# Commercial Fertilizers in Kentucky, 1963

Including a Report on Official Fertilizer
Samples Analyzed

July-December, 1963



University of Kentucky
Agricultural Experiment Station
Lexington

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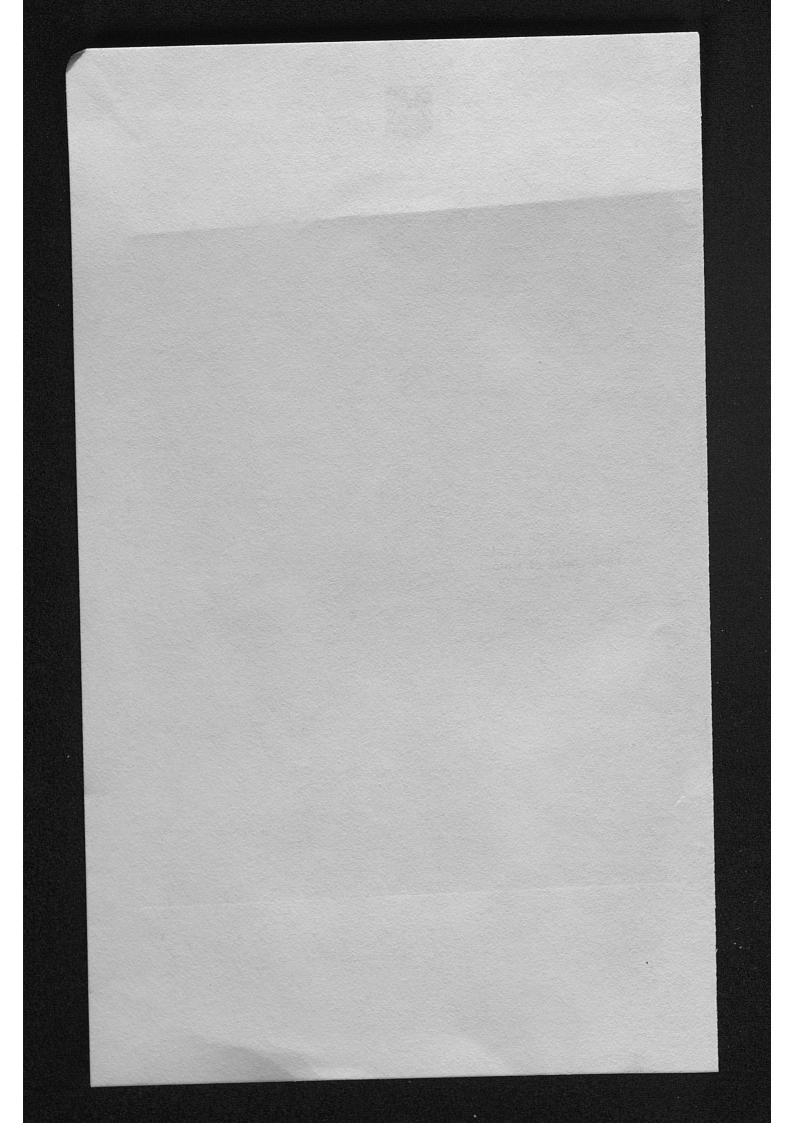
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This report compiled and prepared by Bruce Poundstone and W. J. Huffman Analytical data by the Laboratory Staff



This bulletin contains results of analyses of 668 official samples of commercial fertilizers made during the period July 1 through December 31, 1963.

Separate tables are provided for the results of analyses of mixed dry fertilizers, mixed liquid fertilizers, straight materials, boron and pesticides.

#### EXPLANATION OF TABLES

The information given in the following tables should be useful in determining how nearly a manufacturer is meeting the chemical guarantee printed on the bag or tag for the fertilizer represented by the samples listed. This may be done by comparing the guarantee shown at the beginning of each listing of samples with the actual analysis in the columns at the right in terms of nitrogen, available phosphoric acid and potash.

An additional means of comparing guarantees with the analyses of samples is in the percent of relative value found, shown in the extreme right-hand column. The following examples illustrate how this relative value is calculated:

A 5-10-15 sulfate fertilizer is guaranteed to contain 5 units of Nitrogen, 10 units of Available Phosphoric Acid and 15 units of Potash. Factors for computing the relative value of these plant foods are: 3 for Nitrogen, 2 for Available Phosphoric Acid and 1 for Potash. Thus the combined guaranteed value of the product represented is calculated:

5.0 Units of Nitrogen	x 3 = 15.0
10.0 Units of Available Phosphoric Acid	x 2 = 20.0
15.0 Units of Potash	x 1 = 15.0
Total computed guaranteed value	50.0

The same procedure is followed for "found values." Assuming a sample of 5-10-15 was found to contain 5.1 units of Nitrogen, 10.2 units of Available Phosphoric Acid and 15.1 units of Potash, the relative found value is computed:

5. l Units of Nitrogen	x 3 = 15.3
10.2 Units of Available Phosphoric Acid	x 2 = 20.4
15. l Units of Potash	x 1 = 15.1
Total computed value	50.8

50.8 (computed found value of sample) divided by 50.0 (computed guaranteed value) times 100 (to arrive at percentage) gives 101.6 as the percent of the relative value found.

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

The results of analyses of all inspection samples are given in tables 1, 2, 3, and 4. If an analysis shows a deficiency of more than the tolerance, the amount claimed for Nitrogen, Phosphoric Acid or Potash, or if the percent of the relative value is 97 or less, the result is indicated by an asterisk.

### TONNAGE OF FERTILIZER SOLD

The tonnage of fertilizer sold in 1963 was about 646,000 tons estimated from invoices. This represents an increase of about 14,000 tons over 1962. There was an increase of about 13,000 tons in total mixed fertilizer sold and an increase of about 1,000 tons of fertilizer materials.

## SUGGESTED RATIOS AND MINIMUM GRADES OF FERTILIZER FOR KENTUCKY 1964

The following ratios along with the minimum grade of fertilizer in each ratio is suggested for use in Kentucky during the Calendar year 1964.

Ratio	Minimum Grade
0-1-1	0-20-20
0-1-2	0-10-20*
0-1-3	0-10-30*
1-1-1	10-10-10
1-1-3	6- 6-18
1-2-2	5-10-10
1-2-3	5-10-15
1-3-2	4-12- 8
1-4-1	4-16- 4**
1-4-4	5-20-20*
2-1-1	12- 6- 6

\*When used on clover for seed production or on alfalfa, grades within these ratios should have boron added.

\*\*This is a special fertilizer for burned tobacco plant beds. Only one grade in the ratio is suggested. The grade 4-12-8 may also be used on plant beds.

Grades higher than the minimum grades in all ratios except the 1-4-1 ratio are considered to be on the suggested list.

In addition to this list of mixed fertilizers, straight materials are suggested. These should be used when only one of the major plant nutrients is required or if there is no mixed fertilizer that will approximately meet the nutrient requirements. However, when the nutrient requirements can be met by using a mixed fertilizer, the recommendations should be kept within one of the suggested ratios. The decision as to whether mixed fertilizers or straight materials are used is often a matter of economics and should be left with the farmer.

INFORMATION IS GIVEN FOR SAMPLES WHERE THE WORDS "SEE NOTE" IS SHOWN AS FOLLOWS:

- Note 1. See Table 5 for results of analyses of boron in fertilizer.
- Note 2. See Table 6 for results of analyses of pesticides in fertilizer.
- Note 3. Fertilizer represented by this sample returned to plant.
- Note 4. Purchaser received refund based upon this analysis.
- Note 5. Reworked.
- Note 6. Refund based upon this analysis made to charity.

### COMPANIES REPRESENTED BY SAMPLES REPORTED IN THIS BULLETIN

American Agricultural Chemical Co. 100 Church Street New York, New York

American Cyanamid Company Agricultural Division P. O. Box 400 Princeton, New Jersey

Armour Agricultural Chemical Co. 350 Hurt Building Atlanta, Georgia

Ashcraft-Wilkinson Company 601 Trust Company of Georgia Atlanta, Georgia

Bartlett & O'Bryan Fertilizer Co. 108 River Road Owensboro, Kentucky

Bluegrass Plant Foods, Inc. Cynthiana Kentucky

Bunton Seed Company 300 E. Jefferson Street Louisville, Kentucky

Burley Belt Plant Food Works, Inc. Route 4 Lexington, Kentucky

California Chemical Company Lucas & Ortho Way Richmond, California

Cecil Farm Supply Company Star Route Owensboro, Kentucky

Central Farmers Fertilizer Co. 205 W. Wacker Drive Chicago, Illinois

Coastal Chemical Company Yazoo City Mississippi

Commonwealth Fertilizer Co., Inc. Morgantown Road Russellville, Kentucky

Cooperative Fertilizer Service, Inc. Southern States Building Richmond, Virginia Darling & Company 4201 S. Ashland Avenue Chicago, Illinois

E-town Fertilizer Company Cecilia Kentucky

Farmers Chemical Association P. O. Box 67 Tyner, Tennessee

Federal Chemical Company 646 Starks Building Louisville, Kentucky

Glasgow Fertilizer Company Glasgow Kentucky

W. R. Grace & Company Davison Chemical Division 101 N. Charles Street Baltimore, Maryland

Green Valley Supply Company Island Kentucky

Gro-Green Chemical Company Shelbyville Kentucky

Hutson Chemical Company Railroad Avenue Murray, Kentucky

International Minerals & Chemical Corp.. P. O. Box 15067, Lockland Station Cincinnati 15, Ohio

Kenco Fertilizer Company, Inc. Bowling Green Kentucky

Kentucky Fertilizer Works Winchester Kentucky

Land-O-Nan Warehouse Sturgis Kentucky

North American Fertilizer Company 1419 South Preston Street Louisville, Kentucky Companies Represented by Samples Reported in This Bulletin (Continued)

Northwest Nitro-Chemical Ltd. Medicine Hat Alberta, Canada

Ohio Valley Fertilizer, Inc. Maysville Kentucky

Olin Mathieson Chemical Corp. Little Rock Arkansas

Robin Jones Phosphate Company 204-23rd Avenue, North Nashville, Tennessee

F. S. Royster Guano Company Price Chemical Division Norfolk, Virginia

O. M. Scott & Sons Company Marysville Ohio

Swift & Company Agricultural Chemical Division National Stock Yards, Illinois Tennessee Corporation Lockland Station Cincinnati 15, Ohio

Tri-State Chemical Company Henderson Kentucky

U. S. Steel Corporation 525 William Penn Place Pittsburgh, Pennsylvania

Valley Counties of Kentucky Cooperative Benton Kentucky

Virginia-Carolina Chemical Corporation 401 East Main Street Richmond, Virginia

West Kentucky Liquid Fertilizer Corp. Hopkinsville Kentucky

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
AMERICAN AGRI CHEMICAL CO CINCINNATI	(Percent)	(Percent)	(Percent)	•
4 12 BM				
828	4.1	12.0	8.1	101
903	4.2	12.8	8.5	106
922	4.0	12.4	8.0	102
5 20 20M				
4615	5.0	20•8	19•0*	101
6 12 12M	5.8	12.2	11.8	99
793	5.6	12.02	11.60	<b>,,</b>
AMERICAN AGRI CHEMICAL CO KNOXVILLE				
19 38M				
1930		17•7*	37.6	96*
19 38M 1883		19•2	38•2	101
20 20M 884		20.0	20•1	100
004		20.0	2011	100
30 30M WITH 5 LBS BORAX 3711 SEE NOTE 1		29.9	29.5	99
4 12 8M 885	4.4	12.1	8.3	104
917	4.0	12.0	8.4	101
961	4.3	12.0	8.4	103
4 16 8M				
4648	4.7	15.9	8.3	104
5 20 20M		30.0	10.0	101
<b>899</b>	5•2	20•0	19.8	101
12 12 12M		13.4	12.4	100
4649	11.9	13.4	12.4	104

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

9 27M WITH 4 LBS BORAX 6 0020 HEPT 5041 SEE NOTE 1 6 2 5053 SEE NOTE 1 6 2 5053 SEE NOTE 1 6 2 5053 SEE NOTE 3 25 25M 829 SEE NOTE 3 944 25.0 25.5 101  25 25M WITH 5 LBS BORAX 1961 SEE NOTE 1 6 4 20.7* 21.8* 84*  6 12 12M 830 945 5.8 12.3 12.0 100 945 5.8 12.2 12.0 100 1890 6.0 12.4 12.0 101 1907 5.9 12.4 12.0 101 5054 5.4* 12.3 12.2 98  10 10 10 10M 901 1935 9.5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 10.6 10.4 10.4 10.5 10 10 10M 760	Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
5041 SEE NOTE 1 6 2 5053 SEE NOTE 1 6 2 5053 SEE NOTE 1 6 2 5053 SEE NOTE 1 6 2 25 25M 829 SEE NOTE 3 944 25.0 25.0 25.5 101  25 25M WITH 5 LBS BORAX 1961 SEE NOTE 1 6 4 20.7* 21.8* 84*  6 12 12M 830 945 5,8 12.3 12.0 100 945 5,8 12.2 12.0 100 1890 6.0 12.4 4 12.0 101 5054 5,4* 12.3 12.2 98  10 10 10 M 901 1935 9,5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 10.4 10.4 10.4 10.5 10 10 10M 755 959 10.0 6.9 4.6 105	AMERICAN AGRI CHEMICAL CO NASHVILLE	(Percent)	(Percent)	(Percent)	
5041 SEE NOTE 1 6 2 5053 SEE NOTE 1 6 2 5053 SEE NOTE 1 6 2 5053 SEE NOTE 1 6 2 25 25M 829 SEE NOTE 3 944 25.0 25.0 25.5 101  25 25M WITH 5 LBS BORAX 1961 SEE NOTE 1 6 4 20.7* 21.8* 84*  6 12 12M 830 945 5,8 12.3 12.0 100 945 5,8 12.2 12.0 100 1890 6.0 12.4 4 12.0 101 5054 5,4* 12.3 12.2 98  10 10 10 M 901 1935 9,5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 10.4 10.4 10.4 10.5 10 10 10M 755 959 10.0 6.9 4.6 105	9 27M WITH 4 LBS BORAX & 0020 HEPT				
5053 SEE NOTE 1 6 2  25 25M			9.2	27.0	101
829 SEE NOTE 3 944  944  25.0  25.0  25.5  101  25 25M WITH 5 LBS BORAX 1961 SEE NOTE 1 6 4  20.7*  21.8*  84*  6 12 12M  830  945  5.8  12.3  12.0  100  1890  6.0  1890  6.0  1907  5.9  12.4  12.0  101  5054  5.4*  12.3  12.0  100  1907  5.9  12.4  12.0  101  901  901  9.7  11.2  10.3  103  1935  9.5*  10.2  10.5  97*  AMMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M  794  6.1  23.7  12.5  100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958  4.5*  5.4*  6.7  4.2  100  10 6 4M 755  959  10.0  6.9  4.6  105  10 10 10M 960  10.0  10.0  10.4  10.4  10.4  10.2					
829 SEE NOTE 3 944  944  25.0  25.0  25.5  101  25 25M WITH 5 LBS BORAX 1961 SEE NOTE 1 6 4  20.7*  21.8*  84*  6 12 12M  830  945  5.8  12.3  12.0  100  1890  6.0  1890  6.0  1907  5.9  12.4  12.0  101  5054  5.4*  12.3  12.0  100  1907  5.9  12.4  12.0  101  901  901  9.7  11.2  10.3  103  1935  9.5*  10.2  10.5  97*  AMMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M  794  6.1  23.7  12.5  100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958  4.5*  5.4*  6.7  4.2  100  10 6 4M 755  959  10.0  6.9  4.6  105  10 10 10M 960  10.0  10.0  10.4  10.4  10.4  10.2		,			
944 25.0 25.5 101  25 25M WITH 5 LBS BORAX 1961 SEE NOTE 1 6 4 20.7* 21.8* 84*  6 12 12M 830 945 5.8 12.3 12.0 100 945 5.8 12.4 12.6 103 1907 5.9 12.4 12.0 101 5054 5.4 12.3 12.2 98  10 10 10M 901 901 97.7 11.2 10.3 103 1935 9.5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100 10 6 4M 755 959 10.0 6.9 4.6 105 10 10 10M 960 10.0 10.4 10.4 10.2					
25 25M WITH 5 LBS BORAX 1961 SEE NOTE 1 6 4  6 12 12M  830 945 5.8 12.3 12.0 100 1890 6.0 12.4 12.6 103 1907 5.9 12.4 12.0 101 5.4 12.3 12.2 98  10 10 10M 901 901 901 901 901 901 901 901 901 1935 9,5* 10.2 10.5 99 5042  8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100 10 6 4M 755 959 10.0 6.9 4.6 105 10 10 10M 960 10.0 10.0 10.4 10.4 10.4			21.7*	26.7	93*
1961 SEE NOTE 1 6 4  20.7* 21.8* 84*  6 12 12M 830 945 5.8 12.2 12.0 100 1890 6.0 12.4 12.6 103 1907 5.9 12.4 12.0 101 5054 5.8 12.2 98  10 10 10M 901 901 901 901 905 1935 9.5* 10.2 10.3 103 1935 9.5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10 10 10M 960 10 10 10.4 10.4 10.2	944		25.0	25.5	101
1961 SEE NOTE 1 6 4  20.7* 21.8* 84*  6 12 12M 830 945 5.8 12.2 12.0 100 1890 6.0 12.4 12.6 103 1907 5.9 12.4 12.0 101 5054 5.8 12.2 98  10 10 10M 901 901 907 9.7 11.2 10.3 103 1935 9.5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.2	25 25M WITH 5 LBS BORAY				
6 12 12M 830 945 5.8 12.2 12.0 100 1890 6.0 12.4 12.6 103 1997 5.9 12.4 12.0 101 5.054 5.9 12.4 12.0 101 5.4* 12.3 12.2 98  10 10 10M 901 901 9.7 11.2 10.3 103 1935 9.5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10 10 10M 960 10.0 10.4 10.4 10.2			20.7*	21.8*	84*
\$30				2110	34
945 1890 6.0 12.4 12.6 103 1907 5.9 12.4 12.3 12.2 98  10 10 10 10M 901 901 1935 9.5** 10.2 10.5 99 5042  10 10 20M MERICAN AGRI CHEMICAL CO SEYMOUR  4.5**  5.8 12.2 12.0 100 103 103 12.2 98  10 10 10 10M 901 9.7 11.2 10.3 10.3 10.3 19.5 99.5 10.6 97.*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5.0 958 4.5* 5.8 100  10 6.4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.4	6 12 12M				
1890 6.0 12.4 12.6 103 1907 5.9 12.4 12.0 101 5054 5.9 12.4 12.0 98  10 10 10M 901 9.7 11.2 10.3 103 1935 9.5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.2	830	5.8	12.3	12.0	100
1907 5054  5.9 12.4 12.0 101 5054  10 10 10M 901 901 1935 9.5** 10.2 10.5 99 5042  8.8** 10.6 10.6 97**  MERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794  6.1 23.7 12.5 100  RMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958  4.5* 5.8 100  10 6 4M 755 959 10.0 6.7 4.2 100 10 10 10M 960 10.0 10.4 10.4 10.4 10.2			12.2	12.0	100
5054  5.4* 12.3 12.2 98  10 10 10 10M 901 1935 9.5* 10.2 10.5 99 5042  8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105 10 10 10M 960 10.0 10.4 10.4 10.2					
10 10 10M 901 1935 9.5* 10.2 10.5 99 5042 8.8* 10.6 10.6 97*  AMERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 999 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.2					
901 1935 9.5* 10.2 10.5 99 5042  MERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.7 4.2 10.0 10 10 10M 960 10.0 10.0 10.4 10.4 10.2	5054	5.4*	12.3	12.2	98
1935 5042  9.5* 10.2 10.5 99 8.8* 10.6 10.6 97*  MERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794  6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958  4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.2	10 10 10M				
1935 5042  9.5* 10.2 10.5 99 8.8* 10.6 10.6 97*  MERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794  6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958  4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.2		9.7	11.2	10.3	103
MERICAN AGRI CHEMICAL CO SEYMOUR  6 24 12M 794 6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 102	1935	9.5*	10.2		
6 24 12M 794  6 0 23 0 7 12 0 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958  4 0 5 * 5 0 8 100  10 6 4M 755 959  9 0 4 6 0 7 4 0 2 100 10 10 10M 960  10 0 10 0 4 10 0 10 0 10 0 10 0 10 0	5042	8.8*	10•6	10.6	97*
794  6.1 23.7 12.5 100  ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958  4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.2	AMERICAN AGRI CHEMICAL CO SEYMOUR				
ARMOUR AGRI CHEMICAL CO ATLANTA  5 5 0 958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.2	6 24 12M				
5 5 0 958  4.5* 5.8  100  10 6 4M 755 959 10.0 6.7 4.2 100 959 10.0 6.9 4.6 105	794	6.1	23.7	12.5	100
5 5 0 958  4.5* 5.8  100  10 6 4M 755 959 10.0 6.7 4.2 100 959 10.0 6.9 4.6 105	ARMOUR AGRI CHEMICAL CO ATLANTA				
958 4.5* 5.8 100  10 6 4M 755 959 10.0 6.9 4.6 105  10 10 10M 960 10.0 10.4 10.4 10.2					
10 6 4M 755 959 10 0 6 9 4 6 105 10 10 10M 960 10 0 10 4 10 4 10 2					
755 959 10.0 6.9 4.6 105 10 10 10M 960 10.0 10.4 10.4 102	956	4.5*	5•8		100
959 10.0 6.9 4.6 105 10 10 10M 960 10.0 10.4 10.4 102	10 6 4M				
959 10.0 6.9 4.6 105 10 10 10M 960 10.0 10.4 10.4 102	755	9.4*	6.7	4.2	100
10 10 10M 960 10.0 10.4 10.4 102	959	10.0		4.6	
960 10.0 10.4 10.4 102 12 24 24M	10 10 10M				
		10.0	10.4	10.4	102
	12 24 24M				
	3704	11.8	23.0*	- 25.7	99

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
ARMOUR AGRI CHEMICAL CO ATLANTA C	CONTINUED (Percent)	(Percent)	(Percent)	
13 13 13M				
4693	13•5	16.4	13.2	1 1,1
15 15 15M 1903	14.6*	15.3	15.4	100
ARMOUR AGRI CHEMICAL CO CINCINNAT	rı			
4 12 8M				
916 926	4.3	13.2	8•2 9•0	108
T.				
5 10 10M				
886 972	5.0 5.0	11.1	10.0	105
	5.0	10.2	10.2	101
5 20 20M				
874 4623	5.4	20.0	20.0	102
4650	5.0 5.1	20.0	20•2 19•2*	100
10 10 10M				
875	10.3	11.1	10.0	105
4622	9.5*	10.8	9.8	100
10 20 20M				
887	9•9	18.8*	20.0	97*
ARMOUR AGRI CHEMICAL CO JEFFERSON	NVILLE			
20 20M				
1879		19.7	19.9	99
20 20M WITH 5 LBS BORAX 841 SEE NOTE 1		10.14	20.1	07*
		19.1*	20•1	97*
4 12 8M				
741 798	4.8	11.8	8.1	113
836	4.3	12.0	9.2	105
5078	4.6	12.5	8 • 1	107
5085	4.8	12.0	7.8	105

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
			<b>'</b> 5 .\	T Giae i Saint
RMOUR AGRI CHEMICAL CO JEFFERSONVIL	LE CON (Percent)	(Percent)	(Percent)	
5 20 20M	5•2	20.5	19•7	102
799	4.8	20.5	19.5*	100
837	5.3	19.8	2011	101
1875	5.0	19.5*	20.0	99
1959 5087	6.7	22.5	18.7*	112
5 20 20M WITH 5 LBS BORAX	<b>^</b> 0	20•0	19•4*	99
3658 SEE NOTE 1	4.9	20.0		
6 12 12M	6.4	12.5	12.7	105
742	6.4	13.0	13.5	109
800 1877	6.2	12.7	12.5	105
1878	5•5*	12.7	13•2	102
6 18 12M 801	5.7*	18.0	12.5	99
10 10 10M	9.7	10.2	11.6	102
838	9.2*	10.3	13.8	103
1845	9.6*	10.1	11.2	100
1874 3657	10.0	10•8	11.0	104
			17.04	**
ARMOUR AGRI CHEMICAL CO NASHVILLE 20 20M 1849		20•4	17•0*	96*
20 20M 1849 3 12 6M	3.0	20•4	17•0* 6•1	96 <b>*</b> 105
20 20M 1849	3.0			
20 20M 1849 3 12 6M 4694 3 12 24M	3.0			
20 20M 1849 3 12 6M 4694 3 12 24M 4641		12•9	6•1	105
20 20M 1849 3 12 6M 4694 3 12 24M		12•9	6•1	105
20 20M 1849 3 12 6M 4694 3 12 24M 4641 3 12 24M WITH 3 LBS BORAX	3.0	12•9 11•5*	6•1 24•5	105
20 20M 1849 3 12 6M 4694 3 12 24M 4641 3 12 24M WITH 3 LBS BORAX	3.0 2.9	12.9	6•1 24•5	105
20 20M 1849 3 12 6M 4694 3 12 24M 4641 3 12 24M WITH 3 LBS BORAX 3722 SEE NOTE 1	3.0 2.9 4.3	12•9 11•5*	6•1 24•5 23•2*	105 99 • 98
20 20M 1849  3 12 6M 4694  3 12 24M 4641  3 12 24M WITH 3 LBS BORAX 3722 SEE NOTE 1  4 12 8M 1966 3686	3.0 2.9 4.3 4.1	12.9	6•1 24•5 23•2*	105 99 • 98
20 20M 1849  3 12 6M 4694  3 12 24M 4641  3 12 24M WITH 3 LBS BORAX 3722 SEE NOTE 1  4 12 8M 1966 3686 3686 3687	3.0 2.9 4.3	12.9 11.5* 12.0	6•1 24•5 23•2* 9•0 8•7	99 98 105 103 101 105
20 20M 1849 3 12 6M 4694 3 12 24M 4641 3 12 24M WITH 3 LBS BORAX 3722 SEE NOTE 1	3.0 2.9 4.3 4.1 3.8	12.9 11.5* 12.0 12.2 12.2 11.6*	6•1 24•5 23•2* 9•0 8•7 9•8	105 99 98 105 103 101

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	ONTINUE (Devent)		(Percent)	Traide roun
ARMOUR AGRI CHEMICAL CO NASHVILLE C	ONTINUE (Percent)	(Percent)	(Percent)	
5 10 10M	5.0	10.0	10.4	101
4640 5095	5.3	10.0	10.0	102
5 20 20M	- 0	17•0*	19•8	92*
1918 SEE NOTE 3	5•0 4•7*	18.9*	20.4	96*
3665 3685	4.8	18.0*	19.8	94*
3740	4.6*	18.7*	20.6	96*
4639	4.6*	20.0	18.3*	96*
4642	4.7*	19.9	19.8	98
4671	5.1	21.3	17.0*	100
5039	4.7*	17.6*	23.5	97*
5124	5.0	18•3*	21.2	97*
5 20 20M WITH 5 LBS BORAX	A 5*	18.8*	21.5	97*
3667 SEE NOTE 1	4.5*	10.0*	21.65	,,,
6 12 12M	5•8	12•1	11.9	99
859 860	6.4	12.1	11.8	102
1905	5.9	12.2	12.7	101
4674	6.7	12.2	11.7	104
5059	6.0	12.1	11.5*	99
5127	5.9	12•4	11.6*	100
6 18 12M		16.0*	11.9	93*
1851 SEE NOTE 3	5.3* 5.5*	16.9* 17.2*	12.2	96*
1870	5.8	19.0	11.0*	101
1896 1917	6.0	18.0	11.5*	99
10 10 10M				
1850	9.4*	10.1	10.0	97*
1869	9.8	10.0	10.1	99
1895	9.5*	10.2	10.5	99
1962	10.1	10.2	10.2	102
1967	10.1	10.2	10.2	102
3684	10.0	10.0	12.0	99
3705	8.0*		12.1	94*
4638 4643	10.3	10.0	10.4	102
5040	9.4*	10.3	11.5	101
5126	9.9	10.6	10.3	102
10 20 20M				
4672 4673	9.9 10.1	18.6*	20.0	97* 97*
11 22 22M 4688	11.5	23.5	24.0	107
12 12 12M				
1894	11.6*	12.6	12.1	100

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

iridicated by disterisk.				
Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
ARMOUR AGRI CHEMICAL CO NASHVILLE CONTIN	UE (Percent)	(Percent)	(Percent)	
13 13 13M 3681	10 5	16.0	12.0	
3601	12.5*	16.0	13.0	106
15 15 15M				
4687	1349*	1444*	1518	96*
18 46 0 5094				
5094	17.7	46 • 1		100
BARTLETT AND OBRYAN FERTILIZER CO				
4 12 12M 4653	4.2	12.0	11.5*	100
4033	4.2	12.0	11.5*	100
5 20 20M 4675	5.5	19.7	21.7	103
	3.3	1,70,7	210/	103
6 12 12M				
4652 4682	6.5	12.8	12.3	106
4002	0.0	12.5	11.9	102
12 12 12M				
4651	11.4*	12.8	13.3	102
BLUEGRASS PLANT FOODS INC CYNTHIANA				
10 10 10M				
1886	9.4*	10.9	10.6	101
BLUEGRASS PLANT FOODS INC DANVILLE				
BEDEGRASS FLANT FOODS INC DANVILLE				
5 20 20M				
5037	5.1	20.5	21.7	104
5 20 20M WITH 5 LBS BORAX 5020 SEE NOTE 1	5.0	18.3*	20.2	96*
10 10 10M				
5038 5084	10.1	10.2	10.7	102 105
	10.4	10.2	11.5	105
12 12 12M				
5019	11.7	14.1	12.0	105

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

indicated by asterisk.				
Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
BUNTON SEED COMPANY	(Percent)	(Percent)	(Percent)	
6 12 6M 1843	6•1	12•6	8•1	108
BURLEY BELT PLANT FOOD WORKS INC				
19 38M 1985		21.0	33•2*	99
4 12 8M 965 4647	4.1	11.9	8.6	102
4047	4.4	12•3	9.3	107
5 20 20M 966	4.8	20•7	18•4*	99
12 12 12M 904	11.3*	12.0	12.7	98
20 10 10M 4646	20•1	11•1	10•4	103
CALIFORNIA CHEMICAL COMPANY				
10 20 20M 1938	10•2	20•4	20.0	102
14 14 14M 5024	14.3	14.1	14.5	102
5026	14.0	14.8	14.2	102
16 16 16M 5108	15.9	16•2	16.0	100
CECIL FARM SUPPLY CO				
4 12 8M 4654	4.1	12.9	8•5	106
5 20 20M 4656	5•8	20.8	20-0	105
	3.6	20.8	20.0	105

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
CECIL FARM SUPPLY CO CONTINUED	(Percent)	(Percent)	(Percent)	
6 12 12M 4692	6.5	13.0	12.0	106
10 10 10M 4657	11.3	10.0	10•6	108
12 12 12M 4655	12.8	13•1	10•3*	104
COASTAL CHEMICAL CORPORATION				
16 48 0 832	16•5	48•0		101
COMMONWEALTH FERTILIZER CO CAN	MPBELLSVILLE			
25 25M 5083		25.7	25•2	102
6 18 12M 5082	6•7	18•8	12•1	106
COMMONWEALTH FERTILIZER CO RU	SSELLVILLE			
20 20M 817		20•0	19•0*	98
4 12 8M 818	4.4	13.1	9•1	110
5 20 20M 5032	5.3	19•9	18∙9*	99
6 12 12M 5033 5060	5.8	13.0 12.5	11.1×1×11.0×	
6 18 12M 5061	6•1	18•0	13.7	103
8 16 16M 5062	7.1*	16•5	14.4	× 95*

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
COMMONWEALTH FERT CO RUSSELLVILLE CONTIN	UE (Percent)	(Percent)	(Percent)	
10 10 10M				
819	9.1*	10.2	12.0	100
COOPERATIVE FERTILIZER SERV BALTIMORE				
12 12 12M				
<b>969</b>	11.9	12.4	13.3	103
COOPERATIVE FERTILIZER SERV BRISTOL				
5 10 10M 772				
112	5•1	10•4	10.0	102
10 10 10M 773	10.0	10.0	10.1	100
10.70 200				
10 20 20M 774	10.0	20•4	20•0	101
COOPERATIVE FERTILIZER SERV LOUISVILLE				
COOPERATIVE FERTILIZER SERV LOUISVILLE  10 30M WITH 4 LBS BORAX				
		11+1	25•8*	96*
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M				
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M 820 937		29•4* 30•0	29.6 30.0	96* 98 100
10 30M WITH 4 LBS BORAX B15 SEE NOTE 1 30 30M B20		29•4*	29•6	98
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M 820 937 1839		29•4* 30•0 30•6	29.6 30.0	98 100
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M 820 937 1839 3 12 12M 821	3.4	29.4* 30.0 30.6	29.6 30.0 30.2	98 100 102
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M 820 937 1839	3.8	29.4* 30.0 30.6	29.6 30.0 30.2	98 100 102
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M 820 937 1839 3 12 12M 821 1923 3668 5036		29.4* 30.0 30.6	29.6 30.0 30.2	98 100 102
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1  30 30M 820 937 1839  3 12 12M 821 1923 3668	3.8 3.3	29.4* 30.0 30.6	29.6 30.0 30.2 11.9 12.3 12.6	98 100 102 103 106 106
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M 820 937 1839 3 12 12M 821 1923 3668 5036 5088	3.8 3.3 3.2	29.4* 30.0 30.6 12.2 12.1 12.5 12.4	29.6 30.0 30.2 11.9 12.3 12.6 12.5	98 100 102 103 106 106 104
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M 820 937 1839 3 12 12M 821 1923 3668 5036 5088 4 12 8M 833	3.8 3.3 3.2	29.4* 30.0 30.6 12.2 12.1 12.5 12.4	29.6 30.0 30.2 11.9 12.3 12.6 12.5	98 100 102 103 106 106 104
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1 30 30M 820 937 1839 3 12 12M 821 1923 3668 5036 5088	3.8 3.3 3.2 3.9	29.4* 30.0 30.6 12.2 12.1 12.5 12.4 12.2	29.6 30.0 30.2 11.9 12.3 12.6 12.5 12.0	98 100 102 103 106 106 104 107
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1  30 30M 820 937 1839  3 12 12M 821 1923 3668 5036 5088  4 12 8M 833 938 3714	3.8 3.3 3.2 3.9 4.1 4.0 4.1	29.4* 30.0 30.6 12.2 12.1 12.5 12.4 12.2	29.6 30.0 30.2 11.9 12.3 12.6 12.5 12.0	98 100 102 103 106 106 104 107
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1  30 30M 820 937 1839  3 12 12M 821 1923 3668 5036 5088  4 12 8M 833 938 3714	3.8 3.3 3.2 3.9 4.1 4.0 4.1	29.4* 30.0 30.6 12.2 12.1 12.5 12.4 12.2	29.6 30.0 30.2 11.9 12.3 12.6 12.5 12.0	98 100 102 103 106 106 104 107
10 30M WITH 4 LBS BORAX 815 SEE NOTE 1  30 30M 820 937 1839  3 12 12M 821 1923 3668 5036 5088  4 12 8M 833 938 3714  5 20 20M 834 1838	3.8 3.3 3.2 3.9 4.1 4.0 4.1	29.4* 30.0 30.6 12.2 12.1 12.5 12.4 12.2	29.6 30.0 30.2 11.9 12.3 12.6 12.5 12.0 8.5 9.0 8.6	98 100 102 103 106 106 104 107
815 SEE NOTE 1  30 30M 820 937 1839  3 12 12M 821 1923 3668 5036 5088  4 12 8M 833 938 3714	3.8 3.3 3.2 3.9 4.1 4.0 4.1	29.4* 30.0 30.6 12.2 12.1 12.5 12.4 12.2	29.6 30.0 30.2 11.9 12.3 12.6 12.5 12.0	98 100 102 103 106 106 104 107

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Foun
Sumple Humber	(Percent)	(Percent)	(Percent)	
OOPERATIVE FERT SERV LOUISVILLE CO	NT (Fercent)	(reiceill)	(i creent)	
5 20 20M CONTINUED				
1953	5.2	20.2	20.3	102
3669	4.9	19.1*	21.1	99
5016	5.0	19.4*	20.5	99
5089	5•6	19.9	20.0	102
5 20 20M WITH 2 LBS BORAX				
1842 SEE NOTE 1	5.2	19.5*	19.5*	99
3660 SEE NOTE 1	5.3	20.5	20.1	103
4617 SEE NOTE 1	4.9	20•2	20.0	100
6 12 12M				
939	6.0	12.8	11.6*	102
10 10 10M				
835	10.6	10.9	10.0	106
1844	10.7	10.3	9.8	104
1926	10.9	10.8	10.0	107
1929	9.9	10.9	10.0	103
1952	10.1	10.1	10.3	101
1981	10.1	10.5	10.5	103
				100
3713 OOPERATIVE FERTILIZER SERV RUSSELL	10.1 VILLE	10.9	10.0	104
OOPERATIVE FERTILIZER SERV RUSSELL		10.9	10.0	104
OOPERATIVE FERTILIZER SERV RUSSELL' 30 30M		29.5 23.7*	30.0 36.4	99 93*
OOPERATIVE FERTILIZER SERV RUSSELL 30 30M 803		29•5	30•0	99
OOPERATIVE FERTILIZER SERV RUSSELL 30 30M 803 4634 SEE NOTE 3		29•5	30•0	99
OOPERATIVE FERTILIZER SERV RUSSELL 30 30M 803 4634 SEE NOTE 3	VILLE	29•5 23•7*	30•0 36•4	99 93*
OOPERATIVE FERTILIZER SERV RUSSELL'  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823	VILLE 4•2	29•5 23•7*	30.0 36.4 8.4	99 93* 102
OOPERATIVE FERTILIZER SERV RUSSELL'  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857	4.2 4.1	29.5 23.7* 12.0 12.2	30.0 36.4 8.4 8.1	99 93* 102 102
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 8M 746 804 804 823 1857 1867	4.2 4.1 4.3 4.2 4.0	29.5 23.7* 12.0 12.2 12.0 12.3 11.5*	30.0 36.4 8.4 8.1 8.9 8.0 9.9	99 93* 102 102 104 103 102
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M     803     4634 SEE NOTE 3  4 12 8M     746     804     823     1857     1867     1971	4.2 4.1 4.3 4.2 4.0 4.3	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6	99 93* 102 104 103 102 103
30 30M 803 4634 SEE NOTE 3 4 12 BM 746 804 823 1857 1867 1971 3662	4.2 4.1 4.3 4.2 4.0 4.3 4.4	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.0	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4	99 93* 102 104 103 102 103 104
OOPERATIVE FERTILIZER SERV RUSSELL'  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857 1867 1971 3662 3696	4.2 4.1 4.3 4.2 4.0 4.3 4.4	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.0 12.0	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1	99 93* 102 102 104 103 104 101
OOPERATIVE FERTILIZER SERV RUSSELL'  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857 1867 1971 3662 3696 4636	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.0 12.0 12.2 12.1	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5*	99 93* 102 102 104 103 102 103 104 101 98
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857 1867 1971 3662 3696 4636 5035	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.0 12.2 12.1 12.8	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5*	99 93* 102 102 104 103 102 103 104 101 98 108
OOPERATIVE FERTILIZER SERV RUSSELL'  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857 1867 1971 3662 3696 4636	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.0 12.0 12.2 12.1	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5*	99 93* 102 102 104 103 102 103 104 101 98
OOPERATIVE FERTILIZER SERV RUSSELL'  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3 4.1	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.0 12.2 12.1 12.8	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0	99 93* 102 102 104 103 102 103 104 101 98 108
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3 4.1	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7*	99 93* 102 102 104 103 104 101 98 108 100 102
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 8M 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3 4.1 4.4	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7*	99 93* 102 102 104 103 102 103 104 101 98 108 100 102
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 8M 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074  5 20 20M 756 805	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3 4.1 4.4	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7*	99 93* 102 102 104 103 102 103 104 101 98 108 100 102
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 8M 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3 4.1 4.1	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7*	99 93* 102 102 104 103 102 103 104 101 98 108 100 102
30 30M 803 4634 SEE NOTE 3 4 12 8M 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3 4.1 4.4	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7*	99 93* 102 102 104 103 104 101 98 108 100 102
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074  5 20 20M 756 805 824 941	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3 4.1 4.4	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7*	99 93* 102 102 104 103 102 103 104 101 98 108 100 102
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 8M 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074  5 20 20M 756 805 824 941 946	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.3 4.1 4.4	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7*	99 93* 102 102 104 103 104 101 98 108 100 102 102 102 102 102 98 100
OOPERATIVE FERTILIZER SERV RUSSELLY  30 30M 803 4634 SEE NOTE 3  4 12 BM 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074  5 20 20M 756 805 824 941 946 1927	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.1 4.4	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7*	99 93* 102 102 104 103 104 101 98 108 100 102 102 100 102 102 98
30 30M 803 4634 SEE NOTE 3 4 12 BM 746 804 823 1857 1867 1971 3662 3696 4636 5035 5070 5074 5 20 20M 756 805 824 941 946 1927 1978	4.2 4.1 4.3 4.2 4.0 4.3 4.4 4.0 3.8 4.4 4.0 3.8 4.1 4.4 5.0 5.0 4.9 5.4 5.1 4.7* 5.0 5.2	29.5 23.7* 12.0 12.2 12.0 12.3 11.5* 12.0 12.2 12.1 12.8 11.4* 11.9	30.0 36.4 8.4 8.1 8.9 8.0 9.9 8.6 8.4 8.1 7.5* 8.9 9.0 7.7* 21.8 20.4 19.5* 19.6 20.9 20.0 20.1	99 93* 102 102 104 103 102 103 104 101 98 108 100 102 102 102 102 98 100 100

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

S 20 20M CONTINUED   S 20M CONTINUED	Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
\$ 20 20M CONTINUED  3745 4635 5.0 20.0 20.7 101 4678 5.7 20.0 20.4 103 5034 5.1 20.4 20.0 101 5073 5.5 20.1 19.9 102 5102 5.0 20.2 19.6 100  6 12 12M 757 5.9 12.0 12.5 100 806 6.3 12.5 13.1 106 1910 6.0 12.3 11.4 100 1964 6.2 12.0 11.2 14.0 102 3661 3694 6.2 12.9 12.2 101 3694 6.2 12.9 12.2 105  6 18 12M 807 6.2 12.9 12.2 105  6 18 12M 808 807 6.2 18.0 12.0 10.2 3661 3693 5.9 18.2 11.7 100 10 10 10 10 10 10 10 10 10 10 10 10 10 1		(Percent)		(Percent)	
3745					
## 4535		4.9	19•3*	20.3	98
\$ 5,7 20.0 20.4 103 \$ 3034 \$ 5,1 20.4 20.0 101 \$ 5073 \$ 5,5 20.1 19.9 102 \$ 5102 \$ 5.0 20.2 19.6 100  6 12 12M					
\$03a					
5073 5102 50.0 50.0 20.2 19.6 100  6 12 12M 757 806 60, 12.3 11.4* 106 1910 60.0 12.3 11.4* 106 1964 6.2 12.0 13.6 104 1977 61.1 11.5* 14.0 102 3661 3694 6.2 12.9 12.2 105  6 18 12M 807 6.2 12.9 12.2 105  6 18 12M 807 6.2 18.0 12.0 10.1 825 6.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18					
5102 5.0 20.2 19.6 100  6 12 12M 757 757 5.9 12.0 12.5 100 806 6.3 12.5 13.1 106 1910 6.0 12.3 11* 106 1977 6.1 11.5* 14.0 102 3661 3694 6.2 12.0 13.6 104 6.2 12.0 12.2 101 3694 6.2 12.0 12.2 101 3694 6.2 12.9 12.2 105  6 18 12M 807 6.2 18.0 12.0 12.0 101 1868 6.0 17.7 12.7 100 1965 6.0 18.0 13.2 102 3693 5.9 18.2 11.7 100  10 10 10M 781 808 9,6* 10.1 11.4 106 808 9,6* 10.1 11.4 106 808 9,6* 10.1 11.4 101 826 10.5 10.2 9.* 102 879 10.5 10.0 10.9 109 908 10.8 9.* 11.0 109 10.9 102 1866 10.1 10.0 10.1 10.9 102 1866 10.1 10.0 10.1 10.9 102 1866 10.1 10.0 10.1 10.9 102 1866 10.1 10.0 10.1 10.9 102 1866 10.1 10.0 10.1 10.9 102 1879 10.0 10.1 10.0 10.9 102 1866 10.1 10.0 10.1 10.9 102 1870 1963 10.6 9.8 10.7 104 1972 10.3 10.0 10.1 10.0 10.9 102 1972 10.3 10.0 10.4 10.1 10.9 1972 10.3 10.0 10.4 10.1 10.9 1972 10.3 10.0 10.4 10.1 10.9 1972 10.3 10.0 10.4 10.1 10.9 1973 10.0 10.4 10.1 10.0 10.3 1979 10.3 10.0 10.4 10.1 10.9 10.2 10.2 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.2 10.2 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.9 10.2 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.4 10.1 10.9 10.3 10.0 10.9 10.2 10.2 20M 782 9.5* 19.2* 19.7 99 899 11.6* 12.1 12.1 12.1 99 809 889 11.6* 12.1 12.1 12.1 99 809 889 12.7 11.8 12.0 10.4 10.6 10.1 10.0 10.9 10.2 10.2 20M 788 889 12.7 11.8 13.0 10.0 10.4 10.1 10.9 10.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2			20 • 1	19.9	102
757  806  66.3  12.5  13.1  106  1910  60.0  12.3  11.4*  10.6  1924  66.2  12.0  13.6  10.4  1977  61.1  11.5*  14.0  10.2  3661  6.2  12.0  12.2  10.1  3694  6.2  12.0  12.2  10.1  3694  6.2  12.0  12.2  10.1  3694  6.2  12.0  12.2  10.1  3694  6.2  12.0  12.2  10.1  3694  6.2  12.0  12.2  10.1  3694  6.2  12.0  12.2  10.1  3694  6.2  12.0  12.2  10.1  3694  6.2  12.0  12.2  10.1  10.1  888  6.0  11.7  10.1  10.8  10.1  10.8  10.1  10.8  10.1		5.0	20•2	19.6	100
757  806  806  6.3  12.5  13.1  106  1910  6.0  12.3  11.4*  100  1964  6.2  12.0  13.6  104  1977  6.1  11.5*  14.0  102  3661  6.2  12.0  12.2  101  3694  6.2  12.0  12.2  101  3694  6.2  12.0  12.2  105  6.1  807  6.2  12.9  12.2  105  6.1  807  825  6.2  18.0  12.0  101  1888  6.0  17.7  12.7  100  1965  6.0  18.0  13.2  102  3693  5.9  18.2  11.7  100  101  10 10M  781  10.8  10.8  10.8  10.1  10.8  10.2  879  10.5  10.2  97.8  10.8  98.9  10.4  99.4  10.1  10.0  10.2  10.2  10.3  10.0  10.4  10.7  10.4  10.7  10.9  10.3  10.0  10.4  10.7  10.4  10.7  10.9  10.3  10.0  10.4  10.7  10.4  10.7  10.0  10.1  10.3  10.0  10.4  10.7  10.4  10.7  10.0  10.1  10.0  10.2  10.3  10.0  10.4  10.7  10.0  10.1  10.0  10.2  10.3  10.0  10.4  10.7  10.0  10.1  10.0  10.2  10.3  10.0  10.4  10.7  10.0  10.1  10.0  10.2  4631  10.0  10.4  10.1  10.0  10.2  10.3  10.0  10.4  10.1  10.0  10.2  4637  10.0  10.0  10.1  10.0  10.0  10.1  10.0  10.2  10.3  10.0  10.4  10.1  10.0  10.2  10.3  10.0  10.1  10.0  10.2  10.3  10.0  10.1  10.0  10.2  10.3  10.0  10.1  10.0  10.2  10.3  10.0  10.1  10.0  10.0  10.1  10.0  10.2  10.3  10.0  10.1  10.0  10.2  10.3  10.0  10.1  10.0  1	6 10 100				
806 806 806 1910 6.0 12.3 11.4* 100 1964 6.2 12.0 13.6 104 1977 6.1 11.5* 14.0 102 3661 6.2 12.0 12.2 101 3694 6.2 12.0 12.2 105  6.18 12M 807 6.2 18.0 12.0 101 825 6.2 18.0 12.0 101 1888 6.0 17.7 12.7 100 1965 6.0 18.0 13.2 102 3693 5.9 18.2 11.7 100  10 10 10M 781 808 9.6* 10.1 11.4 101 808 9.6* 10.1 11.4 101 826 10.5 10.0 10.9 102 879 10.5 10.0 10.9 102 10.8 99.4* 11.0 10.9 102 10.8 997 10.0 10.1 10.0 10.9 102 1856 10.1 10.3 10.0 10.9 102 1856 10.1 10.3 10.0 10.2 102 1871 10.3 10.0 8.8 10.7 104 1972 10.3 10.0 10.1 10.9 102 1871 10.3 10.0 8.8 10.7 104 1972 10.3 10.0 10.4 10.1 10.3 10.0 10.9 102 1871 10.3 10.0 10.1 10.3 10.0 10.2 102 1871 10.3 10.0 10.1 10.1 10.3 10.0 10.2 102 1872 10.3 10.0 10.1 10.0 10.2 102 1873 10.3 10.0 10.1 10.0 10.2 102 1874 1975 10.3 10.0 10.1 10.0 10.2 102 1875 10.3 10.0 10.1 10.0 10.2 102 1876 1977 10.3 10.0 10.1 10.0 10.2 102 1877 10.3 10.0 10.1 10.0 10.2 102 1878 1979 10.3 10.0 10.1 10.0 10.2 102 1879 10.3 10.0 10.4 10.1 102 1979 10.3 10.0 10.4 10.1 102 1979 10.3 10.0 10.4 10.1 102 1979 10.3 10.0 10.4 10.1 102 1979 10.3 10.0 10.4 10.1 102 10.3 10.0 10.7 110 5075 10.1 10.8 10.0 10.7 110 5075 10.2 20M 782 9.6* 21.0 19.8 101		5.9	12.0	12.5	100
1910 1964 6.0 12.3 11.4* 100 1964 6.1 11.5* 14.0 102 3661 6.2 12.0 12.0 12.2 101 3694 6.1 11.5* 14.0 102 3661 6.2 12.9 12.2 105  6.1 11.5* 14.0 102 3694 6.2 12.9 12.2 105  6.1 18.0 12.0 12.0 10.1 18.0 18.0 12.0 10.1 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19					
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3661 3694 6.2 12.0 12.2 105  6 18 12M 807 6.2 18.0 12.0 101 825 6.2 18.0 12.0 101 1868 6.0 17.7 12.7 100 1965 6.0 18.0 13.2 102 3693 5.9 18.2 11.7 100  10 10M 781 826 10.5 10.2 879 10.5 10.0 10.5 10.0 10.9 10.8 908 10.8 9.6* 10.1 10.0 10.0 1856 10.1 10.0 10.8 908 10.8 9.6* 10.1 10.0 10.0 1856 10.1 10.0 10.0 1866 10.3 10.0 10.9 10.9 10.0 1871 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10					102
6 18 12M  807 6 6 2 18 0 12 0 101 825 6 6 2 18 0 12 0 101 1868 6 6 0 17 7 12 7 100 1965 6 6 0 18 0 13 2 102 3693 5 9 18 2 11 7 100  10 10 10M 781 826 808 9 6 10 10 1 11 1 1 1 1 1 1 1 1 1 1 1 1 1				12.2	101
807 825 66.2 18.0 12.0 101 1828 66.2 18.0 12.0 101 1868 66.0 17.7 12.7 100 1965 66.0 18.0 13.2 102 3693 5.9 18.2 11.7 100  10 10 10 10 10 10 10 10 11 1 1 1 1				12.2	105
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10 10 10M   10.8   10.0   11.1   106   808   9.6*   10.1   11.4   101   826   10.5   10.2   9.5*   102   879   10.65   10.0   10.9   104   957   10.0   10.1   10.0   10.9   102   1856   10.1   10.3   10.0   10.2   102   1871   10.3   10.0   10.1   10.3   10.0   10.7   104   1972   10.3   10.0   11.1   103   10.0   10.1   10.3   10.0   10.1   10.3   10.0   10.1   10.3   10.0   10.7   104   1972   10.3   10.0   10.1   10.3   10.0   10.1   10.3   10.0   10.1   10.3   10.0   10.1   10.3   10.0   10.1   10.3   10.0   10.1   10.3   10.0   10.1   10.3   10.0   10.4   10.1   10.3   10.0   10.4   10.1   10.3   10.0   10.5					
781 808 808 9-6* 10·1 11·4 101 826 10·5 10·2 9·5* 102 879 10·5 10·0 10·9 104 908 10·8 9·4* 11·0 100 1856 10·1 10·0 10·1 10·9 1856 10·1 10·0 10·1 10·9 102 1856 10·1 10·0 10·1 10·0 10·9 102 1866 10·1 10·3 10·0 10·2 102 1871 10·3 10·0 8·8* 100 1963 10·6 9·8 10·7 104 1972 10·3 10·0 11·1 10 1972 10·3 10·0 11·1 10 1973 4631 10·0 10·4 10·1 102 4637 10·6 10·1 10·0 10·3 4677 11·7 10·0 10·7 110 5075 10·3 10·0 10·4 10·1 102 102 10 20M 782 9·6* 19·2* 19·9 96* 9·6* 21·0 19·8 101  12 12 12M 758 11·6* 12·1 11·6* 99 809 11·6* 12·2 12·2 99 889 12·7 11·8 13·0 104 19·25 10·2 3712 11·6* 12·9 12·6 102 11·7 102 11·7 102 11·7 102 11·7 102 11·7 102 11·6* 12·9 12·6 102 11·7 110 102 11·6* 12·9 12·6 102 11·7 110 102 1102 11025 1106 1107 1107 1107 1107 1107 1107 1107			18•2		100
781 808 808 9-6* 10·1 11·4 101 826 10·5 10·2 9·5* 102 879 10·6 10·5 10·0 10·9 104 908 10·8 9·4* 11·0 100 1856 10·1 10·0 10·1 10·9 102 1856 10·1 10·0 10·1 10·9 102 1866 10·1 10·3 10·0 10·2 102 1871 10·3 10·0 8·8* 100 1963 10·6 9·8 10·7 104 1972 10·3 10·0 11·1 10 1972 10·3 10·0 11·1 10 1973 4631 10·6 9·8 10·7 104 1979 10·3 10·0 10·4 10·1 102 4637 10·6 10·1 10·0 10·3 4677 11·7 10·0 10·7 110 5075 10·0 10·0 10·0 10·0 10·2  10 20 20M 782 9·6* 19·2* 19·9 96* 3695 9·6* 21·0 19·8 101  12 12 12M 758 11·6* 12·1 11·6* 99 809 11·6* 12·2 12·2 99 889 12·7 11·8 13·0 10·4 942 11·6* 12·9 12·6 102 10·2 3712 10·6 12·1 11·7 102 10·6 10·1 10·6 10·1					
808 826 10.5 10.5 10.2 97.5 10.0 10.9 10.4 908 10.8 9.4* 11.0 10.4 957 10.0 10.0 10.1 10.0 10.1 10.9 102 1856 10.1 10.0 10.1 10.0 10.1 10.9 102 1866 10.3 10.0 10.3 10.0 10.2 10.3 10.0 10.2 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.1 10.3 10.0 10.3 10.0 10.3 10.0 10.3 10.0 10.1 10.3 10.0 10.3 10.0 10.1 10.1			10.0		106
826 879 10.5 10.0 10.0 10.0 10.9 104 908 10.8 9.4* 11.0 104 957 10.0 10.1 10.0 10.1 10.9 102 1856 10.1 10.0 10.1 10.0 10.2 102 1871 10.3 10.0 8.8* 100 1963 10.6 9.8 10.7 10.3 10.0 1972 10.3 10.0 10.1 10.3 10.0 11.1 10.3 10.7 10.4 1972 10.3 10.0 10.4 10.1 10.3 10.0 4631 10.0 10.4 10.1 10.0 10.4 4637 10.6 10.1 10.0 10.4 10.1 10.0 10.4 10.1 10.0 10.3 4677 11.7 10.0 10.7 11.7 5075 10.3 10.0 10.0 10.0 10.7 11.0 5075 10.3 10.0 10.0 10.0 10.7 11.0 10.3 10.0 10.0 10.7 11.0 10.3 10.0 10.0 10.7 11.0 10.0 10.7 11.0 10.0 10					
879 908 10.8 908 10.8 90.8 10.8 90.8 10.0 10.1 10.0 10.9 10.4 957 10.0 10.1 10.0 10.9 10.2 1856 10.1 10.0 10.0 10.9 10.2 1866 10.3 10.0 10.0 10.2 10.2 1871 10.3 10.0 8.88* 100 1963 10.6 9.8 10.7 10.4 1972 10.3 10.0 11.1 10.3 1979 10.3 10.0 11.1 10.3 1979 10.3 10.0 11.1 10.3 1979 10.3 10.0 10.4 10.1 10.2 4637 10.6 10.1 10.0 10.4 10.1 10.2 4637 10.6 10.1 10.0 10.4 10.1 10.2 10.3 4677 11.7 10.0 10.7 11.7 5075 10.3 10.0 10.7 11.0 5075 10.3 10.0 10.0 10.0 10.0 10.0 10.0 10.0					
908					
957 10.0 10.1 10.0 10.1 10.0 10.9 102 1866 10.3 10.0 10.0 10.2 102 1871 10.3 10.0 10.6 9.8 10.7 104 1972 10.3 10.0 11.1 10.3 10.0 11.1 10.3 10.0 11.1 10.3 10.0 11.1 10.3 10.0 11.1 10.3 10.0 11.1 10.3 10.0 11.1 10.3 10.0 11.1 10.3 10.0 10.4 10.1 10.0 10.4 10.1 10.0 4637 10.6 10.1 10.0 10.4 10.1 10.0 10.4 10.1 10.0 10.7 110 5075 10.3 10.0 10.0 10.0 10.7 110 5075 10.3 10.0 10.0 10.0 10.0 10.0 10.0 10.0					
1856					102
1866					102
1871 10.3 10.0 8.8* 100 1963 10.6 9.8 10.7 104 1972 10.3 10.0 11.1 103 1979 10.3 10.0 10.2 10.2 10.3 4631 10.0 10.4 10.1 102 4637 10.6 10.1 10.0 10.3 4677 11.7 10.0 10.7 110 5075 10.3 10.0 10.0 10.7 110 5075 10.3 10.0 10.0 10.0  10 20 20M 782 9.6* 19.2* 19.7 97* 912 9.5* 19.2* 19.9 96* 3695 9.6* 21.0 19.8 101  12 12 12M 758 11.6* 12.1 12.1 99 809 11.6* 12.2 11.6* 99 809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100			10.0	10.2	102
1963 1972 10.3 10.6 9.8 10.7 104 1972 10.3 10.0 11.1 103 10.2 10.2 10.2 10.3 4631 10.0 10.0 10.4 10.1 10.0 10.3 4677 11.7 10.0 10.7 110.7 5075 10.3 10.0 10.0 10.0 10.0 10.0 10.2  10 20 20M 782 9.6* 19.2* 19.7 912 9.5* 19.2* 19.9 9.6* 21.0 19.8 101  12 12 12M 758 11.6* 12.1 12.1 758 11.6* 12.2 19.8 889 11.6* 12.2 11.6* 99 889 11.6* 12.2 11.6* 13.0 10.4 10.0 10.0 10.0 10.0 10.0 10.0 10		10.3	10.0	8.8*	100
1979 10.3 10.0 10.4 10.1 10.2 4637 10.6 10.1 10.0 10.4 10.1 10.0 10.3 4677 11.7 10.0 10.7 11.0 5075 10.3 10.0 10.3 10.0 10.0 10.0 10.7 110 5075 10.3 10.0 10.0 10.0 10.0 10.0 10.0 10.0		10.6	9.8	10.7	104
## ## ## ## ## ## ## ## ## ## ## ## ##	1972	10.3	10.0	11.1	103
10 * 6	1979	10.3			
10 20 20M  782  9.6* 19.2* 19.7 97*  912  3695  9.6* 21.0 19.8 101  12 12 12M  758  11.6* 12.1 12.1 99  809  11.6* 12.2 12.2 99  889  12.7 11.8 13.0 104  9.92  11.6* 12.9 12.6 102  1925  12.1 12.6 12.1 11.7 102  3712	4631	10.0			
10 20 20M 782 9.6* 19.2* 19.7 97* 912 9.5* 19.2* 19.9 96* 3695 9.6* 21.0 19.8 101  12 12 12M 758 11.6* 12.1 12.1 99 780 11.8 12.1 11.6* 99 809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11925 1295 1206 1207 1208 1208 1209 1209 1209 1209 1209 1209 1209 1209	4637				
10 20 20M 782 9.6* 19.2* 19.7 97* 912 9.5* 19.2* 19.9 96* 3695 9.6* 21.0 19.8 101  12 12 12M 758 11.6* 12.1 12.1 99 780 11.8 12.1 11.6* 99 809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712	4677				
782 9.6* 19.2* 19.7 97* 912 9.5* 19.2* 19.9 96* 3695 9.6* 21.0 19.8 101  12 12 12M 758 11.6* 12.1 12.1 99 780 11.8 12.1 11.6* 99 809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100	5075	10.3	10.0	10.0	102
782 9.6* 19.2* 19.7 97* 912 9.5* 19.2* 19.9 96* 3695 9.6* 21.0 19.8 101  12 12 12M 758 11.6* 12.1 12.1 99 780 11.8 12.1 11.6* 99 809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100	10 20 20M				
912 9.5* 19.2* 19.9 96* 3695 9.6* 21.0 19.8 101  12 12 12M 758 11.6* 12.1 12.1 99 780 11.8 12.1 11.6* 99 809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100		9.6*	19.2*	19.7	97*
3695 9.6* 21.0 19.8 101  12 12 12M  758 11.6* 12.1 12.1 99  780 11.8 12.1 11.6* 99  809 11.6* 12.2 12.2 99  889 12.7 11.8 13.0 104  942 11.6* 12.9 12.6 102  1925 12.6 12.1 11.7 102  3712 12.1 12.2 11.6* 100					
758 11.6* 12.1 12.1 99 780 11.8 12.1 11.6* 99 809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100		9.6*	21.0	19.8	101
758 11.6* 12.1 12.1 99 780 11.8 12.1 11.6* 99 809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100	12 12 120				
780		11.6*	12.1	12.1	99
809 11.6* 12.2 12.2 99 889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100					
889 12.7 11.8 13.0 104 942 11.6* 12.9 12.6 102 1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100					
942     11.6*     12.9     12.6     102       1925     12.6     12.1     11.7     102       3712     12.1     12.2     11.6*     100					
1925 12.6 12.1 11.7 102 3712 12.1 12.2 11.6* 100					
3712 12.1 12.2 11.6* 100					
					100
4630 11.6* 12.1 12.0 99				12.0	99

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
	(Percent)	(Percent)	(Percent)	
COOPERATIVE FERTILIZER SERV WINCHESTER	(rercent)	(Fercent)	(reicein)	
10 30M WITH 4 LBS BORAX 880 SEE NOTE 1		10•2	30.0	101
30 30M				
881		32.7	30.0	106
906		30 • 1	32.0	102
913		32.8	28.6*	105
954		32.5	30.5	106
964		32.8	29.9	106 104
4618		32•4	29.0*	104
4 12 BM				165
783	4.2	11.7	10.2	105
888	4.5	11.9	9.4	106 98
907	4.1	11.0*	9.0	102
909	3.7*	12.7	8.5 9.6	103
914	4.0	11.9	8.9	100
927	3.7*	12.1	9.4	103
929	3.8	11.9	9.6	101
970	3.7*	12.0	9.8	103
971	4.0	12.0	9.4	103
4679 4681	3.7*	12.0	8.8	100
5 10 10M	4.8	10.2	11.3	102
910	4.0	1012		
5 20 20M	4.9	20.3	19.4*	99
784	4.8 5.3	20.0	20.1	101
882	5.1	19.8	20.0	100
921	5.0	18.9*	20.1	97*
924	5.2	18.9*	20.1	98
934 955	5.0	19.6	20.5	100
3709	4.9	19.1*	20.0	97*
4616	5.0	20.0	20.5	101
4680	5.0	17.9*	21.8	97*
6 6 185				
1884	5.6*	6.1	18.0	98
6 12 12M				
911	6.1	12.2	12.6	102
12 12 12M				
12 12 12M 4659	11.9	11.6*	13.2	100
4039	7			

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
DARLING & CO CAIRO	(Percent)	(Percent)	(Percent)	
5 20 20M				
764	5.1	20.0	20.0	100
1901	5.1	19.9	20•1	100
6 12 12M				
1836	6.5	12.6		106
1887	6.2	13.6	14.0	111
1900	6.1	12•4	13.5	105
E TOWN FERTILIZER COMPANY				
3 12 12M				
5119	3.6	13.3	12.5	111
4 12 8M				
5118	4.2	13.5	9.0	110
5 20 20M				
5117	5.2	20.3	20.0	102
5120	5.3	20•4	20•1	102
6 12 12M				
5115	6.5	14.3	12.5	112
10 10 10M				100
5116	10.2	10.9	10.1	104
FEDERAL CHEMICAL COMPANY HUMBOLDT				
4 12 BM				
857	4.8		9.3	
1889	5.5		8.6	
1906	4.7	13•3	9•0	113
5 20 20M			10.5	* 00
761	5.2			
1897 SEE NOTE 6	4.6*	17•3*	20•4	92*
6 12 12M	5.9	12.4	12.1	101
769	5.8		12.0	
858 1898	6.4	12.2	11.5	
1908	6.1	11.7	12.0	
1700	0.1			

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
EDERAL CHEMICAL COMPANY HUMBOLDT CONT	(Percent)	(Percent)	(Percent)	
10 10 10M				
762	11.3	10.0	9.8	106
1888	10.8	10.8	1010	107
12 12 12M				
1899	12.4	13•0	12.6	105
EDERAL CHEMICAL CO LOUISVILLE				
10 30M WITH 5 LBS BORAX				
890 SEE NOTE 1		9.7	30.0	99
3 12 12M				
1840 1955	3.8 3.9	12.5 12.3	11.6* 12.5	107 108
4 12 8M				
891	4.8	12.2	9.6	110
902	4.4	11.5*	11.0	107
943	4.0	12.0	8.0	100
948	4.2	12.6	9.2	107
4621	4.0	11.4*	8 • 1	98
5017 5081	4 • 1 4 • 8	12•3 12•1	9•0 9•5	104 109
5 20 20M				
892	5.3	19.8	20.0	101
933	4.4*	20.0	21.6	100
1956 4645	5.4 5.0	18•7* 19•4*	20.6	99
10 10 10M				
1939	10.1	10.5	10.1	102
4644	9.8	10.5	10.2	101
4664	11.2	10.2	10.8	108
12 12 12M 1954	.,	10		
	11.1*	12.4	13.4	99
18 46 0 893	18.8	46.0		
	18.8	40.0		102
EDERAL CHEMICAL CO NASHVILLE				
9 27M WITH 5 LBS BORAX & 0020 HEPT				
9 27M WITH 5 LBS BORAX & 0020 HEPT 3716 SEE NOTE 1 & 2 3717 SEE NOTE 1 & 2		9.6	26.8	102

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
FEDERAL CHEMICAL CO NASHVILLE CONTINUED	(Percent)	(Percent)	(Percent)	
20 20M				
4625		19•8	20•4	100
3 12 12M 4684				
4004	3.5	13•3	10.0*	105
4 12 8M				
1921	4.6	12.2	8.8	107
3674	4.7	11.9	9.2	107
5048	4.2	12.2	8•1	103
5 20 20M				
1846 SEE NOTE 3	4.4*	18.4*	18.6*	91*
1920	4.8	19.3*	20.2	98
3671	4.8	18.3*	20.5	95*
3739	4.5*	20.7	19.1*	99
4624	4.6*	19.7	20.9	99
4685	4.6*	18.2*	21.8	96*
5029	5.3	21.4	20.5	106
5030 SEE NOTE 4	4.2*	19.3*	19.6	94*
5051	5.0	19.3*	21.9	101
5091	4.6*	19.2*	21.6	98
5096	4.5*	20.3	18.8*	97*
5109	4.8	19.7	20.0	98
6 12 12M				
1848 SEE NOTE 4	4.5*	12.1	12.5	93*
1919	5.7*	12.4	12.1	100
3673	5.6*	13.3	12.7	104
5050	5.8	12.1	11.3*	98
6 18 12M				
3670	5.3*	18.3	12.1	98
3677	5.2*	17.3*	12.5	95*
4683	5.2*	17.7*	12.9	97*
5092	6.0	17.4*	12.7	99
6 24 12M				
5047	5•5*	23.2*	12.0	96*
6 24 24M				
5028	6.1	22.8*	23.1*	97*
10.10.104				
10 10 10M				
1858 SEE NOTE 3	8.6*	10.0	10.9	95*
1858 SEE NOTE 3	8.1*	10.0	11.0	92*
1922 1974	9.0*	10.2	11.2	98
3675	9.3*	10.2	10.8	99
5031	9.4*	10.1	10.6	98
5097	8.8*	10.2	10.2	95*
5130	9.9	10.2	10.1	100
3130	9.0*	9.8	10.6	95*

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
FEDERAL CHEMICAL CO NASHVILLE CONTINUED	(Percent)	(Percent)	(Percent)	
12 12 12M				
3672				
4626	11.0*	12.8	12.4	99
4686	11.0*	1212	1312	98
5049	11.2*	12•3 13•1	12.4	98 107
GLASGOW FERTILIZER COMPANY				
10 30M				
3741		9•7	32.5	104
4 12 8M				
3742	3.9	12.3	9.0	103
5 20 20M				
3744	4.8	21.0	20•0	102
10 10 10M				
3743	10.1	11.0	10.2	104
R GRACE & CO DAVISON CHEM DIV NASHVILLE				
4 12 8M				
4 12 8M 1863	4.2	11•8	8•6	102
4 12 8M 1863 4665		11•8 11•2*	8•6 8•2	102 100
4 12 8M 1863 4665 5018	4.2 4.5 4.0	11.2* 11.3*	8.2	
4 12 8M 1863 4665	4•2 4•5	11.2*	8.2	100
4 12 8M 1863 4665 5018 5046	4.2 4.5 4.0 3.6*	11.2* 11.3*	8.2	100 97*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861	4.2 4.5 4.0 3.6*	11.2* 11.3* 11.9	8.2	100 97*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975	4.2 4.5 4.0 3.6*	11.2* 11.3* 11.9	8.2 8.1 8.1 20.1 22.1	100 97* 97* 102 96*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629	4.2 4.5 4.0 3.6* 5.0 5.0	11.2* 11.3* 11.9 20.7 17.4* 19.5*	8.2 8.1 8.1	100 97* 97*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975	4.2 4.5 4.0 3.6*	11.2* 11.3* 11.9	8.2 8.1 8.1 20.1 22.1	100 97* 97* 102 96*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043	4.2 4.5 4.0 3.6* 5.0 5.1 4.9	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2	8.2 8.1 8.1 20.1 22.1 20.0 20.2	100 97* 97* 102 96* 99
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843	4.2 4.5 4.0 3.6* 5.0 5.1 4.9	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2 18.6*	8.2 8.1 8.1 20.1 22.1 20.0 20.2 20.9	100 97* 97* 97* 102 96* 99 100 97*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853	4.2 4.5 4.0 3.6* 5.0 5.0 5.1 4.9	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2	8.2 8.1 8.1 20.1 22.1 20.0 20.2 20.9	100 97* 97* 97* 102 96* 99 100 97*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853 1853 1859	4.2 4.5 4.0 3.6* 5.0 5.0 5.1 4.9 4.8	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2 18.6*	8.2 8.1 8.1 20.1 22.1 20.0 20.2 20.9	100 97* 97* 97* 102 96* 99 100 97*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853 1859 1865	4.2 4.5 4.0 3.6* 5.0 5.1 4.9 4.8	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2 18.6*	8.2 8.1 8.1 20.1 22.1 20.0 20.2 20.9	100 97* 97* 102 96* 99 100 97*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853 1853 1859 1865 1902	4.2 4.5 4.0 3.6* 5.0 5.0 5.1 4.9 4.8 5.9 5.7* 6.0 5.3* 6.0	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2 18.6*	8.2 8.1 8.1 20.1 22.1 20.0 20.2 20.9	100 97* 97* 102 96* 99 100 97*
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853 1853 1859 1865 1902 1976	4.2 4.5 4.0 3.6* 5.0 5.0 5.1 4.9 4.8 5.7 6.0 5.3* 6.0 5.5*	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2 18.6* 12.2 12.0 11.5* 12.1 12.5 12.2	8.2 8.1 8.1 20.1 20.1 20.0 20.2 20.9	100 97* 97* 102 96* 99 100 97* 101 99 99
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853 1853 1859 1865 1902	4.2 4.5 4.0 3.6* 5.0 5.0 5.1 4.9 4.8 5.9 5.7* 6.0 5.3* 6.0	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2 18.6* 12.2 12.0 11.5* 12.1 12.5	8.2 8.1 8.1 20.1 22.1 20.0 20.2 20.9	100 97* 97* 97* 102 96* 99 100 97* 101 99 99 96* 102
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853 1859 1865 1902 1976 5045 5112	4.2 4.5 4.0 3.6* 5.0 5.0 5.1 4.9 4.8 5.9 5.7* 6.0 5.3* 6.0 5.5* 5.8	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2 18.6* 12.2 12.0 11.5* 12.1 12.5 12.2 12.1	8.2 8.1 8.1 20.1 22.1 20.0 20.2 20.9 12.6 12.5 12.2 11.8 12.1 12.4 12.2	100 97* 97* 97* 102 96* 99 100 97* 101 99 96* 102 99 100
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853 1859 1865 1902 1976 5045 5112	4.2 4.5 4.0 3.6* 5.0 5.0 5.1 4.9 4.8 5.9 5.7 6.0 5.3* 6.0 5.5 5.8 5.6*	11.2* 11.3* 11.9  20.7 17.4* 19.5* 20.2 18.6*  12.2 12.0 11.5* 12.1 12.5 12.1 12.5	8.2 8.1 8.1 20.1 20.1 20.0 20.2 20.9 12.6 12.5 12.2 11.8 12.1 12.4 12.2 13.5	100 97* 97* 97* 102 96* 99 100 97* 101 99 96* 102 99 100
4 12 8M 1863 4665 5018 5046 5 20 20M 1861 1975 4629 5043 5110 6 12 12M 843 1853 1859 1865 1902 1976 5045 5112	4.2 4.5 4.0 3.6* 5.0 5.0 5.1 4.9 4.8 5.9 5.7* 6.0 5.3* 6.0 5.5* 5.8	11.2* 11.3* 11.9 20.7 17.4* 19.5* 20.2 18.6* 12.2 12.0 11.5* 12.1 12.5 12.2 12.1	8.2 8.1 8.1 20.1 22.1 20.0 20.2 20.9 12.6 12.5 12.2 11.8 12.1 12.4 12.2	100 97* 97* 97* 102 96* 99 100 97* 101 99 96* 102 99 100

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Sample Number  DAVISON CHEMICAL DIVISION NASHVILLE CONT  10 10 10M  844	(Percent)	(Percent)	The state of the s	
		(reicent)	(Percent)	
	9.5*	10.6	10.2	100
864	9.5*	10.7	10.5	101
1860	9.3*	10.0	10.9	98
4666	10.4	10.2	10.2	103
5044	8.8*	10.7	10.5	97*
5111	9.1*	10.6	10.6	99
10 20 20M				
1852	9.6*	20•0	17.4*	96*
W R GRACE & CO DAVISON CHEM DIV NEW ALB	ANY			
4 12 8M	4.4	12.0	9.4	106
743 747	4.4	12.2	9.0	106
795	4.7	12.8	9.9	113
951	4.6	12.9	9.2	111
953	4.0	17.3	8.2	125
1933	4.4	13.5	9.0	112
5 20 20M 796	5•1	20.3	20.7	102
1932	5.4	20•4	19.7	102
6 18 12M				
748	5.6*	16.9*	13.5	97*
797	6.2	18.8	12.7	104
952	6.7	17.6*	13.3	104
10 10 10M				
744	9.9	10.8	10.3	103
749	9.7	10.5	10.4	101
802	9.9	10.5	10.4	102
1934	9.5*	10.4	10.7	100
1960	9.1*	10.8	11.2	100
GREEN VALLEY FARM SUPPLY INC				
20 20M		0.	22.1	111
4669		21.6	23•1	111
5 20 20M 4668	5.6	20.5	20.2	104
4000				

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

The Color of the C	1	I A		
Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
GRO GREEN CHEMICAL COMPANY	(Percent)	(Percent)	(Percent)	
10 10 10M 1872 SEE NOTE 5	8•0*	10•3	9•3*	90*
HUTSON CHEMICAL COMPANY				
4 12 8M				
1913	4.5	11.4*	9•3	104
5 20 20M 1914	4.7*	18•0*	22.0	96*
6 12 12M	6.1	11•6*	12.2	99
10 20 20M 1837	8.9*	19•4*	21.6	97*
INTERNATIONAL MIN & CHEM CORP CINCINNATI				
4 12 8M 928	4.0	13.0	9•0	107
INTERNATIONAL MIN & CHEM CORP CLARKSVILLE				
20 20M 854		19.1*	21.5	100
4 12 8M				
5056	4.2	12.8	8.6	106
5 20 20M 4632 SEE NOTE 3	4.3*	16.0*	20•7	87*
6 12 12M				
4633 5055	5.6* 5.9	12.0	13.0 11.4*	100 102
10 10 10M				
853 855	9.4*	11.1	9.4*	100
5057	9.3*	11.1	9.6* 9.4*	100

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
INTERNATIONAL MIN & CHEM CORP SOMERSET	(Percent)	(Percent)	(Percent)	
4 12 BM 5079	5•0	12.0	8•5	108
KENCO FERTILIZER CO INC				
30 10 0 5131	30.0	10•7		101
KENTUCKY FERTILIZER WORKS INC				
20 20M 867 SEE NOTE 5		17•6*	20•7	93*
4 12 8M 869	4.8	12.5	9•6	111
919 930	4.1 4.5	12.1	7.8 9.8	101 109
5 20 20M				
870 920	5.4 4.4*	19•1* 19•2*	20.0	99 96*
10 10 10M	10.1	10.3	11.9	105
872 878	10.4	10.2	10.6	104
LAND O NAN WAREHOUSE STURGIS				
20 20M 5103		17•4*	24.0	98
5 20 20M		2. 2	20 8	100
5023 5027	4.9 5.5	21.2	20.8 19.8	104
5104	4.7*	18.8*	22.1	98
5105	4.6*	19•1*	23.5	101
6 24 24M 5025 SEE NOTE 4	4.2*	17.0*	33.6	89*

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963 Analyses deficient more than tolerance and relative values of 97 percent or less

indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
LAND O NAN WAREHOUSE STURGIS CONTINUED	(Percent)	(Percent)	(Percent)	
10 20 20M 5106	9•3*	20•2	20•2	98
12 12 12M 5107	12.7	13•4	13•1	108
NORTH AMERICAN FERTILIZER COMPANY				
10 30M WITH BORAX 1958 SEE NOTE 1 6 4		7.4*	31.8	93*
20 20M WITH 5 LBS BORAX 949 SEE NOTE 1		19•6	20•5	100
4 12 8M 1948	4.2	12.0	9•1	104
5 20 20M 1947	5•1	19•7	20.1	100
6 12 12M 1950	6.2	11.8	12.8	102
10 10 10M 1949	10.0	10.5	10.7	103
12 12 12M 1951	12•0	12•3	12.4	101
OHIO VALLEY FERTILIZER INC				
5 20 20M 4619	4.7*	19•8	20•2	99
6 6 18S 4620	6.0	6•0	18•2	100
OLIN MATHIESON CHEM CORP LITTLE ROCK				
18 46 0 849	18.5	45•1*		100

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
ROBIN JONES PHOSPHATE COMPANY	(Percent)	(Percent)	(Percent)	
17 10M 3728		17•3	10.7	103
3 20 10M 3733	3•2	20•5	10•3	103
6 18 12M 3732	7•8	18•8	12.7	112
6 24 12M 3729	6•2	25•6	12•5	106
F S ROYSTER GUANO CO PRICE CHEM DIV				
20 20M 1942		20•4	20•1	102
3 12 12M 1941	3•2	12•4	12.1	103
4 12 8M 1943	4.0	12•0	8•4	101
5 20 20M 1946 SEE NOTE 5	5•0	20•7	18.8*	100
6 12 12M 1940	6•3	12•7	12.7	106
10 10 10M 1944	9•6*	11.0	10.6	102
12 12 12M 1945	12.0	12•6	12•5	102
O M SCOTT AND SONS COMPANY				
20 10 5M 905 1957	20.6	10+3 9+6*	5.6 5.7	104 103

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
SWIFT & CO NATIONAL STOCK YARDS	(Percent)	(Percent)	(Percent)	
5 20 20M 5099	4.5*	19.7	19.9	97*
TENNESSEE CORPORATION NEW ALBANY				
3 12 12M				
1983	3.3	12.3	13.0	106
5114	3,3	12.5	12.6	106
5 20 20M				
1982	4.9	20.0	21.0	101
5113	4.7*	19•4*	20•0	97*
10 10 10M				
1984	10.0	10.5	9•3*	101
RI STATE CHEMICAL COMPANY 4 12 8M 4690	4.0	12.0	9•7	104
4 12 8M 4690	4.0	12•0	9•7	104
4 12 8M 4690 5 20 20M			9•7	104
4 12 8M 4690 5 20 20M 4627	4.9	19•9	20•1	99
4 12 8M 4690 5 20 20M	4∙9 5•0	19•9 20•2	20•1 17•9*	99 98
4 12 8M 4690 5 20 20M 4627 4689	4.9	19•9	20•1	99
4 12 8M 4690 5 20 20M 4627 4689 5098	4∙9 5•0	19•9 20•2	20•1 17•9*	99 98
4 12 8M 4690 5 20 20M 4627 4689 5098	4.9 5.0 5.0	19•9 20•2 20•0	20•1 17•9*	99 98
4 12 8M 4690 5 20 20M 4627 4689 5098	4.9 5.0 5.0	19•9 20•2 20•0	20•1 17•9* 20•5	99 98 101
4 12 8M 4690 5 20 20M 4627 4689 5098 10 10 10M 770 4691	4.9 5.0 5.0	19•9 20•2 20•0	20•1 17•9* 20•5	99 98 101
4 12 8M 4690 5 20 20M 4627 4689 5098 10 10 10M 770 4691	4.9 5.0 5.0 5.0	19•9 20•2 20•0	20.1 17.9* 20.5	99 98 101
4 12 8M 4690 5 20 20M 4627 4689 5098 10 10 10M 770 4691 12 12 12M 4628	4.9 5.0 5.0 5.0	19.9 20.2 20.0	20.1 17.9* 20.5	99 98 101 109 105
4 12 8M 4690 5 20 20M 4627 4689 5098 10 10 10M 770 4691	4.9 5.0 5.0 5.0	19.9 20.2 20.0	20.1 17.9* 20.5	99 98 101 109 105
4 12 8M 4690  5 20 20M 4627 4689 5098  10 10 10M 770 4691  12 12 12M 4628  ALLEY COUNTIES OF KENTUCKY COOP	4.9 5.0 5.0 5.0	19.9 20.2 20.0	20.1 17.9* 20.5	99 98 101 109 105
4 12 8M 4690  5 20 20M 4627 4689 5098  10 10 10M 770 4691  12 12 12M 4628  ALLEY COUNTIES OF KENTUCKY COOP	4.9 5.0 5.0 5.0	19.9 20.2 20.0	20.1 17.9* 20.5	99 98 101 109 105
4 12 8M 4690  5 20 20M 4627 4689 5098  10 10 10M 770 4691  12 12 12M 4628  ALLEY COUNTIES OF KENTUCKY COOP	4.9 5.0 5.0 8.0* 9.3*	19.9 20.2 20.0 15.1 12.7	20:1 17:9* 20:5	99 98 101 109 105
4 12 8M 4690 5 20 20M 4627 4689 5098 10 10 10M 770 4691 12 12 12M 4628 ALLEY COUNTIES OF KENTUCKY COOP 5 20 20M 1891	4.9 5.0 5.0 8.0* 9.3*	19.9 20.2 20.0 15.1 12.7	20:1 17:9* 20:5	99 98 101 109 105

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number         Nitrogen Phosphoric Acid Acid Acid Acid Acid Acid Acid Ac				
VALLEY COUNTIES OF KENTUCKY COOP CONT  15 15 15M		Percent of Relative Value Foun		
15.7   15.1   15.2   15.0   15.2   1892   15.1   16.1   14.3*   15.9   14.3*   15.9   16.1   14.3*   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.1   16.3   16.1	(Percent)			
15.7   15.1   15.2   15.0   15.2   1892   15.1   16.1   14.3*   15.9   14.3*   15.9   16.1   14.3*   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   15.9   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.1   16.3   16.1   16.1   16.3   16.1   16.1   16.1   16.3   16.1				
15.0 15.2 15.1 16.1 16.1 16.1 16.3 15.9 16.1 15.9 16.1 15.9 16.1 16.1 16.3 15.9 16.1 1	14.3*	102		
1892 1909  16 16 16M 968 5093  15.9  16.1  16.3 15.9  16.1  25 25 0 863  24.9  26.0  30 10 0 765  29.7  11.2  VIRGINIA CAROLINA CHEM CORP CINCINNATI  19 19M WITH 5 LBS BORAX 894 SEE NOTE 1 1841 SEE NOTE 1  19.8 19.7  5 20 20M 895  5.6  20.1  6 12 12M 1882  10 10 10 10M 896  9.3*  14.0	15.7	101		
1909  14.3* 15.9  16 16 16M 968 5093  15.9  16.1  16.1  16.3 15.9  16.1  25 25 0 863  24.9  26.0  30 10 0 765  29.7  11.2  VIRGINIA CAROLINA CHEM CORP CINCINNATI  19 19M WITH 5 LBS BORAX 894 SEE NOTE 1 1841 SEE NOTE 1 19.7  5 20 20M 895  5.6  20.1  6 12 12M 1882  10 10 10 10M 896  9.3* 14.0	15.7	104		
968 5093 16.1 16.3 15.9 16.1  25 25 0 863 24.9 26.0  30 10 0 765 29.7 11.2  VIRGINIA CAROLINA CHEM CORP CINCINNATI  19 19M WITH 5 LBS BORAX 894 SEE NOTE 1 1841 SEE NOTE 1 19.7  5 20 20M 895 5.6 20.1  6 12 12M 1882 5.8 12.2  10 10 10 M 896 9.3* 14.0	15•4	100		
968 5093 15.9 16.1 25 25 0 863 24.9 26.0 30 10 0 765 29.7 11.2  VIRGINIA CAROLINA CHEM CORP CINCINNATI  19 19M WITH 5 LBS BORAX 894 SEE NOTE 1 1841 SEE NOTE 1 1841 SEE NOTE 1 5 20 20M 895 5.6 20.1 6 12 12M 1882 5.8 12.2 10 10 10M 896 9.3* 14.0	16•6	102		
25 25 0     863  24.9  26.0  30 10 0     765  29.7  11.2  VIRGINIA CAROLINA CHEM CORP CINCINNATI  19 19M WITH 5 LBS BORAX     894 SEE NOTE 1     1841 SEE NOTE 1     1841 SEE NOTE 1  5 20 20M     895  5.6  20.1  6 12 12M     1882  5.8  12.2	15.9	100		
### 24.9 26.0  30 10 0	13.7			
30 10 0 765  29.7  11.2  VIRGINIA CAROLINA CHEM CORP CINCINNATI  19 19M WITH 5 LBS BORAX		101		
765  VIRGINIA CAROLINA CHEM CORP CINCINNATI  19 19M WITH 5 LBS BORAX				
19 19M WITH 5 LBS BORAX  894 SEE NOTE 1 1841 SEE NOTE 1 19.8 19.7  5 20 20M 895 5.6 20.1  6 12 12M 1882 5.8 12.2  10 10 10M 896 9.3* 14.0		101		
894 SEE NOTE 1 1841 SEE NOTE 1 19.8 19.7  5 20 20M 895 5.6 20.1  6 12 12M 1882 5.8 12.2  10 10 10M 896 9.3* 14.0				
19.7  1841 SEE NOTE 1  19.7  5 20 20M		103		
895 5.6 20.1 6 12 12M 1882 5.8 12.2 10 10 10M 896 9.3* 14.0	19.2	103		
6 12 12M 1882 5.8 12.2 10 10 10M 896 9.3* 14.0	20•0	103		
1882 5.8 12.2  10 10 10M				
10 10 10M 896 9•3* 14•0	12.5	101		
896 9.3* 14.0 12 12 12M	.2.3			
12 12 12M	10.4	111		
	13.0	107		
VIRGINIA CAROLINA CHEM CORP HOPKINSVILLE				
20 20M WITH 3 LBS BORAX				
3680 SEE NOTE 1 20•1	19•2	2* 99		
4 12 8M 1915 4 0 12 3	8.4	102		
1915				
3679 3699 4.1 12.5				

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Nanufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
A CAR CHEM CORP HOPKINSVILLE CONTINUED	(Percent)	(Percent)	(Percent)	
5 20 20M				
1855	4.8	20.3	19.3*	99
3664	5.0	19.3*	20.2	98
3703	4.8	19.0*	20.0	97*
5 20 20M WITH 3 LBS BORAX				
3666 SEE NOTE 1	4.8	19.9	19.1*	98
3702 SEE NOTE 1	4.8	19•5*	19.2*	97*
5 20 20M WITH A LBC BODAY				
5 20 20M WITH 4 LBS BORAX 3688 SEE NOTE 1		10		
Sood SEE NOTE 1	4.8	19.9	19.0*	98
6 12 12M				
1835	6.0	12.1	12.0	100
1854	5.9	12.3	11.5*	100
1916	6.1	11.9	12.9	102
5022	5.3*	12.0	12.0	96*
6 18 12M				
3698	6.4	17.6*	12.7	102
10 10 10M				
1970	9.2*	10.0	11.2	98
3678	8.4*	10.4	11.5	96*
5021	9.0*	10.3	10+1	96*
IRGINIA CAROLINA CHEM CORP MT PLEASANT				
20 20M				
5068		20•4	20.0	101
4 12 8M				
5063	4.1	12.3	8•2	103
4 12 12M				
5064	4.0	12.0	11.9	100
5 20 20M				
EOCC CEP LIGHT 3	4.1*	18.2*	22.0	94*
5066 SEE NOTE 3		19.5*	21.8	101
5076	5.1	Control of the contro		
	5•1 4•8	20.2	18.7*	98
5076				98
5076	4.8			98

TABLE 1.— Analyses of Inspection Samples of Mixed Dry Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
VA CAR CHEM CORP MT PLEASANT CONTINUED	(Percent)	(Percent)	(Percent)	
6 12 12M				
5065	5•7*	12.2	11.9	99
10 10 10M				
5067 5080	9.9 10.6	9•9 10•0	10.5 10.3	100 104
10 20 20M				
5101	9•8	21.2	18.3*	100
12 12 12M 750				
,30	12.0	14.2	12.1	106
VIRGINIA CAROLINA CHEM CORP RICHMOND				
20 20M				
898		20.7	19•1*	101
3 12 12M				
752	3.0	12.0	13.0	102
4 12 8M 753				
1968	4.1	12.0	8.3	101
5077	4.2 4.5	11.3*	9.0 8.2	100 104
5 20 20M				
754	4.9	21.1	19.2*	101
1880	5.0	19.6	21.0	100
1937 4661	5.1	19.6	20.6	100
4001	5.5	20.0	19.5*	101
6 12 12M 3689				
4662	6.4	12.0	12.2	103 101
6 24 12M				
1881	6•2	24•1	12.2	101
10 10 10M				
3690	9.8	9.8	10.3	99
4660	10.5	10.7	10.2	105

TABLE 2.— Analyses of Inspection Samples of Mixed Liquid Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
COMMONWEALTH FERTILIZER CO RUSSELLVILLE	(Percent)	(Percent)	(Percent)	
6 18 6M LIQUID 5071	6.6	18•2	6•5	105
LAND O NAN WAREHOUSE MORGANFIELD				
9 9 9M LIQUID 5123	9.0	9.0	9•6	101
12 6 6M LIQUID 5122	12.0	6•5	6•2	102
WEST KENTUCKY LIQUID FERT CO GUTHERIE				
5 15 9M LIQUID 3691 3730	5•4 5•8	15.0 14.2*	9.0 9.0	102 <sup>-</sup> 101
6 12 12 6M 6KOH LIQUID 3692	6.2	12•7	11.9	104
18 12 0 LIQUID 3731 SEE NOTE 4	17.2*	10•2*		92*
WEST KENTUCKY LIQUID FERT CO HOPKINSVILL	_E			
4 12 8M LIQUID 3721	4.1	12•3	8.0	102
4 16 16M LIQUID 3708	5•4	15•4*	18•2	109
5 15 25M LIQUID 5072	5.0	14.9	25.0	100

TABLE 2.— Analyses of Inspection Samples of Mixed Liquid Fertilizers, July-December, 1963

Analyses deficient more than tolerance and relative values of 97 percent or less indicated by asterisk.

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
WEST KY LIQ FERT CO HOPKINSVILLE CONTIN	NUED (Percent)	(Percent)	(Percent)	
6 12 12M LIQUID				
3718	6.5	12.1	11.1*	101
3736	6.0	12.9	11.3*	102
6 18 6M LIQUID				
3719	7.8	17.5*	8.5	111
3735	6.3	17.7	6.0	101
6 18 12M LIQUID				
3707	6.0	17.3*	12.1	98
6 18 18M LIQUID				
3706	6 • 1	17.7	18•1	100
7 14 7M LIQUID				
3734	6.9	13.1*	7.7	98
9 18 9M LIQUID				
3720	9.0	17.9	9.0	100
3723	9.0	18.2	9.0	101
3724	9.0	17.7	9.0	99
10 10 10M LIQUID				
3726	10.1	10.4	9.9	102
3727	9.7	10.9	9.8	101
3737	9.9	11.0	9.8	103
3738	10.0	10.3	10.0	101
12 12 12M LIQUID				
3725	12.0	11.9	11.5*	99

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
AMERICAN AGRI CHEMICAL CO LONDON	(Percent)	(Percent)	(Percent)	
SUPERPHOSPHATE 900		20•2		101
AMERICAN AGRI CHEMICAL CO NEW YORK				
SUPERPHOSPHATE 831		20•1		100
AMERICAN CYANAMID COMPANY				
CALCIUM CYANAMID 816	20•4*			97*
1911	20•8			99
ARMOUR AGRI CHEMICAL CO ATLANTA				
AMMONIUM NITRATE 918 923	33.6 33.5			100
ARMOUR AGRI CHEMICAL CO CINCINNATI				
SUPERPHOSPHATE 771		21.0		105
46 TRIPLE SUPERPHOSPHATE 962 SEE NOTE 3		41+3*		90*
MURIATE OF POTASH 963			58•9	9 <b>*</b> 98
ARMOUR AGRI CHEMICAL CO FORT MEADE				
46 TRIPLE SUPERPHOSPHATE 1904 5086		44.9 <sup>4</sup> 46.0		98 100

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
ARMOUR AGRI CHEMICAL CO JEFFERSONVILLE	(Percent)	(Percent)	(Percent)	
46 TRIPLE SUPERPHOSPHATE 839		45•6		99
ARMOUR AGRI CHEMICAL CO NASHVILLE				
45 TRIPLE SUPERPHOSPHATE 3682		44•0*		98
MURIATE OF POTASH 3683			60•0	100
ASHCRAFT-WILKINSON CO				
MURIATE OF POTASH 847			60•0	100
BLUEGRASS PLANT FOODS INC DANVILLE				
SUPERPHOSPHATE 5090 SEE NOTE 3		18•7*		94*
CECIL FARM SUPPLY CO				
46 TRIPLE SUPERPHOSPHATE 4658		47•0		102
CENTRAL FARMERS FERTILIZER CO				
MURIATE OF POTASH 5129			60.8	101

TABLE 3.— Analyses of Straight Materials, July-December, 1963

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
COOPERATIVE FERTILIZER SERV BRISTOL	(Percent)	(Percent)	(Percent)	
SUPERPHOSPHATE				100
775		20•0		100
MURIATE OF POTASH 776			60•0	100
COOPERATIVE FERTILIZER SERV LOUISVILLE				
SUPERPHOSPHATE 822		21.0		105
940		20•4		102
COOPERATIVE FERTILIZER SERV RUSSELLVILLE				
SUPERPHOSPHATE		20•4		102
810 1973		20•2		101
46 TRIPLE SUPERPHOSPHATE 827 SEE NOTE 3		43.3*		94*
MURIATE OF POTASH 947			60.0	100
COOPERATIVE FERTILIZER SERV WINCHESTER				
SUPERPHOSPHATE		20.0		100
925 956		20.5		103
1885		19.0*		95*
1936		20•4		102
60 TRIPLE SUPERPHOSPHATE				
915		59.3		99 100
3710		60•2		100
CALCIUM METAPHOSPHATE		64.3		100
785		64•2		100
MURIATE OF POTASH			60.0	100
778 786			60.0	

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
DARLING & CO CAIRO	(Percent)	(Percent)	(Percent)	
46 TRIPLE SUPERPHOSPHATE 763		43•9*		, 95*
FARMERS CHEMICAL ASSOCIATION INC				
NITROGEN SOLUTION 936	30•6			102
AMMONIUM NITRATE 779 787 1980	33.7 33.7 33.4			101 101 100
FEDERAL CHEMICAL CO NASHVILLE				
SUPERPHOSPHATE 5052		20•1		100
W R GRACE & CO DAVISON CHEM DIV NEW ALB	BANY			
SUPERPHOSPHATE 745		21•2		106
HUTSON CHEMICAL COMPANY				
46 TRIPLE SUPERPHOSPHATE 1893		45•2*		98
MURIATE OF POTASH 845			57•5*	96*
INTERNATIONAL MIN & CHEM CORP BONNIE				
46 TRIPLE SUPERPHOSPHATE 848		46•9		102

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
INTERNATIONAL MIN & CHEM CORP SKOKIE	(Percent)	(Percent)	(Percent)	
AMMONIUM NITRATE 856	33.6			100
MURIATE OF POTASH 759 1876			60•0 60•0	100 100
INTERNATIONAL MIN & CHEM CORP TORONTO				
MURIATE OF POTASH 883			61•0	102
KENTUCKY FERTILIZER WORKS INC				
46 TRIPLE SUPERPHOSPHATE 932		46•0		100
MURIATE OF POTASH 931			58•9*	98
NORTHWEST NITRO CHEMICALS LTD				
AMMONIUM NITRATE 1931	33.3			99
F S ROYSTER GUANO CO PRICE CHEM DIV				
SUPERPHOSPHATE 935		19•8		99
UNITED STATES STEEL CORPORATION				
AMMONIUM SULFATE 851	21.0			100

Manufacturer Grade Sample Number	Nitrogen	Available Phosphoric Acid	Potash	Percent of Relative Value Found
VALLEY COUNTIES OF KENTUCKY COOP	(Percent)	(Percent)	(Percent)	
46 TRIPLE SUPERPHOSPHATE 766		46•3		101
60 TRIPLE SUPERPHOSPHATE				
760 767		59 • 4 59 • 8		99 100
MURIATE OF POTASH 768			60•0	100
WIRCINIA CARRIANA CUEN CORR NE DI CARRI				
VIRGINIA CAROLINA CHEM CORP MT PLEASANT				
SUPERPHOSPHATE 5069		19•0*		95*
VIRGINIA CAROLINA CHEM CORP RICHMOND				
SUPERPHOSPHATE 1969		20•2		101

TABLE 4. - Analyses of Inspection Samples of Rock Phosphate

Sample No.	e Manufacturer, Brand Name	Phosphoric Acid Available Total Guar. Found Guar. Found		al	Percent of Relative Value Found	
0950	American Agri. Chemical Co. Rock Phosphate		3.6	31.0	30.9	105
4663	Virginia-Carolina Chemical C Rock Phosphate	<u>o.</u> 	4.9	32.0	32.7	102

TABLE 5. - Results of Analyses of Boron in Fertilizers Reported in Table 1.
Analyses Deficient Are Underlined.

Company	Sample No.	Guarantee	Found	
American Agricultural Chemical Co. London, Kentucky	3711	0.57	0.48	
American Agricultural Chemical Co. Nashville, Tennessee	1961 5041 5053	0.57 0.45 0.45	0.51 0.37 0.35	
Armour Agricultural Chemical Co. Jeffersonville, Indiana	0841 3658	0.57 0.57	0.66	
Armour Agricultural Chemical Co. Nashville, Tennessee	3667 3722	0.57 0.34	0.4	
Bluegrass Plant Foods Danville, Kentucky	5020	0.57	0.4	
Cooperative Fertilizer Service Louisville, Kentucky	0815 1842 3660 4617	0.45 0.22 0.23 0.22	0.3 0.3 0.3 0.3	
Cooperative Fertilizer Service Winchester, Kentucky	0880	0.45	0.4	
Federal Chemical Company Louisville, Kentucky	0890	0.57	0.6	
Federal Chemical Company Nashville, Tennessee	3716 3717	0.57 0.57	0.4	
North American Fertilizer Co. Louisville, Kentucky	1949 1958	0.56 0.40	0.9	
Virginia-Carolina Chemical Co. Cincinnati, Ohio	0894 1841	0.57 0.57	$\frac{0}{0}$ .	
Virginia-Carolina Chemical Co. Hopkinsville, Kentucky	3666 3680 3688 3702	0.34 0.34 0.45 0.34	0. 0. 0.	

TABLE 6. - Results of Analyses of Insecticides Contained in Fertilizers Shown in Table 1. Analyses Deficient Are Underlined.

Company	Sample No.	Insecticide	Guar.	Found
American Agricultural Chem. Co. Nashville, Tennessee	5041 5053	Heptachlor Heptachlor	0.20 0.20	0.18 0.18
Armour Agricultural Chem. Co. Nashville, Tennessee	3722	Heptachlor	0.20	0.05
Federal Chemical Co. Nashville, Tennessee	3716 3717	Heptachlor Heptachlor	0.20 0.20	<u>0.11</u> <u>0.10</u>

