	24.2	3618
1.70	1.96	10.00	4.15	.....	.....	23.8	3619
1.79	1.96	11.00	5.25	.....	28.6	26.4	3366

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Federal Chemical Co., Inc., Louisville, Ky.—Continued		
3188	Federal 3-10-3 (Muriate).....	Buntain Feed & Produce Co., Lawrenceburg
3189		M. T. Riley, Paducah.....
3367		Corbett Hardware Co., Elizabethtown..
3368		Edwards Feed Store, Campbellsville....
3846		Grigsby & Co., Bardstow.....
3847		J. F. Stamper, Waynesburg.....
3946		Otis H. Stevens, Beaver Dam.....
3369	Federal 3-8-6 (Sulfate).....	I. K. Miller & Sons, Campbellsville.....
3370		H. D. Jones, Glasgow.....
3190	Federal 3-8-10 (Muriate).....	Merchants Grocery, Pikeville.....
3620		Vine Street Feed Store, Lexington.....
3621		Crawford-Ferguson Co., Benton.....
3371	Federal 4-8-6 (Muriate).....	E. F. Pearson, Franklin.....
3191	Federal 4-10-4 (Muriate).....	William Stanley, South Corbin
3947	Federal 4-10-6 (Muriate).....	A. Bresler, Son & Co., Owensboro.....
3372		R. T. Horton, Utica.....
3622		J. P. Page & Son, Barlow.....
3623		Wilson Hardware Co., Henderson.....
3624		A. Bresler, Son & Co., Owensboro.....
3373	Federal 4-12-8 (Muriate).....	J. F. Stamper, Waynesburg.....
3625		R. S. Toles, Clintonville.....
3626		A. B. Beale & Son, Murray.....
3192	Federal 5-10-5 (Muriate).....	Bell Grocery, Baxter.....
3193		Martin's Cash Store, Vicco.....
3374		W. A. Robinson, Bremen.....
3628	Federal 6-8-3 (Sulfate)*.....	R. S. Toles, Clintonville.....
3629	Federal 6-8-6 (Muriate).....	Gray Tucker, Cynthiana.....
3632		Williamsburg Hdw. Co., Williamsburg..
3633	Federal 4-12-0	R. S. Toles, Clintonville
3375	Federal 0-10-4	L. T. Rexroat, Russell Springs.....
3634		Williamsburg Hdw. Co., Williamsburg..
3635		Crawford-Ferguson Co., Benton.....
3636		A. B. Beale & Son, Murray.....
3637	Federal 45% Superphosphate.....	Williamsburg Hdw. Co., Williamsburg..
3376	Federal Nitrate of Soda 16%.....	E. F. Pearson, Franklin.....
3639		John P. Fister, Lexington.....

* Not registered.

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
2.92	3.17	9.90	3.71	-----	26.1	27.4	3188
2.86	3.09	10.00	3.71	-----	-----	27.3	3189
2.63	2.93	10.05	3.18	-----	-----	26.1	3367
2.65	2.99	9.55	3.43	-----	-----	26.0	3368
2.74	3.16	9.85	3.29	-----	-----	26.8	3846
2.52	2.84	10.10	3.44	-----	-----	26.2	3847
2.71	3.05	10.05	3.51	-----	-----	27.0	3946
2.25	2.60	7.15	7.85	2.02	27.3	27.1	3369
2.75	3.24	8.35	5.79	-----	-----	28.3	3370
2.88	3.19	8.75	8.11	-----	32.1	31.4	3190
3.08	3.39	8.95	9.14	-----	-----	33.6	3620
3.23	3.36	8.05	9.67	-----	-----	33.0	3621
1.77	1.93	9.20	13.72	-----	30.8	34.3	3371
3.47	3.81	9.40	5.30	-----	-----	31.0	3191
2.69	3.91	10.90	5.15	-----	33.2	33.0	3947
3.06	3.39	9.95	7.00	-----	-----	32.2	3372
3.21	3.38	8.70	5.26	-----	-----	28.6	3622
3.71	3.95	9.60	6.36	-----	-----	33.0	3623
3.68	4.20	9.95	5.43	-----	-----	33.2	3624
3.44	3.77	12.70	7.84	-----	38.0	37.8	3373
3.73	4.10	11.70	8.52	-----	-----	38.6	3625
3.57	3.77	12.15	7.47	-----	-----	36.7	3626
4.50	4.89	10.00	5.19	-----	35.5	35.3	3192
4.89	5.28	10.30	5.22	-----	-----	37.1	3193
5.03	5.22	10.35	5.22	-----	-----	37.0	3374
5.69	6.04	8.30	3.55	-----	34.2	35.4	3628
4.40	4.87	9.35	7.47	-----	37.8	37.2	3629
6.05	6.41	9.00	5.33	-----	-----	39.8	3632
3.69	4.05	12.45	-----	-----	28.4	29.1	3633
-----	-----	10.70	4.06	-----	16.8	17.7	3375
-----	-----	11.55	4.15	-----	-----	18.8	3634
-----	-----	9.95	4.38	-----	-----	17.2	3635
-----	-----	8.95	4.56	-----	-----	16.2	3636
-----	-----	34.50	-----	-----	54.0	41.4	3637
-----	16.24	-----	-----	-----	44.8	45.5	3376
-----	16.08	-----	-----	-----	-----	45.0	3639

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Federal Chemical Co., Inc., Louisville, Ky.—Continued		
3377	Federal Sulfate of Ammonia 20.50%	Miss Agnes Davis, Russellville..... John P. Fister, Lexington.....
3640		
3948	Federal Kalko-Phos 20%.....	Grayson County Supply Co., Leitchfield
3378	Federal Limed Superphosphate 20%	E. F. Pearson, Franklin..... J. F. Stamper, Waynesburg..... J. W. Stamper, Waynesburg.....
3641		
3848		
3949	"Money Maker Br." 2-8-4 (Muriate)	E. C. Foltz, Louisville.....
3950	"Money Maker Br." 3-10-3 (Muriate)	Hall Seed Co., Louisville.....
3951	"Money Maker Br." 3-8-6 (Muriate)	E. C. Foltz, Louisville.....
3952	"Money Maker Br." 20% Superphosphate	E. C. Foltz, Louisville.....
3642	Federal 9-18-18 (Muriate).....	L. F. Thurmond, Murray.....
3631	Federal 6-10-10 (Muriate).....	Clarence LeBus, Lexington.....
3643	Federal 6-12-12 (Muriate)	R. S. Toles, Clintonville.....
3627	Federal 4-12-8 (Sulfate).....	W. H. Brock & Co., Winchester.....
3630	Federal 6-8-6 (Sulfate).....	Tuxedo Feed Store, Lexington.....
3953	Daybreak 2-8-4 (Muriate).....	Grayson County Supply Co., Leitchfield
3194	Daybreak 3-8-6 (Muriate).....	Laurel Grocery, East Bernstadt..... Gray Tucker, Cynthiana..... Campbell's Mill, Kevil.....
3644		
3645		
3195	Daybreak 4-8-4 (Muriate).....	Sandy Valley Grocery, Ashland..... W. A. Robinson, Bremen..... Union Grocery Co., Morehead.....
3379		
3646		
3380	Daybreak 20% Superphosphate.....	Corbett Hardware Co., Elizabethtown... Henry Allen & Son, Brandenburg.....
3647		
3381	1st Prize 2-8-4 (Muriate).....	L. T. Rexroat, Russell Springs..... William L. Howard, Whitesville..... L. T. Rexroat, Russell Springs.....
3648		
3849		
3649	1st Prize 20% Superphosphate.....	R. S. Toles, Clintonville..... L. T. Rexroat, Russell Springs.....
3850		

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
.....	20.04	.....	.....	.....	36.9	36.1	3377
.....	20.80	.....	.....	.....	.....	37.4	3640
.....	.....	20.00	.....	.....	24.0	24.0	3948
.....	.....	20.95 ^c	.....	.....	24.0	25.1	3378
.....	.....	19.20 ^c	.....	.....	.....	23.0	3641
.....	.....	19.45 ^c	.....	.....	.....	23.3	3848
1.96	2.24	8.70	4.44	.....	21.4	23.6	3949
2.92	3.33	10.90	3.72	.....	26.1	29.2	3950
2.74	3.05	8.00	5.76	.....	27.3	27.2	3951
.....	.....	19.40	.....	.....	24.0	23.3	3952
7.15	7.24	15.90	14.48	.....	74.7	61.8	3642
5.95	6.32	9.95	10.26	.....	45.0	46.4	3631
5.40	5.79	12.40	12.42	.....	49.8	50.1	3643
3.52	3.88	12.80	7.88	1.74	38.0	38.4	3627
5.41	5.93	8.75	5.81	.....	37.8	38.2	3630
1.17	1.51	8.55	1.93	.....	21.4	17.9	3953
2.67	2.99	8.30	6.02	.....	27.3	27.7	3194
2.76	3.09	8.65	6.18	.....	.....	28.6	3644
3.10	3.28	9.05	6.00	.....	.....	29.5	3645
3.23	3.66	7.40	4.21	.....	28.4	26.7	3195
3.50	3.71	8.60	4.29	.....	.....	28.5	3379
3.93	4.28	8.75	3.88	.....	.....	30.1	3646
.....	.....	20.35	.....	.....	24.0	24.4	3380
.....	.....	19.80	.....	.....	.....	23.8	3647
1.70	1.90	8.35	3.82	.....	21.4	21.3	3381
1.95	2.17	8.80	4.01	.....	.....	23.0	3648
2.02	2.30	7.95	4.44	.....	.....	22.9	3849
.....	.....	19.50	.....	.....	24.0	23.4	3649
.....	.....	19.90	.....	.....	.....	23.9	3850

^c Not limed.

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Federal Chemical Co., Inc., Louisville, Ky.—Continued		
3382	Fox 2-8-4 (Muriate)	Hagen, Landrum, Cook & Co., Tompkinsville
3196	Fox 3-12-4 (Muriate)	William Stanley, South Corbin
3197	Fox 3-8-6 (Muriate)	Royalton Wholesale Co., Royalton
3650		A. B. Beale & Son, Murray
3198	Fox 4-8-4 (Muriate)	Farmers Supply Co., Pikeville
3383	Fox 20% Superphosphate	Hagen, Landrum, Cook & Co., Tompkinsville
3651		A. B. Beale & Son, Murray
3851		G. M. Estes, Science Hill
3954		A. B. Beale & Son, Murray
3384	Globe 2-8-4 (Muriate)	J. L. Taggart, Depoy
3385		J. S. Squires & Co., Cane Valley
3386		W. M. Coleman, Smiths Grove
3652		W. L. Farris, Farmington
3653		Williamsburg Hardware Co., Williamsburg
3852		I. K. Miller & Son, Campbellsville
3955	Globe 3-12-4 (Muriate)	Vine Grove Feed Co., Vine Grove
3387	Globe 3-8-6 (Muriate)	J. S. Whittinghill, Fordsville
3388		Otis H. Stevens, Beaver Dam
3389		Grigsby & Co., Bardstown
3654		Edw. C. Hawkins, Paducah
3655		Fletcher Hardware Co., London
3656		Jones & Co., La Center
3199	Globe 4-8-4 (Muriate)	H. T. Hackney, Harlan
3657		A. T. Sanders, Lancaster
3658		John T. Jones, Benton
3390	Globe 20% Superphosphate	J. S. Squires & Co., Cane Valley
3391		L. C. Locke, Hiseville
3659		Mrs. Hayden Miles, Ekron
3660		Edw. C. Hawkins, Paducah
3853		I. K. Miller & Son, Campbellsville
3854		J. S. Squires & Co., Cane Valley
3956		Vine Grove Feed Co., Vine Grove
3957		Holmes & Ivy, Mayfield
3392	O-K 2-8-4 (Muriate)	Edwards Feed Store, Campbellsville
3661		Crawford-Ferguson Co., Benton
3662		Florence Feed Store, Florence
3200	O-K 3-8-6 (Muriate)	Lewis Wholesale Co., Whitesburg
3201		Martin's Cash Store, Vicco

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
1.78	1.95	8.45	4.24	.....	21.4	22.1	3382
2.86	3.10	12.10	4.23	.....	29.7	30.5	3196
2.87	3.13	8.45	6.41	.....	27.3	28.8	3197
2.70	2.84	8.00	5.60	.....	.....	26.3	3650
3.69	3.96	9.40	4.06	.....	28.4	30.0	3198
.....	.....	19.90	.....	.....	24.0	23.9	3383
.....	.....	20.95	.....	.....	.....	25.1	3651
.....	.....	19.30	.....	.....	.....	23.2	3851
.....	.....	20.00	.....	.....	.....	24.0	3954
1.91	2.12	8.40	4.60	.....	21.4	23.0	3384
1.69	1.93	8.30	3.97	.....	.....	21.5	3385
2.02	2.24	8.65	4.06	.....	.....	23.1	3386
1.90	2.11	8.75	4.02	.....	.....	22.7	3652
1.87	2.06	7.80	4.12	.....	.....	21.5	3653
1.97	2.20	7.80	4.47	.....	.....	22.4	3852
2.67	2.96	12.20	4.29	.....	29.7	30.2	3955
2.67	3.02	7.90	6.13	.....	27.3	27.5	3387
2.89	3.21	8.40	6.58	.....	.....	29.2	3388
2.71	3.01	8.15	5.78	.....	.....	27.3	3389
3.00	3.16	8.55	6.01	.....	.....	28.5	3654
2.78	3.10	8.50	6.26	.....	.....	28.6	3655
3.18	3.49	11.95	6.03	.....	.....	33.8	3656
2.72	2.99	8.95	3.99	.....	28.4	26.0	3199
3.52	3.86	8.90	4.02	.....	.....	29.0	3657
4.69	5.03	8.30	4.16	.....	.....	32.6	3658
.....	.....	20.20	.....	.....	24.0	24.2	3390
.....	.....	20.45	.....	.....	.....	24.5	3391
.....	.....	19.70	.....	.....	.....	23.6	3659
.....	.....	19.55	.....	.....	.....	23.5	3660
.....	.....	18.60	.....	.....	.....	22.3	3853
.....	.....	19.40	.....	.....	.....	23.3	3854
.....	.....	20.00	.....	.....	.....	24.0	3956
.....	.....	20.10	.....	.....	.....	24.1	3957
1.82	2.06	8.05	4.36	.....	21.4	22.1	3392
2.00	2.26	8.75	5.79	.....	.....	25.4	3661
2.14	2.38	8.95	4.40	.....	.....	24.4	3662
2.89	3.16	8.75	6.20	.....	27.3	29.0	3200
2.73	2.98	9.10	6.00	.....	.....	28.6	3201

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Federal Chemical Co., Inc., Louisville, Ky.—Continued		
3202		M. T. Riley, Paducah.....
3663		H. C. Lawrence, Lynn Grove.....
3664		Florence Feed Store, Florence.....
3958		Crawford & Ferguson Co., Benton.....
3959		M. T. Riley, Paducah.....
3203	O.K 4-8-4 (Muriate).....	Martin's Cash Store, Vicco.....
3665		M. T. Riley, Paducah.....
3393	O-K 20% Superphosphate.....	Hobert Warner, Nancy.....
3666		Crawford-Ferguson Co., Benton.....
3855		Edwards Feed Store, Campbellsville.....
3960		Crawford-Ferguson Co., Benton.....
3961		M. T. Riley, Paducah.....
Hutson Chemical Co., Murray		
3962	Hutson's Limed Superphosphate 20%	N. P. Hutson, Murray.....
3667	Hutson's 4-10-6 (Muriate).....	N. P. Hutson, Murray.....
3668	Hutson's 4-12-8 (Muriate).....	N. P. Hutson, Murray.....
3669		Whittemore Bros., Hickory.....
3670	Hutson's 4-10-12 (Muriate).....	Swann & Miller, Lynn Grove.....
3671		N. P. Huston, Murray
International Agricultural Corporation, Cincinnati, O., Wales, Tenn.		
3672	International 6-8-6 (Sulfate).....	Roy H. Vice, Owingsville.....
3673		H. B. Willoughby, Richmond.....
3674		Denton Mercantile Co., Hillsboro.....
3675	International 4-12-8 (Sulfate).....	B. C. Rose, Tolesboro.....
3676		Richardson Grocery Co., Mt. Sterling....
3394	International 4-10-6 (Sulfate).....	C. M. Brown, West Somerset.....
3677		B. C. Rose, Tolesboro.....
3678		H. B. Willoughby, Richmond.....
3679		C. A. Mitchell, Clay.....
3680		Lexington Seed Co., Lexington.....
3681		C. A. Mitchell, Clay.....
3682	International 4-10-4 (Muriate)....	Youtsey Brothers, Alexandria.....
3683	International 4-8-4 (Sulfate).....	Denton Mercantile Co., Hillsboro.....
3684	International 4-8-4 (Muriate).....	Richardson Grocery Co., Mt. Sterling....
3395	International 3-8-6 (Sulfate).....	M. C. Raymer, Bowling Green.....
3685		H. B. Willoughby, Richmond.....
3686		B. C. Rose, Tolesboro.....
3687		Irvington Truck Line, Irvington.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
3.06	3.20	8.75	6.45	.....	.....	29.4	3202
3.13	3.32	8.85	6.59	.....	.....	30.2	3663
2.60	2.84	8.30	6.00	.....	.....	27.1	3664
3.03	3.25	9.50	6.43	.....	.....	30.5	3958
2.63	2.82	9.40	5.49	.....	.....	27.7	3959
3.96	4.23	8.15	4.83	.....	28.4	30.4	3203
3.35	3.92	8.80	3.97	.....	.....	29.0	3665
.....	.....	19.55	.....	.....	24.0	23.5	3393
.....	.....	21.00	.....	.....	.....	25.2	3666
.....	.....	19.30	.....	.....	.....	23.2	3855
.....	.....	20.00	.....	.....	.....	24.0	3960
.....	.....	19.40	.....	.....	.....	23.3	3961
.....	.....	19.95 ^c	.....	.....	24.0	23.9	3962
3.57	4.05	9.75	6.01	.....	33.2	33.1	3667
3.60	4.12	11.75	8.55	.....	38.0	38.8	3668
3.26	4.04	11.25	9.18	.....	.....	38.7	3669
3.24	3.83	9.65	12.06	.....	40.4	39.5	3670
3.36	3.84	9.80	12.60	.....	.....	40.3	3671
4.70	5.35	10.20	5.96	.....	37.8	38.1	3672
5.39	6.12	7.95	6.43	.....	.....	38.7	3673
5.35	6.03	8.45	6.54	.....	.....	39.1	3674
3.68	4.17	12.45	8.58	.....	38.0	39.8	3675
3.64	4.13	12.25	8.54	.....	.....	39.4	3676
2.83	3.80	10.35	5.97	.....	33.2	32.9	3394
3.17	4.15	10.25	6.50	.....	.....	34.6	3677
3.04	4.06	9.95	6.59	.....	.....	34.1	3678
3.18	3.79	10.20	6.26	.....	.....	33.0	3679
3.14	4.12	10.30	6.23	.....	.....	34.3	3680
3.20	3.80	10.65	5.99	.....	.....	33.3	3681
3.35	3.96	10.30	4.62	.....	30.8	31.8	3682
2.98	3.45	8.85	5.06	1.16	28.4	28.8	3683
3.72	4.25	8.45	5.03	.....	.....	31.1	3684
2.47	2.65	9.75	4.92	3.68	27.3	26.9	3395
2.69	3.05	8.10	5.89	.....	.....	27.5	3685
2.75	3.12	8.35	6.30	.....	.....	28.5	3686
2.77	3.13	8.25	6.19	.....	.....	28.3	3687

^c Not limed.

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
International Agricultural Corporation, Cincinnati, O., Wales, Tenn.—		
Continued		
3204	International 3-8-6 (Muriate)	Richardson Grocery, Mt. Sterling
3396		M. C. Raymer, Bowling Green
3397		J. L. Wilson, Canmer
3688		Denton Mercantile Co., Hillsboro
3398	International 3-10-3 (Muriate)	C. M. Brown, West Somerset
3963		C. L. Jewell & Son, Louisville
3964	International 2-10-4 (Muriate)	C. L. Jewell & Son, Louisville
3399	International 2-8-4 (Muriate)	J. S. Squires & Co., Cane Valley
3400		Cecilian Milling Co., Elizabethtown
3689		Denton Mercantile Co., Hillsboro
3856		J. S. Squires & Co., Cane Valley
3965		C. L. Jewell & Son, Louisville
3205	International 4-12-0	Richardson Grocery, Mt. Sterling
3966	International 0-14-7 (Muriate)	C. L. Jewell & Son, Louisville
3857	International 0-10-4 (Muriate)	M. C. Raymer, Bowling Green
3206	International 43% Super-phosphate	Harlan Fruit Co., Harlan
3401	International 20% Super-phosphate	C. M. Brown, West Somerset
3402		R. R. Cox, Oakland
3403		Cecilian Milling Co., Cecilia
3690		Irvington Truck Line, Irvington
3691		Denton Mercantile Co., Hillsboro
3858		C. M. Brown, West Somerset
3859		J. H. Fedders & Son, Covington
3860		M. C. Raymer, Bowling Green
3861		J. S. Squires, Cane Valley
3967		C. L. Jewell & Son, Louisville
3968		Cecilian Milling Co., Elizabethtown
Knoxville Fertilizer Co., Knoxville and Nashville, Tenn.		
3207	"Pulverized Brand" 5-10-5 (Muriate)	Powell Hackney Grocery, Hazard
3208		Jellico Grocery, Harlan
3404		Ross-Hollingsworth & Co., Tompkinville
3692	"Pulverized Brand" 4-12-8 (Muriate)	W. H. Brock & Co., Winchester
3862		H. B. McCleary, Auburn
3693	"Pulverized Brand" 4-10-6 (Muriate)	W. H. Brock & Co., Winchester

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
2.55	2.95	8.75	5.96	.....	27.3	28.0	3204
2.77	2.93	8.45	5.96	.....	.....	27.6	3396
2.51	2.93	8.10	6.41	.....	.....	27.7	3397
2.54	2.93	8.15	6.00	.....	.....	27.2	3688
2.55	3.02	10.25	3.38	.....	26.1	26.9	3398
2.53	2.95	10.70	3.56	.....	.....	27.4	3963
1.64	1.97	10.05	5.13	.....	23.8	25.1	3964
1.64	1.96	8.20	4.22	.....	21.4	21.8	3399
1.69	2.01	8.20	4.35	.....	.....	22.1	3400
1.57	1.95	8.10	4.40	.....	.....	21.8	3689
1.63	2.02	10.40	3.57	.....	.....	23.8	3856
1.78	2.12	9.00	4.86	.....	.....	24.1	3965
3.37	3.99	11.85	.....	.....	28.4	28.2	3205
.....	.....	15.00	7.28	.....	25.2	26.7	3966
.....	.....	12.30	4.35	.....	16.8	20.0	3857
.....	.....	42.70	.....	.....	51.6	51.2	3206
.....	.....	20.10	.....	.....	24.0	24.1	3401
.....	.....	20.60	.....	.....	.....	24.7	3402
.....	.....	20.65	.....	.....	.....	24.8	3403
.....	.....	21.05	.....	.....	.....	25.3	3690
.....	.....	20.00	.....	.....	.....	24.0	3691
.....	.....	20.65	.....	.....	.....	24.8	3858
.....	.....	20.70	.....	.....	.....	24.8	3859
.....	.....	20.65	.....	.....	.....	24.8	3860
.....	.....	20.70	.....	.....	.....	24.8	3861
.....	.....	20.40	.....	.....	.....	24.5	3967
.....	.....	20.50	.....	.....	.....	24.6	3968
4.80	4.97	10.65	5.01	.....	35.5	36.2	3207
4.84	5.02	10.65	5.06	.....	.....	36.4	3208
4.15	4.35	10.65	5.03	.....	.....	34.0	3404
3.99	4.16	11.95	8.12	.....	38.0	38.6	3692
4.07	4.27	12.10	7.36	.....	.....	38.3	3862
3.70	3.92	10.20	6.30	.....	33.2	33.5	3693

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Knoxville Fertilizer Co., Knoxville and Nashville, Tenn.—Continued		
3209	Triple "A" Brand 4-10-4	
3694	(Muriate)	Renfro Supply Co., Williamsburg..... Grays Hardware Co., Grays.....
3405	"Home Grower Brand" 4-8-8	
	(Muriate)	Vick Smith, Bowling Green.....
3210	Basic 4-8-4 (Muriate)	Jellico Grocery, Harlan.....
3695	Basic 3-10-3 (Muriate)	Grays Hardware Co., Grays.....
3406		Allison Shipp, Campbellsville.....
3211	Knox 3-8-6 (Muriate)	Renfro Supply Co., Williamsburg.....
3212	Basic 3-8-6 (Muriate)	Bohannon Coal & Feed Co., Versailles..
3407		Ross-Hollingsworth Co., Tompkinsville
3696		W. Bryant Robertson, Adairville.....
3863		Vick Smith, Bowling Green.....
3408	3-8-5 (Muriate 4, Sulfate 1)	W. T. Hall, Elkton.....
3213	3-8-5 (Muriate 3, Sulfate 2)	Richmond Hatchery, Richmond.....
3409		Greenwell's Feed Store, Lebanon.....
3410		G. H. Bowles & Son, Glasgow.....
3411		Ross-Hollingsworth Co., Tompkinsville
3412		Vick Smith, Bowling Green.....
3697		Bohannon Coal & Feed Co., Versailles..
3214	2-10-4 (Muriate)	Jellico Grocery Co., Corbin.....
3413		C. M. Langdon, Science Hill.....
3414		H. B. McClary, Auburn.....
3698		W. Bryant Robertson, Adairville.....
3864		H. B. McClary, Auburn.....
3865		Allison Shipp, Campbellsville.....
3866		C. M. Langdon, Science Hill.....
3969		Graves Ice Co., Scottsville.....
3415	Basic 0-10-4 (Muriate)	J. E. Bryant, Scottsville.....
3416		Harris Feed Co., Franklin.....
3417		Williams Produce Co., Russell Springs..
3418		Allison Shipp, Campbellsville.....
3867		C. M. Langdon, Science Hill.....
3868		Allison Shipp, Campbellsville.....
3869		Harris Feed Co., Franklin.....
3215	Knox Magnesia Phosphate 20%	Powell Hackney Grocery, Hazard.....
3419		Stuart's Grocery, Horse Cave.....
3420		Harris Feed Co., Franklin.....
3421		Giltner Seed & Feed Co., Eminence.....
3870		T. W. Hall, Elkton.....
3871		C. M. Langdon, Science Hill.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
4.03	4.21	10.70	4.31	.....	30.8	32.8	3209
3.59	3.77	10.25	4.83	.....	.....	31.3	3694
3.61	3.80	8.55	7.87	.....	33.2	33.0	3405
3.82	3.98	8.50	4.04	.....	28.4	29.0	3210
2.94	3.16	10.25	3.66	.....	26.1	27.8	3695
2.83	3.01	10.90	3.16	.....	.....	27.4	3406
3.08	3.20	8.80	6.19	.....	27.3	29.2	3211
3.01	3.14	8.45	6.19	.....	27.3	28.6	3212
2.79	2.93	8.30	6.21	.....	.....	27.7	3407
2.74	2.98	8.85	5.91	.....	.....	28.1	3696
2.66	2.90	8.35	6.05	.....	.....	27.4	3863
2.59	3.13	8.65	5.04	2.96 ^a	26.1	27.4	3408
2.75	3.22	8.65	5.03	2.26 ^b	26.1	27.7	3213
2.50	2.89	7.95	5.24	2.52 ^b	.....	25.9	3409
2.31	2.73	8.25	5.16	2.12 ^b	.....	25.7	3410
2.43	2.92	8.35	5.09	2.48 ^b	.....	26.4	3411
2.50	2.95	7.95	5.26	2.38 ^b	.....	26.2	3412
2.65	3.14	8.45	5.60	2.10 ^b	.....	27.9	3697
1.81	1.92	10.25	4.27	.....	23.8	24.1	3214
2.55	2.72	10.50	4.26	.....	.....	27.2	3413
1.41	1.65	10.00	4.36	.....	.....	23.0	3414
1.58	1.82	10.15	4.44	.....	.....	23.9	3698
1.67	1.91	10.55	4.12	.....	.....	24.3	3864
1.91	2.13	9.85	4.60	.....	.....	25.3	3865
1.12	1.27	10.20	4.27	.....	.....	21.8	3866
1.71	1.97	10.30	4.34	.....	.....	24.5	3969
.....	.....	10.20	4.29	.....	16.8	17.4	3415
.....	.....	10.00	4.73	.....	.....	17.7	3416
.....	.....	10.00	4.49	.....	.....	17.4	3417
.....	.....	10.35	4.22	.....	.....	17.5	3418
.....	.....	10.65	4.45	.....	.....	18.1	3867
.....	.....	9.95	4.67	.....	.....	17.5	3868
.....	.....	10.20	4.57	.....	.....	17.7	3869
.....	.....	20.35	.....	.....	24.0	24.4	3215
.....	.....	19.65	.....	.....	.....	23.6	3419
.....	.....	19.50	.....	.....	.....	23.4	3420
.....	.....	20.10	.....	.....	.....	24.1	3421
.....	.....	19.75	.....	.....	.....	23.7	3870
.....	.....	19.95	.....	.....	.....	23.9	3871

^a 3.55 percent chlorine allowed.
^b 2.85 percent chlorine allowed.

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Knoxville Fertilizer Co., Knoxville, and Nashville, Tenn.—Continued		
3422	Nitrate of Soda 16%.....	Fountain Run Feed Co., Fountain Run..
3423	"Amnite Brand" 15-0-0.....	J. E. Bryant, Scottsville.....
3424		Allison Shipp, Campbellsville.....
3699		W. Bryant Robertson, Adairville.....
3872		Vick Smith, Bowling Green.....
3700	Sulfate of Potash 48%.....	Ralph Hutton, Berry
3701	"Pulverized Brand" 6-8-6 (Sulfate)	W. H. Brock & Co., Winchester.....
3873	Basic 0-10-6 (Muriate)	Allison Shipp, Campbellsville.....
3874		H. B. McCleary, Auburn.....
3970		G. H. Bowles & Son, Glasgow.....
Louisville Fertilizer Co. (Armour owned), Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.		
3702	Louisville 20% Superphosphate..	Yopp Seed Co., Paducah.....
3971		H. D. Jones, Glasgow.....
Merchants Fertilizer Co., Charleston, S. C.		
3216	Merco Special 5-10-5 (Muriate)..	Bell County Supply Co., Middlesboro....
3217	Merco Special 3-8-6 (Muriate)....	Bell County Supply Co., Middlesboro....
3218	Merco Special 2-8-4 (Muriate)....	Bell County Supply Co., Middlesboro....
3219	Merco Special 0-10-4 (Muriate)..	Bell County Supply Co., Middlesboro....
Morris Fertilizer Co. (Armour owned), Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.		
3703	Morris Old Black Joe 2-10-4 (Muriate)	Duncan and Umstead, Dixon.....
3704	Morris 20% Superphosphate.....	Duncan and Umstead, Dixon.....
3972		Duncan and Umstead, Dixon.....
National Chemical Co., Louisville, Ky.		
3425	Big Pay Brand 4-16-4 (Muriate)..	W. D. Cunningham, Webbs Cross Roads
3705	Big Pay Brand 4-12-8 (Muriate)..	Browning Coal & Feed Co., Winchester
3973	Big Pay Brand 4-10-4 (Muriate)..	Bunton Seed Co., Louisville.....
3426	Big Pay Brand 3-10-3 (Muriate)..	Dowell Grocery, Liberty.....
3508	Big Pay Brand 3-8-10 (Sulfate)..	Harmon & Gammon, Perryville.....
3974		Bunton Seed Co., Louisville.....
3706	Big Pay Brand 3-8-6 (Muriate)....	Jolly and Anderson, Cloverport.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
.....	16.08	.....	.....	.....	44.8	45.0	3422
.....	14.86	.....	.....	.....	27.0	26.8	3423
.....	13.50	.....	.....	.....	.....	24.3	3424
.....	14.82	.....	.....	.....	.....	26.7	3699
.....	14.62	.....	.....	.....	.....	26.3	3872
.....	.....	.....	50.12	.....	52.8	55.1	3700
3.88	5.60	8.65	8.48	.....	37.8	40.2	3701
.....	.....	10.65	6.47	.....	19.2	20.6	3873
.....	.....	10.35	6.62	.....	.....	20.4	3874
.....	.....	10.60	6.89	.....	.....	21.0	3970
.....	.....	20.15	.....	.....	24.0	24.2	3702
.....	.....	19.85	.....	.....	.....	23.8	3971
4.07	4.78	10.05	5.06	.....	35.5	34.9	3216
2.49	3.01	8.55	6.27	.....	27.3	28.3	3217
1.68	2.01	8.25	4.28	.....	21.4	22.1	3218
.....	.....	10.05	4.83	.....	16.8	17.9	3219
1.52	1.86	10.20	3.71	.....	23.8	23.2	3703
.....	.....	20.20	.....	.....	24.0	24.2	3704
.....	.....	19.95	.....	.....	.....	23.9	3972
3.58	3.83	16.35	5.17	.....	38.0	39.2	3425
3.61	3.79	11.70	9.29	.....	38.0	38.5	3705
3.46	3.65	10.05	5.04	.....	30.8	30.9	3973
2.22	2.82	8.10	2.76	.....	26.1	22.9	3426
2.42	2.59	7.55	11.34	4.52	32.1	31.7	3508
2.57	2.78	9.85	3.07	.....	26.1	25.2	3974
2.89	3.16	7.50	6.52	.....	27.3	27.9	3706

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
National Chemical Co., Louisville, Ky.—Continued		
3427 3428	Big Pay Brand 3-8-6 (Sulfate)	W. D. Cunningham, Webbs Cross Roads Dowell Grocery, Liberty
3429 3430	Big Pay Brand 2-8-4 (Muriate)	W. D. Cunningham, Webbs Cross Roads Dowell Grocery, Liberty
North American Fertilizer Co., Louisville, Ky.		
3707	N. Am. 6-8-6 (Muriate)	Browning Coal & Feed Co., Winchester
3708		Stanley Penn, Lexington
3709	N. Am. 6-8-3 (Sulfate)	W. C. Howk, Cynthiana
3710	N. Am. 5-10-5 (Muriate)	L. L. Mauney, S. Corbin
3711	N. Am. 4-8-4 (Muriate)	Stanley Penn, Lexington
3431 3432 3875	N. Am. 3-10-3 (Muriate)	Henry Durham, Greensburg S. P. Tuggle, Albany Parker Cooper, Monticello
3433	N. Am. 3-8-10 (Sulfate)	U. L. Rogers, Gradyville
3434 3435 3436	N. Am. 3-8-6 (Muriate)	Henry Durham, Greensburg Lewisport Mill Co., Lewisport
3712 3713		R. D. Reynolds, Cave City J. J. Carter, Waynesburg Stanley Penn, Lexington
3437 3438 3876 3877 3975	N. Am. 2-8-4 (Muriate)	Henry Durham, Greensburg W. W. Owens, Russell Springs W. W. Owens, Russell Springs
3878 3879	N. Am. 2-12-6 (Muriate)	Henry Durham, Greensburg Miller Hardware Co., Magnolia
3878 3879	N. Am. 2-12-6 (Muriate)	Parker Cooper, Monticello W. W. Owens, Russell Springs
3439 3440 3880 3881	N. Am. 0-20-0	Lewisport Mill Co., Lewisport S. P. Tuggle, Albany Henry Durham, Greensburg W. W. Owens, Russell Springs
3976	N. Am. Sulfate of Ammonia 20.50%	Bunton Seed Co., Louisville
Price Chemical Co., Louisville, Ky.		
3220	6-8-6 (Muriate)	St. Matthews Produce Exchange, St. Matthews
3714		Harralson's Feed & Seed Store, Owensboro
3715		H. W. Noland, Richmond

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
2.51	2.66	7.70	5.45	3.84	27.3	25.1	3427
2.63	2.79	7.60	5.41	3.88	.....	25.4	3428
1.70	1.82	7.15	3.55	.....	21.4	19.2	3429
1.69	1.83	8.05	3.95	.....	.....	20.8	3430
5.40	5.61	7.95	6.32	.....	37.8	36.8	3707
5.00	5.15	7.95	6.53	.....	.....	35.4	3708
5.02	5.30	8.90	4.19	.....	34.2	34.3	3709
4.53	4.77	9.75	5.14	.....	35.5	34.6	3710
3.82	3.96	7.60	4.58	.....	28.4	28.5	3711
2.25	2.91	8.30	2.80	.....	26.1	23.5	3431
2.49	2.84	9.20	3.02	.....	.....	24.6	3432
2.51	2.81	9.00	3.07	.....	.....	24.3	3875
3.54	3.67	7.20	8.18	3.82	32.1	31.3	3433
2.63	2.78	8.00	5.74	.....	27.3	26.2	3434
2.40	2.55	7.75	5.35	.....	.....	24.7	3435
2.79	3.03	7.60	5.72	.....	.....	26.6	3436
2.54	2.67	7.40	5.90	.....	.....	25.3	3712
2.57	2.70	7.20	6.23	.....	.....	25.6	3713
1.67	1.84	7.60	3.98	.....	21.4	20.3	3437
1.66	1.79	7.60	3.41	.....	.....	19.5	3438
1.65	1.87	6.10	5.63	.....	.....	20.6	3876
1.93	2.15	6.50	4.98	.....	.....	21.3	3877
1.54	1.75	7.20	4.68	.....	.....	20.4	3975
1.85	2.01	11.45	6.48	.....	28.6	28.6	3878
1.95	2.12	11.70	6.51	.....	.....	29.3	3879
.....	.....	19.50	.....	.....	24.0	23.4	3439
.....	.....	18.80	.....	.....	.....	22.6	3440
.....	.....	19.70	.....	.....	.....	23.6	3880
.....	.....	19.80	.....	.....	.....	23.8	3881
.....	19.88	.....	.....	.....	36.9	35.8	3976
4.99	5.57	8.45	6.49	.....	37.8	37.4	3220
4.95	5.58	7.85	6.54	.....	.....	36.8	3714
5.44	5.97	8.55	6.15	.....	.....	38.5	3715

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Price Chemical Co., Louisville, Ky.—Continued		
3716	6-8-6 (Sulfate)	H. W. Noland, Richmond
3717		Monarch Milling Co., Mt. Sterling
3221	5-10-5 (Muriate)	St. Matthews Produce Exchange,
		St. Matthews
3441		Walters & Thompson, Shelbyville
3442	4-12-8 (Sulfate)	Farmers Supply Co., Eminence
3718		Fox Brothers, Winchester
3222	4-12-0	Trent & Board, Irvington
3223		Monarch Milling Co., Mt. Sterling
3443		Stewart & Co., Munfordville
3224	4-10-4 (Muriate)	Frank J. Murphy, Valley Station
3225	4-8-8 (Muriate)	St. Matthews Produce Exchange,
		St. Matthews
3226	4-8-6 (Muriate)	St. Matthews Produce Exchange,
		St. Matthews
3719	4-8-4 (Muriate)	Harralson's Feed & Seed Store,
		Owensboro
3444	3-10-3 (Muriate)	Walters & Thompson, Shelbyville
3227	3-8-10 (Muriate)	Triplett Store, S. Corbin
3720	3-8-10 (Sulfate)	Clover Farm Store, Sparta
3721		Monarch Milling Co., Mt. Sterling
3228	3-8-6 (Muriate)	Frank J. Murphy, Valley Station
		St. Matthews Produce Exchange,
		St. Matthews
3229		Trent & Bond, Irvington
3722		
3445	3-8-6 (Sulfate)	Farmers Supply Co., Eminence
3723		Lemons Bros., Cynthiana
3724	2-12-6 (Muriate)	Monarch Milling Co., Mt. Sterling
3884		G. M. Hedrick, Monticello
3230	2-10-4 (Muriate)	Noah Hall, Morehead
3725		Monarch Milling Co., Mt. Sterling
3885		Thomas Emerson, Eubank
3726	2-8-4 (Muriate)	Harralson's Feed & Seed Store,
		Owensboro
3727		R. Z. Hook, Hardinsburg
3977		W. L. Anderson & Son, Caneyville

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
4.87	5.49	9.30	7.20	.....	37.8	39.0	3716
5.53	6.13	9.35	6.11	1.96	.....	40.0	3717
4.55	5.08	9.80	5.20	.....	35.5	35.8	3221
4.27	4.84	10.45	5.37	.....	.....	35.9	3441
3.62	4.04	13.25	8.20	.....	38.0	39.9	3442
3.33	3.82	12.70	9.03	2.98	.....	39.5	3718
3.29	4.15	12.20	.....	.....	28.4	29.2	3222
3.21	4.19	12.20	.....	.....	.....	29.3	3223
2.94	3.89	12.35	.....	.....	.....	28.4	3443
3.51	4.05	10.25	4.37	.....	30.8	31.7	3224
3.76	4.28	8.10	8.16	.....	33.2	34.5	3225
3.59	4.08	8.20	6.53	.....	30.8	32.0	3226
3.65	4.14	7.55	4.40	.....	28.4	28.8	3719
2.49	2.93	10.20	3.94	.....	26.1	27.2	3444
2.75	3.21	9.30	8.95	.....	32.1	33.1	3227
2.87	3.38	9.40	10.70	.....	32.1	36.1	3720
3.06	3.54	8.80	10.57	.....	.....	35.6	3721
2.72	3.16	8.30	6.79	.....	27.3	29.2	3228
2.55	2.97	8.45	6.02	.....	.....	27.8	3229
2.58	3.06	8.40	6.41	.....	.....	28.5	3722
2.71	3.11	8.65	6.38	.....	.....	28.9	3445
2.80	3.24	8.80	6.76	.....	.....	30.0	3723
1.68	2.18	12.65	6.47	.....	28.6	30.6	3724
1.71	2.07	12.15	6.08	.....	.....	29.1	3884
1.68	2.01	10.20	4.06	.....	23.8	24.2	3230
1.77	2.18	10.90	4.56	.....	.....	26.2	3725
1.54	2.07	10.00	4.56	.....	.....	24.7	3885
1.87	2.26	7.95	4.85	.....	21.4	23.3	3726
1.96	2.35	8.05	5.10	.....	.....	24.0	3727
1.86	2.35	9.10	4.51	.....	.....	24.6	3977

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Price Chemical Co., Louisville, Ky.—Continued		
3728	0-20-0	Monarch Milling Co., Mt. Sterling.....
3729		Trent & Bond, Irvington.....
3730		W. R. McClure, Mt. Vernon.....
3731		R. Z. Hook, Hardinsburg.....
3886		Thomas Emerson, Eubank.....
3887		G. M. Hedrick, Monticello.....
3888		Walters & Thompson, Shelbyville.....
3978		Irvington Truck Line, Irvington.....
3979		A. L. Hazle, Hodgenville.....
3980	0-20-0 With 200-lb. Sterlized Tobacco Stems	Vine Grove Feed Co., Vine Grove.....
Standard Wholesale Phosphate & Acid Works, Inc., Baltimore, Md		
3231	Standard 3-8-6 (Muriate).....	Kentucky Wholesale Co., Pikeville.....
3232	Standard 5-10-5 (Muriate).....	Kentucky Wholesale Co., Pikeville.....
3233	Standard 20% Superphosphate.....	Hubert Williamson, Hinkle.....
Swift & Co., National Stock Yards, Ill.		
3732	Vigoro Brand 4-12-4 (Muriate).....	Dorsey Brothers & Fisher, Carlisle.....
3890		O. S. Honaker, Lexington.....
4002		Bunton Seed Co., Louisville.....
3234	Red Steer 6-12-6 (Sulfate).....	L. N. Kratzer, Mt. Sterling.....
3733	Red Steer 5-10-5 (Muriate).....	Geo. C. Goode, Covington.....
3235	Red Steer 4-12-4 (Muriate).....	L. N. Kratzer, Mt. Sterling.....
3734		Geo. C. Goode, Covington.....
3446	Red Steer 4-10-6 (Sulfate).....	Swift & Co., Bowling Green.....
3735		Dorsey Bros. & Fisher, Carlisle.....
3736		Millersburg Coal & Lumber Co., Millersburg
3447	Red Steer 4-8-4 (Muriate).....	Shelby Feed & Seed Co., Shelbyville...
3737		Dorsey Brothers & Fisher, Carlisle.....
3448	Red Steer 3-8-6 (Muriate).....	Knight Bros., Pleasureville.....
3449	Red Steer 3-8-6 (Sulfate)	Knight Bros., Pleasureville.....
3738		Spears-Kiser Co., Paris.....
3739	Red Steer 2-10-4 (Muriate).....	Dorsey Brothers & Fisher, Carlisle.....
3740		Morganfield Hardware Co., Morganfield
3741		L. N. Kratzer, Mt. Sterling.....
3982		Scottsville Feed Co., Scottsville.....
3450	Red Steer 0-10-4 (Muriate).....	Scottsville Feed Co., Scottsville.....
3983		Scottsville Feed Co., Scottsville.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
-----	-----	20.20	-----	-----	24.0	24.2	3728
-----	-----	20.40	-----	-----	-----	24.5	3729
-----	-----	20.40	-----	-----	-----	24.5	3730
-----	-----	20.60	-----	-----	-----	24.7	3731
-----	-----	20.35	-----	-----	-----	24.4	3886
-----	-----	19.70	-----	-----	-----	23.6	3887
-----	-----	20.05	-----	-----	-----	24.1	3888
-----	-----	20.15	-----	-----	-----	24.2	3978
-----	-----	20.20	-----	-----	-----	24.2	3979
-----	-----	19.65	-----	-----	24.0	23.6	3980
4.06	4.49	8.65	6.38	-----	27.3	33.8	3231
4.75	5.17	10.40	5.64	-----	35.5	37.3	3232
-----	-----	19.90	-----	-----	24.0	23.9	3233
4.32	4.55	12.80	5.14	-----	33.2	37.5	3732
4.46	4.67	12.00	5.56	-----	-----	37.4	3890
3.83	4.04	12.90	5.02	-----	-----	35.6	4002
5.56	5.86	12.15	6.25	1.58	42.6	42.6	3234
4.56	4.95	10.30	6.20	-----	35.5	37.1	3733
3.69	4.01	12.60	4.22	-----	33.2	34.2	3235
3.75	4.14	12.55	4.43	-----	-----	34.9	3734
3.55	3.85	10.55	6.05	-----	33.2	33.4	3446
3.58	3.94	11.25	6.32	-----	-----	34.9	3735
3.67	4.03	10.95	6.26	-----	-----	34.8	3736
3.71	4.00	8.30	4.30	-----	28.4	29.1	3447
3.64	4.03	9.30	4.68	-----	-----	30.9	3737
2.80	3.05	8.20	6.23	-----	27.3	28.0	3448
2.76	3.04	8.40	5.97	-----	27.3	27.9	3449
2.77	3.12	8.50	6.26	-----	-----	28.6	3738
1.83	2.20	12.25	4.69	-----	23.8	28.0	3739
1.52	1.89	12.25	4.05	-----	-----	26.2	3740
1.75	2.12	12.35	4.69	-----	-----	27.9	3741
1.74	2.05	11.35	4.26	-----	-----	25.9	3982
-----	-----	10.00	4.77	-----	16.8	17.7	3450
-----	-----	10.35	4.23	-----	-----	17.5	3983

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Swift & Co., National Stock Yards, Ill.—Continued		
3451	Red Steer 20% Superphosphate	Scottsville Feed Co., Scottsville.....
3742		L. N. Kratzer, Mt. Sterling.....
3743		Geo. C. Goode, Covington.....
3984		Scottsville Feed Co., Scottsville.....
Tennessee Chemical Co. (Armour owned), Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.		
3744	Ox 4-12-8 (Muriate)	John W. Whittemore, Hickory.....
3452	Ox 4-8-4 (Muriate)	J. H. Maholland, Franklin.....
3453	Old Black Joe 2-10-4 (Muriate)	W. H. Arnold & Co., Madisonville.....
3454		S. B. Bilbro, Nortonville.....
3455		J. H. Maholland, Franklin.....
3456	Ox 0-10-4 (Muriate)	J. H. Maholland, Franklin.....
3891		J. H. Maholland, Franklin.....
3745	Ox 2-8-4 (Muriate)	M. L. Levi, Pembroke.....
3457	Ox 20% Superphosphate	Thompson's Hardware Co., Trenton.....
3458		J. H. Maholland, Franklin.....
3892		J. H. Maholland, Franklin.....
3985		W. H. Arnold & Co., Madisonville.....
3986		Sexton Bros., Murray.....
3236	Ox 4-8-4 (Sulfate)	V. B. Nuckols, Elkton.....
Virginia-Carolina Chemical Corp., Inc., Cincinnati, O., Mt. Pleasant, Tenn.		
3459	V-C 4-10-6 (Muriate)	Scottsville Feed Co., Scottsville.....
3746		Young Lumber Co., Beaver Dam.....
3747		Ratliff Bros., Carlisle.....
3748	V-C 3-10-3 (Muriate)	Sturgis Implement & Hardware Co., Sturgis.....
3749		Ratliff Bros., Carlisle.....
3750		Dyche Jones, London.....
3894		G. M. Hedrick, Monticello.....
3895		Dyche Jones, London.....
3988		Young Lumber Co., Beaver Dam.....
3989		M. G. Williams Co., Hopkinsville.....
3990		Miss Agnes Davis, Russellville.....
3238	V-C 3-8-6 (Muriate)	Lawrence Bowling, Catlettsburg.....
3460		Miss Agnes Davis, Russellville.....
3461		W. A. Conyers, Hardyville.....
3751		Coleman Feed & Supply Co., Marion.....
3752		Red Hot Coal Co., Owingsville.....
3462	V-C 0-10-4 (Muriate)	Polson & Co., Glasgow.....
3463		George Richardson, Somerset.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid Available	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total				Guaranty	Found	
-----	-----	20.15	-----	-----	24.0	24.2	3451
-----	-----	20.30	-----	-----	-----	24.4	3742
-----	-----	20.05	-----	-----	-----	24.1	3743
-----	-----	20.90	-----	-----	-----	25.1	3984
3.75	4.06	12.50	8.32	-----	38.0	39.2	3744
3.77	4.04	9.30	4.75	-----	28.4	31.0	3452
1.83	2.12	10.20	5.00	-----	23.8	25.7	3453
1.64	1.95	10.35	4.23	-----	-----	24.3	3454
1.64	1.95	10.10	4.09	-----	-----	23.9	3455
-----	-----	10.10	4.52	-----	16.8	17.5	3456
-----	-----	10.55	4.24	-----	-----	17.8	3891
1.91	2.23	7.65	4.51	-----	21.4	22.4	3745
-----	-----	20.40	-----	-----	24.0	24.5	3457
-----	-----	20.30	-----	-----	-----	24.4	3458
-----	-----	20.15	-----	-----	-----	24.2	3892
-----	-----	20.10	-----	-----	-----	24.1	3985
-----	-----	20.00	-----	-----	-----	24.0	3986
3.41	4.53	9.15	4.74	1.56	28.4	32.5	3236
3.22	3.92	10.20	6.66	-----	33.2	34.0	3459
3.84	4.05	10.35	6.59	-----	-----	34.5	3746
3.84	4.08	10.50	6.22	-----	-----	34.3	3747
2.83	3.18	10.30	4.06	-----	26.1	28.4	3748
2.89	3.11	10.00	3.56	-----	-----	27.2	3749
2.98	3.21	10.00	3.35	-----	-----	27.3	3750
3.03	3.22	9.95	3.46	-----	-----	27.4	3894
2.99	3.21	10.30	3.20	-----	-----	27.4	3895
2.75	2.99	10.85	3.57	-----	-----	27.8	3988
2.90	3.13	10.90	3.36	-----	-----	28.2	3989
2.89	3.13	11.00	3.35	-----	-----	28.2	3990
2.96	3.15	8.55	6.43	-----	27.3	29.0	3238
2.22	2.92	8.40	6.81	-----	-----	28.5	3460
2.84	3.00	8.30	6.35	-----	-----	28.1	3461
2.93	3.23	8.50	6.56	-----	-----	29.4	3751
2.92	3.09	8.55	6.32	-----	-----	28.7	3752
-----	-----	10.25	4.44	-----	16.8	17.6	3462
-----	-----	10.00	4.58	-----	-----	17.5	3463

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Virginia-Carolina Chemical Corp., Inc., Cincinnati, O., Mt. Pleasant, Tenn.—Continued		
3464		Scottsville Feed Co., Scottsville.....
3753		Coleman Feed & Supply Co., Marion...
3896		I. K. Miller and Son, Campbellsville.....
3897		George Richardson, Somerset.....
3991		Scottsville Feed Co., Scottsville.....
3465	V-C 20% Superphosphate.....	G. P. Jones & Son, Hartford.....
3466		George Richardson, Somerset.....
3467		M. G. Williams Co., Hopkinsville.....
3468		Scottsville Feed Co., Scottsville.....
3754		W. S. Smith, Sebree.....
3898		Geo. Richardson, Somerset
3899		Dellis K. Hurt, Elkton.....
3992		Bowling Green Milling Co., Branch, Franklin
3903	V-C 0-10-10 (Muriate).....	U. C. Janes, Gradyville.....
3472	V-C 6-8-6 (Muriate).....	Bowling Green Milling Co., Bowling Green
3758		Woodford Spears & Sons, Paris.....
3473	V-C 4-12-8 (Muriate).....	Miss Agnes Davis, Russellville.....
3759		A. T. Sanders, Lancaster.....
3474	V-C 2-10-4 (Muriate).....	W. Z. Lawson, Whitley City.....
3475	V-C 4-12-8 (Sulfate).....	Shelby Feed & Seed Co., Shelbyville...
3760	V-C 4-10-6 (Sulfate).....	Cottingham Grain Co., Henderson.....
3761	V-C 4-12-4 (Muriate).....	A. T. Sanders, Lancaster.....
3476	V-C 3-8-10 (Muriate 4, Sulfate 6).....	Miss Agnes Davis, Russellville.....
3477	V-C 3-8-6 (Sulfate).....	Shelby Feed & Seed Co., Shelbyville...
3478		U. C. Janes, Gradyville.....
3479	V-C Muriate of Potash 50%.....	Scottsville Feed Co., Scottsville.....
3993	V-C 10-6-4 (Muriate).....	Cottingham Grain Co., Henderson.....
3755	V-C 4-8-4 (Muriate).....	Richmond Hatchery, Richmond.....
3239	V-C 3-12-4 (Muriate).....	Knox County Supply Co., Barbourville
3756		Young Lumber Co., Beaver Dam.....
3240	V-C 2-12-6 (Muriate).....	Lawrence Bowling, Catlettsburg.....
3900		George Richardson, Somerset.....
3994		Miss Agnes Davis, Russellville.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
.....	.....	11.00	4.16	.....	.....	18.2	3464
.....	.....	10.95	4.22	.....	.....	18.2	3753
.....	.....	10.00	4.48	.....	.....	17.4	3896
.....	.....	10.20	4.28	.....	.....	17.4	3897
.....	.....	10.55	4.03	.....	.....	17.5	3991
.....	.....	20.90	.....	.....	24.0	25.1	3465
.....	.....	20.15	.....	.....	.....	24.2	3466
.....	.....	20.65	.....	.....	.....	24.8	3467
.....	.....	20.70	.....	.....	.....	24.8	3468
.....	.....	20.40	.....	.....	.....	24.5	3754
.....	.....	20.25	.....	.....	.....	24.3	3898
.....	.....	20.75	.....	.....	.....	24.9	3899
.....	.....	20.80	.....	.....	.....	25.0	3992
.....	.....	9.95	11.35	.....	.....	25.6	3903
5.75	5.91	8.40	6.57	.....	37.8	38.7	3472
6.09	6.28	8.00	6.34	.....	.....	39.2	3758
3.44	3.65	12.00	8.53	.....	38.0	37.4	3473
3.87	4.06	12.45	7.99	.....	.....	38.7	3759
1.86	2.04	10.00	4.52	.....	23.8	24.6	3474
4.02	4.17	12.15	8.42	.....	38.0	39.3	3475
3.49	3.77	10.25	6.30	.....	33.2	33.1	3760
4.20	4.37	12.00	5.83	.....	.....	36.7	3761
2.65	2.87	8.05	9.64	3.72 ^a	32.1	31.3	3476
2.95	3.15	8.15	6.57	.....	27.3	28.7	3477
2.92	3.14	8.30	6.47	.....	.....	28.7	3478
.....	.....	.....	48.36	.....	45.0	43.5	3479
7.81	8.20	7.55	4.46	.....	47.0	43.1	3993
3.79	3.98	8.35	4.46	.....	28.4	29.3	3755
2.93	3.16	12.05	4.58	.....	29.7	31.0	3239
2.82	3.10	12.75	4.94	.....	.....	32.1	3756
1.83	2.00	12.50	6.47	.....	28.6	29.8	3240
1.85	2.05	11.95	6.73	.....	.....	29.6	3900
1.99	2.26	12.15	5.76	.....	.....	29.4	3994

^a 3.80 percent chlorine allowed.

TABLE 2.—ANALYSES OF INSPECTION SAMPLES OF MIXED

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Virginia-Carolina Chemical Corp., Inc., Cincinnati, O., Mt. Pleasant, Tenn.—Continued		
3241	V-C 2-8-4 (Muriate).....	W. L. Rice & Son, Rice Station.....
3469		I. K. Miller & Sons, Campbellsville.....
3470		Polson & Co., Glasgow.....
3471		Farmers Supply Co., White Plains.....
3757		Young Lumber Co., Beaver Dam.....
3901		George Richardson, Somerset.....
3902		I. K. Miller & Sons, Campbellsville.....
3995		Scottsville Feed Co., Scottsville.....

FERTILIZERS, SUPERPHOSPHATE, AND FERTILIZER SALTS—Continued.

Nitrogen		Phosphoric acid	Potash	Chlorine	Index of relative value		Station number
Water soluble	Total	Available			Guaranty	Found	
1.80	1.95	8.55	4.21	.....	21.4	22.1	3241
1.80	1.98	8.30	4.31	.....	.....	22.1	3469
1.98	2.15	8.65	4.42	.....	.....	23.2	3470
1.90	2.07	7.85	4.38	.....	.....	21.9	3471
2.01	2.18	8.00	4.60	.....	.....	22.8	3757
1.85	2.05	8.00	4.42	.....	.....	22.1	3901
1.78	1.99	7.90	4.48	.....	.....	21.8	3902
1.76	1.97	8.80	4.28	.....	.....	22.6	3995

TABLE 3.—ANALYSES OF INSPECTION SAMPLES OF

Station number	Name and address of manufacturer, brand name and guaranty	From whom obtained
Armour Fertilizer Works, Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.		
3824	Armour's Bone Meal 2-27-0.....	Wilson, Miles & Co., Russellville.....
Colloidal Phosphate Sales Co., Dunnellon, Fla.		
3253	Florida Waste Pond Rock Phosphate	J. A. Wheeler, Dixon.....
The Davison Chemical Corporation, Hopkins Fertilizer Division, New Albany, Ind.		
3937	Old Time Raw Bone Meal 3.50-21.50-0	Hall Seed Co., Louisville.....
The Davison Chemical Corporation, Read Phosphate Division, Nashville, Tenn.		
3358	Raw Bone Meal 3.70-20-0.....	Hollingsworth-Young Hardware Co., Bowling Green
3609		C. S. Brent & Co., Lexington.....
Federal Chemical Co., Inc., Louisville, Ky.		
3638	Federal Pure Bone 2-27-0.....	Williamsburg Hardware Co., Williamsburg
M. R. Porter Co., Ocala, Fla.		
3882	Florida Waste Pond Rock Phosphate	Morris Brothers, Somerset.....
3883		G. M. Hedrick, Monticello.....
Ruhm Phosphate & Chemical Co., Mt. Pleasant, Tenn.		
3981	"Red Seal Brand" Ruhm's 33% Phosphate Rock	Aaron L. Moore, Leitchfield.....
3889		J. D. Reynolds, Horse Cave.....
Tennessee Chemical Co. (Armour owned), Cincinnati, O., Nashville, Tenn., Jeffersonville, Ind.		
3237	Ox Bone Meal 2-24-0*	V. B. Nuckols, Elkton.....
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.		
3893	Ground Open Hearth Basic Slag.....	H. G. Chilson, Columbia.....
3987		Polson & Co., Glasgow.....

* Not registered.

BONES, ROCK PHOSPHATE AND BASIC SLAG.

Nitrogen	Phosphoric acid	Index of relative value		Station number
		Guaranty	Found	
Total	Total			
2.21	28.20	34.0	35.9	3824
.....	19.40	9.0	9.7	3253
3.79	22.60	33.8	35.9	3937
4.25	20.95	32.9	35.8	3358
3.47	22.90	.....	35.2	3609
2.21	27.90	34.0	35.6	3638
.....	20.70	10.0	10.4	3882
.....	20.90	.....	10.5	3883
.....	33.70	16.5	16.9	3981
.....	32.75	.....	16.4	3889
2.48	27.10	31.0	35.8	3237
.....	11.95	8.0	11.95	3893
.....	11.60	.....	11.60	3987