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Fertilizer Inspection and Analysis; Spring, 1949

COLUMBIA, MISSOURI

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Fertilizer Inspection and Analysis; Spring, 1949

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This bulletin is published semi-annually to familiarize manufacturers, dealers, and users of commercial fertilizer with the results of the fertilizer inspection and analysis work carried on by the Missouri Agricultural Experiment Station. This issue covers the period January 1 to June 30, 1949.

The Missouri Fertilizer Law requires the seller to take certain steps before his fertilizers may legally be offered for sale in this state. Briefly these requirements may be summarized into three major classifications: (1) registration with the Experiment Station which must state the name of the manufacturer, the brand name, and the guaranteed chemical analysis, (2) the attachment of a dated registration tag to each container (tags must be purchased from the Experiment Station in the current year), (3) proper labeling or identification of the bag or container.

Though the law protects the manufacturer from competition of inferior goods, which often are not properly labeled, its primary purpose is the protection of the purchaser. The intent of this law is to make available to the purchaser complete information concerning the contents of fertilizers being offered for sale in Missouri. Since this effort is made to protect the buyer, it is highly recommended that he accept only those materials that are fully labeled as to manufacturer, brand name, and guaranteed analysis.

INSPECTION

The inspection work covered by this bulletin began March 1 and was carried on throughout the 1949 spring fertilizer season. Inspectors traveled a total of 10,754 miles calling on 520 dealers located in 273 Missouri cities, towns, and communities. Each county in the state is represented by at least two of the 1011 official samples collected. An effort was made to obtain samples of every brand and analysis of fertilizer offered for sale in Missouri. The number of samples collected of a particular brand does not necessarily indicate the proportion of that fertilizer sold in the state. However, an attempt was made to secure a large number of samples of those brands and grades which were sold more extensively. This resulted in the collection of one sample for approximately every 216 tons of commercial fertilizer sold during this period.

VIOLATIONS REPORT FOR SPRING 1949**1. SALE OF NON-REGISTERED FERTILIZER**

The following fertilizers were found on the open market prior to being registered with the Missouri Agricultural Experiment Station. In all cases registration was made upon notification.

20% Granulated Superphosphate—Offered for sale by the Missouri Farm Bureau Service Co., Jefferson City and found at Cole County Farm Bureau Service Co., Jefferson City and Carroll County Farm Bureau Service Co., Carrollton.

Pioneer 0-20-20—Manufactured by Pioneer Phosphate Co., Des Moines, Iowa, found on sale at Rolla Feed Mill, Rolla.

Pioneer 3-9-18—Manufactured by Pioneer Phosphate Co., Des Moines, Iowa, found on sale at Kennett Grain and Seed Co., Kennett.

Balanced Rose Food—Manufactured by Economy Nursery Co., Little Silver, N. J., found on sale at F. W. Woolworth, Kansas City.

T. H. S. Fertilizer—Manufactured by Missouri Valley Organic Fertilizer Mix. Inc., Union Star, Missouri, found on sale at above location.

Take-Hold—Manufactured by Victor Chemical Works, Chicago, Ill., found on sale at Standard Seed Co., Kansas City.

V-C Garden Fertilizer 4-12-4—Manufactured by Virginia-Carolina Chemical Corp., East St. Louis, Ill., found on sale at Lon Bowles General Merchandise Store, Centerville.

2. VIOLATIONS WITH RESPECT TO REGISTRATION TAGS

The stocks of fertilizers listed below did not have registration tags attached unless otherwise stated:

American Agricultural Chemical Co., National Stock Yards, Ill.

Agrico Phosphate and Potash 0-14-7, 375 bags at Farmers Equity Exchange, Bowling Green.

Agrico Phosphate and Potash 0-14-7, 125 bags at Kahoka Implement Co., Kahoka.

Agrico for Corn 2-14-8, 12 bags at Mexico Feed and Seed Co., Mexico.

AA Quality 3-12-12, 43 bags at Mexico Feed and Seed Co., Mexico.

Agrico for Midwest 3-12-12, 60 bags at St. Charles County Farm Bureau Service Co., St. Charles.

Agrico for Gardens 4-12-4, 15 bags at Long's Feed Store, Festus.

Swift and Company, National Stock Yards, Ill.

Red Steer 2-12-6, 70 bags at Huntsville Elevator and Feed Co., Huntsville.

Red Steer 2-12-6, 36 bags at Hahn Feed Co., Union.

Blenn 3-12-12, 32 bags at Clarence Grain Co., Clarence.

Blenn 3-12-12, 17 bags at Vandalia Roller Mill, Vandalia.

Red Steer 3-12-12, 120 bags at Vandalia Roller Mill, Vandalia.

Red Steer 4-12-4, 36 bags at Huntsville Elevator and Feed Co., Huntsville.

Missouri Farmers Association, Columbia, Mo.

Muriate of Potash 60%, 120 bags at M. F. A. Central Coop., Lancaster.

Muriate of Potash 60%, 23 bags at Farmers Produce Co., Shelbina.

Muriate of Potash 60%, 40 bags at M. F. A. Central Coop., Grant City.

Muriate of Potash 60%, 27 bags at M. F. A. Central Coop., Canton.

Muriate of Potash 60%, 32 bags at La Grange Elevator Co., La Grange.

Armour Fertilizer Works, East St. Louis, Ill.

Big Crop 2-12-6, 250 bags at Kahoka Implement Co., Kahoka.

Big Crop 2-12-6, 65 bags at Farmers Elevator and Exchange Co., Hannibal.

Big Crop 4-12-4, 23 bags at Piedmont Feed and Grocery Supply Co.,
Piedmont.

Velvetgreen 5-10-5, 70 bags at Piedmont Feed and Grocery Supply Co.,
Piedmont.

Darling and Company, East St. Louis, Ill.

Twelve-Twelve 0-12-12, 15 bags at Farmers Supply Company, Steelville.

Crop King 2-12-6, 50 bags at Farmers Supply Co., Steelville.

Big Potash 3-9-18, 400 bags at Missouri Soybean Co., Caruthersville.

Sure Winner, 3-12-12, 24 bags at Sloop's Produce and Feed Co., Queen
City.

Sears Roebuck and Co., Chicago, Ill.

Cross Country Bone Meal, 20 bags at Sears, Roebuck and Co., St. Louis.

Cross Country Cattle Manure, 30 bags at Sears, Roebuck and Co., St. Louis.

Cross Country Sheep Manure, 40 bags at Sears, Roebuck and Co., St. Louis.

Cross Country Bulb Food, 16 bags at Sears, Roebuck and Co., St. Louis.

Spencer Chemical Company, Pittsburg, Kans.

Spencer's Ammonium Nitrate 33.5%, 15 bags at Farmers Elevator and
Exchange Co., Hannibal.

Spencer's Ammonium Nitrate 33.5%, 200 bags at Kraft Seed and Grain
Co., Morehouse.

Spencer's Ammonium Nitrate 33.5%, 20 bags at Economy Feed Mill, Har-
risonville.

Spencer's Ammonium Nitrate 33.5%, 40 bags at De Mott Elevator Co.,
Maryville.

Farm Belt Fertilizer and Chemical Company, Kansas City, Mo.

Farm Belt 0-20-0, 30 bags at Farmers Elevator Co., Salisbury. Kansas Tags.

Farm Belt 0-20-0, 40 bags at Shultice Produce Co., Boonville. Kansas Tags.

Farm Belt 4-12-4, 15 bags at Bryan Produce Co., Princeton.

Thurston Chemical Company, Joplin, Mo.

Bem 3-12-12, 900 bags at Malden Grain Co., Malden.

Bem 4-12-4, 100 bags at Fayette Cooperative Mill and Elevator Co., Fay-
ette. Oklahoma Tags.

Bem Ammoniated Superphosphate 4-16-0, 50 bags at Arnold Elevator Mill,
Butler. Oklahoma Tags.

Schrock Fertilizer Service, Congerville, Ill.

Schrock Pulverized Phosphate Rock, 120 bags at Stover Milling Co., Stover.

- Schrock Hi-Test Natural Phosphate, 20 bags at H. F. Owen Mercantile Co., Forsyth.
- Schrock Pulverized Phosphate Rock, 200 bags at Rolla Feed Mill, Rolla.
- American Cyanamid Co., New York, N. Y.
- Aero Cyanamid, 24 bags at Dannen Mills and Elevator Co., St. Joseph.
- Aero-Phos Florida Natural Phosphate, 160 bags at Rohrback Produce Co., California.
- Consumers Cooperative Association, Kansas City, Mo.
- Coop 0-20-10, 750 bags at Ray-Carroll County Grain Growers Association, Richmond.
- Coop 4-16-8, 200 bags at United Cooperative Feed Mill, Liberty.
- Excell Laboratories, Inc., Chicago, Ill.
- New Plant Life, 96 bottles at Harnden's Seed Store, Kansas City.
- New Plant Life, 144 bottles at F. W. Woolworth Co., Columbia.
- Indiana Farm Bureau Cooperative Association, Indianapolis, Ind.
- Farm Bureau 0-20-0, 25 bags at M. F. A. Cooperative Association Brunswick. Indiana Tags.
- Farm Bureau 0-20-0, 110 bags at Boone County M. F. A. Exchange, Columbia. Indiana Tags.
- Pioneer Phosphate Co., Des Moines, Ia.
- Pioneer 3-9-18, 350 bags at Kennett Grain and Seed Co., Kennett. (1948 Tags)
- Pioneer 0-20-0, 300 bags at Rolla Feed Mill, Rolla.
- J. C. Adderly and Associates, Molino, Fla.
- Vitaloid Phosphate, 190 bags at Missouri Soybean Co., Caruthersville.
- Davison Chemical Corporation, Perry, Ia.
- Davco 3-9-18, 100 bags at Boone County Farm Bureau Service Co., Columbia.
- Economy Nursery Co., Little Silver, N. J.
- Balanced Rose Food, 24 bags at F. W. Woolworth Co., Kansas City.
- Gaylord Chemical Company, Kansas City, Mo.
- Sup-Ro, 12 boxes at Archias Seed Store, Sedalia.
- Kansas City Fertilizer Company, Kansas City, Mo.
- Archer Brand Dehydrated Sheep Manure, 36 bags at Archias Seed Store, Sedalia.
- Lange Brothers, St. Louis, Mo.
- Manure Salts 25%, 400 bags at Burchfield Milling Co., Marshfield.
- Lyons Fertilizer Company, Tampa, Fla.
- Lyons Mixture #20, 150 bags at St. Charles County Farm Bureau Service Company, St. Charles.
- McCormick and Company, Baltimore, Md.
- Hy-Gro, 12 bags at Standard Seed Company, Kansas City.

Plant-Chem Inc., San Francisco, Calif.

Lawn-Chem Salts, 12 bags at Standard Seed Company, Kansas City.

Rose Manufacturing Company, Beacon, N. Y.

Tri-Ogen Rose Food, 100 bags at Harndens Seed Company, Kansas City.

O. M. Scott and Sons, Marysville, Ohio

Scotts Turf Builder, 33 bags at Henry Schulz Feed Co., Webster Groves.

Stockdale Fertilizer Company, Morris, Ill.

Ovene, 24 bags at F. W. Woolworth Company, Kansas City.

Tennessee Corporation, New York, N. Y.

Mineralized Loma, 8-8-8, 3 bags at Arnold Elevator Mill, Butler.

Victor Chemical Works, Chicago, Ill.

Take-Hold, 1 bag at Standard Seed Company, Kansas City.

3. VIOLATIONS WITH RESPECT TO LABELING

M. F. A. Muriate of Potash 60%. This material was registered and offered for sale by Missouri Farmers Association, Columbia, Missouri. When found at several of the Missouri Farmers Cooperative stores it bore the label of the original manufacturer which did not agree with the registration certificate. The Missouri Fertilizer Law provides that the labels must make the same statements as made on the registration.

20% Granulated Superphosphate and 4-24-12. These fertilizers were being offered for sale by the Farm Bureau Service Company of Missouri and found at two of the above named company's stores. The only identifying labels to be found on the bags were tags which specified that the contents was 20% Granulated Superphosphate in the case of that material. The bags containing the 4-24-12 were not labeled in any manner. The law provides that each package or container shall have stamped or affixed to it a plainly printed statement which shall certify the brand name, the name and address of the manufacturer, and the guaranteed chemical composition of the fertilizer. These fertilizers were being marketed in violation of the above provisions.

25% Manure Salts. This material was found on sale at Burchfield Milling Company, Marshfield, and Kennett Grain and Seed Company, Kennett. In each case the manure salts was purchased in bulk through Lange Bros., St. Louis, Missouri, and was bagged by the dealer. The bags used for this purpose were devoid of labels. For the protection of the consumer the Missouri fertilizer law specifies that each container must be properly labeled as set forth in the preceding paragraph.

Pulverized Phosphate Rock. This material was marketed by Schrock Fertilizer Service, Congerville, Illinois. It was registered as Schrock Natural Phosphate and labeled Pulverized Phosphate Rock. On the registration certificate the company guaranteed 3 per cent available and 29 per cent insoluble phosphoric acid. However, the bags were labeled and sold only as containing 32 per cent total phosphoric acid. The law provides that only a bone fertilizer may be sold under a guarantee of total phosphoric acid.

TABLE 1.--SUMMARY OF AVERAGE VARIATIONS FROM MANUFACTURERS GUARANTEE (Spring 1948)

MANUFACTURER	Super-phosphate		Mixed Fertilizers						Miscellaneous Materials								All Fertilizers	
			Nitrogen		Avail. P ₂ O ₅		Potash		Nitrogen		Total in Bone		Avail. P ₂ O ₅		Potash			
	No. Samples	%	No. Samples	%	No. Samples	%	No. Samples	%	No. Samples	%	No. Samples	%	No. Samples	%	No. Samples	%	No. Samples	%
American Agricultural Chemical Co.	5	103.4	42	101.0	54	101.6	54	105.3	-	-	-	-	6	103.6	-	-	65	102.8
American Cyanamid Co.	-	-	-	-	-	-	-	-	3	100.0	-	-	10	114.3	-	-	13	104.7
Arkansas Fertilizer Co.	-	-	4	101.7	4	96.6	4	109.2	-	-	-	-	-	-	-	-	4	103.1
Armour Fertilizer Works	21	99.0	85	99.6	101	100.8	98	105.1	5	96.7	2	99.4	3	107.7	3	164.3	127	101.3
Blytheville Fertilizer Corp.	-	-	9	102.5	9	102.7	9	105.1	-	-	-	-	-	-	-	-	9	104.0
Central Farmers Fertilizer Co.	21	102.4	-	-	-	-	-	-	10	102.0	-	-	-	-	-	-	31	102.3
Consumers Cooperative Ass'n.	2	101.6	5	101.1	8	97.5	8	112.0	-	-	-	-	-	-	-	-	10	102.6
Darling and Co.	-	-	70	97.4	75	103.2	73	110.4	-	-	-	-	-	-	-	-	75	104.9
Davison Chemical Corp.	8	101.9	12	105.4	12	101.8	12	108.5	-	-	-	-	-	-	-	-	20	103.5
Excell Laboratories	-	-	4	113.9	4	159.3	4	126.4	-	-	-	-	-	-	-	-	4	128.0
Farm Belt Fertilizer & Chem. Co.	5	101.4	19	106.0	21	96.9	14	92.8	-	-	-	-	-	-	-	-	26	98.6
Gaylord Chemical Co.	-	-	3	110.5	3	135.8	3	115.4	-	-	-	-	-	-	-	-	3	120.6
A. H. Hoffman, Inc.	-	-	-	-	-	-	-	-	3	121.9	1	100.0	2	146.0	2	190.3	3	116.2
Hydroponic Chemical Co.	-	-	5	108.4	5	109.7	5	111.2	-	-	-	-	-	-	-	-	5	110.3
Lange Bros.	6	102.1	24	102.6	29	99.1	29	108.2	-	-	-	-	-	-	3	88.6	38	102.2
Milwaukee Sewerage Comm.	-	-	-	-	-	-	-	-	3	98.2	-	-	3	134.8	-	-	3	107.3
Missouri Farmers Ass'n.	17	100.2	142	104.5	174	102.2	174	108.7	-	-	-	-	-	-	8	102.0	199	104.0
Spencer Chemical Co.	-	-	-	-	-	-	-	-	31	101.1	-	-	-	-	-	-	31	101.1
Swift and Co.	7	102.6	75	101.9	81	101.8	81	104.1	-	-	-	-	-	-	-	-	88	102.5
Tennessee Corp.	-	-	3	103.0	3	106.3	3	102.9	-	-	-	-	-	-	-	-	3	104.4
Thurston Chemical Co.	37	101.3	105	101.2	116	103.9	110	101.9	-	-	-	-	-	-	2	104.7	155	102.6
Virginia-Carolina Chemical Corp.	4	103.2	44	89.7	47	103.0	47	112.4	-	-	-	-	-	-	-	-	51	105.0
Totals	133	101.3	651	101.7	746	102.5	728	106.6	55	101.8	3	99.6	24	116.0	18	121.8	863	103.2

Results were omitted from this table if less than three samples were obtained in any one class of fertilizer designated above.
 An index of 100 = Guaranteed Analysis.

ANALYSIS OF SAMPLES

Each official sample collected was analyzed by the Experiment Station laboratories located at the University of Missouri, Columbia. These results are set forth in this bulletin by the use of three tables. Tables 1 and 2 summarize the analyses in order that the reader may tell at a glance the relative manner in which manufacturers have met guarantees. Table 3 presents in greater detail a description of each individual sample.

Table 1 compares, by the use of an index number, the amount of plant food present in the sample with that of the guarantee of the manufacturer. If the found value and the guarantee are the same the number 100 is used; should the guarantee be exceeded by the found value the number used is greater than 100; and in the event the guarantee is not equalled by the found value the number used is less than 100.

Table 2 summarizes and expresses as a percentage the deficient nutrients to total analyzed. In this table each of the three primary elements is considered as a sample so that the grand total in this table is greater than the actual number of samples collected.

Table 3 includes the brand name, place of collection, analytical results, and guarantee of each official sample. Where there are two or more like samples of any brand the average analysis is given. If the guarantee is not equalled by an element that figure is underlined and such a sample is classed as deficient.

FERTILIZERS REGISTERED FOR SALE IN MISSOURI IN 1950

Table 4 is a list of companies, brand names, and guaranteed analyses of those fertilizers registered for sale in Missouri for 1950 as this bulletin goes to press.

TABLE 2.--SUMMARY OF TOTAL AND DEFICIENT FERTILIZER NUTRIENTS (Spring 1949)

MANUFACTURER	Nitrogen			Total Phosphoric Acid From Bone			Available Phosphoric Acid			Potash			All Analyses		
	Total No.	Deficient No.	%	Total No.	Deficient No.	%	Total No.	Deficient No.	%	Total No.	Deficient No.	%	Total No.	Deficient No.	%
American Agricultural Chemical Co.	42	5	11.9	-	-	-	65	14	21.5	54	7	13.0	161	28	18.1
American Cyanamid Co.	3	0	0	-	-	-	10	2	20.0	-	-	-	13	2	15.4
Arkansas Fertilizer Co.	4	1	25.0	-	-	-	4	2	50.0	4	0	0	12	3	25.0
Armour Fertilizer Works	90	33	36.7	2	1	50.0	125	31	24.8	101	12	11.9	318	77	24.2
Blytheville Fertilizer Corp.	8	2	22.2	-	-	-	9	1	11.1	9	2	22.2	27	5	18.5
Central Farmers Fertilizer Co.	10	0	0	-	-	-	21	1	4.8	-	-	-	31	1	3.2
Consumers Cooperative Ass'n.	5	2	40.0	-	-	-	10	4	40.0	8	1	12.5	23	7	30.4
Darling and Co.	70	35	50.0	-	-	-	75	2	2.7	73	13	17.8	218	50	22.9
Davison Chemical Corp.	12	0	0	-	-	-	20	0	0	12	0	0	44	0	0
Excell Laboratories	4	0	0	-	-	-	4	0	0	4	0	0	12	0	0
Farm Belt Fertilizer & Chemical Co.	19	3	15.8	-	-	-	28	16	61.5	14	7	50.0	59	28	44.1
Ford Chemical Co.	3	0	0	-	-	-	3	0	0	3	0	0	9	0	0
Hoffman, Inc.	3	0	0	1	0	0	2	0	0	2	0	0	8	0	0
Hydroponic Chemical Co.	5	0	0	-	-	-	5	0	0	5	0	0	15	0	0
Lange Bros.	24	2	8.3	-	-	-	35	11	31.4	32	2	6.3	91	15	16.5
Milwaukee Sewerage Comm.	3	2	66.7	-	-	-	3	0	0	-	-	-	6	2	33.3
Missouri Farmers Ass'n.	142	21	14.8	-	-	-	191	27	14.1	182	9	4.9	515	57	11.1
Spencer Chemical Co.	31	0	0	-	-	-	-	-	-	-	-	-	31	0	0
Swift and Co.	75	14	18.7	-	-	-	88	9	10.2	81	14	17.3	244	37	15.2
Tennessee Corp.	3	0	0	-	-	-	3	0	0	3	0	0	9	0	0
Thurston Chemical Co.	105	17	16.2	-	-	-	153	12	7.8	112	15	13.4	370	44	11.9
Virginia-Carolina Chemical Corp.	44	13	29.5	-	-	-	51	2	3.9	47	2	4.3	142	17	12.0
Totals	708	150	21.2	3	1	33.3	903	134	14.8	748	84	11.3	2358	369	15.6

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
J. C. ADDERLEY AND ASSOCIATES,						
MOLINO, FLA.						
<u>Vitaloid Phosphate</u>						
Missouri Soybean Co., Caruthersville (D) .	----	----	----	22.00	----	----
Guaranteed Analysis	----	----	----	20.00	----	----
AGRICULTURAL LABORATORIES, INC.,						
COLUMBUS, OHIO						
<u>Stim-U-Plant</u>						
Standard Seed Co., Kansas City (H)	11.93	99.8	----	.03	11.37	17.26
Guaranteed Analysis	11.00	----	----	----	12.00	15.00
AMERICAN AGRICULTURAL CHEMICAL CO.,						
NATIONAL STOCK YARDS, ILL.						
<u>AA Quality Brands</u>						
<u>Phosphate Rock</u>						
Farmers Elevator Co., Monroe City	----	----	----	27.60	3.75	----
St. Charles County Farm Bureau Service Co., St. Charles	----	----	----	27.60	3.15	----
Farmers Equity Exchange, Bowling Green	----	----	----	28.30	3.00	----
Bryan Produce, Princeton	----	----	----	28.20	3.30	----
Langfitt's Seed Farm & Elevators, Bethany	----	----	----	28.85	2.80	----
Lafayette Elevator Co., Lexington	----	----	----	29.00	2.65	----
Average Analysis	----	----	----	28.28	3.11	----
Guaranteed Analysis	----	----	----	28.00	3.00	----
<u>18% Normal Superphosphate</u>						
Farmers Elevator Co., Monroe City	----	----	----	.76	18.64	----
Cape Egg and Feed Store, Cape Girardeau	----	----	----	.94	19.01	----
Lopez Store Co., Ironton	----	----	----	.67	18.53	----
Farmers Elevator Co., Eldorado Springs.	----	----	----	.76	18.54	----
Boland Feed Store, Washington	----	----	----	.77	18.38	----
Average Analysis	----	----	----	.78	18.62	----
Guaranteed Analysis	----	----	----	----	18.00	----
<u>AA Quality 0-14-7</u>						
M. M. Montgomery, Silva	----	----	----	.57	15.08	7.79
Reynolds County M.F.A., Ellington	----	----	----	.53	14.32	7.34
Lopez Store Co., Ironton	----	----	----	.52	14.00	8.11
Dowell and Fuqua, New London	----	----	----	.54	14.00	7.50
Average Analysis	----	----	----	.54	14.35	7.69
Guaranteed Analysis	----	----	----	----	14.00	7.00
<u>AA Quality 2-12-6</u>						
Farmers Elevator Co., Jonesburg	2.00	92.5	----	1.04	11.76	5.87
Burchfield Milling Co., Marshfield	2.00	94.5	----	.61	12.00	6.28
Farmers Supply Co., Steelville	2.00	93.5	----	.86	12.00	6.00
Average Analysis	2.00	93.5	----	.84	11.92	6.05
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
<u>AA Quality 3-12-12</u>						
Mexico Feed and Seed Co., Mexico (D)	3.13	94.2	----	.90	11.75	12.42
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
<u>AA Quality 4-12-4</u>						
Oral M. Robinson, Lathrop	4.00	97.5	----	.57	12.26	4.28
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
<u>Agrico Brands</u>						
<u>Agrico Phosphate and Potash 0-12-12</u>						
Producers Grain Co., Montgomery City . .	----	----	----	.75	12.00	13.01
Farmers Elevator Co., Eldorado Springs.	----	----	----	.58	12.49	13.37
The Trading Post, De Soto	----	----	----	.65	13.13	11.62
Average Analysis	----	----	----	.65	12.54	12.67

(D) Registration tags not attached.

Deficiencies are underlined.

(H) Sample drawn from less than five containers.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES, SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
<u>(Agrico Phosphate & Potash 0-12-12 cont'd)</u>						
Guaranteed Analysis	----	----	----	----	12.00	12.00
<u>Agrico Phosphate and Potash 0-14-7</u>						
Kahoka Implement Co., Kahoka (D)	----	----	----	.62	14.00	7.23
Farmers Elevator Co., Monroe City	----	----	----	.57	14.00	7.00
Farmers Equity Exchange, Bowling Green (D)	----	----	----	.55	14.00	7.59
St. Charles County Farm Bureau Service Co., St. Charles	----	----	----	.53	14.35	7.72
Mexico Feed and Seed Co., Mexico	----	----	----	.53	14.27	7.00
Average Analysis	----	----	----	.56	14.12	7.31
Guaranteed Analysis	----	----	----	----	14.00	7.00
<u>Agrico for Corn 2-12-6</u>						
Kahoka Implement Co., Kahoka	2.00	94.0	----	.74	11.69	5.82
L. L. Bridges, Lutesville	2.07	93.7	----	.81	<u>11.78</u>	<u>6.47</u>
Lopez Store Co., Ironton	2.00	94.0	----	.52	12.00	6.00
Farmers Grain and Supply Co., Golden City	2.06	95.6	----	.60	12.00	6.42
Producers Exchange, Vienna	2.00	95.0	----	.79	12.00	6.18
Boland Feed Store, Washington	2.04	93.6	----	.47	12.36	6.34
M. F. A. Central Coop., Ste. Genevieve	2.07	93.2	----	.52	12.43	6.44
Average Analysis	2.03	94.2	----	.64	12.04	6.24
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
<u>Agrico for Grain 2-12-6</u>						
Cape Egg and Feed Store, Cape Girardeau	2.00	94.5	----	1.36	11.34	6.48
Evans Produce, Eldon	2.03	94.1	----	.41	12.00	6.75
Average Analysis	2.02	94.3	----	.89	11.67	6.61
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
<u>Agrico for Corn 2-14-8</u>						
M. M. Montgomery, Silva	2.34	94.4	----	.58	14.77	8.84
Farmers Elevator Co., Eldorado Springs	2.09	94.7	----	.77	14.00	8.38
Farmers Elevator and Supply Co., Clinton	2.12	96.2	----	.51	14.34	8.40
The Trading Post, De Soto	2.07	95.2	----	.52	14.53	<u>7.61</u>
Farmers Elevator Co., Monroe City	2.07	94.7	----	.58	14.52	<u>7.52</u>
Dowell and Fuqua, New London	2.00	95.0	----	.78	14.00	<u>7.63</u>
Farmers Elevator Co., Jonesburg	2.14	94.4	----	.50	14.28	8.00
Mexico Feed and Seed Co., Mexico (D)	2.11	95.3	----	.64	14.00	8.00
Average Analysis	2.12	95.0	----	.61	14.31	8.05
Guaranteed Analysis	2.00	----	----	----	14.00	8.00
<u>Agrico for Midwest 3-12-12</u>						
Clarence Grain Co., Clarence	3.00	97.0	----	.92	12.00	12.00
Farmers Elevator Co., Monroe City	3.05	93.8	----	.99	12.00	12.34
St. Charles County Farm Bureau Service Co., St. Charles (D)	3.15	95.6	----	.73	12.00	12.00
Langfitt Seed Farm and Elevators, Bethany	3.30	97.0	----	.78	12.50	12.20
Cape Egg and Feed Store, Cape Girardeau	3.00	96.3	----	.91	12.00	12.84
Boland Feed Store, Washington	3.10	97.1	----	.87	12.00	12.86
M.F.A. Central Coop., Ste. Genevieve	2.88	95.5	----	.97	12.00	12.90
Average Analysis	3.07	96.0	----	.88	12.07	12.45
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
<u>Agrico for Cereals 4-12-4</u>						
L. L. Bridges, Lutesville	4.00	97.5	----	.80	12.00	4.53
Lopez Store Co., Ironton	<u>3.91</u>	95.7	----	.58	12.00	4.58
Evans Produce, Eldon	4.00	97.8	----	.56	12.29	4.55
Farmers Equity Exchange, Bowling Green	4.00	95.3	----	.87	12.00	4.74
Weston Elevator Co., Weston	<u>3.87</u>	97.4	----	.58	12.00	5.13
Fred Lange, Sedalia	4.00	97.3	----	.54	12.00	4.46
Average Analysis	<u>3.96</u>	96.8	----	.66	12.05	4.67
Guaranteed Analysis	4.00	----	----	----	12.00	4.00

(D) Registration tags not attached.

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
<u>Agrico for Truck 4-12-4</u>						
St. Charles County Farm Bureau Service Co., St. Charles	4.00	96.5	----	.67	12.00	4.37
Farmers Equity Exchange, Bowling Green	4.00	97.5	----	.64	12.51	4.18
Cape Egg and Feed Store, Cape Girardeau	4.00	96.8	----	.45	13.43	4.80
The Trading Post, De Soto	4.05	96.5	----	.64	12.00	4.10
Average Analysis	4.01	96.8	----	.60	12.49	4.36
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
<u>Agrico for Gardens 4-12-4</u>						
Cape Egg and Feed Store, Cape Girardeau	3.91	97.4	----	.46	12.57	4.56
Longs Feed Store, Festus (B) (H)	4.00	97.8	----	.51	12.64	4.24
Average Analysis	3.96	97.6	----	.48	12.61	4.40
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
<u>Agrico for Lawns, Trees and Shrubs 6-10-4</u>						
Henry Schulz Feed Co., Webster Groves .	5.60	97.9	----	.66	11.14	4.93
Guaranteed Analysis	6.00	----	----	----	10.00	4.00
AMERICAN CYANAMID CO., NEW YORK, N. Y.						
<u>Aero-Phos Florida Natural Phosphate</u>						
Rohrbach Produce, California (D)	----	----	----	28.50	4.90	----
Producers Exchange, Stover	----	----	----	30.30	3.55	----
M.F.A. Central Coop., Ste. Genevieve . . .	----	----	----	28.00	3.20	----
Farmers Cooperative Ass'n., Union	----	----	----	30.00	3.00	----
Farmers Exchange, Kirksville	----	----	----	30.60	2.60	----
Farmers Exchange, Macon	----	----	----	28.60	3.35	----
M.F.A. Exchange, Unionville	----	----	----	30.20	3.50	----
Farmers Produce Exchange, Queen City .	----	----	----	28.50	4.05	----
Producers Grain Co., Montgomery City . .	----	----	----	29.70	3.95	----
Cooperative Ass'n. #20, Wentzville	----	----	----	31.00	2.20	----
Average Analysis	----	----	----	29.64	3.43	----
Guaranteed Analysis	----	----	----	----	3.00	----
<u>20.6% Aero Cyanamid, Granular</u>						
Dannen Mills, St. Joseph (D)	20.60	95.4	----	----	----	----
Pierce Produce, Rockport	20.60	95.1	----	----	----	----
Sandy Moody's Feed Store, Mound City . .	20.60	95.0	----	----	----	----
Average Analysis	20.60	95.2	----	----	----	----
Guaranteed Analysis	20.60	----	----	----	----	----
ARKANSAS FERTILIZER CO., LITTLE ROCK, ARK.						
<u>White Diamond Brands</u>						
<u>3-9-18</u>						
Carroll County Farm Bureau Service Co., Carrollton	3.00	95.2	----	.60	9.00	18.00
New Madrid County Farm Bureau Supply Co., New Madrid	3.14	95.5	----	.48	8.67	19.55
Average Analysis	3.07	95.4	----	.54	8.84	18.78
Guaranteed Analysis	3.00	----	----	----	9.00	18.00
<u>4-12-4</u>						
Stoddard County Farm Bureau Store, Advance	4.33	96.7	----	1.17	10.98	5.55
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
<u>5-10-5</u>						
Stoddard County Farm Bureau Store, Advance	4.78	97.1	----	1.16	10.00	6.06
Guaranteed Analysis	5.00	----	----	----	10.00	5.00

(B) Some registration tags missing.
(D) Registration tags not attached.(H) Sample drawn from less than five containers.
Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
ARMOUR FERTILIZER WORKS, EAST ST. LOUIS, ILL.						
Armour's Big Crop Brands						
20% Superphosphate						
Farmers Seed and Supply Co., Dexter . . .	----	----	----	.82	20.63	----
Burford Feed and Supply Co., Doniphan . .	----	----	----	1.00	20.45	----
Signer and Signer, Arcadia	----	----	----	1.20	20.35	----
Easter Bros., Lebanon	----	----	----	.98	18.32	----
H. L. Emery and Sons, Nevada	----	----	----	.92	20.43	----
Bourbon Farm Exchange, Bourbon	----	----	----	.60	20.00	----
Leroy Blount Feed Store, Jefferson City. .	----	----	----	.95	20.75	----
Bohs Produce and Feed Co., Farmington .	----	----	----	.93	20.00	----
Valley Park Cooperative Elevator Assn., Valley Park	----	----	----	.91	20.89	----
Old Monroe Elevator Co., Old Monroe . . .	----	----	----	1.08	20.00	----
Bryan Produce, Princeton	----	----	----	1.07	20.58	----
Fogarty Coal and Grain Co., St. Joseph . .	----	----	----	1.13	20.00	----
Alexander's Feed and Supply Co., Pleasant Hill	----	----	----	1.02	20.00	----
Economy Feed Mill, Harrisonville	----	----	----	1.68	19.12	----
Boonville Mill and Grain Co., Boonville . .	----	----	----	.63	20.47	----
Average Analysis	----	----	----	.99	20.20	----
Guaranteed Analysis	----	----	----	----	20.00	----
45% Superphosphate						
Bryan Produce, Princeton	----	----	----	.64	43.51	----
Carter Feed Store, Chillicothe	----	----	----	.88	43.87	----
Fogarty Coal and Grain Co., St. Joseph . .	----	----	----	1.04	43.78	----
Weston Milling Co., Weston	----	----	----	.78	45.00	----
Peterson Feed and Seed Co., Tarkio	----	----	----	1.24	42.76	----
Pierce Feed Store, Fairfax	----	----	----	1.28	42.42	----
Average Analysis	----	----	----	.98	43.55	----
Guaranteed Analysis	----	----	----	----	45.00	----
0-12-12						
Prebe Bros., Edina	----	----	----	1.77	12.26	11.18
Langfitt Seed Farm and Elevators, Bethany	----	----	----	1.50	12.00	10.86
Economy Feed Mill, Harrisonville	----	----	----	1.36	12.00	11.01
Rolla Feed Mill, Rolla	----	----	----	2.84	12.36	12.00
Average Analysis	----	----	----	1.87	12.16	11.26
Guaranteed Analysis	----	----	----	----	12.00	12.00
0-14-7						
Signer and Signer, Arcadia	----	----	----	1.57	14.68	7.00
Greenfield Milling Co., Greenfield	----	----	----	1.70	14.80	7.00
Owen Redel, Vienna	----	----	----	1.68	14.00	7.48
Leroy Blount Feed Store, Jefferson City. .	----	----	----	1.87	13.41	8.58
Roy's Feed Store, Potosi	----	----	----	1.84	14.34	8.02
Ralls County Farm Bureau Service Co., New London	----	----	----	2.46	14.00	7.69
Sikes Produce, Spickard	----	----	----	2.10	14.50	7.41
Carters Feed Store, Chillicothe	----	----	----	2.12	14.00	8.79
Fogarty Coal and Grain Co., St. Joseph . .	----	----	----	1.99	14.56	8.36
Fred Lange, Sedalia	----	----	----	2.06	14.00	7.85
Economy Feed Mill, Harrisonville	----	----	----	1.93	14.00	7.82
Boonville Mill and Grain Co., Boonville . .	----	----	----	2.00	13.45	7.61
Average Analysis	----	----	----	1.93	14.15	7.30
Guaranteed Analysis	----	----	----	----	14.00	7.00
2-12-6						
Burford Feed and Supply Co., Doniphan . .	2.00	85.5	----	2.59	12.00	6.44
Price Mercantile, Van Buren	1.94	85.8	----	1.48	12.50	5.81

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	Soluble Potash (K ₂ O) %
(2-12-6 cont'd)						
Signer and Signer, Arcadia	1.83	86.9	----	2.06	12.00	6.29
Easter Bros., Lebanon	2.04	90.7	----	2.58	11.75	6.36
Allman Feed and Produce, Wheaton	1.94	85.6	----	1.58	12.00	7.42
Bill Downey, Anderson	1.87	92.5	----	2.24	12.00	6.31
Cantrell Seed House and Hatchery, Carthage	2.00	91.5	----	2.57	12.00	6.58
Greenfield Milling Co., Greenfield	2.12	87.3	----	1.93	12.45	6.20
H. L. Emery and Sons, Nevada	1.91	84.8	----	1.81	12.00	7.10
Craig Bros. Feed and Seed Co., Memphis	2.00	93.0	----	2.99	12.00	6.14
Prebe Bros., Edina	2.13	93.0	----	2.23	12.00	6.53
Farmers Elevator & Exchange Co., Hannibal (D)	2.16	89.4	----	1.28	11.42	8.65
New Florence Milling Co., New Florence	1.88	87.8	----	2.05	11.73	6.00
Carter Feed Store, Chillicothe	2.25	86.2	----	2.23	12.50	6.52
Fogarty Coal and Grain Co., St. Joseph	1.90	91.1	----	1.68	12.00	6.57
Weston Milling Co., Weston	1.77	86.4	----	4.31	14.89	5.46
Farmers Elevator, Salisbury	2.00	90.0	----	5.07	10.53	6.26
Average Analysis	1.98	88.7	----	2.39	12.10	6.51
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
3-9-18						
Snider and Sons, Fisk	3.00	96.0	----	1.61	9.29	18.97
Guaranteed Analysis	3.00	----	----	----	9.00	18.00
3-12-12						
Rolla Feed Mill, Rolla	3.05	94.1	----	1.35	12.83	11.25
Leroy Blount Feed Store, Jefferson City	2.57	97.7	----	.83	13.40	12.40
Bohs Produce and Feed Co., Farmington	3.00	97.3	----	.99	13.09	10.70
Bloomsdale Feed and Supply Co., Bloomsdale	2.82	96.6	----	.96	13.32	10.10
Old Monroe Elevator Co., Old Monroe	3.00	97.0	----	1.97	12.00	12.95
Good News Feed Store, Warrensburg	2.66	95.5	----	1.28	11.47	12.99
Average Analysis	2.87	96.4	----	1.23	12.69	11.73
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
4-12-4						
Weston Milling Co., Weston	3.73	94.1	----	1.51	12.74	4.21
Craig Bros. Feed and Seed Co., Memphis	3.88	95.4	----	.82	12.00	4.26
Prebe Bros., Edina	4.00	94.5	----	1.03	12.00	4.00
Farmers Exchange, Kirksville	4.00	96.0	----	1.30	12.35	4.27
Farmers Elevator and Exchange Co., Hannibal	4.15	96.6	----	1.01	12.44	4.38
Farmers Elevator and Exchange Co., Palmyra	4.15	94.9	----	1.12	12.51	4.46
Milnes Feed and Produce, Paris	4.06	94.8	----	1.53	12.20	4.18
New Florence Milling Co., New Florence	3.85	95.9	----	2.02	12.23	4.05
Galloway Bros., Elsberry	3.81	95.3	----	1.51	12.22	4.21
Sikes Produce, Spickard	3.92	93.9	----	2.66	11.52	4.00
Carter Feed Store, Chillicothe	4.00	93.5	----	2.40	11.45	4.00
Oral M. Robinson, Lathrop	4.00	95.8	----	2.72	11.11	4.00
Black Produce, Oregon	3.59	95.0	----	2.30	11.58	4.00
Fogarty Coal and Grain Co., St. Joseph	4.00	94.8	----	1.72	12.00	4.00
Farmers Elevator, Salisbury	4.00	94.5	----	1.80	11.28	4.25
Good News Feed Store, Warrensburg	4.00	94.3	----	1.70	11.68	4.16
Alexander's Feed and Supply Co., Pleasant Hill	4.08	93.6	----	3.10	10.60	4.17
Economy Feed Mill, Harrisonville	4.06	94.6	----	2.39	11.19	4.13
Snider and Sons, Fisk	4.00	96.5	----	1.60	12.00	4.62
Farmers Seed and Supply Co., Dexter	4.16	94.5	----	2.76	10.94	4.48
Piedmont Feed and Grocery Supply Co., Piedmont (D)	3.80	94.5	----	1.42	12.00	4.12
Mike Stehn, Winona	4.00	95.0	----	1.08	13.10	3.78

(D) Registration tags not attached.

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(4-12-4 cont'd)						
Burford Feed and Supply Co., Doniphan . .	4.11	95.4	----	1.71	12.00	4.83
Price Mercantile, Van Buren	4.00	94.3	----	2.04	11.76	4.62
Reynolds County M.F.A., Ellington	3.89	95.1	----	1.26	12.00	4.21
Signer and Signer, Arcadia	4.08	95.8	----	3.07	11.36	4.46
Easter Bros., Lebanon	3.89	94.9	----	1.56	11.67	4.52
Bill Downey, Anderson	4.00	95.0	----	1.63	11.57	4.83
Cantrell Seed House and Hatchery, Carthage	3.71	94.9	----	1.78	12.00	4.15
Greenfield Milling Co., Greenfield	4.18	94.5	----	3.04	11.29	4.55
H. L. Emery and Sons, Nevada	3.91	94.6	----	1.38	12.00	4.13
Rolla Feed Mill, Rolla	3.84	95.3	----	2.74	12.00	4.86
Turners Feed Store, Belgrade	4.00	95.0	----	1.04	12.00	4.45
Festus Milling Co., Festus	4.17	95.4	----	3.50	11.70	4.30
Valley Park Cooperative Elevator Ass'n., Valley Park	4.10	95.1	----	.87	12.00	4.61
Average Analysis	3.97	94.9	----	1.86	11.84	4.31
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
4-16-0						
Langfitt Seed Farm and Elevators, Bethany	4.06	92.9	----	2.66	16.00	----
Fogarty Coal and Grain Co., St. Joseph . .	2.12	81.6	----	1.38	16.27	----
Black Produce, Oregon	4.00	93.3	----	1.81	16.00	----
Average Analysis	3.39	89.3	----	1.88	16.09	----
Guaranteed Analysis	4.00	----	----	----	16.00	----
Velvetgreen 5-10-5						
Prebe Bros., Edina (H)	5.12	95.3	----	1.91	10.00	5.00
Old Monroe Elevator Co., Old Monroe . .	5.26	96.8	----	.88	10.25	5.22
Carter Feed Store, Chillicothe	5.19	96.0	----	1.91	10.87	5.22
Pierce Feed Store, Fairfax	5.18	95.2	----	1.49	10.00	5.12
Odessa Canning Co., Odessa	5.19	94.4	----	1.00	10.35	5.34
Good News Feed Store, Warrensburg	5.09	93.7	----	1.78	10.00	5.31
Forbridge Feed and Produce Co., Poplar Bluff	5.38	96.3	----	2.62	9.68	5.30
Farmers Seed and Supply Co., Dexter . . .	4.88	95.7	----	1.52	10.73	5.42
Malden Grain Co., Malden	4.89	94.3	----	1.46	10.79	5.84
Piedmont Feed and Grocery Supply Co., Piedmont (D)	5.69	96.1	----	1.12	10.00	6.17
Sunnyhill Feed and Seed Store, Cape Girardeau (H)	5.26	96.0	----	1.22	10.63	5.48
Mike Stein, Winona	5.32	96.4	----	1.21	10.14	5.72
Price Mercantile, Van Buren	5.50	96.4	----	1.25	10.00	5.98
Allman Feed and Produce, Wheaton	5.28	94.7	----	.99	10.89	5.33
Bill Downey, Anderson	5.29	95.5	----	.67	10.00	5.66
Cantrell Seed House and Hatchery, Carthage	4.92	95.5	----	1.77	10.38	5.94
Leroy Blount Feed Store, Jefferson City . .	5.14	95.5	----	1.03	10.32	5.53
Valley Park Cooperative Elevator Ass'n., Valley Park	5.41	96.1	----	1.02	10.18	5.74
Average Analysis	5.22	95.6	----	1.38	10.28	5.52
Guaranteed Analysis	5.00	----	----	----	10.00	5.00
8-8-8S						
Carter Feed Store, Chillicothe	7.40	97.6	----	1.18	8.34	8.30
Langfitt Seed Farm and Elevators, Bethany	7.68	97.3	----	1.18	8.14	8.00
Average Analysis	7.54	97.5	----	1.18	8.24	8.15
Guaranteed Analysis	8.00	----	----	----	8.00	8.00
8-8-8						
Old Monroe Elevator Co., Old Monroe . . .	8.28	98.7	----	.93	8.00	8.00
Fogarty Coal and Grain Co., St. Joseph . .	8.00	97.6	----	1.11	8.00	8.12
Average Analysis	8.14	98.2	----	1.02	8.00	8.06
Guaranteed Analysis	8.00	----	----	----	8.00	8.00

(D) Registration tags not attached.

Deficiencies are underlined.

(H) Sample drawn from less than five containers.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
<u>Pulverized Sheep Manure 2-1-2</u>						
Farmers Elevator and Exchange Co., Hannibal	2.05	47.3	----	.06	1.20	3.40
Long's Feed Store, Festus	1.42	22.5	----	.18	1.15	3.56
Average Analysis	1.74	34.9	----	.12	1.18	3.48
Guaranteed Analysis	2.00	----	----	----	1.00	2.00
<u>Pulverized Sheep Manure 1.5-1-2</u>						
Coulter O. K. Hatchery, Kirkwood	1.20	24.2	----	.16	.88	2.90
Guaranteed Analysis	1.50	----	----	----	1.00	2.00
<u>Bone Meal</u>						
Cantrell Seed House and Hatchery, Carthage (H)	2.11	21.3	27.90	----	----	----
Henry Schulz Feed Co., Webster Groves	2.41	13.3	25.75	----	----	----
Average Analysis	2.26	17.3	26.83	----	----	----
Guaranteed Analysis	2.00	----	27.00	----	----	----
<u>10-6-4</u>						
Black Produce, Oregon	9.11	99.2	----	.70	6.95	4.98
Guaranteed Analysis	10.00	----	----	----	6.00	4.00
BLYTHEVILLE FERTILIZER CORP., BLYTHEVILLE, ARK.						
<u>BFC Brands</u>						
<u>3-9-18</u>						
Farmers Exchange, West Plains	3.29	98.2	----	.53	9.00	19.36
Reynolds County M.F.A., Ellington	3.00	98.0	----	.43	10.80	20.62
Grovespring Farmers Exchange, Grovespring	3.30	97.0	----	.31	9.14	19.22
Christian County Farmers Exchange, Ozark	2.79	96.8	----	.48	8.80	18.00
Farmers Exchange, Bolivar	3.31	97.6	----	.35	9.20	19.38
Producers Exchange, Lincoln	3.00	97.3	----	.28	9.00	19.32
M.F.A. Central Coop., Green City	2.84	96.1	----	.52	9.18	17.37
Average Analysis	3.08	97.3	----	.41	9.30	19.04
Guaranteed Analysis	3.00	----	----	----	9.00	18.00
<u>8-8-8</u>						
M.F.A. Central Coop., Marshall	8.38	99.0	----	.37	8.00	7.34
Clay County Gin Co., Charleston	8.00	96.8	----	.38	8.00	8.57
Average Analysis	8.19	97.9	----	.38	8.00	7.96
Guaranteed Analysis	8.00	----	----	----	8.00	8.00
CENTRAL FARMERS FERTILIZER CO., CHICAGO, ILL.						
<u>45% Concentrated Superphosphate</u>						
M.F.A. Central Coop., Perryville	----	----	----	.93	48.72	----
M.F.A. Central Coop., Lowry City	----	----	----	1.62	47.78	----
Average Analysis	----	----	----	1.28	48.25	----
Guaranteed Analysis	----	----	----	----	45.00	----
<u>46% Concentrated Superphosphate</u>						
M.F.A. Cooperative Assn., Odessa	----	----	----	.47	48.18	----
Ray-Carroll Counties Grain Growers Assn., Richmond	----	----	----	.22	49.03	----
Farmers Exchange, Brookfield	----	----	----	1.55	48.40	----
Farmers Produce and Grain Co., Hamilton	----	----	----	2.29	46.76	----
Average Analysis	----	----	----	1.13	48.09	----
Guaranteed Analysis	----	----	----	----	46.00	----
<u>47% Concentrated Superphosphate</u>						
Ray-Carroll Counties Grain Growers Assn., Norborne	----	----	----	1.92	47.00	----
M.F.A. Central Coop., Grant City	----	----	----	2.89	45.76	----

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
<u>(47% Concentrated Superphosphate cont'd)</u>						
Farmers Elevator Co., Jonesburg	----	----	----	2.41	47.79	----
Boone County M.F.A. Exchange, Columbia	----	----	----	3.25	47.00	----
Farmers Exchange, West Plains	----	----	----	1.26	48.14	----
Grovespring Farmers Exchange, Grovespring	----	----	----	1.15	48.25	----
Neosho Farmers Exchange, Neosho	----	----	----	.92	48.63	----
M.F.A. Central Coop., Versailles	----	----	----	1.24	48.21	----
Producers Exchange, Stover	----	----	----	1.27	48.48	----
Average Analysis	----	----	----	1.81	47.70	----
Guaranteed Analysis	----	----	----	----	47.00	----
<u>48% Concentrated Superphosphate</u>						
M.F.A. Exchange, Clarence	----	----	----	2.52	48.00	----
M.F.A. Central Coop., Canton	----	----	----	.44	50.11	----
Farm Bureau Service Co., Mexico	----	----	----	2.76	48.00	----
United Cooperative Feed Mill, Liberty	----	----	----	2.19	48.00	----
M.F.A. Central Coop., St. Joseph	----	----	----	2.15	48.00	----
Average Analysis	----	----	----	2.01	48.42	----
Guaranteed Analysis	----	----	----	----	48.00	----
<u>50% Concentrated Superphosphate</u>						
M.F.A. Central Coop., Green City	----	----	----	1.53	50.00	----
Guaranteed Analysis	----	----	----	----	50.00	----
<u>33% Ammonium Nitrate</u>						
Cooperative Ass'n. #20, Wentzville	33.00	I	----	----	----	----
Farmers Exchange, Truesdale	33.34	I	----	----	----	----
Ray-Carroll Counties Grain Growers Assn., Norborne	34.30	I	----	----	----	----
M.F.A. Cooperative Ass'n., Brunswick	34.32	I	----	----	----	----
M.F.A. Cooperative Ass'n., Higginsville	33.60	I	----	----	----	----
Farmers Exchange, Birch Tree	33.00	I	----	----	----	----
Ava Farmers Exchange, Ava	33.69	I	----	----	----	----
Farm Club Exchange, Owensville	33.00	I	----	----	----	----
Cole County Farm Bureau Service Co., Jefferson City	34.35	I	----	----	----	----
M.F.A. Central Coop., California	33.95	I	----	----	----	----
Average Analysis	33.66	I	----	----	----	----
Guaranteed Analysis	33.00	----	----	----	----	----
<u>CHILEAN NITRATE SALES CORP., NEW YORK, N. Y.</u>						
<u>Chilean Nitrate of Soda - Champion Brand</u>						
T. H. Shell and Sons, Lutesville	16.00	I	----	----	----	----
Weston Milling Co., Weston	16.00	I	----	----	----	----
Average Analysis	16.00	I	----	----	----	----
Guaranteed Analysis	16.00	----	----	----	----	----
<u>CONSUMERS COOPERATIVE ASS'N. KANSAS CITY, MO.</u>						
<u>Co-op Brands</u>						
<u>0-20-0</u>						
Farm Bureau Service Co., Mexico	----	----	----	.29	20.00	----
United Cooperative Feed Mill, Liberty	----	----	----	.77	20.63	----
Average Analysis	----	----	----	.53	20.32	----
Guaranteed Analysis	----	----	----	----	20.00	----
<u>0-20-10</u>						
Ray-Carroll Counties Grain Growers Ass'n., Richmond (D)	----	----	----	1.25	20.00	11.40
Guaranteed Analysis	----	----	----	----	20.00	10.00

(D) Registration tags not attached.
I Not determined; all H₂O Soluble.

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	Soluble Potash (K ₂ O) %
0-20-20						
United Cooperative Feed Mill, Liberty . . .	----	----	----	1.02	20.00	20.59
Ray-Carroll Counties Grain Growers Assn., Richmond	----	----	----	1.08	20.42	20.59
Average Analysis	----	----	----	1.05	20.21	20.59
Guaranteed Analysis	----	----	----	----	20.00	20.00
4-12-4						
Purdin Farm Club, Purdin	4.55	95.6	----	.73	12.67	3.73
Cameron Cooperative Elevator Ass'n., Cameron	3.64	95.3	----	2.47	10.68	6.09
United Cooperative Feed Mill, Liberty . . .	4.13	94.9	----	2.04	10.71	5.34
Ray-Carroll Counties Grain Growers Assn., Norborne	3.90	94.6	----	1.99	11.06	5.98
Average Analysis	4.06	95.1	----	1.81	11.28	5.29
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
4-16-8						
United Cooperative Feed Mill, Liberty (D)	4.00	97.3	----	.95	15.35	9.19
Guaranteed Analysis	4.00	----	----	----	16.00	8.00
DARLING AND CO., EAST ST. LOUIS, ILL.						
Twelve Twelve 0-12-12						
Sloops Produce and Feed Co., Queen City .	----	----	----	.89	12.46	11.61
Reynolds County M.F.A., Ellington	----	----	----	.38	13.02	11.19
Phil Ratliff, Neosho	----	----	----	.48	12.87	12.88
Farmers Supply Co., Steelville (D)	----	----	----	.39	13.56	10.95
Average Analysis	----	----	----	.54	12.98	11.66
Guaranteed Analysis	----	----	----	----	12.00	12.00
Fourteen Seven 0-14-7						
Hudt Feed Store, Lynn	----	----	----	.98	14.72	7.46
Guaranteed Analysis	----	----	----	----	14.00	7.00
Crop King 2-12-6						
Richards Bros., West Plains	2.32	79.7	----	1.20	12.00	7.80
Grovespring Farmers Exchange, Grovespring	2.24	82.1	----	1.28	12.37	7.22
Ava Farmers Exchange, Ava	2.52	83.3	----	1.08	12.42	7.34
Spring Creek Mill, Crane	2.17	82.9	----	1.22	12.28	7.10
Greenfield Milling Co., Greenfield	2.03	77.3	----	1.07	12.43	6.77
Harriman Elevator, Adrian	2.22	80.2	----	1.06	12.44	7.22
Warsaw Produce Co., Warsaw	2.08	80.3	----	1.11	12.19	6.87
Owen Redel, Vienna	2.48	83.9	----	.70	12.00	6.38
Farmers Supply Co., Steelville (D)	2.11	81.0	----	.86	12.29	6.94
Hudt Feed Store, Lynn	2.38	84.9	----	1.01	12.34	7.14
Rohrbach Produce, California	2.11	85.3	----	1.12	12.38	6.99
Roys Feed Store, Potosi	2.05	85.4	----	.53	12.00	7.26
Gabe Logsdon and Sons, Wayland	2.00	88.5	----	.95	12.00	6.75
Farmers Elevator and Exchange Co., Palmyra	1.96	96.4	----	1.47	12.00	6.00
Farmers Elevator Co., Monroe City	2.11	95.3	----	.63	12.52	6.00
Reed's Farm Supply Co., Trenton	2.13	94.4	----	.85	12.00	6.64
Scott Produce, Chillicothe	2.08	87.5	----	.84	12.56	7.05
H. H. Green Mill and Elevator Co., Pattonburg	2.14	88.8	----	.76	12.52	6.77
Henderson Produce Co., Albany	2.00	95.5	----	1.23	12.30	6.83
Average Analysis	2.16	85.9	----	1.00	12.27	6.90
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
Sure Winner 3-12-12						
Gabe Logsdon and Sons, Wayland	2.88	96.5	----	1.05	12.00	12.00
Hughes Feed and Produce Co., Huntsville .	2.81	92.5	----	.59	12.00	11.50

(D) Registration tags not attached.

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(Sure Winner 3-12-12 cont'd)						
Sloops Produce and Feed Co., Queen City (D)	<u>2.74</u>	91.6	----	.83	12.00	<u>11.69</u>
Farmers Elevator and Exchange Co., Palmyra	2.57	96.1	----	.91	12.00	<u>10.05</u>
Farmers Elevator Co., Jonesburg	3.00	97.7	----	.71	12.27	<u>11.55</u>
Reed's Farm Supply Co., Trenton	3.00	91.3	----	.78	12.30	<u>11.49</u>
H. H. Green Mill and Elevator Co., Pattonsburg	<u>2.92</u>	96.2	----	.74	12.24	<u>11.74</u>
Henderson Produce Co., Albany	3.00	97.0	----	.56	12.27	<u>12.00</u>
Langfitt Seed Farm and Elevators, Bethany	2.93	92.2	----	.92	13.03	<u>12.00</u>
Mississippi County Grain Co., East Prairie	3.33	94.6	----	.64	12.00	<u>12.84</u>
Van Buren Mercantile Co., Van Buren	3.00	94.3	----	.77	12.33	<u>11.45</u>
Farmers Supply Co., Steelville	1.70	90.6	----	.76	13.02	<u>11.38</u>
Hudt Feed Store, Lynn	3.18	95.9	----	.60	12.00	<u>12.42</u>
Farmers Elevator Co., Tipton	3.00	96.7	----	.67	12.36	<u>11.79</u>
Farmers Cooperative Ass'n., Union	3.21	97.2	----	.76	12.49	<u>11.03</u>
Average Analysis	2.88	94.7	----	.75	12.29	<u>11.67</u>
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
Big Potash 3-9-18						
Worley Implement Co., Dexter	2.87	95.1	----	.65	9.30	19.04
R. C. Davis Gin and Grain Co., Charleston	3.06	95.0	----	.58	9.37	18.00
Mississippi County Grain Co., East Prairie	3.16	96.2	----	.67	9.43	18.00
Osteen and Adams, Portageville	3.11	95.8	----	.39	8.76	19.74
Missouri Soybean Co., Caruthersville (D)	3.20	94.1	----	.45	9.00	18.66
Average Analysis	3.08	95.2	----	.55	9.17	18.69
Guaranteed Analysis	3.00	----	----	----	9.00	18.00
Field Marshall 4-12-4						
Mississippi County Grain Co., East Prairie	4.00	97.0	----	1.07	12.00	5.14
Richards Bros., West Plains	3.45	96.8	----	.61	12.77	4.92
Grovespring Farmers Exchange, Grovespring	3.75	96.3	----	.67	12.00	5.18
Spring Creek Mill, Crane	4.07	97.5	----	.95	12.35	4.91
Phil Ratliff, Neosho	3.76	95.7	----	.83	12.00	6.29
Harriman Elevator, Adrian	3.88	95.6	----	.75	12.93	5.02
Warsaw Produce Co., Warsaw	3.85	95.8	----	.91	12.00	6.77
Owen Redel, Vienna	3.41	94.4	----	.73	12.75	5.98
Farmers Supply Co., Steelville	3.92	97.2	----	.77	12.33	6.54
Farmers Elevator Co., Tipton	3.84	96.6	----	.79	13.14	5.15
Boland Feed Store, Washington	3.55	97.5	----	.71	12.00	6.39
Roy's Feed Store, Potosi	3.53	97.7	----	.68	12.00	5.81
Henderson Produce Co., Clarence (H)	4.88	98.0	----	.79	13.19	5.62
Columbia Cooperative Whse, Ass'n., Columbia	3.53	94.1	----	.80	13.58	4.62
Farmers Produce Co., Shelbina	3.80	97.6	----	.51	12.84	5.80
Hughes Feed and Produce Co., Huntsville	3.79	93.1	----	.89	12.54	4.54
Summers Elevator Co., Fayette	3.33	93.1	----	.52	12.98	7.12
Reeds Farm Supply Co., Trenton	3.62	93.6	----	.64	12.54	5.74
Bryan Produce, Princeton	3.58	98.0	----	.55	12.38	4.59
Scott Produce, Chillicothe	3.75	94.4	----	.41	13.44	5.25
Purdin Farm Club, Purdín	3.90	94.6	----	.77	12.29	4.69
H. H. Green Mill and Elevator Co., Pattonsburg	3.66	94.5	----	.75	12.83	4.70
Maysville Produce Co., Maysville	3.58	94.1	----	.84	12.26	6.05
King City Elevator, King City	3.89	95.6	----	.72	12.43	4.74
Hammacher's, Richmond	3.45	95.4	----	.64	12.31	4.88
Saline County Seed House, Marshall	3.42	96.8	----	.68	11.07	9.26
Average Analysis	3.74	95.8	----	.73	12.50	5.60
Guaranteed Analysis	4.00	----	----	----	12.00	4.00

(D) Registration tags not attached.

Deficiencies are underlined.

(H) Sample drawn from less than five containers.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
<u>Harvest Queen 4-12-8</u>						
Farmers Elevator Co., Monroe City	4.00	96.3	----	.64	12.00	9.08
Saline County Seed House, Marshall	3.67	95.4	----	.87	12.00	8.69
Van Buren Mercantile Co., Van Buren	3.73	97.3	----	.55	12.60	9.03
Average Analysis	3.80	96.3	----	.69	12.20	8.93
Guaranteed Analysis	4.00	----	----	----	12.00	8.00
<u>4-16-0</u>						
Henderson Produce Co., Albany	4.00	94.5	----	.94	16.66	----
Saline County Seed House, Marshall	3.82	93.7	----	.91	16.00	----
Average Analysis	3.91	94.1	----	.93	16.33	----
Guaranteed Analysis	4.00	----	----	----	16.00	----
<u>DAVISON CHEMICAL CORP., NASHVILLE, TENN., and PERRY, IOWA.</u>						
<u>Davco Granulated Superphosphate 20%</u>						
H. H. Green Mill and Elevator Co., Pattonsburg	----	----	----	.44	20.31	----
H. H. Green Mill and Elevator Co., Hamilton	----	----	----	.53	20.00	----
Cameron Cooperative Elevator Ass'n., Cameron	----	----	----	.33	20.32	----
Farmers Exchange, Cabool	----	----	----	.27	20.00	----
Farmers Elevator Co., El Dorado Springs Armstrong & Jackson, Lowry City	----	----	----	.22	20.38	----
Farmers Exchange, Bolivar	----	----	----	.28	20.37	----
Farmers Exchange, Bolivar	----	----	----	.34	20.91	----
Osceola Flour and Feed Mill, Osceola	----	----	----	.10	20.75	----
Average Analysis	----	----	----	.31	20.38	----
Guaranteed Analysis	----	----	----	----	20.00	----
<u>Davco Red Diamond 2-12-5</u>						
Farmers Exchange, Bolivar	2.43	95.9	----	.42	12.78	6.27
Farmers Exchange, El Dorado Springs	2.27	95.6	----	.91	12.00	6.26
W. W. Henry, Wheatland	2.22	95.5	----	.85	12.20	6.42
Average Analysis	2.31	95.7	----	.73	12.33	6.32
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
<u>Davco 3-12-12</u>						
Boone County Farm Bureau Service Co., Columbia	3.00	82.0	----	1.05	12.40	12.00
Ray-Carroll Counties Grain Growers Assn., Richmond	3.00	92.7	----	.88	12.30	14.86
Average Analysis	3.00	92.4	----	.97	12.35	13.43
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
<u>Davco 3-18-9</u>						
Farm Bureau Service Co., Mexico	3.27	92.7	----	1.26	18.49	9.63
Ray-Carroll Counties Grain Growers Assn., Richmond	3.14	96.8	----	1.16	18.00	9.00
Cole County Farm Bureau Service Co., Jefferson City	3.04	97.4	----	.84	18.00	9.54
Average Analysis	3.15	95.6	----	1.09	18.16	9.39
Guaranteed Analysis	3.00	----	----	----	18.00	9.00
<u>Davco Red Diamond 4-12-4</u>						
Osceola Flour and Feed Mill, Osceola	4.25	96.7	----	.83	12.25	4.81
W. W. Henry, Wheatland	4.23	98.1	----	.60	12.00	4.73
H. H. Green Mill and Elevator Co., Hamilton	4.13	98.1	----	1.02	12.48	4.37
Ray-Carroll Counties Grain Growers Assn., Richmond	4.00	98.3	----	1.16	12.19	4.34
Average Analysis	4.15	97.8	----	.90	12.23	4.56
Guaranteed Analysis	4.00	----	----	----	12.00	4.00

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
E. I. DUPONT DE NEMOURS AND CO., WILMINGTON, DEL.						
<u>Uramon</u>						
Langfitt Seed Farm and Elevators, Bethany	43.66	98.7	----	----	----	----
Guaranteed Analysis	42.00	----	----	----	----	----
ECONOMY NURSERY CO., LITTLE SILVER, N. J.						
<u>Balanced Rose Food</u>						
F. W. Woolworth, Kansas City (A) (D) (H)	6.26	69.0	----	.44	8.76	3.49
Guaranteed Analysis	5.00	----	----	----	8.00	3.00
EXCELL LABORATORIES, CHICAGO, ILL.						
<u>New Plant Life</u>						
Harnden's Seed Co., Kansas City (D) (H)	2.26	97.3	----	.05	1.34	2.55
F. W. Woolworth, Kirksville (H)	2.23	100.0	----	.03	2.22	2.76
F. W. Woolworth, Columbia (D) (H)	2.29	99.1	----	.00	1.36	2.17
F. W. Woolworth, Poplar Bluff (H)	2.33	98.3	----	.00	1.45	2.63
Average Analysis	2.28	98.7	----	.02	1.59	2.53
Guaranteed Analysis	2.00	----	----	----	1.00	2.00
FARM BELT FERTILIZER AND CHEMICAL CO., KANSAS CITY, MO.						
<u>Farm Belt Brands</u>						
<u>0-20-0</u>						
Bryan Produce Co., Princeton	----	----	----	1.09	20.00	----
Farmers Elevator Co., Salisbury (C)	----	----	----	1.49	20.00	----
M.F.A. Central Coop., Warrensburg	----	----	----	1.34	20.00	----
Alexanders Feed and Supply Co., Pleasant Hill	----	----	----	.21	20.54	----
Shultice Produce Co., Boonville (C)	----	----	----	.30	20.90	----
Average Analysis	----	----	----	.89	20.29	----
Guaranteed Analysis	----	----	----	----	20.00	----
<u>0-20-10</u>						
Odessa Canning Co., Odessa	----	----	----	1.75	17.95	6.18
Lafayette Elevator Co., Lexington	----	----	----	1.40	18.50	8.73
Average Analysis	----	----	----	1.58	18.23	7.46
Guaranteed Analysis	----	----	----	----	20.00	10.00
<u>2-12-6</u>						
M.F.A. Cooperative Ass'n., Odessa	2.84	98.2	----	1.95	11.40	5.62
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
<u>3-12-12</u>						
Odessa Canning Co., Odessa	3.51	98.6	----	1.52	11.41	12.42
M.F.A. Central Coop., Warrensburg	4.32	97.9	----	1.62	11.63	11.02
Average Analysis	3.92	98.3	----	1.57	11.52	11.72
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
<u>4-12-4</u>						
Bryan Produce Co., Princeton (D)	4.49	97.3	----	2.03	11.50	4.54
Brock Produce Co., Maysville	5.43	98.9	----	1.80	11.03	4.94
Whitaker Feed and Produce Co., Marysville	4.00	97.3	----	2.27	11.53	4.89
M.F.A. Cooperative Ass'n., Odessa	4.40	98.4	----	2.27	11.33	4.32
M.F.A. Central Coop., Warrensburg	4.67	98.1	----	2.08	11.50	4.36
Alexanders Feed and Supply Co., Pleasant Hill	4.60	97.8	----	2.17	11.41	4.14
Average Analysis	4.60	98.0	----	2.10	11.38	4.53
Guaranteed Analysis	4.00	----	----	----	12.00	4.00

(A) Not registered.

(C) Registration tags from another state.

(D) Registration tags not attached.

(H) Sample drawn from less than five containers.
Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
4-16-0						
Whitaker Feed and Produce Co., Marysville	4.59	96.9	----	2.94	<u>15.26</u>	----
Ray-Carroll Counties Grain Growers Assn., Norborne	4.55	97.6	----	3.01	<u>14.49</u>	----
M.F.A. Central Coop., Warrensburg	4.57	97.6	----	3.06	<u>14.54</u>	----
Average Analysis	4.57	97.4	----	3.00	<u>14.76</u>	----
Guaranteed Analysis	4.00	----	----	----	16.00	----
8-8-8						
Bryan Produce Co., Princeton	8.00	99.4	----	.85	8.58	<u>7.18</u>
Oral M. Robinson, Lathrop	8.30	99.0	----	.93	10.17	<u>6.45</u>
Brock Produce Co., Maysville	<u>5.82</u>	98.8	----	1.47	10.63	<u>6.20</u>
Average Analysis	<u>7.37</u>	99.1	----	1.08	9.79	<u>6.61</u>
Guaranteed Analysis	8.00	----	----	----	8.00	8.00
8-16-0						
Pierce Feed Store, Fairfax	8.42	98.2	----	1.55	16.00	----
Whitaker Feed and Produce Co., Maryville	8.67	99.1	----	1.56	16.00	----
Average Analysis	8.55	99.2	----	1.56	16.00	----
Guaranteed Analysis	8.00	----	----	----	16.00	----
10-20-0						
Pierce Feed Store, Fairfax	9.25	99.0	----	2.05	18.75	----
Sandy Moody Feed Store, Mound City	<u>9.78</u>	99.3	----	2.11	<u>19.24</u>	----
Average Analysis	<u>9.52</u>	99.2	----	2.08	<u>19.00</u>	----
Guaranteed Analysis	10.00	----	----	----	20.00	----
FARM BUREAU SERVICE CO. OF MO. JEFFERSON CITY, MO.						
20% Granulated Superphosphate						
Carroll County Farm Bureau Service Co., Carrollton (G)	----	----	----	.82	20.53	----
Cole County Farm Bureau Service Co., Jefferson City (G)	----	----	----	1.06	20.00	----
Average Analysis	----	----	----	----	20.27	----
Guaranteed Analysis	----	----	----	----	20.00	----
4-24-12						
Cole County Farm Bureau Service Co., Jefferson City (G)	5.28	96.4	----	.92	24.00	12.60
Guaranteed Analysis	4.00	----	----	----	24.00	12.00
FORD MOTOR CO. DEARBORN, MICH.						
Ford Ammonium Sulphate						
Allton Implement Co., Columbia (H)	20.80	I	----	----	----	----
Guaranteed Analysis	20.80	----	----	----	----	----
GAYLORD CHEMICAL CO. KANSAS CITY, MO:						
Sup-Ro						
Farmers Elevator Co., Boonville (H)	5.08	98.2	----	.47	4.63	4.58
Archias Seed Store, Sedalia (B) (H)	4.18	98.1	----	.73	6.85	4.88
Planters Seed Co., Kansas City (H)	4.00	97.0	----	.08	4.72	4.39
Average Analysis	4.42	97.8	----	.43	5.43	4.62
Guaranteed Analysis	4.00	----	----	----	4.00	4.00
A. H. HOFFMAN, INC. LANDISVILLE, PENNA.						
Sheep Manure						
F. W. Woolworth, Kansas City (H)	1.55	26.4	----	.22	1.14	3.80

(B) Some registration tags missing.
 (G) Labels missing entirely.
 (H) Sample drawn from less than five containers,

I Not determined; all H₂O Soluble.
 Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(Sheep Manure cont'd)						
Guaranteed Analysis	1.50	----	----	----	1.00	2.00
<u>Cow Manure</u>						
F. W. Woolwrth, Kansas City (H)	3.10	45.8	----	.85	1.78	2.11
Guaranteed Analysis	2.00	----	----	----	1.00	1.00
<u>Raw Bone Meal</u>						
F. W. Woolwrth, Kansas City (H)	4.13	9.2	20.00	----	----	----
Guaranteed Analysis	3.70	----	20.00	----	----	----
HYDROPONIC CHEMICAL CO. COPLEY, OHIO						
<u>Hyponex</u>						
Archias Seed Stone, Sedalia (H)	7.62	99.5	----	.21	6.53	21.10
Standard Seed Co., Kansas City (H)	7.62	99.7	----	.47	6.13	21.12
F. W. Woolwrth, Kirksville (H)	7.62	99.7	----	.17	6.39	21.16
Sunnyhill Feed and Seed Store, Cape Girardeau (H)	7.48	99.6	----	.24	6.71	20.95
Henry Schulz Feed Co., Webster Groves (H)	7.60	99.2	----	.13	7.15	21.29
Average Analysis	7.59	99.5	----	.24	6.58	21.12
Guaranteed Analysis	7.00	----	----	----	6.00	19.00
INDIANA FARM BUREAU COOPERATIVE ASS'N. INDIANAPOLIS, IND.						
<u>Farm Bureau 0-20-0</u>						
M.F.A. Cooperative Ass'n., Brunswick (A) (D)	----	----	----	1.38	20.00	----
Boone County M.F.A. Exchange, Columbia (C)	----	----	----	.39	20.91	----
Average Analysis	----	----	----	----	20.46	----
Guaranteed Analysis	----	----	----	----	20.00	----
INTERSTATE FERTILIZER CO. CAIRO, ILL.						
<u>Interstate 3-9-18</u>						
Planters Gin Co., Sikeston	3.13	97.8	----	.55	8.75	19.59
Guaranteed Analysis	3.00	----	----	----	9.00	18.00
KANSAS CITY FERTILIZER CO. KANSAS CITY, MO.						
<u>Archer Brand Dehydrated Sheep Manure</u>						
Archias Seed Store, Sedalia (D)	1.68	20.2	----	.32	1.80	3.21
Guaranteed Analysis	2.00	----	----	----	1.00	2.00
LANGE BROS. ST. LOUIS, MO.						
<u>L B Brands</u>						
<u>0-20-0</u>						
Oral M. Robison, Lathrop	----	----	----	.35	20.60	----
Paul Skaggs and Co., Fredericktown	----	----	----	.67	20.63	----
Suttons Feed Mill, Belgrade	----	----	----	1.08	20.00	----
Festus Milling Co., Festus	----	----	----	.95	20.00	----
Average Analysis	----	----	----	.76	20.31	----
Guaranteed Analysis	----	----	----	----	20.00	----
<u>0-45-0</u>						
St. Francois County Farm Bureau Service Co., Farmington	----	----	----	.39	45.00	----
Boonville Mill and Grain Co., Boonville	----	----	----	.83	47.42	----
Average Analysis	----	----	----	.51	46.21	----
Guaranteed Analysis	----	----	----	----	45.00	----

(A) Not registered.
 (C) Registration tags from another state.
 (D) Registration tags not attached.

(H) Sample drawn from less than five containers.
 Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
<u>0-9-27</u>						
Planters Gin Co., Sikeston	----	----	----	.06	<u>8.29</u>	27.80
Guaranteed Analysis	----	----	----	----	9.00	27.00
<u>0-12-12</u>						
Suttons Feed Mill, Belgrade	----	----	----	.25	<u>11.68</u>	13.70
St. Francois County Farm Bureau Service Co., Farmington	----	----	----	.78	<u>11.22</u>	13.41
Average Analysis	----	----	----	.52	<u>11.45</u>	13.56
Guaranteed Analysis	----	----	----	----	12.00	12.00
<u>0-14-7</u>						
St. Francois County Farm Bureau Service Co., Farmington	----	----	----	.84	14.36	7.70
Oral M. Robison, Lathrop	----	----	----	1.06	14.00	7.55
Average Analysis	----	----	----	.95	14.18	7.83
Guaranteed Analysis	----	----	----	----	14.00	7.00
<u>2-12-6</u>						
Summers Elevator Co., Armstrong	2.00	95.5	----	1.45	<u>11.68</u>	7.20
Boonville Mill and Grain Co., Boonville . .	2.06	97.1	----	.56	<u>12.54</u>	6.00
Perry County Farm Bureau, Perryville . .	2.17	94.9	----	.21	12.00	6.19
Beumel Bros., Westphalia	<u>1.87</u>	92.5	----	.63	12.37	6.33
Cole County Farm Bureau Service Co., Jefferson City	2.00	94.0	----	.65	12.00	6.35
St. Francois County Farm Bureau Service Co., Farmington	2.11	95.3	----	.56	12.00	6.25
Average Analysis	2.04	94.9	----	.68	12.10	6.39
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
<u>3-9-18</u>						
Kennett Grain and Seed Co., Kennett	3.17	96.8	----	.58	9.00	19.34
Guaranteed Analysis	3.00	----	----	----	9.00	18.00
<u>3-12-12</u>						
Paul Skaggs and Co., Fredericktown	3.17	96.2	----	1.00	12.35	12.58
Perry County Farm Bureau, Perryville . .	3.19	95.9	----	1.33	<u>11.50</u>	13.49
Beumel Bros., Westphalia	3.18	96.9	----	1.30	12.33	12.63
St. Francois County Farm Bureau Service Co., Farmington	3.16	97.2	----	1.06	12.00	12.92
Average Analysis	3.18	96.6	----	1.17	12.05	12.91
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
<u>4-12-4</u>						
Paul Skaggs and Co., Fredericktown	4.11	97.3	----	1.85	<u>11.65</u>	4.70
Perry County Farm Bureau, Perryville . .	4.14	97.6	----	2.13	<u>11.37</u>	4.44
St. Francois County Farm Bureau Service Co., Farmington	4.07	97.8	----	1.36	<u>11.32</u>	4.52
Festus Milling Co., Festus	4.09	97.1	----	1.25	12.00	4.27
Summers Elevator Co., Armstrong	4.13	98.1	----	1.33	12.00	4.26
Ralph Gladney Ice, Fuel and Feed Co., Elsberry	4.07	98.0	----	1.82	12.00	4.58
Boonville Mill and Grain Co., Boonville . .	4.22	98.6	----	1.24	12.00	4.93
Average Analysis	4.12	97.8	----	1.57	11.76	4.53
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
<u>4-12-8</u>						
Perry County Farm Bureau, Perryville . .	3.88	97.4	----	1.95	11.25	8.33
Beumel Bros., Westphalia	4.34	98.2	----	1.13	<u>11.45</u>	8.63
Average Analysis	4.11	97.8	----	1.54	<u>11.35</u>	8.48
Guaranteed Analysis	4.00	----	----	----	12.00	8.00
<u>8-8-8</u>						
Paul Skaggs and Co., Fredericktown	8.00	99.0	----	.39	8.00	8.46
Cole County Farm Bureau Service Co., Jefferson City	8.00	98.8	----	.36	8.14	8.73

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(8-8-8 cont'd)						
Oral M. Robison, Lathrop	8.25	99.0	----	.77	8.83	8.54
Average Analysis	8.08	98.9	----	.51	8.32	8.58
Guaranteed Analysis	8.00	----	----	----	8.00	8.00
10-6-4						
Perry County Farm Bureau, Perryville . .	10.13	98.2	----	.19	5.69	4.66
Guaranteed Analysis	10.00	----	----	----	6.00	4.00
0-0-25						
Kennett Grain and Seed Co., Kennett (G) . .	----	----	----	----	----	24.15
Burchfield Milling Co., Marshfield (G) (D)	----	----	----	----	----	26.06
Average Analysis	----	----	----	----	----	25.11
Guaranteed Analysis	----	----	----	----	----	25.00
0-0-60						
Paul Statler, Bloomfield	----	----	----	----	----	58.22
Guaranteed Analysis	----	----	----	----	----	60.00
LYONS FERTILIZER CO., TAMPA, FLA. Lyons Mixture #20						
St. Charles County Farm Bureau Service Co., St. Charles (D)	4.16	94.7	----	1.32	23.13	12.55
Guaranteed Analysis	4.00	----	----	----	24.00	12.00
MC CORMICK AND CO., INC., BALTIMORE, MD. Hy-Gro						
Standard Seed Co., Kansas City (D) (H) . .	13.50	98.6	----	.35	26.95	14.55
Guaranteed Analysis	13.00	----	----	----	26.00	13.00
MILWAUKEE SEWERAGE COMMISSION, MILWAUKEE, WISC. Milorganite						
Archias Seed Store, Sedalia	5.74	5.4	----	.65	2.73	----
Henry Schulz Feed Co., Webster Groves . .	5.83	6.7	----	.54	2.54	----
Coulter O.K. Hatchery, Kirkwood	6.10	9.5	----	.54	2.82	----
Average Analysis	5.88	7.2	----	.58	2.70	----
Guaranteed Analysis	6.00	----	----	----	2.00	----
MISSOURI FARMERS ASS'N., COLUMBIA, MO. M.F.A. Brands						
0-20-0						
Christian County Farmers Exchange, Ozark	----	----	----	1.04	20.81	----
Watson and Murley, Sparta	----	----	----	1.04	21.86	----
Producers Exchange, Marshfield	----	----	----	.86	20.00	----
Farmers Produce Exchange, Lebanon	----	----	----	.87	20.00	----
Crane Farmers Exchange, Crane	----	----	----	1.00	20.80	----
Neosho Farmers Exchange, Neosho	----	----	----	.75	21.10	----
Lamar Farmers Exchange, Lamar	----	----	----	1.08	20.00	----
Buffalo Farmers Exchange, Buffalo	----	----	----	.97	20.68	----
M.F.A. Central Coop., Lowry City	----	----	----	1.13	20.00	----
Producers Exchange, Lincoln	----	----	----	1.04	16.08	----
M.F.A. Central Coop., Eldon	----	----	----	.82	20.63	----
Producers Exchange, Vienna	----	----	----	.97	20.00	----
M.F.A. Central Coop., Versailles	----	----	----	.83	20.42	----
Farmers Elevator, Tipton	----	----	----	.60	21.85	----
M.F.A. Central Coop., Moberly	----	----	----	1.75	18.45	----
Farmers Exchange, Macon	----	----	----	1.27	17.86	----
M.F.A. Exchange, Unionville	----	----	----	1.52	20.43	----

(D) Registration tags not attached.

(G) Labels missing entirely.

(H) Sample drawn from less than five containers.
Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
<u>(0-20-0 cont'd)</u>						
Average Analysis	----	----	----	1.03	20.05	----
Guaranteed Analysis	----	----	----	----	20.00	----
<u>0-14-7</u>						
Neosho Farmers Exchange, Neosho	----	----	----	1.46	14.39	8.18
Guaranteed Analysis	----	----	----	----	14.00	7.00
<u>0-14-14</u>						
M.F.A. Central Coop., Bethany	----	----	----	2.48	14.00	11.38
Guaranteed Analysis	----	----	----	----	14.00	14.00
<u>0-16-8</u>						
M.F.A. Central Coop., Kahoka	----	----	----	.59	16.66	8.66
Farmers Exchange, Macon	----	----	----	.86	<u>15.44</u>	<u>7.28</u>
M.F.A. Exchange, Unionville	----	----	----	.67	16.68	8.58
M.F.A. Central Coop., Fulton	----	----	----	.58	16.00	9.04
M.F.A. Central Coop., Laddonia	----	----	----	.63	16.00	8.14
Farmers Produce and Grain Co., Hamilton	----	----	----	.53	16.92	8.87
M.F.A. Central Coop., Pattonsburg	----	----	----	.48	16.82	8.62
M.F.A. Central Coop., Albany	----	----	----	1.10	15.68	8.23
M.F.A. Cooperative Ass'n., Brunswick . .	----	----	----	.64	16.86	8.40
Farmers Exchange, Cabool	----	----	----	1.01	16.00	8.73
Producers Exchange, Vienna	----	----	----	.47	17.28	9.06
M.F.A. Cooperative Ass'n., Salem	----	----	----	.40	17.60	9.18
Farmers Elevator, Tipton	----	----	----	.50	17.35	9.05
Average Analysis	----	----	----	.65	16.56	8.60
Guaranteed Analysis	----	----	----	----	16.00	8.00
<u>0-20-20</u>						
Farmers Exchange, Cabool	----	----	----	1.07	20.38	20.62
Watson and Murley, Sparta	----	----	----	.84	19.46	20.59
Ava Farmers Exchange, Ava	----	----	----	.83	19.12	21.21
Neosho Farmers Exchange, Neosho	----	----	----	.33	20.00	21.85
Lamar Farmers Exchange, Lamar	----	----	----	.93	18.97	21.30
Buffalo Farmers Exchange, Buffalo	----	----	----	.80	20.65	20.41
M.F.A. Cooperative Ass'n., Salem	----	----	----	1.08	20.00	20.83
Farmers Cooperative Ass'n., Union	----	----	----	.87	21.53	18.80
Boone County M.F.A. Exchange, Columbia	----	----	----	1.27	20.98	20.00
M.F.A. Central Coop., Moberly	----	----	----	1.49	20.41	20.42
Farmers Exchange, Kirksville	----	----	----	1.15	20.00	20.62
M.F.A. Central Coop., Marshall	----	----	----	1.15	21.25	20.00
Farmers Exchange, Macon	----	----	----	1.11	21.59	19.11
M.F.A. Exchange, Unionville	----	----	----	1.15	20.00	20.51
M.F.A. Central Coop., Paris	----	----	----	1.31	19.29	20.52
M.F.A. Central Coop., Fulton	----	----	----	.94	19.26	22.44
M.F.A. Central Coop., St. Joseph	----	----	----	1.25	21.20	20.92
Average Analysis	----	----	----	1.03	20.24	20.60
Guaranteed Analysis	----	----	----	----	20.00	20.00
<u>2-12-6</u>						
M.F.A. Exchange, Unionville	2.37	97.9	----	4.84	<u>9.41</u>	7.06
M.F.A. Central Coop., Green City	2.05	97.1	----	.78	12.00	7.05
La Grange Elevator Co., La Grange	2.26	98.7	----	.72	12.00	7.48
M.F.A. Central Coop., Canton	2.13	97.7	----	.68	12.00	7.01
Farmers Exchange, Truesdale	2.33	97.9	----	.68	12.47	6.92
Farmers Elevator Co., Jonesburg	2.45	98.4	----	.57	12.76	6.62
Farmers Exchange, Brookfield	2.03	97.0	----	.74	12.00	6.31
M.F.A. Central Coop., St. Joseph	2.11	97.1	----	.78	12.50	6.74
M.F.A. Cooperative Ass'n., Brunswick . .	1.86	96.8	----	.58	12.40	6.29
M.F.A. Central Coop., Sedalia	<u>1.87</u>	94.7	----	.48	12.00	6.66
Farmers Exchange, Houston	2.12	93.4	----	.62	12.41	6.90
Farmers Exchange, Thayer	2.06	94.2	----	.41	12.42	6.67
Reynolds County M.F.A., Ellington	2.00	94.5	----	1.94	11.41	6.87

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(2-12-6 cont'd)						
Grovespring Farmers Exchange, Grovespring	2.24	93.3	----	1.46	12.00	6.39
Christian County Farmers Exchange, Ozark	2.04	96.1	----	1.14	12.19	6.27
Producers Exchange, Marshfield	2.09	91.4	----	1.23	<u>11.47</u>	6.15
Farmers Produce Exchange, Lebanon . . .	2.09	93.3	----	1.60	<u>11.40</u>	6.38
Crane Farmers Exchange, Crane	2.24	94.6	----	1.42	<u>12.21</u>	6.43
Neosho Farmers Exchange, Neosho	2.19	95.0	----	1.02	12.00	6.35
Lamar Farmers Exchange, Lamar	2.03	96.1	----	1.28	<u>11.47</u>	6.46
Farmers Supply Co., Greenfield	2.00	96.5	----	.56	<u>12.29</u>	6.18
Farmers Exchange, Bolivar	2.00	95.5	----	.52	12.73	6.19
M.F.A. Central Coop., Eldon	2.00	93.0	----	.52	12.23	7.09
Producers Exchange, Richland	2.04	93.6	----	2.77	<u>11.66</u>	7.18
M.F.A. Cooperative Ass'n., Salem	2.21	94.6	----	2.35	<u>11.15</u>	7.02
Farm Club Exchange, Owensville	2.37	93.7	----	.22	<u>13.21</u>	6.60
M.F.A. Central Coop., Versailles	2.17	95.9	----	.66	13.19	7.43
Producers Exchange, Stover	2.12	90.6	----	3.78	9.70	7.11
Farmers Elevator, Tipton	2.05	91.2	----	.26	<u>13.17</u>	6.51
Average Analysis	2.12	95.2	----	1.19	12.00	6.70
Guaranteed Analysis	2.00	-----	----	----	12.00	6.00
2 1/2 - 15 - 7 1/2						
M.F.A. Central Coop., Dexter	2.76	94.9	----	.65	15.60	9.03
M.F.A. Central Coop., Perryville	2.40	95.0	----	.75	15.80	7.90
Farmers Exchange, West Plains	2.68	96.3	----	.62	15.28	7.73
Ava Farmers Exchange, Ava	2.64	96.6	----	.49	15.48	7.50
Buffalo Farmers Exchange, Buffalo	2.74	97.1	----	.47	15.88	7.66
Producers Exchange, Richland	2.65	96.8	----	.62	17.33	8.08
Farm Club Exchange, Owensville	2.95	92.5	----	.43	16.57	8.40
Boone County M.F.A. Exchange, Columbia	2.78	97.1	----	.97	15.00	7.88
M.F.A. Central Coop., Moberly	2.41	97.5	----	.77	15.00	7.50
M.F.A. Central Coop., Laddonia	2.30	97.4	----	.76	15.49	7.70
M.F.A. Central Coop., Marshall	2.92	97.9	----	1.00	15.45	8.29
Average Analysis	2.66	96.3	----	.68	15.71	7.97
Guaranteed Analysis	2.50	-----	----	----	15.00	7.50
3-12-12						
M.F.A. Central Coop., Fulton	2.62	96.6	----	.52	12.26	13.34
M.F.A. Cooperative Ass'n., Brunswick . .	3.12	98.7	----	.58	12.35	12.88
M.F.A. Central Coop., Sedalia	3.09	98.4	----	.76	12.00	13.34
M.F.A. Central Coop., Dexter	3.07	93.2	----	.41	12.82	12.82
Farmers Exchange, West Plains	3.35	94.3	----	.44	13.01	12.82
Lamar Farmers Exchange, Lamar	2.88	94.8	----	.33	12.65	12.24
Farmers Exchange, Bolivar	3.00	95.3	----	.37	12.48	12.00
Producers Exchange, Lincoln	3.17	94.0	----	.36	12.19	12.38
M.F.A. Cooperative Ass'n., California . .	2.75	93.7	----	.43	12.45	12.95
Average Analysis	3.01	95.4	----	.47	12.47	12.75
Guaranteed Analysis	3.00	-----	----	----	12.00	12.00
4-12-4						
M.F.A. Central Coop., Dexter	4.76	97.7	----	.68	12.47	4.96
Farmers Exchange, Houston	4.00	97.8	----	.62	12.41	5.06
Farmers Exchange, Cabool	4.76	98.1	----	.66	12.49	5.34
Farmers Exchange, Thayer	4.39	98.6	----	.51	12.22	4.86
Farmers Exchange, Birch Tree	4.17	97.6	----	3.93	<u>9.50</u>	4.60
Christian County Farmers Exchange, Ozark	4.17	98.1	----	.57	12.00	4.95
Producers Exchange, Marshfield	4.09	97.3	----	.49	12.44	4.98
Farmers Produce Exchange, Lebanon . . .	4.29	97.9	----	.38	12.00	5.19
Neosho Farmers Exchange, Neosho	4.11	97.1	----	.34	12.41	4.82
Farmers Supply Co., Greenfield	3.88	96.9	----	.52	12.86	4.96
Lamar Farmers Exchange, Lamar	4.23	97.9	----	.45	12.30	4.96
Buffalo Farmers Exchange, Buffalo	4.47	98.2	----	.39	12.46	5.41

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES, SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(4-12-4 cont'd)						
M.F.A. Central Coop., Lowry City	4.11	98.3	----	.75	12.45	4.35
Farmers Exchange, Bolivar	4.15	97.8	----	.41	12.00	4.84
Producers Exchange, Lincoln	4.23	98.1	----	.56	12.00	4.33
M.F.A. Central Coop., Eldon	4.28	97.7	----	.17	12.00	5.08
Producers Exchange, Richland	3.88	97.2	----	.62	12.00	4.94
Farmers Coop., Dixon	4.23	96.9	----	.40	12.33	5.07
M.F.A. Cooperative Ass'n., Salem	4.38	97.3	----	.64	12.29	5.46
Farm Club Exchange, Owensville	4.58	98.3	----	.36	13.17	5.37
M.F.A. Central Coop., Versailles	4.19	97.6	----	.59	12.21	5.21
Farmers Cooperative Ass'n., Union	4.46	98.2	----	.29	13.19	4.92
M.F.A. Exchange, Clarence	4.31	98.1	----	.36	12.42	5.08
M.F.A. Central Coop., Moberly	4.25	98.6	----	.52	12.00	5.07
M.F.A. Central Coop., Browning	4.00	97.8	----	.78	12.00	4.90
M.F.A. Exchange, Unionville	4.19	97.9	----	.34	12.46	5.09
M.F.A. Central Coop., Lancaster	4.00	96.5	----	3.30	10.30	4.99
M.F.A. Central Coop., Green City	4.33	97.5	----	2.35	10.33	5.00
La Grange Elevator Co., La Grange	4.24	97.2	----	.33	12.55	5.03
M.F.A. Central Coop., Canton	4.27	97.7	----	1.45	11.23	5.15
M.F.A. Central Coop., Paris	4.35	96.8	----	.58	12.50	5.00
Cooperative Ass'n. #20, Wentzville	4.46	97.8	----	.38	12.65	4.90
Farmers Exchange, Truesdale	4.41	97.7	----	.41	12.97	4.58
Farmers Elevator Co., Jonesburg	4.49	96.7	----	.57	12.53	5.13
M.F.A. Central Coop., Fulton	4.20	98.6	----	.25	13.18	4.67
Farmers Exchange, Trenton	4.56	96.3	----	.87	12.38	4.70
Farmers Exchange, Brookfield	4.05	97.0	----	.83	12.52	4.83
M.F.A. Central Coop., Grant City	4.05	97.5	----	.98	12.00	5.07
M.F.A. Central Coop., Pattonsburg	4.75	97.3	----	.68	13.45	5.38
M.F.A. Central Coop., Albany	4.00	97.0	----	.92	13.58	5.14
M.F.A. Central Coop., Bethany	4.33	96.8	----	1.31	12.00	4.94
M.F.A. Cooperative Ass'n., Brunswick	4.43	97.7	----	.61	12.54	5.16
M.F.A. Central Coop., Marshall	4.20	97.9	----	.28	12.77	5.30
M.F.A. Central Coop., Sedalia	4.00	97.3	----	1.05	12.00	4.97
Farmers Elevator, Boonville	4.26	98.1	----	.63	12.25	5.02
Average Analysis	4.27	97.6	----	.76	12.26	4.99
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
4-24-12						
M.F.A. Central Coop., Kahoka	4.54	98.7	----	1.37	22.88	11.59
Farmers Produce Co., Shelbyville	4.54	97.8	----	1.39	25.31	12.55
M.F.A. Central Coop., Moberly	4.18	97.1	----	1.27	22.33	11.68
Farmers Exchange, Kirksville	4.34	97.5	----	1.65	24.60	12.47
M.F.A. Central Coop., Canton	4.51	98.2	----	1.13	25.02	12.00
M.F.A. Central Coop., Paris	4.24	97.9	----	1.44	25.56	10.98
Farmers Produce and Grain Co., Hamilton	4.58	97.4	----	1.58	24.77	12.58
M.F.A. Central Coop., Pattonsburg	3.86	97.3	----	1.44	24.00	12.00
M.F.A. Central Coop., Albany	4.50	98.2	----	1.17	24.00	12.00
M.F.A. Central Coop., Bethany	4.35	98.4	----	1.45	24.00	12.00
M.F.A. Cooperative Ass'n., Brunswick	4.24	97.6	----	1.59	25.51	12.58
M.F.A. Central Coop., Warrensburg	4.06	97.5	----	1.73	24.87	13.07
M.F.A. Central Coop., Marshall	4.54	97.6	----	1.82	24.00	12.27
Average Analysis	4.33	97.8	----	1.46	24.37	12.14
Guaranteed Analysis	4.00	----	----	----	24.00	12.00
5-15-5						
Mt. Vernon Farmers Exchange, Mt. Vernon	4.27	98.1	----	.58	15.67	4.74
Farmers Elevator Co., El Dorado Springs	4.28	97.9	----	2.53	13.02	4.30
Average Analysis	4.28	98.0	----	1.56	14.35	4.52
Guaranteed Analysis	5.00	----	----	----	15.00	5.00
6-18-6						
M.F.A. Central Coop., Eldon	6.37	98.4	----	.97	18.93	6.32

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(6-18-6 cont'd)						
Farmers Cooperative Ass'n., Union,	6.35	97.8	----	.68	18.82	7.55
M.F.A. Central Coop., Ste. Genevieve . . .	6.82	98.4	----	.95	18.00	6.22
Boone County M.F.A. Exchange, Columbia	6.78	97.8	----	1.29	18.51	6.83
Farmers Exchange, Kirksville	6.56	98.0	----	1.18	18.57	6.65
M.F.A. Central Coop., Moberly,	6.58	97.7	----	1.54	19.16	6.60
Farmers Produce Exchange, Queen City. . .	6.56	97.7	----	1.25	18.00	6.68
La Grange Elevator Co., La Grange.	6.62	97.7	----	1.73	17.52	6.74
M.F.A. Central Coop., Canton.	6.61	97.6	----	2.23	18.37	6.00
M.F.A. Central Coop., Paria,	6.48	98.5	----	1.50	18.55	6.58
M.F.A. Central Coop., Fulton.	6.66	97.7	----	1.97	18.78	7.15
Farmers Exchange, Trenton,	6.73	97.8	----	1.86	18.00	7.43
M.F.A. Exchange, Unionville	6.69	97.6	----	1.21	18.34	6.62
M.F.A. Central Coop., Browning.	6.34	97.6	----	1.63	20.22	6.76
M.F.A. Central Coop., Grant City	6.59	98.2	----	1.75	18.60	6.19
M.F.A. Central Coop., Pattonsburg	6.48	98.0	----	1.56	19.64	7.05
Farmers Produce Exchange, Hamilton. . . .	6.16	97.6	----	1.53	19.87	6.64
M.F.A. Central Coop., Albany.	6.39	97.5	----	1.74	18.36	6.66
M.F.A. Central Coop., Bethany.	6.52	97.9	----	1.57	18.00	7.19
M.F.A. Central Coop., St. Joseph	6.66	97.7	----	1.42	18.00	6.83
M.F.A. Cooperative Ass'n., Brunswick. . .	6.63	98.0	----	1.42	18.68	7.17
M.F.A. Central Coop., Warrensburg	6.33	98.3	----	1.79	18.81	7.02
M.F.A. Central Coop., Marshall	6.47	97.8	----	1.53	18.00	7.10
Average Analysis	6.54	97.9	----	1.49	18.60	6.78
Guaranteed Analysis	6.00	----	----	----	18.00	6.00
8-8-8						
Clarence Grain Co. Clarence	7.43	98.5	----	.43	8.17	11.53
La Grange Elevator Co., La Grange.	6.12	98.5	----	.48	9.25	8.69
M.F.A. Central Coop., Fulton.	8.00	98.6	----	.44	7.84	8.49
M.F.A. Exchange, Unionville	6.15	98.2	----	.65	8.98	8.16
M.F.A. Central Coop., Marshall	7.70	98.4	----	.59	8.00	8.26
Farmers Elevator, Boonville	7.66	99.0	----	.51	8.14	8.66
M.F.A. Cooperative Ass'n., Mansfield . . .	7.80	98.8	----	.27	8.00	8.50
Crane Farmers Exchange, Crane	8.17	99.1	----	.24	8.00	8.40
Farm Club Exchange, Owensville	7.46	99.1	----	.52	8.91	9.22
M.F.A. Central Coop., Ste. Genevieve . . .	6.90	98.4	----	.51	8.64	8.30
Average Analysis	7.34	98.7	----	.46	8.39	8.82
Guaranteed Analysis	8.00	----	----	----	8.00	8.00
Manure Salts 23%						
Farmers Exchange, Houston,	----	----	----	----	----	24.13
M.F.A. Cooperative Ass'n., Salem.	----	----	----	----	----	24.81
Average Analysis	----	----	----	----	----	24.47
Guaranteed Analysis	----	----	----	----	----	23.00
Manure Salts 25%						
Farmers Produce Exchange, Lebanon	----	----	----	----	----	26.43
Guaranteed Analysis	----	----	----	----	----	25.00
Muriate of Potash 60%						
Farmers Produce Co., Shelbyville (E) (D) . .	----	----	----	----	----	60.00
M.F.A. Central Coop., Grant City (E) (D) .	----	----	----	----	----	60.98
M.F.A. Central Coop., Lancaster (E) (D) .	----	----	----	----	----	62.14
La Grange Elevator Co., La Grange (E) (D)	----	----	----	----	----	60.00
M.F.A. Central Coop., Canton (E)	----	----	----	----	----	60.00
Average Analysis	----	----	----	----	----	60.62
Guaranteed Analysis	----	----	----	----	----	60.00
MISSOURI VALLEY ORGANIC FERTILIZER						
MIX, INC., UNION STAR, MO.						
T.H.S. Fertilizer						
Missouri Valley Organic Fertilizer Mix, Inc., Union Star	.13	71.4	----	.08	.21	.31
Guaranteed Analysis	1.30	----	----	----	1.30	.50

(D) Registration tags not attached.
(E) Incomplete labels.

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
PHOSPHATE FERTILIZER, INC.						
KEMMERER, WYO.						
<u>Top of the World Brand Phosphate Rock</u>						
Ray-Carroll Counties Grain Growers Ass'n., Richmond	----	----	----	29.50	2.55	----
Cameron Cooperative Elevator Ass'n., Cameron	----	----	----	30.05	2.50	----
Average Analysis	----	----	----	29.78	2.53	----
Guaranteed Analysis	----	----	----	28.00	2.00	----
PIONEER PHOSPHATE CO.						
DES MOINES, IOWA						
<u>Pioneer Brands</u>						
0-20-20						
Rolla Feed Mill, Rolla (A) (D)	----	----	----	.42	20.83	20.00
Guaranteed Analysis	----	----	----	----	20.00	20.00
3-9-18						
Kennett Grain and Seed Co., Kennett (A)	3.10	99.0	----	1.19	9.49	18.29
Guaranteed Analysis	3.00	----	----	----	9.00	18.00
PLANTABBS CORP.						
BALTIMORE, MD.						
<u>Fulton's Plantabbs</u>						
Sunny Hill Feed and Seed Store, Cape Girardeau (H)	11.29	99.5	----	.23	18.87	25.86
Harndens Seed Co., Kansas City (H)	10.02	100.0	----	.32	17.18	25.30
Average Analysis	----	----	----	----	----	----
Guaranteed Analysis	11.00	----	----	----	15.00	20.00
PLANT-CHEM, INC.						
SAN FRANCISCO, CALIF.						
<u>Plant-Chem Salts</u>						
Standard Seed Co., Kansas City (H)	5.99	98.7	----	.38	7.20	14.21
Guaranteed Analysis	4.00	----	----	----	7.00	10.00
<u>Lawn-Chem Salts</u>						
Standard Seed Co., Kansas City (D) (H)	14.84	99.1	----	.37	11.71	8.14
Guaranteed Analysis	14.00	----	----	----	9.00	7.00
RALSTON-PURINA CO.						
ST. LOUIS, MO.						
<u>Purina Brands</u>						
5-10-5						
Branson Farm Supply Co., Branson (H)	4.54	97.1	----	3.10	12.65	5.71
Guaranteed Analysis	5.00	----	----	----	10.00	5.00
ROSE MANUFACTURING CO.						
BEACON, N.Y.						
<u>Tri-Ogen Rose Food</u>						
Harnden's Seed Co., Kansas City (D) (H)	5.39	96.5	----	.91	10.29	5.98
Guaranteed Analysis	5.00	----	----	----	10.00	5.00
SAN FRANCISCO CHEMICAL CO.						
SAN FRANCISCO, CALIF.						
<u>Mountain Phosphate Rock</u>						
St. Charles County Farm Bureau Service Co., St. Charles	----	----	----	29.85	2.52	----
Guaranteed Analysis	----	----	----	29.00	3.00	----

(A) Not registered.
(D) Registration tags not attached.

(H) Sample drawn from less than five containers.
Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
SCHROCK FERTILIZER SERVICE						
CONGERVILLE, ILL.						
<u>Natural Phosphate</u>						
Knight Produce, Delta	----	----	----	29.30	3.90	----
Guaranteed Analysis	----	----	----	----	3.00	----
<u>Pulverized Phosphate Rock</u>						
Stover Milling Co., Stover (F) (D)	----	----	----	30.00	3.90	----
Rolla Feed Mill, Rolla (F) (D)	----	----	----	29.40	3.85	----
Buffalo Farmers Exchange, Buffalo (F)	----	----	----	29.50	3.65	----
Average Analysis	----	----	----	29.63	3.80	----
Guaranteed Analysis	----	----	----	----	none	----
<u>Schrock High-Test Natural Phosphate</u>						
H. F. Owen Mercantile, Forsythe (D)	----	----	----	30.20	4.20	----
Boonville Mill and Grain Co., Boonville	----	----	----	31.90	1.50	----
Average Analysis	----	----	----	31.05	2.85	----
Guaranteed Analysis	----	----	----	----	3.00	----
<u>Muriate of Potash</u>						
Nichols Bros., Southwest City	----	----	----	----	----	61.10
Guaranteed Analysis	----	----	----	----	----	60.00
O. M. SCOTT AND SONS CO.						
MARYSVILLE, OHIO						
<u>Scott's Turf Builder</u>						
Henry Schulz Feed Co., Webster Groves (D)	9.93	83.3	----	.18	7.30	4.29
Guaranteed Analysis	9.00	----	----	----	7.00	4.00
SEARS ROEBUCK AND CO.						
CHICAGO, ILL.						
<u>Cross County Brands</u>						
<u>Bulb Food 4-12-8</u>						
Sears Roebuck and Co., St. Louis (D) (H)	3.55	71.5	----	1.15	13.88	6.52
Guaranteed Analysis	4.00	----	----	----	12.00	8.00
<u>Bone Meal</u>						
Sears Roebuck and Co., St. Louis (D) (H)	1.26	22.2	33.05	----	----	----
Guaranteed Analysis	2.00	----	20.00	----	----	----
<u>Cattle Manure</u>						
Sears Roebuck and Co., St. Louis (D) (H)	1.24	----	----	.17	1.08	3.04
Guaranteed Analysis	1.50	----	----	----	1.00	2.00
<u>Sheep Manure</u>						
Sears Roebuck and Co., St. Louis (D) (H)	1.17	23.9	----	.15	.95	2.89
Guaranteed Analysis	1.50	----	----	----	1.00	2.00
SPENCER CHEMICAL CO.						
MILITARY, KAN.						
<u>Ammonium Nitrate</u>						
M.F.A. Cooperative Ass'n., Salem	33.50	I	----	----	----	----
Rolla Feed Mill, Rolla	33.50	I	----	----	----	----
D. O. Fugate, Weaubleau	33.50	I	----	----	----	----
Farmers Elevator and Supply Co., Clinton	33.99	I	----	----	----	----
Farmers Elevator Co., El Dorado Springs	33.50	I	----	----	----	----
Buffalo Farmers Exchange, Buffalo	33.50	I	----	----	----	----
Lamar Farmers Exchange, Lamar	34.17	I	----	----	----	----
Mt. Vernon Farmers Exchange, Mt. Vernon	34.55	I	----	----	----	----
Crane Farmers Exchange, Crane	34.35	I	----	----	----	----
Farmers Produce Exchange, Lebanon	34.19	I	----	----	----	----
H. W. Moore, Ava	33.50	I	----	----	----	----
Farmers Exchange, Branson	33.50	I	----	----	----	----
Reynolds County M.F.A., Ellington	34.33	I	----	----	----	----

(D) Registration tags not attached.

(F) Labels partly wrong.

(H) Sample drawn from less than five containers.

I Not determined; all H₂O Soluble.
Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(Ammonium Nitrate cont'd)						
Farmers Exchange, Thayer	34.25	I	----	----	----	----
Farmers Exchange, Houston	34.05	I	----	----	----	----
Paul Skaggs & Co., Fredericktown	33.50	I	----	----	----	----
R. C. Davis Gin & Grain Co., Charleston	33.50	I	----	----	----	----
Miner Feed and Seed Co., Miner	33.50	I	----	----	----	----
Kraft Seed and Grain Co., Morehouse (D)	34.25	I	----	----	----	----
Saline County Seed House, Marshall	34.04	I	----	----	----	----
Economy Feed Mill, Harrisonville (D)	34.22	I	----	----	----	----
Knobnoster Elevator Co., Knobnoster	34.01	I	----	----	----	----
M.F.A. Cooperative Ass'n., Higginsville	33.89	I	----	----	----	----
Whitaker Feed & Produce Co., Marysville	33.50	I	----	----	----	----
De Mott Elevator Co., Marysville (D)	34.17	I	----	----	----	----
Owen Produce Co., Maysville	33.50	I	----	----	----	----
M.F.A. Central Coop., Grant City	34.01	I	----	----	----	----
Farmers Produce & Grain Co., Hamilton	33.50	I	----	----	----	----
Reeds Farm Supply Co., Trenton	33.86	I	----	----	----	----
Old Monroe Elevator Co., Old Monroe	34.12	I	----	----	----	----
Gallaway Bros., Elsberry (H)	33.50	I	----	----	----	----
Average Analysis	33.85	I	----	----	----	----
Guaranteed Analysis	33.50	----	----	----	----	----
STOCKDALE FERTILIZER CO., MORRIS, ILL.						
<u>Ovene</u>						
F. W. Woolworth, Kansas City (D) (H)	1.76	43.2	----	.25	1.88	2.13
Guaranteed Analysis	2.00	----	----	----	1.00	2.00
SWIFT AND CO., NATIONAL STOCK YARDS, ILL.						
<u>Red Steer Brands</u>						
<u>0-20-0</u>						
Farmers Equity Exchange, Bowling Green	----	----	----	.42	21.33	----
Washburn Produce, King City	----	----	----	.42	20.48	----
Sandy Moody Feed Store, Mound City	----	----	----	.46	20.49	----
Fred Hawkins Feed Co., Springfield	----	----	----	.49	20.00	----
H. H. George, Pierce City	----	----	----	.24	20.91	----
Norris Grain Co., Nevada	----	----	----	.41	20.44	----
Halbrook Feed Store, Salem	----	----	----	.43	20.00	----
Average Analysis	----	----	----	.41	20.52	----
Guaranteed Analysis	----	----	----	----	20.00	----
<u>0-12-12</u>						
Fred Hawkins Feed Co., Springfield	----	----	----	.36	12.34	10.67
Guaranteed Analysis	----	----	----	----	12.00	12.00
<u>0-14-7</u>						
Fred Hawkins Feed Co., Springfield	----	----	----	.59	14.00	7.60
H. H. George, Pierce City	----	----	----	.48	14.92	7.00
Norris Grain Co., Nevada	----	----	----	.52	14.00	7.48
Farmers Equity Exchange, Bowling Green	----	----	----	.62	13.38	8.91
Vandalia Roller Mill, Vandalia	----	----	----	.58	14.00	7.36
Average Analysis	----	----	----	.56	14.06	7.67
Guaranteed Analysis	----	----	----	----	14.00	7.00
<u>2-12-6</u>						
Huntsville Elevator and Feed Co., Huntsville (D)	2.20	96.8	----	.55	12.00	6.69
Macon Elevator Co., Macon	2.32	95.7	----	.36	12.00	6.00
Summers Elevator Co., Fayette	2.47	96.8	----	.66	12.00	6.00
Clarence Grain Co., Clarence	2.00	96.5	----	.74	12.00	6.43
Shell and Sons, Lutesville	2.30	94.8	----	.92	12.26	6.57

(D) Registration tags not attached.

(H) Sample drawn from less than five containers.

I Not determined; all H₂O Soluble.
Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(2-12-6 cont'd)						
F. E. Thompson and Sons, Alton	2.18	95.0	----	.55	12.63	6.71
Easter Bros., Lebanon	2.10	94.8	----	.95	12.00	6.24
Phil Ratliff, Neosho	2.36	95.8	----	1.01	<u>11.29</u>	6.54
H. H. George, Pierce City	2.19	96.3	----	.31	12.29	6.00
Roy Webb, Jasper	2.07	94.7	----	.36	12.00	6.39
Norris Grain Co., Nevada	2.10	96.7	----	1.81	<u>11.42</u>	6.29
Armstrong and Jackson, Lowry City	2.12	94.3	----	.91	12.00	6.20
Producers Exchange, Lincoln	2.00	93.0	----	.39	12.29	6.22
Rolla Feed Mill, Rolla	2.16	94.4	----	1.00	12.00	6.22
Bourbon Farmers Exchange, Bourbon	2.27	96.5	----	.42	12.28	6.77
Hartung Produce, Bourbon	2.24	93.3	----	.28	12.00	7.72
Average Analysis	2.19	95.3	----	.70	12.03	6.44
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
3-12-6						
Madison County Farmers Whse. Assn., Fredericktown	3.44	96.8	----	1.20	<u>11.49</u>	6.73
Shell and Sons, Lutesville	3.30	96.1	----	1.45	<u>11.33</u>	6.38
Fred Hawkins Feed Co., Springfield	3.00	97.0	----	2.23	<u>11.10</u>	6.52
H. H. George, Pierce City	2.24	92.4	----	.47	12.00	6.30
Johnnies Feed and Produce, Buffalo	<u>3.12</u>	95.2	----	1.81	12.00	6.82
Norris Grain Co., Nevada	2.68	94.0	----	.77	12.66	6.43
Hartung Produce, Bourbon	3.00	96.0	----	.61	12.39	6.29
Washburn Produce, King City	2.79	96.8	----	1.82	<u>11.51</u>	6.65
Farmers Equity Exchange, Bowling Green	<u>3.04</u>	97.4	----	1.20	12.58	6.29
Average Analysis	<u>2.96</u>	95.7	----	1.27	<u>11.90</u>	6.49
Guaranteed Analysis	3.00	----	----	----	12.00	6.00
3-12-12						
R. C. Davis Gin and Grain Co., Charleston	3.15	95.9	----	.58	12.25	<u>11.75</u>
Norris Grain Co., Nevada	3.08	95.5	----	.67	12.23	<u>12.00</u>
Rolla Feed Mill, Rolla	3.18	96.9	----	.57	12.36	<u>11.28</u>
Vandalia Roller Mill, Vandalia (D)	3.13	97.1	----	.49	12.00	<u>10.24</u>
Average Analysis	3.14	96.4	----	.58	12.21	<u>11.32</u>
Guaranteed Analysis	3.00	----	----	----	12.00	<u>12.00</u>
Blenn 3-12-12						
Vandalia Roller Mill, Vandalia (D)	3.00	96.7	----	.86	12.89	12.00
Clarence Grain Co., Clarence (D)	3.23	97.5	----	.66	12.74	12.20
R. C. Davis Gin and Grain Co., Charleston	3.00	95.0	----	.88	12.00	<u>11.69</u>
H. H. George, Pierce City	3.11	94.5	----	.41	13.04	<u>11.50</u>
Greenfield Milling Co., Greenfield	3.05	93.8	----	.51	12.00	<u>11.64</u>
Producers Exchange, Lincoln	3.08	95.5	----	.53	12.75	<u>11.06</u>
Average Analysis	3.08	95.5	----	.64	12.57	<u>11.68</u>
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
4-12-4						
F. E. Thompson and Sons, Alton	4.00	96.5	----	.52	12.91	4.38
Albert A. Moss, Ellsinore	4.07	97.8	----	.46	12.24	4.15
Fred Hawkins Feed Co., Springfield	4.06	97.3	----	1.61	12.00	4.62
H. H. George, Pierce City	4.06	97.8	----	.24	12.64	4.18
Roy Webb, Jasper	4.00	98.0	----	.38	13.20	4.42
Greenfield Milling Co., Greenfield	4.18	97.4	----	1.17	12.23	3.78
Norris Grain Co., Nevada	4.05	97.3	----	1.73	12.00	4.46
Armstrong and Jackson, Lowry City	<u>3.82</u>	97.6	----	.58	12.55	4.55
Producers Exchange, Lincoln	4.19	97.8	----	.40	12.68	5.02
Rolla Feed Mill, Rolla	4.00	97.8	----	.46	12.52	4.35
Halbrook Feed Store, Salem	<u>3.81</u>	97.9	----	1.21	12.00	4.45
Bourbon Farmers Exchange, Bourbon	<u>3.51</u>	97.7	----	.96	12.44	4.85
Hartung Produce, Bourbon	4.10	97.3	----	.45	12.40	4.61
Stover Milling Co., Stover	4.00	96.5	----	.37	12.71	4.27
Summers Elevator Co., Armstrong	4.00	97.8	----	.84	12.64	4.26

(D) Registration tags not attached.

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(4-12-4 cont'd)						
Huntsville Elevator and Feed Co., Huntsville (D)	4.07	97.5	----	.92	12.61	4.29
Macon Elevator Co., Macon	<u>3.91</u>	97.7	----	.91	12.00	4.35
Summers Elevator Co., Fayette	<u>3.90</u>	97.9	----	.70	12.70	4.00
Farmers Elevator and Exchange Co., Palmyra	4.12	98.3	----	.77	12.00	4.10
James Young, Paris	<u>3.94</u>	97.5	----	.51	12.00	4.61
Farmers Elevator Co., Jonesburg	<u>3.90</u>	97.7	----	.49	12.00	4.38
Vandalia Rollar Mill, Vandalia	4.16	97.6	----	1.20	12.00	4.00
Washburn Produce Co., King City	4.00	97.3	----	.84	12.00	4.23
Sandy Moody Feed Store, Mound City	4.21	98.1	----	.70	12.00	4.21
Boonville Mill and Grain Co., Boonville	4.19	97.9	----	.71	12.00	5.78
Average Analysis	4.01	97.6	----	.77	12.34	4.41
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
Vigoro 4-12-4						
Macon Elevator Co., Macon	4.00	97.3	----	.69	12.66	4.00
F. W. Woolworth, Kirksville (H)	<u>3.90</u>	97.9	----	4.63	<u>9.32</u>	<u>3.84</u>
Farmers Exchange, Green Castle	4.00	97.8	----	.78	12.70	4.26
Weston Milling Co., Weston	4.00	98.0	----	1.03	12.00	4.56
Savannah Hardware, Savannah (H)	4.00	98.3	----	1.57	12.31	4.54
Schreiner Lumber and Hardware Co., Marble Hill	4.21	97.9	----	.28	13.55	4.86
Sunnyhill Feed and Seed Store, Cape Girardeau (H)	4.27	97.7	----	.11	13.49	5.75
Roy Webb, Jasper	4.46	97.8	----	.38	14.10	2.34
Armstrong & Jackson, Lowry City	4.00	98.0	----	1.23	12.00	4.38
Farm Club Exchange, Owensville	4.11	97.8	----	.72	13.11	4.28
Average Analysis	4.10	97.9	----	1.14	12.52	4.28
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
Brimm 4-12-8						
R. C. Davis Gin and Grain Co., Charleston Madison County Farmers Whse. Ass'n., Fredericktown	4.33	97.9	----	1.73	12.00	<u>7.39</u>
H. H. George, Pierce City	<u>4.34</u>	97.5	----	2.43	<u>9.82</u>	8.00
Norris Grain Co., Nevada	<u>3.88</u>	97.4	----	.74	12.21	<u>7.75</u>
James Young, Paris	<u>3.74</u>	97.6	----	.45	12.23	<u>8.78</u>
Average Analysis	<u>3.52</u>	97.2	----	.53	12.82	<u>6.58</u>
Guaranteed Analysis	<u>3.96</u>	97.5	----	1.18	<u>11.82</u>	<u>7.70</u>
Guaranteed Analysis	4.00	----	----	----	12.00	8.00
TENNESSEE CORP., LOCKLAND, OHIO						
Loma 5-10-5						
Archias Seed Store, Sedalia	5.31	98.5	----	.44	10.71	5.11
Henry Schulz Feed Co., Webster Groves	5.23	97.9	----	.84	10.34	5.41
Average Analysis	5.27	98.2	----	.84	10.53	5.26
Guaranteed Analysis	5.00	----	----	----	10.00	5.00
Loma 8-8-8 Mineralized						
Arnold Elevator Mill, Butler (D) (H)	8.00	97.6	----	.22	8.71	8.00
Guaranteed Analysis	8.00	----	----	----	8.00	8.00
THOMPSON SALES CO., MONTGOMERY, ALA.						
Calphos						
Leroy Blount Feed Store, Jefferson City	----	----	----	15.50	3.85	----
Guaranteed Analysis	----	----	----	16.00	2.00	----

(D) Registration tags not attached.

Deficiencies are underlined.

(H) Sample Drawn from less than five containers.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
THOMSON PHOSPHATE CO.,						
CHICAGO, ILL.						
<u>Four Leaf Powdered Rock Phosphate (F)</u>						
Carroll County Farm Bureau Service Co., Carrollton	----	----	----	24.30	3.15	----
Hughes Feed and Produce Co., Huntsville	----	----	----	25.90	4.00	----
Average Analysis	----	----	----	25.10	3.58	----
Guaranteed Analysis	----	----	----	30.00	2.00	----
<u>Four Leaf Powdered Rock Phosphate</u>						
Nichols Bros., Southwest City (F)	----	----	----	26.90	3.35	----
Guaranteed Analysis	----	----	----	----	None	----
THURSTON CHEMICAL CO.,						
JOPLIN, MO.						
<u>Bem Brands</u>						
<u>0-20-0</u>						
Fayette Cooperative Mill and Elevator Co., Fayette	----	----	----	.97	20.78	----
Farmers Exchange, Kirksville	----	----	----	.50	20.00	----
M.F.A. Central Coop., Green City	----	----	----	.59	21.16	----
Purdin Farm Club, Purdin	----	----	----	.64	20.56	----
Farmers Produce and Grain Co., Hamilton	----	----	----	.75	20.80	----
Henderson Produce Co., Albany	----	----	----	.46	20.94	----
Sheridan Grain Co., Sheridan	----	----	----	.41	21.04	----
D. & M. Feed Store, Excelsior Springs	----	----	----	1.51	20.34	----
Benton Feed Store, St. Joseph	----	----	----	.58	20.00	----
Frank Johnson, Rosendale	----	----	----	.39	20.71	----
Whitaker Feed and Produce Co., Marysville	----	----	----	.54	20.76	----
Armstrong Elevator Co., Harrisonville	----	----	----	.78	20.00	----
Richards Bros., West Plains	----	----	----	1.29	20.00	----
Burford Feed and Supply Co., Doniphan	----	----	----	.70	20.55	----
Richards Bros., Mansfield	----	----	----	.24	21.26	----
Christian County Farmers Exchange, Ozark	----	----	----	.45	20.95	----
H. F. Owen Mercantile, Forsyth	----	----	----	.60	21.35	----
Jenkins Feed Mill, Hollister	----	----	----	.38	20.47	----
H. W. Moore, Ava	----	----	----	.40	20.85	----
Tevebaugh Bros., Gainesville	----	----	----	.75	20.00	----
Producers Exchange, Marshfield	----	----	----	.87	20.00	----
Baker Feed Store, Cassville	----	----	----	.86	20.59	----
Nichols Bros., Southwest City	----	----	----	.67	20.93	----
Neosho Farmers Exchange, Neosho	----	----	----	.25	20.00	----
Cantrell Seed House and Hatchery, Carthage	----	----	----	.36	20.99	----
Greenfield Milling Co., Greenfield	----	----	----	.84	20.36	----
Johnnies Feed Store, Buffalo	----	----	----	.84	20.00	----
Harriman Elevator Co., Adrian	----	----	----	.39	20.96	----
Arnold Elevator Mill, Butler	----	----	----	1.16	19.49	----
Farmers Elevator Co., El Dorado Springs	----	----	----	.55	20.70	----
D. O. Fugate, Weaubleau	----	----	----	.77	20.00	----
Shelby Feed Store, Camdenton (H)	----	----	----	.99	20.86	----
Halbrook Feed Store, Salem	----	----	----	.90	20.35	----
Stover Milling Co., Stover	----	----	----	.36	21.04	----
Rohrbach Produce Co., California	----	----	----	.78	21.37	----
Average Analysis	----	----	----	.67	20.58	----
Guaranteed Analysis	----	----	----	----	20.00	----
<u>Triple Superphosphate 47%</u>						
Arnold Elevator Mill, Butler	----	----	----	1.43	39.72	----
Iberia Farmers Exchange, Iberia	----	----	----	1.00	44.70	----
Average Analysis	----	----	----	1.22	42.21	----

(F) Labels partly wrong.

Deficiencies are underlined.

(H) Sample drawn from less than five containers.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, AND DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(Triple Superphosphate 47% cont'd)						
Guaranteed Analysis	----	----	----	----	47.00	----
0-14-7						
H. W. Moore, Ava	----	----	----	.89	14.61	7.33
Producers Exchange, Marshfield	----	----	----	.92	14.28	7.00
Allman Feed and Produce Co., Wheaton	----	----	----	.49	15.93	7.00
Spring Creek Mill, Crane	----	----	----	.97	14.23	7.11
Arnold Elevator Mill, Butler	----	----	----	1.31	<u>13.32</u>	7.57
Beacon Milling Co., Bolivar	----	----	----	1.04	<u>13.59</u>	7.38
Ernest Clintworth, Hermitage	----	----	----	.97	14.33	7.00
M.F.A. Central Coop., Kahoka	----	----	----	1.07	14.00	7.25
Fayette Cooperative Mill and Elevator Co., Fayette	----	----	----	1.44	<u>13.66</u>	7.27
Farmers Exchange, Kirksville	----	----	----	1.58	14.42	6.50
Benton Feed Store, St. Joseph	----	----	----	1.17	14.00	7.00
Average Analysis	----	----	----	1.08	14.22	7.13
Guaranteed Analysis	----	----	----	----	14.00	7.00
2-12-6						
Fayette Cooperative Mill and Elevator Co., Fayette	2.00	96.5	----	1.99	12.39	6.00
Producers Grain Co., Montgomery City	2.09	95.2	----	1.61	12.69	6.13
D. & M. Feed Store, Excelsior Springs	2.18	95.0	----	1.81	12.00	6.16
Farmers Exchange, Alton	2.17	88.9	----	.90	12.35	6.30
Richards Bros., West Plains	2.14	97.2	----	.92	12.23	6.22
Farmers Exchange, Birch Tree	2.16	96.3	----	1.09	12.36	6.34
Burford Feed and Supply Co., Doniphan	2.06	96.1	----	.62	12.83	6.59
Richards Bros., Mansfield	2.14	95.8	----	.86	12.54	6.00
H. W. Moore, Ava	2.08	94.7	----	.83	12.47	6.39
Tevebaugh Bros., Gainesville	2.11	95.3	----	.98	12.57	<u>5.71</u>
Baker Feed Store, Cassville	2.11	97.2	----	1.03	12.72	<u>6.83</u>
Rice Produce, Noel	2.08	97.6	----	1.03	12.27	6.50
Nichols Bros., Southwest City	2.20	98.6	----	1.20	13.55	6.73
Cantrell Seed House and Hatchery, Carthage	2.28	96.9	----	1.10	12.35	6.89
Norris Grain Co., Lamar	2.30	96.1	----	.96	12.44	6.20
Harriman Elevator, Adrian	2.00	95.5	----	1.10	12.55	6.11
Arnold Elevator Mill, Butler	2.07	93.7	----	1.09	12.36	7.07
Beacon Milling Co., Bolivar	<u>1.96</u>	92.9	----	.98	12.00	6.00
Farmers Exchange, Bolivar	<u>2.36</u>	94.5	----	1.01	12.44	6.28
D. O. Fugate, Weaubleau	2.14	94.9	----	1.35	12.25	6.39
Ernest Clintworth, Hermitage	2.15	95.3	----	1.12	13.13	<u>5.76</u>
Shelby Feed Store, Camdenton	2.46	96.7	----	1.11	12.00	6.33
Producers Exchange, Richland	2.38	97.5	----	.54	12.98	6.00
Halbrook Feed Store, Salem	2.13	96.7	----	.95	12.00	6.31
Stover Milling Co., Stover	2.38	97.9	----	.64	12.41	6.46
Bohs Produce and Feed Co., Farmington	2.20	97.7	----	1.12	12.00	6.34
Average Analysis	2.17	95.8	----	1.07	12.46	6.31
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
3-9-18						
Forbridge Feed and Produce Co., Poplar Bluff	3.20	99.1	----	1.26	9.00	19.10
Miner Feed and Seed Co., Miner	3.36	97.9	----	.62	8.68	19.46
Osteen and Adams, Portageville	3.34	97.6	----	.67	<u>8.83</u>	18.64
Missouri Soybean Co., Caruthersville	3.21	97.8	----	1.01	10.34	<u>16.84</u>
Riverside Gin, Inc., Caruthersville	3.13	98.1	----	.68	9.00	<u>18.92</u>
Burford Feed Supply Co., Doniphan	3.00	98.7	----	.96	9.57	<u>17.04</u>
Producers Exchange, Marshfield	3.37	98.5	----	.57	9.41	<u>16.98</u>
Beacon Milling Co., Bolivar	3.00	99.3	----	.63	9.82	<u>17.58</u>
Average Analysis	3.20	98.4	----	.80	9.33	18.07
Guaranteed Analysis	3.00	----	----	----	9.00	18.00

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
3-12-12						
Farm Bureau Mill, Poplar Bluff	3.27	98.8	----	.68	13.57	12.33
Malden Grain Co., Malden (B)	3.32	97.9	----	1.93	12.67	12.26
Farm Bureau Store, Lutesville	3.28	98.2	----	1.77	12.48	12.06
Producers Exchange, Lincoln	3.00	97.3	----	1.55	13.20	10.86
Farm Bureau Service Co., Mexico	3.04	99.3	----	1.32	12.00	12.00
Average Analysis	3.18	98.3	----	1.45	12.78	11.90
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
4-12-4						
Columbia Cooperative Whse. Ass'n., Columbia	4.00	98.3	----	1.71	12.00	4.29
Long's Feed Store, Hurdland	4.00	98.3	----	1.70	12.00	4.00
Fayette Cooperative Mill and Elevator Co., Fayette (C)	4.00	98.3	----	1.64	12.74	4.10
Farmers Exchange, Green Castle	4.00	98.3	----	1.69	12.34	4.22
Old Monroe Elevator Co., Old Monroe	4.18	97.6	----	1.91	12.34	4.00
Audrain County Farm Bureau Service Co., Mexico	4.08	97.1	----	1.67	12.51	4.00
M.F.A. Exchange, Unionville	4.00	96.8	----	1.64	12.76	4.00
Farmers Produce and Grain Co., Hamilton	4.00	96.3	----	1.84	12.49	4.00
Sheridan Grain Co., Sheridan	4.06	97.5	----	1.56	12.57	4.42
D. & M. Feed Store, Excelsior Springs	4.00	98.0	----	1.06	13.82	4.09
Owen Produce Co., Maysville	4.00	97.5	----	1.54	12.89	4.00
Dannen Mills, St. Joseph	4.00	97.3	----	2.15	12.00	4.00
Weston Elevator Co., Weston	4.00	96.3	----	1.82	12.48	4.08
Frank Johnson, Rosendale	4.20	97.6	----	1.82	12.23	4.00
Whitaker Feed and Produce Co., Marysville	4.00	98.3	----	1.41	12.57	4.14
M.F.A. Cooperative Ass'n., Higginsville	4.00	98.0	----	1.57	12.31	4.00
Carroll County Farm Bureau Service Co., Carrollton	4.20	97.6	----	1.78	12.32	4.00
Armstrong Elevator Co., Harrisonville	3.83	98.2	----	1.84	12.94	4.22
M.F.A. Central Coop., Sedalia	4.18	98.1	----	1.17	12.51	4.17
Farm Bureau Store, Lutesville	4.14	98.3	----	1.55	11.80	4.14
Farmers Exchange, Houston	4.00	95.5	----	1.84	12.00	4.44
Farmers Exchange, Alton	4.31	99.3	----	1.49	11.81	4.17
Richards Bros., West Plains	4.34	99.3	----	1.77	12.00	4.29
Burford Feed and Supply Co., Doniphan	4.00	99.5	----	1.66	12.00	4.07
Richards Bros., Mansfield	4.07	99.3	----	1.62	12.00	4.00
H. F. Owen Mercantile, Forsyth	4.09	96.8	----	1.63	12.47	4.07
Jenkins Feed Mill, Hollister	4.08	98.0	----	1.68	11.72	4.05
H. W. Moore, Ava	3.10	96.8	----	1.27	12.83	4.99
Tevebaugh Bros., Gainesville	4.12	97.3	----	1.16	12.39	4.00
Producers Exchange, Marshfield	4.07	96.6	----	1.88	12.00	4.53
Baker Feed Store, Cassville	3.78	96.0	----	1.70	12.45	4.20
Rice Produce, Noel	4.00	96.8	----	1.70	11.65	4.00
Nichols Bros., Southwest City	3.93	96.7	----	1.34	13.11	4.31
Cantrell Seed House and Hatchery, Carthage	4.00	97.5	----	1.85	12.45	4.14
Norris Grain Co., Lamar	4.00	97.3	----	1.23	12.67	4.15
Buffalo Farmers Exchange, Buffalo	4.10	97.1	----	1.37	13.81	4.00
Harriman Elevator Co., Adrian	4.14	97.3	----	1.62	12.93	4.19
Farmers Elevator Co., El Dorado Springs	4.15	96.4	----	1.65	12.60	4.00
Producers Exchange, Lincoln	4.19	96.7	----	1.57	12.83	4.19
W. W. Henry, Wheatland	4.00	95.5	----	1.54	13.36	4.38
Ernest Clintworth, Hermitage	4.14	96.4	----	1.26	12.54	4.08
Farmers Cooperative, Dixon	3.83	96.1	----	1.44	12.71	4.48
Halbrook Feed Store, Salem	4.20	96.7	----	1.59	12.71	4.22
Rohrbach Produce Co., California	4.00	97.3	----	1.34	13.01	4.28
Bohs Produce and Feed Co., Farmington	4.00	96.8	----	1.66	12.00	4.18

(B) Some registration tags missing.
(C) Registration tags not attached.

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(4-12-4 cont'd)						
Average Analysis	4.03	97.4	----	1.60	12.48	4.16
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
4-12-8						
Long's Feed Store, Hurdland	3.87	97.9	----	1.39	12.89	8.00
Guaranteed Analysis	4.00	----	----	----	12.00	8.00
4-16-0						
Dannen Mills, St. Joseph	4.08	97.3	----	2.43	16.00	----
Whitaker Feed and Produce Co., Marysville	4.13	96.8	----	2.04	16.00	----
Carroll County Farm Bureau Service Co., Carrollton	4.29	97.0	----	2.64	16.00	----
M.F.A. Central Coop., Marshall	4.49	97.3	----	1.91	16.39	----
Allman Feed and Produce Co., Wheaton . .	4.00	96.3	----	2.09	16.76	----
Arnold Elevator Mill, Butler (C)	3.93	96.4	----	1.78	17.12	----
Average Analysis	4.15	96.9	----	2.15	16.38	----
Guaranteed Analysis	4.00	----	----	----	16.00	----
5-10-5						
Farm Bureau Store, Lutesville	5.00	98.4	----	1.58	11.07	5.13
Baker Feed Store, Cassville	4.64	98.3	----	1.32	10.86	4.61
Fayette Cooperative Mill and Elevator Co., Fayette	4.48	98.0	----	1.54	10.00	4.55
Farmers Equity Exchange, Bowling Green	4.37	98.6	----	1.66	10.00	4.56
Average Analysis	4.62	98.3	----	1.53	10.48	4.71
Guaranteed Analysis	5.00	----	----	----	10.00	5.00
5-10-10						
Columbia Cooperative Whse. Ass'n., Columbia	5.00	98.4	----	1.10	10.73	9.59
Producers Grain Co., Montgomery City . .	5.00	98.6	----	1.24	10.54	10.00
Oral M. Robison, Lathrop	4.80	98.8	----	.89	10.00	10.00
Weston Elevator Co., Weston	5.06	99.0	----	1.07	10.00	10.00
Riverside Gin, Inc., Caruthersville	5.14	99.0	----	1.59	10.51	9.77
H. W. Moore, Ava	4.87	99.0	----	1.14	10.81	9.42
Average Analysis	4.98	98.8	----	1.19	10.43	9.80
Guaranteed Analysis	5.00	----	----	----	10.00	10.00
8-8-8						
Boone County Farm Bureau Service Co., Columbia	7.43	99.6	----	.88	9.22	8.00
Long's Feed Store, Hurdland	7.11	99.2	----	1.02	8.91	7.58
Farm Bureau Service Co., Mexico	7.41	99.3	----	.94	8.74	8.00
Benton Feed Store, St. Joseph	7.30	99.6	----	.92	9.41	8.13
Average Analysis	7.31	99.4	----	.94	9.07	7.93
Guaranteed Analysis	8.00	----	----	----	8.00	8.00
Mamre Salts 25%						
Miner Feed and Seed Co., Miner	----	----	----	----	----	26.33
M.F.A. Central Coop., Perryville	----	----	----	----	----	26.03
Average Analysis	----	----	----	----	----	26.18
Guaranteed Analysis	----	----	----	----	----	25.00
TRI-STATE CHEMICAL CO., WEBB CITY, MO.						
Gro-Mor Brands						
0-20-0						
Allman Feed and Produce Co., Wheaton . .	----	----	----	2.30	18.54	----
Guaranteed Analysis	----	----	----	----	20.00	----
2-12-6						
Allman Feed and Produce Co., Wheaton . .	1.19	94.1	----	1.83	11.05	6.00
Guaranteed Analysis	2.00	----	----	----	12.00	6.00

(C) Registration tags from another state.

Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
VICTOR CHEMICAL WORKS, CHICAGO, ILL.						
<u>Take-Hold</u>						
Standard Seed Co., Kansas City (A) (D) (H)	10.00	99.7	----	.01	52.00	17.70
Guaranteed Analysis	10.00	----	----	----	52.00	17.00
VIRGINIA-CAROLINA CHEMICAL CORP., EAST ST. LOUIS, ILL.						
<u>V-C Brands</u>						
<u>20% Superphosphate</u>						
Hughes Feed and Produce Co., Huntsville. Madison County Farmers Whse. Ass'n., Fredericktown	----	----	----	1.47	20.58	----
Central Missouri Turkey Hatchery, Eldon	----	----	----	1.62	20.53	----
Owensville Roller Mill, Owensville	----	----	----	1.53	20.32	----
Average Analysis	----	----	----	1.37	21.13	----
Guaranteed Analysis	----	----	----	1.50	20.64	----
<u>Potash Phospho Tobacco 0-14-7</u>						
Farm Bureau Service Co., Mexico	----	----	----	1.14	14.41	7.97
Guaranteed Analysis	----	----	----	----	14.00	7.00
<u>0-20-10</u>						
Central Feed Co., Springfield	----	----	----	1.32	17.43	11.73
Farmers Elevator and Supply Co., Clinton	----	----	----	1.11	20.00	12.77
Average Analysis	----	----	----	1.22	18.72	12.25
Guaranteed Analysis	----	----	----	----	20.00	10.00
<u>2-12-6</u>						
Brees Produce Co., Edina	2.03	95.1	----	1.35	12.00	6.00
Hammachers, Richmond	2.00	94.5	----	.76	13.07	6.00
Knobnoster Elevator Co., Knobnoster	2.00	94.0	----	1.09	12.39	6.58
Paul Statler, Bloomfield	2.17	96.8	----	1.46	12.72	6.81
Chaffee Grain Co., Chaffee	2.07	93.7	----	1.29	12.59	7.57
R. N. Allmon, Winona	2.29	93.4	----	1.35	12.40	6.88
Burford Feed and Supply Co., Doniphan	2.38	95.4	----	.66	12.29	6.40
Van Dykes Store, Ellsinore	2.47	95.5	----	.80	12.48	6.32
Lon Bowles, Centerville	2.45	92.7	----	1.14	12.54	6.28
Central Feed Co., Springfield	2.00	94.5	----	1.08	12.47	5.58
Bushong Bros., Gainesville	2.07	95.2	----	1.13	12.27	5.76
Mt. Vernon Farmers Exchange, Mt. Vernon	2.07	95.7	----	1.14	12.00	6.78
Farmers Elevator Co., El Dorado Springs	2.12	96.7	----	1.10	13.03	6.64
Watt Produce, Windsor	2.18	96.8	----	1.39	12.54	7.23
Central Missouri Turkey Hatchery, Eldon	2.14	95.8	----	.90	12.60	6.23
Owensville Roller Mill, Owensville	2.44	95.1	----	.89	12.34	6.57
Rosser Produce Co., Farmington	2.16	94.0	----	1.22	12.00	6.28
Pauls Feed Store, De Soto	2.11	95.7	----	1.03	12.37	6.74
Average Analysis	2.18	95.0	----	1.10	12.45	6.47
Guaranteed Analysis	2.00	----	----	----	12.00	6.00
<u>3-9-18</u>						
Kennett Grain and Seed Co., Kennett	2.93	97.3	----	1.21	9.24	18.88
Guaranteed Analysis	3.00	----	----	----	9.00	18.00
<u>3-12-12</u>						
Missouri Soybean Co., Caruthersville	3.00	97.7	----	.98	12.00	12.33
Chaffee Grain Co., Chaffee	3.20	97.2	----	.96	12.39	13.07
Donze Bros., Weingarten	3.00	97.0	----	1.40	12.60	12.58
Average Analysis	3.07	97.3	----	1.11	12.33	12.66
Guaranteed Analysis	3.00	----	----	----	12.00	12.00
<u>Ammo. Phospho Tobacco 3-14-4</u>						
Farmers Elevator Co., El Dorado Springs	3.21	96.9	----	2.00	14.00	4.50
Watt Produce Co., Windsor	3.17	97.2	----	1.40	14.55	4.50

(A) Not registered.

(D) Registration tags not attached.

(H) Sample drawn from less than five containers.
Deficiencies are underlined.

TABLE 3. FERTILIZER ANALYSES AND GUARANTEES; SPRING 1949 (Cont'd)

MANUFACTURER BRANDS, and DEALER OR PURCHASER	NITROGEN		PHOSPHORIC ACID (P ₂ O ₅)			Water Soluble Potash (K ₂ O) %
	Total %	Water Soluble to Total %	Total in Bone %	Insoluble %	Available %	
(Ammo, Phospho Tobacco 3-14-4 cont'd)						
Average Analysis	3.19	97.1	----	1.70	14.28	4.50
Guaranteed Analysis	3.00	----	----	----	14.00	4.00
<u>4-12-4</u>						
Madison County Farmers Whse. Ass'n., Fredericktown	4.00	97.3	----	1.21	12.62	4.65
Chaffee Grain Co., Chaffee	4.05	96.5	----	1.23	12.80	4.74
Schreiner Lumber and Hardware Co., Marble Hill	4.25	98.1	----	.92	12.93	4.22
R. N. Allmon, Winona	3.77	98.1	----	2.10	12.00	4.42
Burford Feed and Supply Co., Doniphan . .	<u>3.94</u>	99.2	----	1.05	12.23	4.88
Van Dykes Store, Ellsinore	<u>3.92</u>	98.7	----	1.44	12.56	5.26
Lon Bowles, Centerville	<u>3.61</u>	97.2	----	1.08	12.00	5.31
De Mott Elevator Co., Marysville	<u>3.89</u>	96.7	----	1.02	12.91	4.39
Central Feed Co., Springfield	<u>3.91</u>	97.7	----	1.38	12.00	4.51
Norris Grain Co., Lamar	4.14	97.3	----	.97	12.38	4.55
Watt Produce Co., Windsor	4.00	97.0	----	1.12	12.00	5.26
Central Missouri Turkey Hatchery, Eldon.	<u>3.43</u>	97.1	----	1.33	12.27	4.58
Owensville Roller Mill, Owensville	4.06	97.0	----	1.35	13.73	4.00
Pauls Feed Store, De Soto	4.41	97.3	----	1.00	12.60	4.62
Average Analysis	<u>3.86</u>	97.5	----	1.23	12.50	4.67
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
<u>Garden Fertilizer 4-12-4</u>						
Lon Bowles, Centerville (A)	<u>3.32</u>	96.7	----	1.06	<u>10.49</u>	6.02
Guaranteed Analysis	4.00	----	----	----	12.00	4.00
<u>4-12-8</u>						
M.F.A. Central Coop., Perryville	4.11	97.3	----	1.53	12.35	8.82
Guaranteed Analysis	4.00	----	----	----	12.00	8.00
<u>8-8-8</u>						
Potosi Mill and Elevator Co., Potosi	8.00	99.0	----	.43	8.35	8.48
Guaranteed Analysis	8.00	----	----	----	8.00	8.00
<u>Good Luck Fish Pond Fertilizer 10-6-4</u>						
Pauls Feed Store, De Soto	8.68	99.1	----	.40	7.43	6.03
Owensville Roller Mill, Owensville (H) . .	<u>10.24</u>	99.2	----	.25	6.23	4.95
Brees Produce Co., Edina	<u>8.12</u>	98.6	----	.66	7.32	5.77
Average Analysis	<u>9.01</u>	99.0	----	.44	6.99	5.58
Guaranteed Analysis	10.00	----	----	----	6.00	4.00

(A) Not registered.

Deficiencies are underlined.

(H) Sample drawn from less than five containers.

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
ALLIED CHEMICAL AND DYE CORP., NEW YORK, N. Y.					
Arcadian, The American Nitrate of Soda	16.00	----	----	----	----
A-N-L Brand Fertilizer Compound	20.50	----	----	----	----
Sulphate of Ammonia	20.56	----	----	----	----
Standard Urea Fertilizer Compound	42.00	----	----	----	----
AMERICAN AGRICULTURAL CHEMICAL CO., NATIONAL STOCK YARDS, ILL.					
Agrico for Top Dressing 8-8-8	8.00	----	----	8.00	8.00
Agrico for Truck 4-12-8	4.00	----	----	12.00	8.00
Agrico for Cereals 4-12-4	4.00	----	----	12.00	4.00
Agrico for Midwest 3-12-12	3.00	----	----	12.00	12.00
Agrico for Cotton 3-9-18	3.00	----	----	9.00	18.00
Agrico for Corn 2-14-8	2.00	----	----	14.00	8.00
Agrico for Grain 2-12-6	2.00	----	----	12.00	6.00
Agrico Phosphate and Potash 0-14-7	----	----	----	14.00	7.00
Agrico Phosphate and Potash 0-12-12	----	----	----	12.00	12.00
Agrico Alkaline 0-10-20	----	----	----	10.00	20.00
Agrico for Gardens 4-12-4	4.00	----	----	12.00	4.00
AA Quality 8-8-8	8.00	----	----	8.00	8.00
AA Quality 4-12-8	4.00	----	----	12.00	8.00
AA Quality 4-12-4	4.00	----	----	12.00	4.00
AA Quality 3-12-12	3.00	----	----	12.00	12.00
AA Quality 3-9-18	3.00	----	----	9.00	18.00
AA Quality 2-14-8	2.00	----	----	14.00	8.00
AA Quality 2-12-6	2.00	----	----	12.00	6.00
AA Quality 0-14-7	----	----	----	14.00	7.00
AA Quality 0-12-12	----	----	----	12.00	12.00
AA Quality 0-10-20	----	----	----	10.00	20.00
18% Normal Superphosphate	----	----	----	18.00	----
AA Quality Phosphate Rock	----	----	27.00	3.00	----
Agrico for Tobacco 4-12-8	4.00	----	----	12.00	8.00
AMERICAN CYANAMID CO., NEW YORK, N. Y.					
20.6% Aero Cyanamid, Granular	20.60	----	----	----	----
Aero Cyanamid, Special Grade	21.00	----	----	----	----
Aeroprills Ammonium Nitrate	33.50	----	----	----	----
Aero-Phos Florida Natural Phosphate	----	----	30.00	3.00	----
AMERICAN LIQUID FERTILIZER CO., MARIETTA, OHIO					
Liqua-Vita Plant Food	6.00	----	----	9.00	7.00
Liqua-Vita Turf Special	12.00	----	----	8.00	4.00
ARKANSAS FERTILIZER CO., DIVISION OF MATHIESON CHEMICAL CORP., LITTLE ROCK, ARK.					
White Diamond 0-10-20	----	----	----	10.00	20.00
White Diamond 0-12-12	----	----	----	12.00	12.00
White Diamond 0-14-7	----	----	----	14.00	7.00
White Diamond 0-20-0	----	----	----	20.00	----

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
Arkansas Fertilizer Co., (cont'd)					
White Diamond 0-45-0	----	----	----	45.00	----
White Diamond 0-0-22	----	----	----	----	22.00
White Diamond 0-0-25	----	----	----	----	25.00
White Diamond 0-0-30	----	----	----	----	30.00
White Diamond 0-0-50	----	----	----	----	50.00
White Diamond 0-0-60	----	----	----	----	60.00
White Diamond 2-12-6	2.00	----	----	12.00	6.00
White Diamond 3-9-18	3.00	----	----	9.00	18.00
White Diamond 3-12-12	3.00	----	----	12.00	12.00
White Diamond 4-12-4	4.00	----	----	12.00	4.00
White Diamond 4-16-0	4.00	----	----	16.00	----
White Diamond 5-10-5	5.00	----	----	10.00	5.00
White Diamond 6-8-12	6.00	----	----	8.00	12.00
White Diamond 8-8-8	8.00	----	----	8.00	8.00
White Diamond 12-12-12	12.00	----	----	12.00	12.00
White Diamond Sulphate of Ammonia	20.60	----	----	----	----
Sulphate of Potash, Magnesia	----	----	----	----	21.00
ARK-MO PLANT FOOD CO., WALNUT RIDGE, ARK.					
Ark-Mo 10-6-4	10.00	----	----	6.00	4.00
Ark-Mo 10-20-10	10.00	----	----	20.00	10.00
Ark-Mo 8-24-8	8.00	----	----	24.00	8.00
Ark-Mo 8-8-8	8.00	----	----	8.00	8.00
Ark-Mo 6-8-12	6.00	----	----	8.00	12.00
Ark-Mo 5-10-5	5.00	----	----	10.00	5.00
Ark-Mo 4-12-4	4.00	----	----	12.00	4.00
Ark-Mo 3-12-12	3.00	----	----	12.00	12.00
Ark-Mo 3-9-18	3.00	----	----	9.00	18.00
Ark-Mo 2-12-6	2.00	----	----	12.00	6.00
Ark-Mo 0-14-7	----	----	----	14.00	7.00
Ark-Mo 0-20-0	----	----	----	20.00	----
Ark-Mo 0-45-0	----	----	----	45.00	----
Ark-Mo 22% Mamre Salts	----	----	----	----	22.00
Ark-Mo 50% Muriate of Potash	----	----	----	----	50.00
Ark-Mo Sul Po Mag 40% K ₂ SO ₄ 18.5% MGO	----	----	----	----	21.50
ARMOUR FERTILIZER WORKS, EAST ST. LOUIS, ILL.					
Armour's Big Crop 20% Superphosphate	----	----	----	20.00	----
Armour's Big Crop 45% Superphosphate	----	----	----	45.00	----
Armour's Big Crop 0-9-27	----	----	----	9.00	27.00
Armour's Big Crop 0-12-12	----	----	----	12.00	12.00
Armour's Big Crop 0-14-7	----	----	----	14.00	7.00
Armour's Big Crop 0-20-10	----	----	----	20.00	10.00
Armour's Big Crop 0-20-20	----	----	----	20.00	20.00
Armour's Big Crop 2-12-6	2.00	----	----	12.00	6.00
Armour's Big Crop 3-9-18	3.00	----	----	9.00	18.00
Armour's Big Crop 3-12-12	3.00	----	----	12.00	12.00
Armour's Big Crop 4-12-4	4.00	----	----	12.00	4.00
Armour's Big Crop 4-16-0	4.00	----	----	16.00	----
Armour's Big Crop 4-16-16	4.00	----	----	16.00	16.00
Armour's Big Crop 4-24-12	4.00	----	----	24.00	12.00
Armour's Big Crop 8-8-8	8.00	----	----	8.00	8.00
Armour's Big Crop 8-8-8S	8.00	----	----	8.00	8.00

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
Armour Fertilizer Works (Cont'd)					
Armour's Big Crop 8-24-8	8.00	----	----	24.00	8.00
Armour's Big Crop 10-6-4	10.00	----	----	8.00	4.00
Armour's Big Crop 10-20-0	10.00	----	----	20.00	----
Armour's Vertagreen 5-10-5	5.00	----	----	10.00	5.00
Armour's Gold Bond 8-8-8	8.00	----	----	8.00	8.00
Armour's Special Ornamental 10-8-6	10.00	----	----	8.00	6.00
Armour's Pulverized Sheep Manure	1.50	----	----	1.00	2.00
Armour's Steam Bone Meal	2.50	50.00	----	----	----
Manure Salts	----	----	----	----	25.00
Muriate of Potash 60%	----	----	----	----	60.00
Muriate of Potash 50%	----	----	----	----	50.00
Sulphate of Ammonia	20.80	----	----	----	----
Cyanamid	20.80	----	----	----	----
Ammonium Nitrate	33.50	----	----	----	----
Nitrate of Soda 16%	16.00	----	----	----	----
ASSOCIATED COOPERATIVES, INC., SHEFFIELD, ALA.					
Ammonium Nitrate	33.00	----	----	----	----
Concentrated 45% Superphosphate	----	----	----	45.00	----
Concentrated 46% Superphosphate	----	----	----	46.00	----
Concentrated 47% Superphosphate	----	----	----	47.00	----
Concentrated 48% Superphosphate	----	----	----	48.00	----
ATKINS AND DURBROW, INC., NEW YORK, N. Y.					
Peatblend	1.00	----	----	1.00	1.00
BALFOUR, GUTHRIE AND CO., CHICAGO, ILL.					
Elephant Brand	33.50	----	----	----	----
BLYTHEVILLE FERTILIZER CORP., BLYTHEVILLE, ARK.					
BFC 2-12-6	2.00	----	----	12.00	6.00
BFC 4-8-6	4.00	----	----	8.00	6.00
BFC 6-9-27	6.00	----	----	9.00	27.00
BFC 3-8-18	3.00	----	----	9.00	18.00
BFC 5-10-5	5.00	----	----	10.00	5.00
BFC 8-8-8	8.00	----	----	8.00	8.00
BFC 4-12-4	4.00	----	----	12.00	4.00
BFC 3-12-12	3.00	----	----	12.00	12.00
BFC 6-8-12	6.00	----	----	8.00	12.00
BFC 0-14-7	----	----	----	14.00	7.00
BFC 20% Super	----	----	----	20.00	----
CARNEGIE-ILLINOIS STEEL CORP., PITTSBURG, PENNA.					
USS Ammonium Sulphate	20.60	----	----	----	----

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI; 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
CENTRAL FARMERS FERTILIZER CO., CHICAGO, ILL.					
Ammonium Nitrate 33%	33.00	----	----	----	----
Concentrated Superphosphate 45%	----	----	----	45.00	----
Concentrated Superphosphate 46%	----	----	----	46.00	----
Concentrated Superphosphate 47%	----	----	----	47.00	----
Calcium Meta-phosphate 62%	----	----	----	62.00	----
CHILEAN NITRATE SALES CORP., NEW YORK, N. Y.					
Chilean Nitrate of Soda, Champion Brand	16.00	----	----	----	----
DARLING AND CO., CHICAGO, ILL.					
Darling's Eight Sixteen	8.00	----	----	16.00	----
Darling's Eight Eight Eight	8.00	----	----	8.00	8.00
Darling's Four Twenty-Four Twelve	4.00	----	----	24.00	12.00
Darling's Field Marshal	4.00	----	----	12.00	4.00
Darling's Harvest Queen	4.00	----	----	12.00	8.00
Darling's Sure Winner	3.00	----	----	12.00	12.00
Darling's Three Eighteen Nine	3.00	----	----	18.00	9.00
Darling's Big Potash	3.00	----	----	9.00	18.00
Darling's Crop King	2.00	----	----	12.00	6.00
Darling's Twenty Ten	----	----	----	20.00	10.00
Darling's Twelve Twelve	----	----	----	12.00	12.00
Darling's 20% Superphosphate	----	----	----	20.00	----
DAVISON CHEMICAL CORP., BALTIMORE, MD., AND NASHVILLE, TENN.					
Davco Granulated Superphosphate 20%	----	----	----	20.00	----
Davco Triple Superphosphate	----	----	----	46.00	----
Davco Red Diamond 6-12-12	6.00	----	----	12.00	12.00
Davco Red Diamond 5-10-5	5.00	----	----	10.00	5.00
Davco Red Diamond 4-12-8	4.00	----	----	12.00	8.00
Davco Red Diamond 4-12-4	4.00	----	----	12.00	4.00
Davco Red Diamond 3-12-12	3.00	----	----	12.00	12.00
Davco Red Diamond 2-12-6	2.00	----	----	12.00	6.00
Davco Red Diamond 0-14-7	----	----	----	14.00	7.00
Davco Red Diamond 0-12-12	----	----	----	12.00	12.00
DAVISON CHEMICAL CORP., PERRY, IOWA					
Davco 10-20-0	10.00	----	----	20.00	----
Davco 4-16-0	4.00	----	----	16.00	----
Davco 3-12-12	3.00	----	----	12.00	12.00
Davco 4-12-8	4.00	----	----	12.00	8.00
Davco 4-12-4	4.00	----	----	12.00	4.00
Davco 3-18-9	3.00	----	----	18.00	9.00
Davco 2-12-6	2.00	----	----	12.00	6.00
Davco 0-9-27	----	----	----	9.00	27.00
Davco 0-20-0	----	----	----	20.00	----

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
E. I. DU PONT DE NEMOURS AND CO., WILMINGTON, DEL.					
Du Pont Uramon Fertilizer Compound	42.00	----	----	----	----
Du Pont Nu Green Fertilizer Compound	44.00	----	----	----	----
ECONOMY NURSERY CO., LITTLE SILVER, N. J.					
Balanced Rose Food	5.00	----	----	8.00	3.00
EXCELL LABORATORIES, INC., CHICAGO, ILL.					
New Plant Life	2.00	----	----	1.00	2.00
FAESY AND BESTHOFF, INC., NEW YORK, N. Y.					
Pure Bone Meal	2.47	23.00	----	----	----
FARM BELT FERTILIZER AND CHEMICAL CO., KANSAS CITY, MO.					
Farm Belt 0-20-0	----	----	----	20.00	----
Farm Belt 0-45-0	----	----	----	45.00	----
Farm Belt 0-46-0	----	----	----	46.00	----
Farm Belt 0-47-0	----	----	----	47.00	----
Minor L 8-8-8	8.00	----	----	8.00	8.00
Minor L 4-12-4	4.00	----	----	12.00	4.00
Farm Belt 3-12-12	3.00	----	----	12.00	12.00
Farm Belt 2-12-6	2.00	----	----	12.00	6.00
Farm Belt 10-20-0	10.00	----	----	20.00	----
Farm Belt 8-24-8	8.00	----	----	24.00	8.00
Farm Belt 8-8-8	8.00	----	----	8.00	8.00
Farm Belt 6-30-0	6.00	----	----	30.00	----
Farm Belt 6-10-4	6.00	----	----	10.00	4.00
Farm Belt 4-12-4	4.00	----	----	12.00	4.00
Farm Belt 4-16-0	4.00	----	----	16.00	----
Farm Belt 0-20-10	----	----	----	20.00	10.00
FARM BUREAU SERVICE CO. OF MISSOURI JEFFERSON CITY, MO.					
Green Diamond 4-24-12	4.00	----	----	24.00	12.00
Green Diamond 3-9-27	3.00	----	----	9.00	27.00
Green Diamond 0-20-0	----	----	----	20.00	----
Green Diamond 4-12-4	4.00	----	----	12.00	4.00
Green Diamond 5-15-10	5.00	----	----	15.00	10.00
Green Diamond 0-15-15	----	----	----	15.00	15.00
Green Diamond 3-12-12	3.00	----	----	12.00	12.00
Green Diamond 3-9-18	3.00	----	----	9.00	18.00
Green Diamond 10-10-10	10.00	----	----	10.00	10.00
FORD MOTOR CO., DEARBORN, MICH.					
Ford Ammonium Sulphate	20.80	----	----	----	----

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
FORT SMITH COTTON OIL CO., FORT SMITH, ARK					
Rais-Mor Fertilizer 4-12-4	4.00	----	----	12.00	4.00
Rais-Mor Fertilizer 3-9-18	3.00	----	----	9.00	18.00
Rais-Mor Fertilizer 8-8-8	8.00	----	----	8.00	8.00
Rais-Mor Fertilizer 0-20-0	----	----	----	20.00	----
Rais-Mor Fertilizer 0-14-7	----	----	----	14.00	7.00
Rais-Mor Fertilizer 5-10-5	5.00	----	----	10.00	5.00
GOULARD AND OLENA, INC., SKILLMAN, N. J.					
G. & O. Rose Food	7.00	----	----	8.00	5.00
G. & O. Dahlia Food	5.00	----	----	6.00	15.00
G. & O. Rhodo-Azalea Food	3.00	----	----	20.00	3.00
G. & O. Tree Food	9.00	----	----	7.00	3.00
G. & O. Ground Bone Fertilizer	2.40	20.00	----	----	----
G. & O. Lawn Fertilizer	10.00	----	----	6.00	4.00
Sulphate of Ammonia	20.00	----	----	----	----
J. HARRIS MANURE CO., EAST ST. LOUIS, ILL.					
Hampton Park Brand Dried Cattle Manure	2.00	----	----	1.00	2.00
Hampton Park Brand Dried Sheep Manure	2.00	----	----	1.00	2.00
HARWICK CHEMICALS, BUTLER, MO.					
Ammonium Nitrate	32.50	----	----	----	----
A. H. HOFFMAN, INC., LANDISVILLE, PENNA.					
Hoffman Bone Meal (Raw)	3.70	20.00	----	----	----
Hoffman Cow Manure (Dehydrated)	2.00	----	----	1.00	1.00
Hoffman Sheep Manure (Kilm-Dried)	1.50	----	----	1.00	2.00
Hoffman Poultry Manure (Dehydrated)	3.00	----	----	1.00	1.50
Hoffman Rose Food	5.00	----	----	10.00	5.00
HOOVER SOIL SERVICE, GILMAN, ILL.					
A Soft Phosphate with Colloidal Clay	----	----	18.00	2.00	----
HYDROPONIC CHEMICAL CO., COPLEY, OHIO					
Hyponex Plant Food 7-6-18	7.00	----	----	6.00	19.00
INTERSTATE FERTILIZER CO., CAIRO, ILL.					
Interstate Brand 2-14-8	2.00	----	----	14.00	8.00
Interstate Brand 6-8-6	6.00	----	----	8.00	6.00
Interstate Brand 5-10-10S	5.00	----	----	10.00	10.00
Interstate Brand 3-12-12	3.00	----	----	12.00	12.00

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
Interstate Fertilizer Co., (Cont'd)					
Interstate Brand 3-9-18	3.00	----	----	9.00	18.00
Interstate Brand 4-12-4	4.00	----	----	12.00	4.00
Interstate Brand 3-9-6	3.00	----	----	9.00	8.00
Interstate Brand 0-12-12	----	----	----	12.00	12.00
Interstate Brand 8-8-8	8.00	----	----	8.00	8.00
Interstate Brand Superphosphate 20%	----	----	----	20.00	----
Interstate Brand Muriate of Potash 60%	----	----	----	----	60.00
Interstate Brand Muriate of Potash 50%	----	----	----	----	50.00
Interstate Brand Sulphate of Ammonia 20.5%	20.50	----	----	----	----
Interstate Brand Manure Salts 23%	----	----	----	----	23.00
I.M.&C. Corp. Sul-Po-Mag. 21.5%	----	----	----	----	21.50
Champion Nitrate of Soda 16%	16.00	----	----	----	----
Arcadian Nitrate of Soda 16%	16.00	----	----	----	----
Spencer's Ammonium Nitrate 33.5%	33.50	----	----	----	----
T.V.A. Ammonium Nitrate 33%	33.00	----	----	----	----
T.V.A. Triple Superphosphate 45%	----	----	----	45.00	----
T.V.A. Triple Superphosphate 46%	----	----	----	46.00	----
T.V.A. Triple Superphosphate 47%	----	----	----	47.00	----
LANGE BROTHERS, INC., ST. LOUIS, MO.					
Lange Brothers 10-6-4	10.00	----	----	6.00	4.00
Lange Brothers 8-24-8	8.00	----	----	24.00	8.00
Lange Brothers 8-16-16	8.00	----	----	16.00	16.00
Lange Brothers 8-8-8	8.00	----	----	8.00	8.00
Lange Brothers 5-20-10	5.00	----	----	20.00	10.00
Lange Brothers 4-24-12	4.00	----	----	24.00	12.00
Lange Brothers 4-16-16	4.00	----	----	16.00	16.00
Lange Brothers 4-16-0	4.00	----	----	16.00	----
Lange Brothers 4-12-8	4.00	----	----	12.00	8.00
Lange Brothers 4-12-4	4.00	----	----	12.00	4.00
Lange Brothers 3-12-12	3.00	----	----	12.00	12.00
Lange Brothers 3-8-18	3.00	----	----	9.00	18.00
Lange Brothers 2-12-6	2.00	----	----	12.00	8.00
Lange Brothers 0-20-20	----	----	----	20.00	20.00
Lange Brothers 0-20-10	----	----	----	20.00	10.00
Lange Brothers 0-14-7	----	----	----	14.00	7.00
Lange Brothers 0-12-12	----	----	----	12.00	12.00
Lange Brothers 0-8-27	----	----	----	9.00	27.00
Lange Brothers 0-45-0	----	----	----	45.00	----
Lange Brothers 0-20-0	----	----	----	20.00	----
Lange Brothers Rock Phosphate	----	----	----	2.00	----
Lange Brothers 0-0-60	----	----	----	----	60.00
Lange Brothers 0-0-50	----	----	----	----	50.00
Lange Brothers 0-0-25	----	----	----	----	25.00
LION OIL CO., EL DORADO, ARK.					
Lion Ammonium Nitrate Fertilizer	33.50	----	----	----	----
Lion Sulphate of Ammonia Fertilizer	21.00	----	----	----	----
MATHIESON CHEMICAL CORP., PASADENA, TEXAS					
Sasco-Phos Pelleted 16-20-0	16.00	----	----	20.00	----

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI; 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
Mathieson Chemical Corp. (Cont'd) Sasco-Phos Pelleted 11-48-0	11.00	----	----	48.00	----
MC CORMICK AND CO., BALTIMORE, MD.					
Hy-Gro	13.00	----	----	26.00	13.00
MID-SOUTH CHEMICAL CO., MEMPHIS, TENN.					
Spencer Chemical Company's Commercial Grade (99.5% NH ₃) Anhydrous Ammonia	82.50	----	----	----	----
MIDWEST PHOSPHATE CO., JOLIET, ILL.					
Midwest Quality Phosphate (30% Total P ₂ O ₅)	----	----	28.00	2.00	----
Midwest Quality Phosphate (32% Total P ₂ O ₅)	----	----	30.00	2.00	----
MISSOURI FARMERS ASS'N., INC., COLUMBIA, MO.					
M.F.A. Triple Superphosphate 47%	----	----	----	47.00	----
M.F.A. 5-10-10	5.00	----	----	10.00	10.00
M.F.A. 9-9-9	9.00	----	----	9.00	9.00
M.F.A. 8-24-8	8.00	----	----	24.00	8.00
M.F.A. 8-16-0	8.00	----	----	16.00	----
M.F.A. 0-20-20 with Borax	----	----	----	20.00	20.00
M.F.A. 0-20-0	----	----	----	20.00	----
M.F.A. 0-20-20	----	----	----	20.00	20.00
M.F.A. 0-14-14	----	----	----	14.00	14.00
M.F.A. 0-16-8	----	----	----	16.00	8.00
M.F.A. 0-14-7	----	----	----	14.00	7.00
M.F.A. 0-10-20	----	----	----	10.00	20.00
M.F.A. 0-9-27	----	----	----	9.00	27.00
M.F.A. 2-12-6	2.00	----	----	12.00	6.00
M.F.A. 2 1/2-15-7 1/2	2.50	----	----	15.00	7.50
M.F.A. 3-12-12	3.00	----	----	12.00	12.00
M.F.A. 3-9-18	3.00	----	----	9.00	18.00
M.F.A. 4-12-4	4.00	----	----	12.00	4.00
M.F.A. 4-24-12	4.00	----	----	24.00	12.00
M.F.A. 5-15-5	5.00	----	----	15.00	5.00
M.F.A. 6-18-6	6.00	----	----	18.00	6.00
M.F.A. 8-8-8	8.00	----	----	8.00	8.00
M.F.A. 5-15-30	5.00	----	----	15.00	30.00
M.F.A. 3-9-27	3.00	----	----	9.00	27.00
M.F.A. 10-10-10	10.00	----	----	10.00	10.00
M.F.A. Garden Grow with Ne-So-Min	5.00	----	----	10.00	5.00
M.F.A. Manure Salts 20%	----	----	----	----	20.00
M.F.A. Manure Salts 21%	----	----	----	----	21.00
M.F.A. Manure Salts 22%	----	----	----	----	22.00
M.F.A. Manure Salts 23%	----	----	----	----	23.00
M.F.A. Manure Salts 24%	----	----	----	----	24.00
M.F.A. Manure Salts 25%	----	----	----	----	25.00
M.F.A. Manure Salts 26%	----	----	----	----	26.00
M.F.A. Manure Salts 27%	----	----	----	----	27.00
M.F.A. Muriate of Potash 60%	----	----	----	----	60.00

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI; 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
Missouri Farmers Ass'n., Inc., (Cont'd)					
M.F.A. Muriate of Potash 50%	----	----	----	----	50.00
M.F.A. Triple Superphosphate 45%	----	----	----	45.00	----
M.F.A. Triple Superphosphate 46%	----	----	----	46.00	----
NA-CHURS PLANT FOOD CO., MARION, OHIO					
Na-Churs Liquid Fertilizer	5.00	----	----	10.00	5.00
NATIONAL FERTILIZER CO., DES MOINES, IOWA					
Green Top 8-8-8	8.00	----	----	8.00	8.00
Green Top 8-32-0	8.00	----	----	32.00	----
Green Top 0-20-20	----	----	----	20.00	20.00
Green Top 10-20-0	10.00	----	----	20.00	----
Green Top 8-16-8	8.00	----	----	16.00	8.00
Green Top 6-24-0	6.00	----	----	24.00	----
Green Top 5-20-20	5.00	----	----	20.00	20.00
Green Top 0-20-0	----	----	----	20.00	----
Green Top 4-16-0	4.00	----	----	16.00	----
Green Top 0-46-0	----	----	----	46.00	----
Green Top 4-16-8	4.00	----	----	16.00	8.00
Green Top 0-0-50	----	----	----	----	50.00
Green Top 4-24-12	4.00	----	----	24.00	12.00
Green Top 0-9-27	----	----	----	9.00	27.00
Green Top 3-12-12	3.00	----	----	12.00	12.00
PHILLIPS CHEMICAL CO., BARTLESVILLE, OKLA.					
Phillips 66 Prilled Ammonium Nitrate	33.50	----	----	----	----
Phillips 66 Ammonium Nitrate	33.40	----	----	----	----
PIONEER PHOSPHATE CO., DES MOINES, IOWA					
Pioneer Brand 0-20-20	----	----	----	20.00	20.00
Pioneer Brand 3-12-12	3.00	----	----	12.00	12.00
Pioneer Brand 3-9-18	3.00	----	----	9.00	18.00
Pioneer Brand 4-16-0	4.00	----	----	16.00	----
Pioneer Brand 10-20-0	10.00	----	----	20.00	----
Pioneer Brand 10-6-4	10.00	----	----	6.00	4.00
PLANTABBS CORP., BALTIMORE, MD.					
Fulton's Plantabbs 11-15-20	11.00	----	----	15.00	20.00
PULVERIZED MANURE CO., CHICAGO AND EAST ST. LOUIS, ILL.					
Wizard Brand Pulverized Sheep Manure	2.00	----	----	1.00	2.00
Wizard Brand Cow Manure	2.00	----	----	1.00	1.00

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI; 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
RA-PID-GRO CORP., DANSVILLE, N. Y.					
Ra-Pid-Gro	23.00	----	----	21.00	17.00
C. M. REED AND SON, CARTHAGE, MO.					
Kalosecta 4-12-4	4.00	----	1.00	12.00	4.00
ROBIN JONES PHOSPHATE CO., NASHVILLE, TENN.					
Arrow Phosphate (Tenn. Phos. Rock)	----	----	28.00	2.00	----
ROSE MANUFACTURING CO., BEACON, N. Y.					
Triogen Rose Food	5.00	----	----	10.00	5.00
RUHM PHOSPHATE AND CHEMICAL CO., CHICAGO, ILL.					
Red Seal Brand Ruhm's Phosphate Rock	----	----	27.00	3.00	----
SAN FRANCISCO CHEMICAL CO., MONTPELIER, IDAHO					
Western Natural Phosphate Rock	----	----	28.50	2.50	----
SARATOGA LABORATORIES, INC., SARATOGA SPRINGS, N. Y.					
Trace L	8.00	----	----	18.00	7.00
SCHROCK FERTILIZER SERVICE, DIVISION OF SCHROCK BROS. CO., CONGERVILLE, ILL.					
Schrock Superphosphate	----	----	----	20.00	----
Schrock Natural Phosphate 32%	----	----	29.00	3.00	----
Schrock Natural Phosphate 33%	----	----	29.50	3.50	----
Muriate of Potash	----	----	----	----	60.00
O. M. SCOTT AND SONS CO., MARYSVILLE, OHIO					
Scotts Turf Builder	9.00	----	----	7.00	4.00
Scotts Weed and Feed	7.00	----	----	11.00	5.00
SEARS ROEBUCK AND CO., CHICAGO, ILL.					
Cross Country Sheep Manure 1.5 - .75 - 2	1.50	----	----	.75	2.00
Cross Country Evergreen Food	8.00	----	----	8.00	4.00
Cross Country Liquid Plant Food	10.00	----	----	5.00	5.00
Cross Country Peat Manure	2.00	----	----	1.00	1.00
Cross Country Plant Food	4.00	----	----	12.00	4.00

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
Sears Roebuck and Co. (Cont'd)					
Cross Country Rose Food	5.00	----	----	10.00	5.00
Cross Country Lawn and Weed Killer	5.00	----	----	10.00	5.00
Cross Country Berry Food	10.00	----	----	6.00	4.00
Cross Country Bone Meal	2.00	20.00	----	----	----
Cross Country Bulb Food	4.00	----	----	12.00	8.00
Cross Country Cattle Mamure 1.5-1-2	1.50	----	----	1.00	2.00
Cross Country Cattle Manure 1.75-.75-3	1.75	----	----	.75	3.00
Cross Country Cattle Manure 1.5-.75-2	1.50	----	----	.75	2.00
Cross Country Sheep Manure 1.5-1-2	1.50	----	----	1.00	2.00
Cross Country Sheep Mamure 1.75-.75-3	1.75	----	----	.75	3.00
SEWERAGE COMMISSION OF THE CITY OF MILWAUKEE, MILWAUKEE, WISC.					
Milorganite	6.00	----	.75	2.00	----
SMITH-DOUGLASS CO., STREATOR, ILL.					
S-D Crop Raiser	8.00	----	----	16.00	----
S-D Soil Saver	8.00	----	----	8.00	8.00
S-D Money Maker	4.00	----	----	12.00	8.00
S-D Big Yield	3.00	----	----	18.00	9.00
S-D Corn Grower	3.00	----	----	12.00	12.00
S-D Big Buy	3.00	----	----	9.00	27.00
S-D Heavy Weight	3.00	----	----	9.00	18.00
S-D Old Standby	2.00	----	----	12.00	6.00
S-D Shur Shot	----	----	----	20.00	20.00
S-D Gro Grain	----	----	----	20.00	10.00
S-D Big Shot	----	----	----	10.00	20.00
S-D Hi Potash	----	----	----	9.00	27.00
S-D Superphosphate	----	----	----	20.00	----
SPENCER CHEMICAL CO., KANSAS CITY, MO.					
'Ammonium Nitrate Fertilizer	33.50	----	----	----	----
Anhydrous Ammonia, Commercial	82.00	----	----	----	----
STOCKDALE FERTILIZER CO., MORRIS, ILL.					
Ovene	2.00	----	----	1.00	2.00
SWIFT AND CO. PLANT FOOD DIV., NATIONAL STOCK YARDS, ILL.					
Red Steer 8-32-0	8.00	----	----	32.00	----
Red Steer 0-14-7	----	----	----	14.00	7.00
Red Steer 0-12-12	----	----	----	12.00	12.00
Red Steer 4-16-0	4.00	----	----	16.00	----
Red Steer 0-45-0	----	----	----	45.00	----
Ammonium Nitrate	33.50	----	----	----	----
Nitrate of Soda	16.00	----	----	----	----
Pulverized Sheep and Cattle Manure	1.50	----	----	1.00	1.75
Blenn 3-12-12	3.00	----	----	12.00	12.00
Blenn 6-8-6 (All Sulp. Potash)	6.00	----	----	8.00	6.00

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
Swift and Co. Plant Food Div. (Cont'd)					
Brimm 4-12-8	4.00	----	----	12.00	8.00
Brimm 6-8-8	6.00	----	----	8.00	8.00
Vigoro 4-12-4	4.00	----	----	12.00	4.00
Vigoro 6-10-4	6.00	----	----	10.00	4.00
Vigoro Commercial Grower 8-8-8	8.00	----	----	8.00	8.00
Vigoro Commercial Grower 4-12-8	4.00	----	----	12.00	8.00
Red Steer 8-24-8	8.00	----	----	24.00	8.00
Red Steer 8-8-8	8.00	----	----	8.00	8.00
Red Steer 5-10-5	5.00	----	----	10.00	5.00
Red Steer 4-24-12	4.00	----	----	24.00	12.00
Red Steer 4-16-8	4.00	----	----	16.00	8.00
Red Steer 4-12-4	4.00	----	----	12.00	4.00
Red Steer 3-12-12	3.00	----	----	12.00	12.00
Red Steer 3-12-6	3.00	----	----	12.00	6.00
Red Steer 4-12-8	4.00	----	----	12.00	8.00
Red Steer 3-9-18	3.00	----	----	9.00	18.00
Red Steer 2-12-6	2.00	----	----	12.00	6.00
Red Steer 4-16-0	4.00	----	----	16.00	----
Red Steer 10-20-0	10.00	----	----	20.00	----
Red Steer 0-20-20	----	----	----	20.00	20.00
Red Steer 0-20-10	----	----	----	20.00	10.00
Red Steer 0-20-0	----	----	----	20.00	----
Red Steer 3-12-8	3.00	----	----	12.00	8.00
Swift's Ground Raw Phosphate	----	----	----	3.00	----
Swift's Ground Raw Phosphate	----	----	----	2.50	----
Cyanamid	21.00	----	----	----	----
Bone Meal	2.00	20.00	----	----	----
TEMPLE COTTON OIL CO., LITTLE ROCK, ARK.					
Quapaw 6-8-12	6.00	----	----	8.00	12.00
Quapaw 3-9-18	3.00	----	----	9.00	18.00
Quapaw 4-12-4	4.00	----	----	12.00	4.00
Quapaw 0-10-20	----	----	----	10.00	20.00
Quapaw 0-14-7	----	----	----	14.00	7.00
Quapaw 5-10-5	5.00	----	----	10.00	5.00
Muriate of Potash	----	----	----	----	50.00
Mamure Salts	----	----	----	----	22.00
Superphosphate	----	----	----	20.00	----
Nitrate of Soda	16.00	----	----	----	----
Sulphate of Potash Magnesium	----	----	----	----	21.00
Ammonium Nitrate	33.50	----	----	----	----
TENNESSEE CORP., CINCINNATI, OHIO, AND ATLANTA, GA.					
Loma 5-10-5	5.00	----	----	10.00	5.00
Loma 8-8-8 Mineralized	8.00	----	----	8.00	8.00
Es-Min-El	0	----	----	0	0
THOMPSON-HAYWARD CHEMICAL CO., KANSAS CITY, MO.					
Thom-Ward Phosphate Rock	----	----	29.00	3.00	----

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI; 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
THOMPSON SALES CO., MONTGOMERY, ALA.					
Calphos	----	----	16.00	2.00	----
THOMSON PHOSPHATE CO., CHICAGO, ILL.					
Four Leaf Powdered Rock Phosphate 31% Total P ₂ O ₅	----	----	29.00	2.00	----
Four Leaf Powdered Rock Phosphate 33% Total P ₂ O ₅	----	----	30.00	3.00	----
Four Leaf Powdered Rock Phosphate 30% Total P ₂ O ₅	----	----	28.00	2.00	----
THURSTON CHEMICAL CO., JOPLIN, MO.					
Bem Brand 4-12-4	4.00	----	----	12.00	4.00
Bem Brand 2-12-6	2.00	----	----	12.00	6.00
Bem Brand 5-10-10	5.00	----	----	10.00	10.00
Bem Brand 5-10-5	5.00	----	----	10.00	5.00
Bem Brand 3-12-12	3.00	----	----	12.00	12.00
Bem Brand 4-16-8	4.00	----	----	16.00	8.00
Bem Brand 0-20-10	----	----	----	20.00	10.00
Bem Brand 8-24-8	8.00	----	----	24.00	8.00
Bem Brand 4-12-8	4.00	----	----	12.00	8.00
Bem Brand 3-9-18	3.00	----	----	9.00	18.00
Bem Brand 8-8-8	8.00	----	----	8.00	8.00
Bem Brand 4-24-12	4.00	----	----	24.00	12.00
Bem Brand 0-20-20	----	----	----	20.00	20.00
Bem Brand 0-20-0	----	----	----	20.00	----
Bem Brand 4-16-0	4.00	----	----	16.00	----
Bem Brand 0-14-7	----	----	----	14.00	7.00
Bem Brand 10-20-0	10.00	----	----	20.00	----
Bem Brand 0-0-25	----	----	----	----	25.00
Bem Brand 0-0-50	----	----	----	----	50.00
Bem Brand 0-0-60	----	----	----	----	60.00
Bem Brand 0-45-0	----	----	----	45.00	----
Bem Brand 0-46-0	----	----	----	46.00	----
TRI-STATE CHEMICAL CO., WEBB CITY, MO.					
Gro-Mor 0-0-60	----	----	----	----	60.00
Gro-Mor 0-0-26	----	----	----	----	26.00
Gro-Mor 0-15-15	----	----	----	15.00	15.00
Gro-Mor 4-24-12	4.00	----	----	24.00	12.00
Gro-Mor 0-20-20	----	----	----	20.00	20.00
Gro-Mor 0-20-10	----	----	----	20.00	10.00
Gro-Mor 0-45-0	----	----	----	45.00	----
Gro-Mor 3-9-18	3.00	----	----	9.00	18.00
Gro-Mor 0-20-0	----	----	----	20.00	----
Gro-Mor 0-14-7	----	----	----	14.00	7.00
Gro-Mor 2-12-6	2.00	----	----	12.00	6.00
Gro-Mor 3-12-12	3.00	----	----	12.00	12.00
Gro-Mor 3-12-8	3.00	----	----	12.00	8.00
Gro-Mor 4-12-4	4.00	----	----	12.00	4.00
Gro-Mor 4-16-0	4.00	----	----	16.00	----
Gro-Mor 0-7-14	----	----	----	7.00	14.00
Rock Phosphate	----	----	32.00	2.00	----

TABLE 4. FERTILIZERS, WITH GUARANTEED ANALYSES, REGISTERED AND OFFERED FOR SALE IN MISSOURI, 1950 (Cont'd)

MANUFACTURER AND BRAND NAMES	Nitrogen %	Phosphoric Acid (P ₂ O ₅)			Potash (K ₂ O) %
		Total in Bone %	Insol- uble %	Avail- able %	
U. S. PHOSPHORIC PRODUCTS, DIV. OF TENNESSEE CORP., TAMPA, FLA.					
Florida Triple Phosphate	----	----	.50	46.00	----
VICTOR CHEMICAL WORKS, CHICAGO, ILL.					
Take-Hold	10.00	----	----	52.00	17.00
VIRGINIA-CAROLINA CHEMICAL CORP., EAST ST. LOUIS, ILL.					
V-C Ammoniated Phospho Tobacco 4-12-8	4.00	----	----	12.00	8.00
V-C Ammoniated Phospho Tobacco 3-12-12	3.00	----	----	12.00	12.00
V-C Ammoniated Phospho Tobacco 2-12-6	2.00	----	----	12.00	6.00
V-C Potash Phospho Tobacco 0-12-12	----	----	----	12.00	12.00
V-C Fertilizer 10-20-0	10.00	----	----	20.00	----
V-C Fertilizer 10-6-4	10.00	----	----	6.00	4.00
V-C Fertilizer 8-24-8	8.00	----	----	24.00	8.00
V-C Fertilizer 8-8-8	8.00	----	----	8.00	8.00
V-C Fertilizer 0-20-10	----	----	----	20.00	10.00
V-C Fertilizer 0-9-27	----	----	----	9.00	27.00
V-C Fertilizer 0-10-20	----	----	----	10.00	20.00
V-C Plant Food 6-8-6	6.00	----	----	8.00	6.00
V-C Good Luck Fish Pond Fertilizer 10-6-4	10.00	----	----	6.00	4.00
V-C Muriate of Potash 0-0-60	----	----	----	----	60.00
V-C 20% Superphosphate 0-20-0	----	----	----	20.00	----
V-C 47% Superphosphate 0-47-0	----	----	----	47.00	----
V-C Fertilizer 5-10-5	5.00	----	----	10.00	5.00
V-C Fertilizer 4-24-12	4.00	----	----	24.00	12.00
V-C Fertilizer 4-16-0	4.00	----	----	16.00	----
V-C Fertilizer 4-12-8	4.00	----	----	12.00	8.00
V-C Fertilizer 4-12-4	4.00	----	----	12.00	4.00
V-C Fertilizer 3-12-12	3.00	----	----	12.00	12.00
V-C Fertilizer 3-9-18	3.00	----	----	9.00	18.00
V-C Fertilizer 2-12-6	2.00	----	----	12.00	6.00
V-C Fertilizer 0-20-20	----	----	----	20.00	20.00
F. H. WOODRUFF AND SONS, INC., MILFORD, CONN.					
Gro-Sod Lawn Food	10.00	----	----	6.00	4.00