

Regulatory Bulletin 226

**ANNUAL REPORT
ANALYSES OF OFFICIAL
FERTILIZER SAMPLES**

JULY 1977 - JUNE 1978



University of Kentucky
College of Agriculture
Agricultural Experiment Station
Division of Regulatory Services
Lexington

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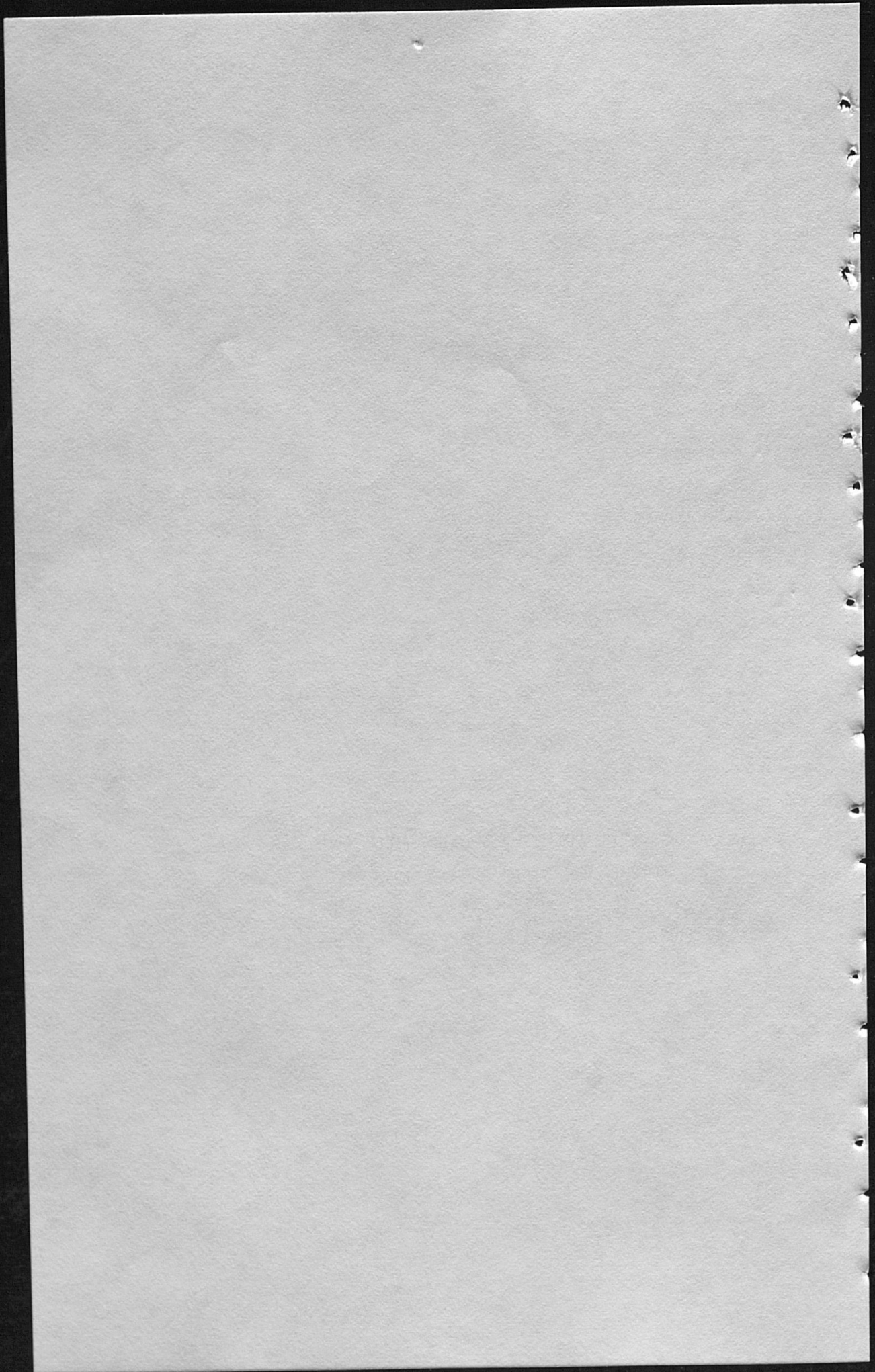
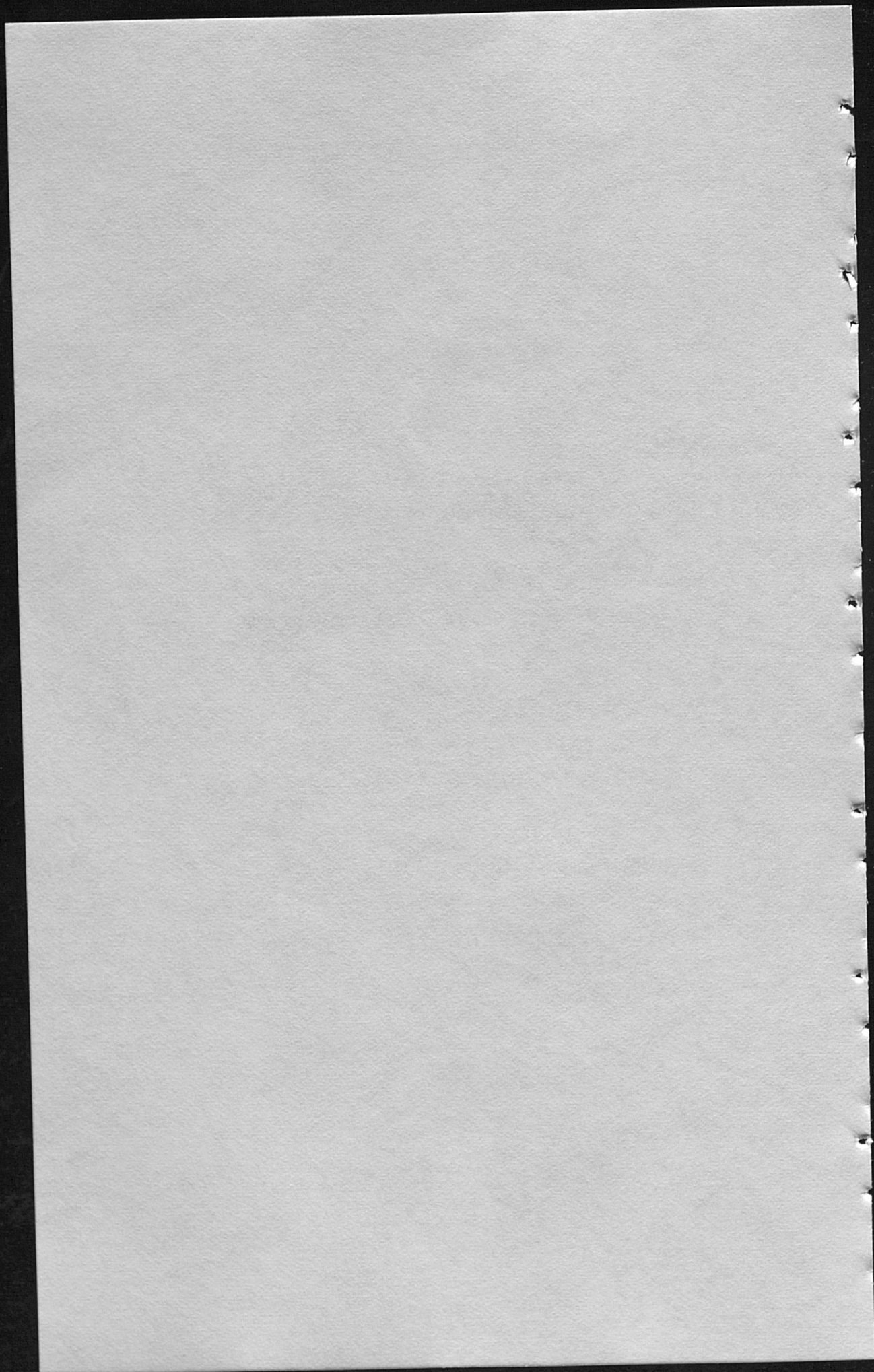


TABLE OF CONTENTS

INTRODUCTION	7
EXPLANATION OF TABLES.	7
INSPECTION AND ANALYTICAL TOLERANCE.	10
TABLE 1. RESULTS OF NITROGEN (N), AVAILABLE PHOSPHORIC ACID (APA), SOLUBLE POTASH (POT), AND EXCESS CHLORIDE (XS CL) ANALYSES OF OFFICIAL FERTILIZER SAMPLES	13
TABLE 2. AVERAGE ANALYSIS (AA), OVERALL PERCENT OF GUARANTEE ACHIEVED (% OF GUAR.), AND COEFFICIENTS OF VARIATION (CV) OF OFFICIAL FERTILIZER SAMPLES OF CERTAIN GRADES AND COMPANIES	58
TABLE 3. RESULTS OF THE ANALYSES OF CERTAIN OFFICIAL FERTILIZER SAMPLES FOR SECONDARY AND MINOR ELEMENTS AND FOR ORGANIC NITROGEN.	65
TABLE 4. COMPANIES REGISTERED TO SELL FERTILIZER IN KENTUCKY AS OF JUNE 30, 1978.	71



INTRODUCTION

This bulletin presents the results of analyses of 2,119 official samples of commercial fertilizer taken during the period July 1, 1977 through June 30, 1978 by the field inspection staff. These samples represented approximately 27,000 tons of fertilizer out of the approximately 989,000 tons sold during this period. The regulatory laboratory made 1,971 nitrogen, 1,979 phosphorus, 1,984 potassium, and about 720 chloride, secondary, and minor element analyses on these samples. The results of N, P_2O_5 , and K_2O analyses of samples of mixed fertilizers and fertilizer materials are in Table 1. An indication of the variation of the N, P_2O_5 , and K_2O found among the samples from a specific grade of a specific manufacturer is in Table 2. Table 3 contains the results of secondary and minor element analyses and Table 4 is a listing of fertilizer registrants for Kentucky as of June 30, 1978.

EXPLANATION OF TABLES

TABLE 1.

Every official sample taken during the year of a fertilizer with a guarantee for N, P_2O_5 , or K_2O is listed in this table. A comparison of the "GRADE" with the laboratory analysis for nitrogen (N), available phosphoric acid (APA), and potash (POT) will show how closely the manufacturer met his chemical guarantee. An additional way of comparing guaranteed with the found analysis is with the relative value shown in the column headed RV. The following example illustrates how this relative value is calculated:

A 5-10-15 fertilizer is guaranteed to contain 5% N, 10% P_2O_5 , and 15% K_2O . A "Guaranteed Value" and a "Found Value" are computed for this fertilizer by assigning arbitrary values to the individual nutrients as follows: 4 for N, 3 for P_2O_5 , and 2 for K_2O . Thus, the "Guaranteed Value" of the 5-10-15 is calculated as follows:

<u>Element</u>	<u>Guaranteed, %</u>		<u>Factor</u>		<u>Value</u>	
N	5.0	X	4	=	20.0	
P_2O_5	10.0	X	3	=	30.0	
K_2O	15.0	X	2	=	30.0	
Total "Guaranteed Value"					=	80.0

The same procedure is followed for the "Found Value", thus:

<u>Element</u>	<u>Found, %</u>		<u>Factor</u>		<u>Value</u>	
N	5.1	X	4	=	20.4	
P ₂ O ₅	10.2	X	3	=	30.6	
K ₂ O	15.1	X	2	=	30.2	
Total "Found Value"					=	81.2

The relative value (RV) is then computed by dividing the "Found Value" by the "Guaranteed Value" and multiplying by 100:

$$RV = (81.2/80.0) \times 100 = 101.5\%$$

The RV is rounded to the nearest whole percent before being printed in the bulletin.

Those results marked with an asterisk (*) are deficient under the criteria stated in the Inspection and Analytical Tolerance section (page 8). Occasionally an analysis may be found that appears to be inconsistent in its marking. For example, two samples that are guaranteed 10% P₂O₅ (APA) may both be shown as containing 9.3%. One of these may have an asterisk (*) and the other not. There are two situations which may cause this apparent difference:

(1) The tolerances are calculated by computer and applied to the laboratory analyses before the data are rounded to the nearest tenth of a percent and printed. In the above example, the laboratory found 9.27% for one sample and 9.33% for the other. Only the first one would be marked (*) as deficient.

(2) The grade as printed is the largest whole number in the guarantee of each ingredient. For example, a custom-mixed lot of fertilizer may be guaranteed 11.9% P₂O₅ and 11.2% K₂O. The grade would be printed 0-11-11. However, the tolerances are calculated on the 11.9% and 11.2% guarantees. If this custom mixed fertilizer analyzed 11.0% P₂O₅ and 10.9% K₂O, only the 11.0% P₂O₅ would be marked (*) because it is below the 11.9% guarantee by more than the tolerance.

The column headed "NUM" lists the laboratory number of the particular sample. In the column headed "XS CL", an asterisk (*) indicates that the chlorine content of the sample exceeded the maximum chlorine guarantee of the field crop tobacco fertilizer.

TABLE 2.

The data in this table show the average analysis (AA) and coefficient of variation (CV) for certain grades and the average percentage of guarantee (% of GUAR.) and appropriate CV for all grades sampled for certain companies. An entry was made in this table for a company when one grade was sampled 5 or more times or 10 or more total samples were obtained.

The coefficient of variation is proposed as a useful means for describing variation among samples. The method for doing this will be found in textbooks on statistics and will be illustrated for 10 analyses of a fertilizer guaranteed to contain 5% nitrogen:

The formula for computing the coefficient of variation (CV) is:

$$CV = (S/M) \times 100$$

where S = standard deviation

M = average found analysis

The formula for computing S is:

$$S = \sqrt{\frac{\sum X^2 - (\sum X)^2/n}{n - 1}}$$

where X = an individual found analytical result

n = number of analyses

Σ means "Sum of"

Now in our example n = 10 and let's assume that the 10 X's are 5.6, 5.5, 5.4, 5.7, 5.5, 5.8, 5.0, 6.0, 5.5, and 5.3.

$$\sum X^2 = 5.6^2 + 5.5^2 + \dots + 5.3^2 = 306.49$$

$$(\sum X)^2 = (55.3)^2 = 3058.09$$

$$S = \sqrt{(306.49 - 3058.09/10)/9} = 0.275$$

The average found analysis, M, is computed as follows:

$$M = (5.6 + 5.5 + \dots + 5.3)/10 = 5.53$$

Using S and M, the CV can now be computed:

$$CV = (0.275/5.53) \times 100 = 5\%$$

If, in this example, there had been less variation or "scatter", the resulting percentage (CV) would have been smaller. If there had been more variation, it would have been larger. The CV varies directly with the range in values of analyses and inversely with the average analysis.

No matter how much care is exerted in a fertilizer plant, an occasional "wild" batch may appear and subsequently be sampled. Such batches are caused by unusual circumstances such as putting the wrong fertilizer in bags labeled for another grade or large errors in mixing or manipulation in the factory that cannot be said to represent usual procedure. Computations that include such samples would only throw the coefficient of variation as well as the average analysis completely out of line. They are judged to be so abnormal that they have not been included in these statistical determinations. There were 6 samples reported in Table 1 that were excluded from the CV computations reported in

Table 2. As a basis for excluding these samples, the following rules were generally followed.

1. Throw out any samples more than 120% or less than 80% in relative value except:
 - a. Those within $\pm 20\%$ of the average sample value, or
 - b. When the variation of all the sample values is such that the questionable sample appears to fit a normal distribution pattern.
2. Throw out any sample whose ratio of ingredients differs strongly from the balance of samples of that grade. These may include samples:
 - a. Whose ratio strongly suggests an entirely different grade of fertilizer, or
 - b. Where two or more of its ingredients are higher or lower by 20% or more of the extreme values of the remaining normal samples.

TABLE 3 and 4. (Self Explanatory)

INSPECTION AND ANALYTICAL TOLERANCE

A tolerance is allowed for variations that may occur in sampling and chemical analyses. It does not, nor is it intended to allow for variation in the manufacturing process. The manufacturer should compensate for variability in manufacturing techniques and materials when calculating the formula for a given analysis.

The following formula was used to identify those samples of mixed fertilizers which were considered to be deficient in N, P_2O_5 , and K_2O .

IF "FOUND" \leq "GUARANTEE" - "TOLERANCE" THEN "FOUND IS DEFICIENT"

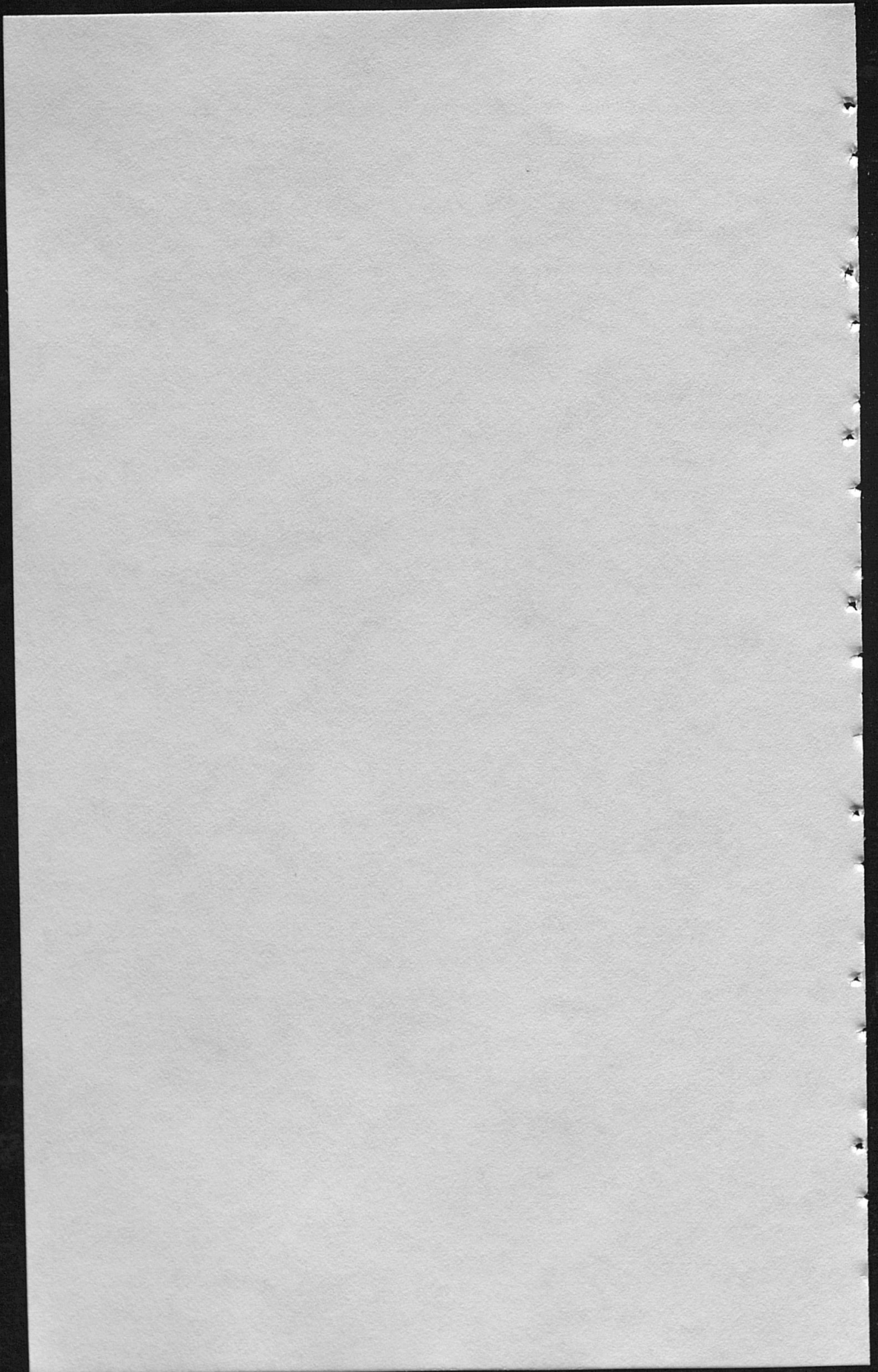
where: "TOLERANCE" = "GUARANTEE" X 0.03 + 0.4

In words this is: If the "FOUND" analysis is less than or equal to the "GUARANTEED" analysis minus the "TOLERANCE" then the "FOUND" analysis is deemed deficient. The "TOLERANCE" is equal to 3% of the "GUARANTEE" plus 0.4. For example, the tolerance on a 12% guarantee is $12 \times 0.03 + 0.4 = 0.76$. Any found value of 11.24% or less was declared deficient ($12 - 0.76 = 11.24\%$). The relative value (RV) was considered deficient when it was more than 2.5% below 100%. Specifically, if the RV was less than 97.5% it was considered deficient.

Fertilizers sold for use on field crop tobacco must carry a maximum chlorine guarantee which can be no more than 1.5%. Samples were considered excessive in chlorine (XS CL) if they analyzed more than 0.5 above the maximum guaranteed percentage.

A product was considered deficient in calcium (Ca), magnesium (Mg), sulfur (S), boron (B), and iron (Fe) if the sample analyzed less than or equal to $0.9 \times$ "GUARANTEE"; and, deficient in copper (Cu), manganese (Mn), molybdenum (Mo), and zinc (Zn) if the sample analyzed less than or equal to $0.8 \times$ "GUARANTEE". The product was considered excessive, "E", if the sample analyzed as much or more than $2 \times$ "GUARANTEE" for any of these elements.

In some samples a deficiency in one nutrient was accompanied by an overrun in another. This may be evidence of segregation, incomplete mixing, or incorrect weighing by the manufacturer. Extreme variations of this kind, however, cannot be wholly attributed to segregation which occurs after the product is mixed although this may be a factor. Excess of one nutrient will not be allowed to compensate for a deficiency of another. The purchaser is entitled to receive the full guarantee for all nutrients as expressed by the manufacturer's guaranteed analysis.



ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 13

TABLE 1. RESULTS OF NITROGEN (N), AVAILABLE PHOSPHORIC ACID (APA), SOLUBLE POTASH (POT), AND EXCESS CHLORIDE (XS CL) ANALYSES OF OFFICIAL FERTILIZER SAMPLES. Deficiencies in N, APA, POT, and RV and excessive chloride are noted with an asterisk (*).

ADAIR FARMERS SERVICE, INC.		COLUMBIA		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
0-25-25	44743	0.0	26.0	25.5		102	
7- 8-13	45273	8.3	10.6	12.3*		104	
11- 7-11	45271	12.2	8.5	10.6*		103	
17-17-17	43988	18.0	18.9	17.2		102	
17-17-17	43989	18.4	18.5	16.9		102	
17-17-17	45274	17.2	17.6	18.5		99	
AG/GRO FERTILIZER CO.		WINCHESTER		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
0- 0-22	45024	0.0	0.0	22.5		102	
0-20-20	44642	0.0	19.9	20.8		101	
0-20-20	44890	0.0	19.4	20.8		100	
0-20-20	45026	0.0	19.2	21.5		100	
5-10-15	43641	4.8	9.3*	16.8		100	
5-10-15	43810	5.3	9.0*	15.8		100	
5-10-15	43811	4.8	9.1*	16.3		99	
5-10-15	43812	4.3*	8.1*	17.6		96*	
5-10-15	43813	4.9	9.2*	17.6		103	
5-10-15	44283	5.2	10.0	15.7		102	
5-10-15	44284	5.2	10.3	15.5		103	
5-10-15	44702	5.0	9.7	16.2		102	
5-10-15	44882	4.7	9.6	16.9		101	
5-10-15	44889	5.2	10.9	14.8		104	
5-10-15	44963	4.8	9.4	16.3		100	
5-10-15	45348	4.8	9.7	14.8		97*	
5-20-20	43288	5.0	19.2	21.6		100	
5-20-20	43376	4.6	17.8*	22.8		98	
5-20-20	43689	5.6	20.0	19.9		102	
5-20-20	44964	5.0	18.6*	20.5		97*	
5-20-20	45347	4.7	20.6	19.8		100	
6-12-12	43681	5.9	11.4	13.0		100	
6-12-12	44965	6.2	12.1	12.7		103	
6-12-12	45191	5.4*	11.4	12.8		97*	
10-10-10	43287	10.7	10.8	9.2*		104	
10-10-10	43377	9.4	9.4	10.3		96*	
10-10-10	43682	10.1	10.1	10.6		102	
10-10-10	43690	10.0	9.7	8.7*		96*	
10-10-10	44282	9.4	9.7	16.6		111	
10-20-20	44641	9.8	19.6	20.4		99	
20-20-10	44961	19.4	20.0	10.2		99	
AG-MAD FERTILIZER		MADISON		IN			
GRADE	NUM	N	APA	POT	XS CL	RV	
15-15-15	44540	15.0	14.6	14.8		99	
15-15-15	44539	14.8	14.9	14.8		99	
18-46- 0	44579	17.4	46.3	0.0		99	
AGRI-CHEM, INC.		HOPKINSVILLE		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
9-23-22	43300	8.4*	21.7*	24.7		98	
19-19-19	43319	17.3*	20.2	22.3		100	
20-18-18	43318	18.7*	19.8	19.7		100	
21-17-17	44651	19.7*	17.8	21.2		101	
23-15-16	44652	21.2*	16.5	19.7		100	
AGRICHO CHEMICAL CO.		TULSA		OK			
GRADE	NUM	N	APA	POT	XS CL	RV	
0- 0-50	44568	0.0	0.0	54.1		108	
0- 0-60	43384	0.0	0.0	59.7		99	
0- 0-61	44569	0.0	0.0	60.5		99	

TABLE 1. (Continued)

AGRICC CHEMICAL CO.		TULSA			OK	XS CL	RV
GRADE	NUM	N	APA	POT			
0-46-0	43385	0.0	46.5	0.0		101	
11-54-0	45389	11.0	54.9	0.0		101	
18-46-0	43387	18.1	47.2	0.0		102	
28-0-0	43289	28.5	0.0	0.0		102	
28-0-0	43774	28.2	0.0	0.0		101	
45-0-0	43386	45.8	0.0	0.0		102	
46-0-0	44570	46.5	0.0	0.0		101	
AGRICC CHEMICAL CO		BCWLING GREENKY			XS CL	RV	
GRADE	NUM	N	APA	POT			
6-26-26	45315	7.4	27.1	25.7		105	
AGRICO FARM CENTER		CADIZ			XS CL	RV	
GRADE	NUM	N	APA	POT			
8-22-28	44216	9.2	22.6	28.8		102	
21-13-14	44217	20.6	13.6	15.0		99	
AGRICC CHEMICAL CO		CECILIA			XS CL	RV	
GRADE	NUM	N	APA	POT			
5-10-15	43755	5.2	10.5	15.2		104	
5-10-15	43762	5.5	10.8	15.0		105	
5-10-15	43770	5.1	10.2	15.8		103	
5-10-15	44019	5.0	10.3	16.3		104	
5-10-15	44257	5.5	11.1	14.8		106	
5-10-15	44372	5.5	11.2	15.6		108	
5-10-15	44850	5.3	11.2	16.1		109	
5-20-20	43760	5.2	20.2	22.3		105	
5-20-20	43772	5.3	21.5	19.1		103	
6-24-24	44259	6.0	25.3	24.4		103	
10-10-10	43234	8.0*	9.6	9.8		89*	
10-10-10	43636	9.3*	9.8	10.5		97*	
10-10-10	43754	11.8	10.8	9.8		110	
10-10-10	43761	10.8	10.2	10.1		104	
10-10-10	43771	11.4	10.6	10.3		109	
10-10-10	44020	8.5*	10.6	10.3		96*	
10-10-10	44258	10.1	10.4	9.8		101	
10-10-10	44290	9.1*	10.1	10.7		98	
10-10-10	44373	9.7	10.4	10.3		101	
10-10-10	44849	9.4	11.2	10.7		103	
10-10-10	45314	9.5	9.3*	10.3		96*	
15-15-15	44841	20.0	15.6	11.3*		111	
15-15-15	44848	16.0	16.9	13.8*		105	
15-15-15	44851	18.3	16.0	10.7*		105	
15-15-15	44891	16.5	20.5	11.5*		111	
15-15-15	44970	19.9	16.6	11.2*		112	
19-19-19	44892	18.7	19.0	19.6		100	
AGRICO CHEMICAL CO		CLARKSON			XS CL	RV	
GRADE	NUM	N	APA	POT			
5-24-24	44037	5.5	20.5*	31.3		102	
6-26-26	44036	7.4	29.1	23.5*		106	
9-23-30	44035	9.4	24.4	29.8		103	
12-12-12	44039	16.9	17.9	17.7		136	
19-18-19	44038	18.4	18.3	20.5		99	
19-19-19	45390	17.6*	20.3	20.2		100	
AGRICC CHEMICAL CO		CLAY			XS CL	RV	
GRADE	NUM	N	APA	POT			
9-23-30	45062	7.8*	20.5*	34.4		98	
AGRICO FARM CENTER		CRCFTON			XS CL	RV	
GRADE	NUM	N	APA	POT			
5-23-29	45239	5.9	23.7	30.1		101	

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 15

TABLE 1. (Continued)

AGRICO FARM CENTER		CROFTON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
7-26-26	45238	7.3	25.0*	29.4			101
7-26-26	45241	7.3	24.5*	29.4			100
19-15-15	45240	18.6*	15.8	16.8			99
AGRICO FARM CENTER		FREDONIA		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
6-15-20	45250	5.2*	13.5*	20.3			92*
AGRICO CHEMICAL CO		FREDONIA		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-21-32	44656	0.0	22.3	32.6			102
5-10-15	45249	4.6	8.9*	15.6			96*
19-13-19	45248	19.2	12.5	20.7			98
21- 8-25	44655	12.0*	9.4	39.4			95*
AGRICO FARM CENTER		GUTHRIE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
6-24-24	44559	4.6*	19.2*	25.8			88*
AGRICO CHEMICAL CO		HARTFORD		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
4-21-33	45388	4.6	21.7	34.4			101
5-20-30	45299	4.2*	19.5	31.7			98
15-16-22	45387	15.4	14.8*	23.8			99
AGRICO CHEMICAL CO.		HENDERSON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-25-25	44664	0.0	25.4	26.9			100
9-23-30	44662	9.4	24.8	29.7			104
18-46- 0	44321	17.2	45.4	0.0			98
28- 0- 0	43685	28.0	0.0	0.0			100
35- 4-10	44663	32.7*	4.9	14.3			100
AGRICO CHEMICAL CO.		HENDERSON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
16-20- 0	44136	15.3	21.6	0.0			102
AGRICO CHEMICAL CO		HODGENVILLE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-25-27	44021	0.0	24.5	29.0			101
5-25-25	44018	4.2*	22.3*	29.8			97*
8-24-28	44759	8.1	23.4	30.7			100
19-19-19	44022	19.5	18.8	20.1			100
27-13-13	44760	26.7	13.8	15.5			101
AGRICO CHEMICAL CO		HORSE CAVE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-25-24	43756	0.0	25.3	25.4			102
6-24-24	43767	6.2	25.0	25.8			103
11-17-17	43768	11.3	18.7	16.8			102
19-17-17	43757	21.9	17.1	15.8*			104
19-19-19	43769	19.7	19.6	19.6			102
AGRICO CHEMICAL CO		IRVINGTON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-26-26	45287	0.0	26.3	26.3			100
6-26-26	45285	6.5	25.3	27.8			100
8-21-32	45286	8.2	21.5	32.8			100
19-19-19	45283	17.2*	17.9*	22.9			96*
19-19-19	45284	18.9	20.7	18.7			100
AGRICO CHEMICAL CO		MADISONVILLE		KY			
GRADE	NUM	N	APA	PCT	XS	CL	RV
0-23-30	45071	0.0	23.4	30.2			101
0-23-30	45242	0.0	21.3*	32.7			100
0-23-30	45243	0.0	23.7	30.5			102

TABLE 1. (Continued)

AGRICO CHEMICAL CO		MORGANFIELD KY			XS	CL	RV
GRADE	NUM	N	APA	PCT			
0-15-37	44262	0.0	16.8	36.9			103
AGRICO CHEMICAL CO		DWENSBORO KY			XS	CL	RV
GRADE	NUM	N	APA	PCT			
0-23-30	44137	0.0	25.3	28.8			103
0-23-31	44643	0.0	21.5*	34.8			102
9-23-31	44644	8.2*	23.4	31.3			99
17-17-17	44645	17.4	16.6	21.1			105
AGRICO FARM CENTER		PEMBROKE KY			XS	CL	RV
GRADE	NUM	N	APA	PCT			
10-26-26	45244	9.3*	24.5*	29.1			98
AGRICO CHEMICAL CO		RUSSELLVILLE KY			XS	CL	RV
GRADE	NUM	N	APA	PCT			
0-19-19	44302	0.0	19.9	21.7			107
0-26-26	43235	0.0	23.1*	28.7			97*
0-26-26	44301	0.0	24.7*	29.1			102
5-20-20	44473	4.7	18.1*	26.7			105
6-24-24	44281	4.9*	23.7	29.9			104
6-24-24	44505	6.2	24.1	22.8*			99
27-13-13	44303	19.1*	13.4	25.5			95*
AIR PRODUCTS & CHEMICALS INC.		PENSACOLA FL			XS	CL	RV
GRADE	NUM	N	APA	PCT			
34- 0- 0	43463	34.0	0.0	0.0			100
34- 0- 0	43523	34.1	0.0	0.0			100
34- 0- 0	43554	33.9	0.0	0.0			100
34- 0- 0	43792	34.2	0.0	0.0			101
34- 0- 0	43999	33.1	0.0	0.0			97
ALLEN CO. FARMERS SERVICE		SCOTTSVILLE KY			XS	CL	RV
GRADE	NUM	N	APA	PCT			
14-14-22	45372	14.4	15.3	22.9			102
17-13-20	45373	17.4	12.9	21.5			99
19-19-19	44062	19.7	19.1	19.7			100
21-13-18	45374	20.6	11.7*	20.1			97*
25-15-15	45309	23.8*	15.1	16.2			98
ALLENSVILLE CROP SERVICE		ALLENSVILLE KY			XS	CL	RV
GRADE	NUM	N	APA	PCT			
6-24-24	43921	6.4	22.5*	25.9			101
33- 0- 0	43922	30.7*	0.0	0.0			93*
ALLIED CHEM CORP.-AGRI DIV.		HOUSTON TX			XS	CL	RV
GRADE	NUM	N	APA	PCT			
32- 0- 0	44327	31.9	0.0	0.0			100
THE ANDERSONS, SPECIALTIES DIV		MAUMEE OH			XS	CL	RV
GRADE	NUM	N	APA	PCT			
0-14-42	43622	0.0	14.9	41.3			101
19-19-19	43621	19.4	19.2	19.5			102
19-19-19	43623	18.8	19.7	20.4			102
AREX CORPORATION		BAINBRIDGE GA			XS	CL	RV
GRADE	NUM	N	APA	PCT			
3-18-18	44968	3.7	17.3	18.0			100
9-18- 9	44969	9.3	17.5	9.2			100
AYERS SEED & FERTILIZER		MORGANTOWN KY			XS	CL	RV
GRADE	NUM	N	APA	PCT			
12-24-24	44048	11.9	25.9	23.5			101
17-16-16	44047	17.6	17.5	16.2			103
BALLARD CO. COOP.		LA CENTER KY			XS	CL	RV
GRADE	NUM	N	APA	PCT			
8-22-29	45161	8.8	22.6	30.4			100
9-23-30	45201	8.9	22.6	30.3			99

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 17

TABLE 1. (Continued)

BALLARD CO. COOP.		LA CENTER			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
17-15-20	45162	16.9	15.7	20.4		101
BARLOWS FARM CENTER		GLENDALE			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
6-26-25	44765	6.5	25.3	28.0		101
19-19-18	44764	19.6	18.0*	21.0		100
21-11-18	44761	21.1	9.6*	19.7		99
25-15-15	44763	26.1	13.8*	17.4		102
27-13-13	44762	27.7	12.8*	14.8		101
BARREN RIVER FERT. CO., INC		GLASGOW			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
0- 0-61	44153	0.0	0.0	59.8		98
3-15-15	43324	7.5	17.5	17.4		131
5-10-15	43447	5.1	10.2	16.5		105
5-10-15	44241	4.2*	8.5*	16.9		95*
5-10-15	44456	4.8	9.6	19.0		108
5-10-15	45003	6.7	10.2	15.8		111
5-10-15	45041	5.1	11.0	13.8*		101
5-20-20	43310	5.2	17.2*	18.4*		91*
5-20-20	44577	5.0	20.9	19.0*		101
5-20-20	45404	4.3*	17.6*	21.9		95*
5-20-20	43323	4.9	21.1	17.9*		99
5-20-20	44781	5.5	22.8	21.1		110
6-12-12	43311	7.4	12.4	11.0*		106
6-12-12	44240	7.7	14.5	10.9*		114
9- 9- 9	43745	10.3	11.1	10.0		105
10- 0- 0	45004	11.3	0.0	0.0		113
10-10-10	43446	9.2*	10.1	10.6		98
10-10-10	44455	9.7	9.8	10.7		100
10-10-10	45403	10.3	11.0	10.2		105
10-10-10	43241	6.6*	11.4	10.5		91*
10-20-20	43322	9.8	19.5	19.8		98
11-11-11	43744	11.9	12.5	12.0		103
12-24-24	43355	12.3	24.4	23.5		101
12-24-24	43356	12.0	24.3	23.5		100
12-24-24	44342	11.9	24.4	23.7		100
12-24-24	44343	10.7*	22.6*	26.6		97*
12-24-24	44344	11.9	25.3	22.2*		100
14-14-14	43746	14.3	15.1	14.1		103
15-15-15	45002	15.8	17.7	12.5*		105
15-15-15	44782	15.7	14.6	15.8		102
18-46- 0	44154	17.6	46.2	0.0		100
20-10-10	43321	20.0	10.1	9.0*		99
23-11-11	44783	20.5*	9.6*	10.0*		87*
BEAUCHAMPS FARM SERVICE		LEITCHFIELD			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
5-22-22	45114	6.0	22.4	21.1		103
9-25-24	45116	10.2	25.8	24.1		102
19-19-19	45115	19.8	20.9	17.8*		104
19-19-19	45117	19.6	20.3	18.2		103
20-16-16	45113	19.7*	17.5	16.8		99
BIG FOUR FEED & IMPLEMENT CC.		SCOTTSDALE			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
12-24-24	44061	9.6*	21.5*	28.7		95*
BIG 4 FERT & CHEM CO.		BARDSTOWN			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
10-26-25	44696	11.9	29.8	23.4*		107
10-28-23	44694	11.6	27.6	24.6		102

TABLE 1. (Continued)

BIG 4 FERT & CHEM CO.		BARDSTOWN		KY			
GRADE	NUM	N	APA	PCT	XS CL	RV	
16-11-15	44695	16.7	11.6	16.9		103	
18-20-0	44693	18.6	21.8	0.0		103	
20-9-14	44697	20.5	8.4*	16.6		101	
BLCOMFIELD FERT. & CHEM CO.		BLCOMFIELD		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
4-9-14	45222	9.5	17.9	25.1		183	
9-8-12	45223	14.7	15.3	20.0		166	
15-15-15	45224	17.6	20.0	16.7		121	
BLUEGRASS PLANT FOODS		CYNTHIANA		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
10-10-10	43580	9.2*	10.0	11.2		99	
10-10-10	43694	10.8	10.6	9.8		105	
10-10-10	44703	11.3	13.9	12.2		124	
BOURBON FARM SERVICE		PARIS		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
10-11-21	45144	11.5	9.5*	23.3		100	
12-9-21	44978	11.8	9.5	22.7		101	
18-0-23	44947	17.8	0.0	24.5		101	
22-0-20	44946	22.8	0.0	20.1		101	
25-0-15	44945	25.5	0.0	15.4		101	
OTIS BRYANT & SON MILLING CO.		CANEYVILLE		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
19-19-19	45289	19.4	20.0	19.1		101	
19-19-19	45300	19.2	20.7	19.3		102	
21-17-17	45293	22.0	16.5*	18.1		99	
28-28-0	44755	28.4	29.6	0.0		103	
BURLEY BELT CHEMICAL CO.		LEXINGTON		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
0-0-60	44602	0.0	0.0	59.8		100	
0-0-60	44604	0.0	0.0	59.6		99	
0-10-30	43880	0.0	7.2*	31.7		94*	
0-10-30	45089	0.0	10.2	26.7*		93*	
0-26-26	44873	0.0	27.3	21.4*		96*	
4-16-4	43581	4.3	16.2	4.9		105	
4-16-4	44016	4.7	16.4	5.3		109	
5-10-15	43639	4.7	10.0	16.0		101	
5-10-15	43642	5.5	11.4	14.3		106	
5-10-15	44176	6.4	11.7	12.2*		106	
5-10-15	44179	7.0	14.4	13.4*		123	
5-10-15	44833	5.4	10.7	15.4		105	
5-10-15	44870	5.3	10.8	15.9		107	
5-10-15	44957	5.3	8.9*	16.0		100	
5-10-15	45259	5.6	11.0	15.6		108	
5-10-15	45264	5.0	9.9	16.1		102	
5-10-15	45336	5.5	9.8	16.0		104	
5-10-15	45339	3.3*	8.1*	18.2		92*	
5-20-20	43640	5.1	17.8*	20.0		95*	
5-20-20	43662	7.6	25.5	14.5*		113	
5-20-20	43881	4.4*	18.7*	21.1		96*	
5-20-20	44733	5.8	19.2	20.9		102	
5-20-20	44869	5.0	19.3	18.6*		96*	
5-20-20	44955	5.4	21.6	20.4		106	
5-20-20	44956	5.6	21.0	19.8		104	

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 19

TABLE 1. (Continued)

BURLEY BELT CHEMICAL CO.		LEXINGTON		KY		XS CL	RV
GRADE	NUM	N	APA	POT			
6- 6-18	43614	6.9	9.4	14.8*		109	
6- 6-18	44526	5.5	5.3*	17.7		94*	
6- 6-18	44888	6.3	6.1	19.2		105	
6-12-12	43859	5.9	11.3	12.6		98	
6-12-12	44734	5.8	12.4	12.6		102	
6-12-18	44866	5.8	12.5	18.3		101	
6-12-18	44958	5.7	11.9	18.9	*	100	
7- 0- 0	43454	7.0	0.0	0.0		100	
7- 0- 0	44852	8.3	0.0	0.0		118	
7- 0- 0	44881	7.2	0.0	0.0		103	
8-10-15	43232	7.8	9.9	16.1		101	
8-10-15	44177	8.4	9.7	17.0		105	
10-10-10	43664	9.4	10.4	9.8		98	
10-10-10	43860	9.9	11.2	11.9		108	
10-10-10	43882	8.6*	9.7	12.9		99	
10-10-10	43883	7.8*	8.9*	11.6		90*	
10-10-10	44527	10.2	12.2	11.9		113	
10-10-10	44528	10.0	10.1	9.2*		98	
10-10-10	44735	10.0	11.7	10.9		108	
10-10-10	44806	9.1*	9.3	12.0		98	
10-10-10	44872	9.5	10.0	11.1		100	
10-10-10	44962	8.7*	9.6	10.0		93*	
10-10-10	45090	9.8	9.3*	11.4		100	
10-10-10	45265	9.4	9.7	11.3		99	
10-10-10	44178	10.1	10.9	9.9		103	
10-10-10	45028	9.2*	16.0	13.0		123	
12-12-12	43858	11.5	12.5	12.3		100	
12-12-12	45260	12.3	11.7	10.5*		97*	
13-13-13	44867	12.7	13.5	13.6		101	
15-15-15	44868	14.7	14.1*	13.9*		95*	
15-15-15	45019	14.4	15.0	17.8		102	
15-30- 0	44871	14.0*	27.9*	0.0		93*	
18-46- 0	43878	17.9	46.2	0.0		100	
18-46- 0	43665	18.0	46.2	0.0		100	
18-46- 0	44601	16.0*	41.8*	0.0		90*	
18-46- 0	44605	17.8	46.0	0.0		100	
18-46- 0	45148	17.7	45.8	0.0		99	
22- 7- 8	45143	21.6*	8.5	8.6		99	
24- 0-20	43233	24.6	0.0	20.4		102	
34- 0- 0	43592	34.3	0.0	0.0		101	
34- 0- 0	43879	34.2	0.0	0.0		100	
BURLEY BELT CHEMICAL CO.		CYNTHIANA		KY		XS CL	RV
GRADE	NUM	N	APA	POT			
0-20-20	44419	0.0	21.9	19.8		105	
5-10-15	44413	6.0	11.2	15.4		110	
5-10-15	44541	5.1	10.8	15.9		106	
5-10-15	44553	4.7	10.9	15.6		103	
5-10-15	44832	5.0	11.3	15.5		106	
5-10-15	45365	6.1	11.2	15.8		112	
5-10-15	44949	5.1	10.3	16.0		104	
5-20-20	44414	5.3	19.8	19.8		100	
5-20-20	44552	5.6	21.1	18.5*		102	
6-12-12	43278	6.8	13.7	12.5		111	
6-12-12	44415	6.3	13.9	13.2		111	
10-10-10	43277	9.7	9.3*	10.7		98	
10-10-10	43397	8.3*	11.0	12.2		101	
10-10-10	44416	10.0	12.3	10.5		109	

TABLE 1. (Continued)

BURLEY BELT CHEMICAL CO.		CYNTHIANA		KY		XS CL	RV
GRADE	NUM	N	APA	POT			
10-10-10	44542	10.3	11.2	11.1			108
10-10-10	44555	8.8*	10.3	13.4			103
10-10-10	44556	9.3*	9.8	13.4			104
10-10-10	45370	10.5	9.7	10.8			103
15-15-15	44554	8.6*	15.0	20.0			88*
15-15-15	44948	14.4	14.8	15.4			98
15-15-15	45371	8.6*	13.2*	15.1			77*
20-10-10	44606	18.1*	9.4	10.5			93*
22-15- 0	44951	19.1*	20.4	0.0			100
23- 7- 7	44950	22.9	7.5	7.6			99
BURLEY BELT CHEMICAL CO.		EKRON		KY		XS CL	RV
GRADE	NUM	N	APA	POT			
9-18-24	44149	9.1	18.6	25.0			101
15-15-23	45105	16.4	15.6	22.4			103
19-19-19	45106	20.5	19.4	19.3			102
19-19-19	45108	19.9	20.4	18.6			101
25-15-15	45107	26.0	16.7	14.9			104
BURLEY BELT CHEMICAL CO.		LONDON		KY		XS CL	RV
GRADE	NUM	N	APA	POT			
0-20-20	43599	0.0	21.4	16.2*			96*
0-20-20	44727	0.0	20.5	19.0			99
5-10-15	43413	4.8	11.1	16.2			106
5-10-15	43452	4.7	10.6	15.6			102
5-10-15	43453	4.7	11.0	15.3			103
5-10-15	43566	5.5	11.6	15.7			110
5-10-15	43833	5.2	11.0	16.1			107
5-10-15	43946	5.5	10.3	14.9			103
5-10-15	43950	5.5	10.0	14.9			102
5-10-15	43977	4.7	11.6	16.0			107
5-10-15	43979	5.4	8.8*	12.8*			92*
5-10-15	44285	5.0	11.2	15.8			107
5-10-15	44287	5.3	10.6	15.9			106
5-10-15	44451	5.2	10.1	15.0			101
5-10-15	44507	5.0	11.0	15.6			105
5-10-15	44509	4.7	10.4	15.5			101
5-10-15	44726	4.9	10.7	15.8			104
5-10-15	44790	5.3	10.0	15.5			103
5-10-15	44800	4.9	11.0	15.8			105
5-10-15	44819	5.7	10.4	13.2*			100
5-10-15	44834	5.3	10.8	16.4			108
5-10-15	44887	5.4	10.1	15.0			102
5-10-15	44987	4.8	10.8	15.8			104
5-10-15	44992	5.7	8.6*	15.7			100
5-10-15	45334	4.9	9.8	15.9			101
5-10-15	45335	6.5	9.8	16.6			110
5-10-15	45337	4.7	9.6	15.8			99
5-10-15	43336	5.2	10.4	14.5			101
5-20-20	43306	5.7	18.9*	21.1			101
5-20-20	43579	5.3	18.8*	22.0			101
5-20-20	43615	5.4	19.3	20.4			100
5-20-20	43663	5.4	21.3	19.7			104
5-20-20	43731	5.3	20.8	19.8			102
5-20-20	43831	5.0	20.1	20.2			100
5-20-20	43975	5.9	18.8*	21.2			102
5-20-20	44174	5.3	20.5	20.3			103
5-20-20	44492	5.4	21.2	21.2			106
5-20-20	44818	5.6	21.0	19.9			104

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 21

TABLE 1. (Continued)

BURLEY BELT CHEMICAL CO.		LCNDON		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
6-12-12	43830	5.9	12.4	13.7		105
6-12-12	43947	5.9	12.6	9.9*		97*
6-12-12	44407	6.0	12.3	12.6		102
6-12-12	44730	6.1	12.3	13.3		105
6-12-18	43961	7.1	15.9	16.4*		113
7- 0- 0	43567	7.4	0.0	0.0		106
10-10-10	43253	9.4	8.9*	10.8		95*
10-10-10	43334	10.0	10.7	10.9		104
10-10-10	43597	10.5	11.1	7.0*		99
10-10-10	43602	10.0	12.2	11.1		110
10-10-10	43603	9.9	12.3	11.2		110
10-10-10	43613	9.9	10.8	10.4		103
10-10-10	43832	11.0	11.5	11.0		112
10-10-10	43945	10.2	11.3	10.4		106
10-10-10	43951	9.5	9.9	11.6		101
10-10-10	43976	10.0	11.2	11.1		106
10-10-10	43980	10.6	10.2	9.8		103
10-10-10	44171	9.7	11.3	11.5		106
10-10-10	44175	9.9	10.7	11.1		104
10-10-10	44420	9.5	10.9	11.9		105
10-10-10	44452	8.7*	9.5	9.9		92*
10-10-10	44725	9.9	10.4	11.7		105
10-10-10	44801	10.2	12.0	10.9		109
10-10-10	44988	9.7	10.0	10.7		100
10-10-10	44991	8.4*	8.9*	10.0		89*
10-10-10	45237	9.5	11.9	10.9		106
10-10-10	43335	10.1	10.7	9.9		103
10-10-10	43432	10.1	11.1	10.8		106
10-10-15	43464	9.1*	10.7	15.5		99
10-10-15	43565	9.6	10.6	15.9		102
10-10-15	44009	10.0	9.5	16.8		102
10-10-15	45031	9.5	9.4	16.6		100
10-10-20	43732	9.6	10.4	20.2		100
10-10-20	44172	9.6	10.0	21.3		101
10-10-20	44173	9.7	10.7	20.3		101
10-10-20	44508	9.7	10.8	20.6		102
10-10-20	44791	9.8	10.8	20.6		102
10-20-20	44989	10.4	19.4	18.1*		97*
12-12-12	43598	11.2*	12.4	10.8*		96*
12-12-12	44731	12.8	12.0	12.0		103
12-24-24	43601	12.9	26.6	20.9*		103
13-13-13	43600	12.9	12.9	14.4		102
13-13-13	43661	12.9	13.0	13.9		101
13-13-13	43982	12.6	12.7	13.7		99
13-13-13	44010	12.9	13.2	13.9		101
13-13-13	44603	13.1	13.1	14.1		102
13-13-13	44990	13.0	13.0	14.0		102
15-15-15	43236	13.9*	15.4	14.9		98
15-15-15	43981	14.3	15.7	15.7		101
18-11-16	44993	18.2	11.1	17.1		99
18-46- 0	43984	18.1	46.3	0.0		101
28- 0- 0	44994	27.5	0.0	0.0		98
34- 0- 0	43455	33.2	0.0	0.0		98
BURLEY BELT CHEMICAL CO.		FERGUSON		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0- 0-60	44322	0.0	0.0	59.6		99
0-15-30	44325	0.0	16.8	27.0*		99

TABLE 1. (Continued)

BURLEY BELT CHEMICAL CO.		FERGUSON		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-20-20	44359	0.0	15.2*	22.9		91*
0-20-20	44008	0.0	19.7	21.1		101
0-25-16	44323	0.0	28.8	14.3*		107
5-10-15	43436	5.5	10.8	15.0		105
5-10-15	43520	4.4*	7.5*	15.4		89*
5-10-15	43936	5.1	9.3*	16.6		101
5-10-15	44360	4.5	7.8*	16.8		93*
5-10-15	44536	5.4	10.8	15.9		107
5-10-15	44780	5.5	10.1	16.1		106
5-10-15	44929	5.3	10.2	15.9		104
5-10-15	45131	5.5	10.9	15.5		107
5-20-20	43795	5.3	19.3	21.0		101
5-20-20	43801	5.2	19.9	21.6		103
5-20-20	43935	5.3	19.4	21.5		102
5-20-20	44324	5.7	18.9*	19.3		99
5-20-20	44538	4.7	19.7	21.0		100
6-12-12	43435	6.4	12.6	12.6		105
6-12-12	43735	5.5	11.5	10.2*		91*
6-12-12	43800	6.4	12.3	13.4		106
10-10-10	43373	9.8	10.9	10.9		104
10-10-10	43438	7.7*	9.1*	9.8		86*
10-10-10	43519	10.1	9.9	9.5		99
10-10-10	43734	10.0	11.4	11.1		107
10-10-10	43962	9.0*	9.9	10.8		97*
10-10-10	44358	9.1*	10.0	9.8		95*
10-10-10	44446	8.7*	9.3	10.1		92*
10-10-10	44537	9.8	10.6	10.9		103
10-10-10	44740	8.7*	9.8	10.9		95*
10-10-10	44981	9.0*	10.3	11.3		99
15-15-15	44357	12.2*	15.5	13.9*		91*
15-15-15	44447	12.7*	15.1	14.8		93*
15-15-15	44535	13.9*	15.9	14.8		98
15-15-15	44982	12.3*	15.1	16.8		95*
19-19-19	44983	17.5*	18.4	21.0		98
BURLEY BELT CHEMICAL CO.		GEORGETOWN		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
8-10-15	45096	6.6*	7.2*	14.2		83*
8-10-15	45099	7.9	9.2*	15.6		98
14- 7-14	45097	12.9*	6.6	16.1		98
14-12-15	45098	12.2*	15.1	15.8		100
BURLEY BELT CHEMICAL CO.		HARRODSBURG		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-18-35	45354	0.0	19.1	35.7		102
10-17-15	45356	10.2	18.5	15.9		102
14- 6- 9	45188	13.9	6.5	10.1		100
15- 0-27	45012	14.5	0.0	29.2		100
17- 0-25	45008	17.5	0.0	25.1		102
17-10-13	45011	16.4	12.2	13.5		102
17-17-17	44704	17.2	14.5*	21.6		97*
17-17-17	45355	17.7	17.4	18.5		100
21- 0-22	45009	21.1	0.0	23.4		101
21- 7-12	45010	21.6	7.8	12.5		101
24- 8-10	45357	24.8	8.3	11.3		100
BURLEY BELT CHEMICAL CO.		RUSSELL SPRNGKY		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
5-10-15	44739	5.2	9.5	17.2		105
5-20-20	44741	4.7	19.0*	21.8		99

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 23

TABLE 1. (Continued)

BURLEY BELT CHEMICAL CO.		RUSSELL SPRNGKY				
GRADE	NUM	N	APA	POT	XS CL	RV
8-10-16	44902	4.3*	11.4	17.4		86*
8-21-31	44901	8.5	21.4	33.1		101
9-18-27	45277	8.4*	17.4*	29.0		97*
10- 7-11	45275	10.3	7.3	12.7		99
10-10-10	43959	9.9	10.0	9.8		99
10-10-10	43960	9.9	10.7	10.0		102
10-10-10	44742	8.6*	9.3*	11.8		95*
10-20-30	45276	10.4	19.9	30.9		100
BURLEY BELT CHEMICAL CO.		STANFORD KY				
GRADE	NUM	N	APA	POT	XS CL	RV
9-23-30	45017	9.0	23.0	30.7		101
19-19-19	45018	18.8	19.9	20.1		100
CALLOWAY CO. SOIL IMP. ASSN.		MURRAY KY				
GRADE	NUM	N	APA	POT	XS CL	RV
18-18-18	45383	17.4	23.6	15.7*		105
CAMPBELLSVILLE CROP SERVICE		CAMPBELLSVILLKY				
GRADE	NUM	N	APA	POT	XS CL	RV
12-23-23	43914	12.1	25.0	24.7		103
15-15-15	43916	16.9	16.0	15.1		106
17-17-17	43915	18.6	19.1	16.0*		103
17-17-17	43917	18.3	18.7	16.7		102
17-17-17	43918	18.7	19.3	16.0*		103
CARGILL, INC.		MINNEAPOLIS MN				
GRADE	NUM	N	APA	POT	XS CL	RV
18-46- 0	44578	18.1	46.6	0.0		101
DONALD CARNEY & SON		SPRINGFIELD KY				
GRADE	NUM	N	APA	POT	XS CL	RV
9-18-27	45183	9.3	17.1*	27.5		99
16-12- 0	45185	16.5	13.0	0.0		101
16-12-18	45184	16.1	12.0	19.9		99
17-17-17	45186	17.5	16.8	18.7		99
18-10-16	45187	18.0	12.3	17.0		103
19-13-17	44716	19.1	12.8	19.6		101
CAYCE LIME & FERTILIZER		FULTON KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-15-39	44598	0.0	17.1	39.0		102
0-15-40	44597	0.0	16.4	39.9		102
0-23-30	44600	0.0	23.9	30.1		102
7-19-34	44596	8.1	20.4	34.7		103
9-23-30	44595	9.2	23.5	30.6		102
CENTRAL FARMERS SUPPLY		GREENSBURG KY				
GRADE	NUM	N	APA	POT	XS CL	RV
9-24-24	44674	9.9	24.4	24.7		102
17-17-17	44673	18.0	17.5	17.9		101
17-17-17	44757	17.9	18.5	17.4		101
18-17-17	44758	18.1	17.5	18.1		100
23-11-11	44756	24.2	11.3	11.5		102
CENTRAL KY AERIAL SPRAY INC.		DANVILLE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0- 0-30	44000	0.0	0.0	32.7		109
3- 9-12	45043	2.7	8.2*	13.8		100
12-12- 8	45398	10.0*	5.3*	7.2*		70*
20- 5- 5	44803	17.0*	5.5	4.9		90*
32- 0- 0	45396	31.5	0.0	0.0		98
32- 0- 0	45397	30.2*	0.0	0.0		94*
32- 0- 0	45044	30.2*	0.0	0.0		94*

TABLE 1. (Continued)

CF INDUSTRIES, INC.		LONG GROVE		IL			
GRADE	NUM	N	APA	POT	XS	CL	RV
28- 0- 0	44607	29.1	0.0	0.0			104
28- 0- 0	44825	28.0	0.0	0.0			100
28- 0- 0	45033	28.2	0.0	0.0			101
28- 0- 0	45414	27.3	0.0	0.0			97
34- 0- 0	43357	33.5	0.0	0.0			98
34- 0- 0	43360	33.4	0.0	0.0			98
34- 0- 0	43417	33.6	0.0	0.0			99
34- 0- 0	43487	34.5	0.0	0.0			101
34- 0- 0	43553	33.3	0.0	0.0			98
34- 0- 0	43892	33.4	0.0	0.0			97
CHEVRON CHEMICAL CO-ORTHO DIV		RICHMOND		CA			
GRADE	NUM	N	APA	POT	XS	CL	RV
24- 4- 8	43693	26.9	3.5*	8.7			109
CIRCLE O FARM CENTER		MARION		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
10-34- 0	45362	10.1	33.7	0.0			100
COMINCO AMERICAN INC.		SPCKANE		WA			
GRADE	NUM	N	APA	POT	XS	CL	RV
0- 0-60	43983	0.0	0.0	59.4			99
0- 0-60	44320	0.0	0.0	60.7			101
ELKTON CROP SERVICE		GUTHRIE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
6-26-26	45125	5.9	25.7	25.7			99
FARMERS CROP SERVICE INC		PRINCETON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-26-25	44653	0.0	27.5	25.1			102
26-14-14	44654	6.0*	34.2	15.4			89*
FARMERS FEED & FERTILIZER		SCOTTSDALE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
5-20-20	44063	4.7*	22.0	22.0			103
17-17-17	44064	17.6	17.1	16.4			101
FARMERS FERTILIZER COMPANY		SMITHS GROVE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
5-20-20	43784	5.9	21.4	20.0			106
9- 9- 9	43782	12.2	12.5	9.8			128
10-10-10	43783	10.4	10.6	10.8			105
11-11-17	45304	13.6	15.0	18.8			117
11-11-17	45305	13.1	13.8	18.5			111
11-11-17	45306	14.4	15.3	19.1			121
15-15-15	44918	14.8	16.0	16.0			103
28-28- 0	43402	27.9	29.8	0.0			103
30-10-10	44917	27.9*	10.6	9.9			96*
FARMERS GIN COMPANY		CLINTON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
9-23-30	44594	8.9	22.3	31.8			101
16-15-26	44590	16.2	15.4	27.8			101
20-16-21	44591	20.7	16.2	20.8			101
23-14-18	44592	22.9	13.8	20.1			101
23-14-18	44593	22.1*	14.1	20.3			99
FARMERS SUPPLY & PRODUCE CO.		MONTICELLO		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
17-12-12	43720	16.3*	14.1	13.4			102
17-17-17	43715	16.8*	17.6	20.1			100
17-17-17	43716	17.2	18.2	18.5			101
17-17-17	43718	16.4*	16.2*	21.6			98
17-17-17	43719	17.0	18.0	19.9			101
18-16-16	44096	16.8*	16.6	19.2			98

TABLE 1. (Continued)

FARMERS SUPPLY & PRODUCE CO.		MONTICELLO		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
19-15-15	44097	19.5	15.7	15.6			99
20- 9- 9	43717	19.8*	11.0	10.4			100
FARMLAND INDUSTRIES INC.		KANSAS CITY		MO			
GRADE	NUM	N	APA	POT	XS	CL	RV
6-24-24	44469	5.9	23.7	25.1			100
10-10-10	44421	10.7	10.0	10.4			104
12-12-12	44468	12.2	13.9	12.2			106
13-13-13	44422	12.1*	12.3	13.5			96*
34- 0- 0	43267	33.4	0.0	0.0			98
FAYETTE SEED CO.		LEXINGTON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
10-10-10	43405	9.7	12.3	9.2*			105
10-10-10	44180	9.6	10.9	11.5			105
FELTY CROP SERVICE		BEAVER DAM		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-23-30	45302	0.0	22.2	31.4			100
11- 7-11	45301	12.6	8.2	12.5			108
FLEMING CO. FARM SUPPLY		FLEMINGSBURG		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
16-15-16	44636	15.9	14.7	18.5			101
17-17-17	44637	18.0	19.0	17.5			103
17-17-17	44639	16.6*	17.4	20.5			100
17-17-17	44640	17.5	19.1	17.5			102
18- 0-27	44638	17.7	0.0	29.5			102
FOURTH ST. FERT. CC., INC.		LEXINGTON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-23-30	44271	0.0	24.2	31.0			104
5-10-15	43688	5.0	9.9	15.2			100
5-10-15	43804	5.4	10.4	16.0			106
5-10-15	44185	4.8	9.2*	15.3			97*
5-10-15	44267	5.1	10.1	15.3			101
5-10-15	44270	4.7	9.9	16.3			101
5-10-15	44815	4.8	8.6*	16.5			97*
5-10-15	44885	4.6	9.2*	16.3			98
5-10-15	45346	5.1	10.6	16.0			105
5-20-20	43687	5.4	19.7	19.3			99
6-12-12	44817	6.1	11.7	11.9			99
6-24-24	44188	6.2	24.1	23.1			99
8-10-15	44883	7.7	9.7	16.1			100
8-10-15	44943	7.9	9.5	15.5			99
10- 6-15	44979	9.4	5.6	16.9			100
10- 8-12	44977	11.4	8.5	13.1			108
10-10-10	43315	9.1*	9.4	10.9			96*
10-10-10	44187	9.3*	9.8	9.8			96*
10-10-10	44272	8.9*	9.8	10.5			96*
10-10-10	44816	10.0	8.5*	11.7			99
10-10-10	44884	9.1*	9.3*	10.1			94*
10-10-10	44942	8.8*	8.0*	10.9			90*
12- 7-11	44976	12.9	7.3	12.3			104
15-15-15	44186	14.7	15.3	15.8			101
19-19-19	44268	15.7*	19.4	21.8			96*
21- 0-22	44269	21.2	0.0	23.2			101
FOURTH ST. FERT. CC., INC.		WINCHESTER		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0- 0-61	43261	0.0	0.0	60.8			100
9- 8-12	45344	9.9	8.3	13.7			102
10-10-10	45345	9.7	10.7	12.7			107

TABLE 1. (Continued)

FOURTH ST. FERT. CO., INC.		WINCHESTER		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
15-14-28	43686	15.2	14.5	29.5			101
FRANKLIN CROP SERVICE		FRANKLIN		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
12-18-18	43742	13.2	17.7	18.5			101
15-16-16	43743	9.4*	21.4	22.4			104
GAMALIEL BULK FERTILIZER INC		TOMPKINSVILLE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
3-14-14	43312	4.7	15.3	14.8			110
4-12-12	44237	5.8	12.3	13.0			110
15-15-15	45001	16.1	11.2*	19.0			98
17-6-6	44238	15.9*	4.8*	4.5*			83*
GLASGOW FERTILIZER CO.		GLASGOW		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
4-16-4	43570	4.2	15.4	4.0			99
4-16-4	43753	4.5	16.2	4.4			105
4-16-4	43887	4.5	16.7	4.7			107
5-10-15	43609	5.0	9.5	16.5			101
5-10-15	43656	5.0	9.6	16.5			102
5-10-15	43780	5.4	10.1	15.1			102
5-10-15	43894	4.8	9.1*	15.8			97*
5-10-15	43904	5.0	9.3*	16.2			100
5-10-15	44084	5.4	10.7	15.3			105
5-10-15	44130	5.0	9.9	15.5			101
5-10-15	44431	5.2	9.8	16.3			103
5-10-15	45132	5.1	10.0	14.7			100
5-10-15	45165	4.8	10.6	16.0			104
5-10-15	45291	4.1*	9.6	18.4			103
5-20-20	43383	5.6	19.1	20.0			100
5-20-20	43779	5.4	20.6	19.8			102
5-20-20	43897	5.2	20.1	20.5			101
5-20-20	43902	5.0	18.8*	20.6			98
5-20-20	44158	5.2	19.9	20.6			101
5-20-20	44587	5.3	20.7	19.8			103
5-20-20	45006	5.5	21.3	19.8			105
5-20-20	45261	5.1	20.4	19.7			101
5-20-20	43928	4.9	19.2	20.3			98
6-12-12	43445	6.8	13.4	11.4			108
6-12-12	43900	6.0	11.8	12.4			100
6-12-12	45122	5.9	12.6	12.5			103
6-24-24	45124	6.1	23.9	23.9			100
7-28-14	43752	7.2	28.7	14.0			102
7-28-14	43899	7.1	27.7	14.8			101
10-0-0	45005	11.3	0.0	0.0			113
10-0-0	45007	11.2	0.0	0.0			112
10-10-10	43242	10.4	10.4	9.8			103
10-10-10	43256	10.3	9.7	9.9			100
10-10-10	43657	9.8	10.3	10.2			100
10-10-10	43660	10.9	11.2	10.3			109
10-10-10	43896	10.2	10.8	9.8			103
10-10-10	43903	10.1	9.9	10.0			100
10-10-10	44083	10.6	10.9	9.8			105
10-10-10	44129	10.5	10.9	10.3			106
10-10-10	44156	9.8	9.9	10.5			100
10-10-10	44315	11.0	10.8	10.6			108
10-10-10	44429	10.8	10.3	10.5			106
10-10-10	44430	10.4	11.1	9.8			105
10-10-10	44667	9.8	9.5	10.4			98

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 27

TABLE 1. (Continued)

GLASGOW FERTILIZER CO.		GLASGOW		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
10-10-10	44971	9.6	10.3	10.4		100	
10-10-10	45042	10.1	10.5	9.8		102	
10-10-10	45123	10.4	10.4	10.6		105	
10-10-10	43925	12.2	11.7	10.5		116	
10-10-15	43675	10.0	9.2*	15.8		99	
10-26-26	43927	9.2*	22.9*	29.6		96*	
12-24-24	43781	11.7	22.6*	25.7		99	
12-24-24	45100	11.6	23.4	24.7		99	
13-33-14	43926	12.7	32.1*	16.8		99	
15-15-15	43895	15.0	14.7	15.8		100	
15-15-15	44157	15.7	15.3	15.1		103	
15-15-15	44316	15.5	14.2	15.5		101	
15-15-15	44748	15.0	15.8	14.8		101	
15-15-15	43929	15.2	14.5	14.9		99	
W.R. GRACE & CO.-AGR PROD. DIV		CADIZ		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
15- 8- 8	44334	16.4	8.9	8.8		108	
16- 7- 7	44333	18.0	7.4	6.7		105	
16- 8- 8	44913	17.1	8.0*	8.8		98	
W. R. GRACE & CO.		CECILIA		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
19-19-19	45281	18.7	19.3	20.4		100	
23-16-16	45279	22.1*	16.7	17.1		98	
23-16-16	45282	23.8	14.1*	16.3		97*	
25-14-15	45280	25.3	14.5	14.7		99	
W. R. GRACE & CO.		IRVINGTON		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
6-26-26	45109	6.7	27.4	25.0		102	
6-26-26	45110	6.4	27.8	24.6*		101	
19-19-19	44252	18.3*	19.2	20.3		98	
19-19-19	44255	18.3*	18.9	21.0		99	
22-17-17	44256	21.7	18.3	17.1		100	
W R GRACE & CO		LA CENTER		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
3-11-19	45160	3.9	9.9*	18.7*		91*	
W. R. GRACE & CO.		HOPKINSVILLE		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
0- 0-60	43313	0.0	0.0	59.7		100	
5-15-25	45202	4.9	12.8*	22.6*		90*	
9-10-15	45204	9.0	8.2*	12.3*		89*	
W.R. GRACE & CO. AG CHEM GRUP		MEMPHIS		TN			
GRADE	NUM	N	APA	POT	XS CL	RV	
0-46- 0	43272	0.0	45.8	0.0		100	
0-46- 0	44250	0.0	44.5	0.0		97	
4-16- 4	43515	4.8	14.8*	5.9		104	
4-16- 4	43659	4.4	15.3	5.5		103	
4-16-28	43862	3.8	19.0	24.4*		101	
4-16-28	43863	4.2	15.7	28.5		101	
4-16-28	43875	3.7	14.6*	29.6		98	
5-10-15	43513	6.0	11.3	16.0		112	
5-10-15	43611	5.1	9.9	15.1		100	
5-10-15	43798	5.2	11.0	13.5*		101	
5-10-15	44462	5.2	11.8	13.7*		104	
5-10-15	44463	4.9	9.9	14.8		98	
5-10-15	44313	5.9	11.5	16.9		115	
5-10-15	45111	5.4	11.0	16.2		109	
5-20-20	43797	4.5	20.0	20.1		98	

TABLE 1. (Continued)

W.R. GRACE & CO. AG CHEM GROUP		MEMPHIS		TN		XS CL	RV
GRADE	NUM	N	APA	POT			
5-20-20	44253	4.9	19.5	21.0			100
5-20-20	44460	4.9	18.6*	20.6			97*
6-24-24	43556	6.7	24.9	21.7*			101
6-24-24	43635	6.2	24.7	23.8			102
6-24-24	43864	7.9	26.3	19.4*			104
6-24-24	44260	7.0	24.6	22.4*			102
6-24-24	44261	6.8	24.1	23.2			101
6-24-24	44266	6.7	24.2	23.4			101
6-24-24	44311	6.3	23.6	22.6*			98
6-24-24	44445	6.3	24.5	22.2*			99
6-24-24	44467	6.1	23.7	24.8			101
6-24-24	44312	6.4	22.9	22.3*			97*
6-38-6	43518	5.9	34.1*	9.0			96*
7-40-6	44550	7.3	44.1	6.2			109
10-10-10	43412	10.2	14.2	11.7			119
10-10-10	43433	9.5	10.3	11.1			101
10-10-10	43514	9.7	13.5	16.3			125
10-10-10	43634	10.8	11.2	8.4*			104
10-10-10	44254	8.8*	12.7	12.5			109
10-10-10	44310	10.4	11.1	12.6			111
10-10-10	44314	10.4	11.0	12.3			110
15-15-15	43633	14.6	15.5	14.8			100
15-15-15	43658	14.7	15.0	15.5			100
15-15-15	43876	13.7*	14.4	16.8			97*
15-15-15	44581	15.0	16.3	14.8			103
15-15-15	44776	14.2	16.9	15.1			102
15-15-15	45375	14.2	15.3	16.1			100
33-0-0	43610	32.8	0.0	0.0			98
33-0-0	43796	33.9	0.0	0.0			101
46-0-0	43273	46.1	0.0	0.0			100
W. R. GRACE & CO.		NASHVILLE		TN		XS CL	RV
GRADE	NUM	N	APA	POT			
0-23-30	44854	0.0	23.1	30.3			101
5-20-20	43251	5.0	18.7*	21.4			99
5-20-20	44856	4.8	19.4	21.1			99
6-24-24	43279	5.9	22.4*	23.8			96*
10-10-10	43252	9.7	10.3	11.3			103
82-0-0	44857	81.9	0.0	0.0			100
W.R. GRACE & CO. AG CHEM GROUP		NEW ALBANY		IN		XS CL	RV
GRADE	NUM	N	APA	POT			
0-0-60	44565	0.0	0.0	60.6			101
0-23-30	45410	0.0	24.1	29.9			102
0-46-0	44563	0.0	45.1	0.0			98
4-16-4	43695	4.2	15.1*	5.0			100
5-10-15	43698	5.5	12.2	16.0	*		113
5-10-15	44292	5.5	11.2	15.7			109
5-10-15	44377	5.4	11.5	13.2*			103
5-10-15	44298	5.1	12.1	16.8			112
6-24-24	44378	6.3	24.3	23.8			101
6-24-24	45330	6.1	25.5	21.5*			100
6-24-24	44299	6.6	22.4*	24.8			100
6-24-24	45412	6.3	24.4	24.2			102
7-28-28	44562	5.9*	22.9*	32.6			94*
10-10-10	43697	11.1	10.6	8.6*			104
10-10-10	44291	10.7	10.4	10.9			106
10-10-10	45331	9.8	11.1	11.5			106
12-12-18	43701	11.8	14.4	17.1			104

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 29

TABLE 1. (Continued)

W.R. GRACE & CO. AG CHEM GROUP		NEW ALBANY		IN		
GRADE	NUM	N	APA	POT	XS CL	RV
18-46-0	44251	17.3	44.8	0.0		97*
18-46-0	44564	17.3	46.2	0.0		99
GRAVES CO. SOIL IMP. ASSN.		MAYFIELD		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
9-23-30	44224	8.8	22.4	31.4		100
12-30-20	44222	12.4	31.2	20.1		102
15-11-17	44220	15.5	11.5	18.5		101
19-17-20	44223	19.9	15.0*	21.5		97*
22-15-18	44221	22.6	15.3	18.8		101
GREEN CO. FARM SUPPLY		GREENSBURG		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
6-12-12	43347	7.5	12.7	10.9*		106
17-17-17	44668	18.0	16.5*	18.9		99
17-17-17	44670	17.7	17.8	18.3		100
17-17-17	44671	17.8	17.0	18.5		99
17-17-17	44672	18.8	14.5*	18.7		97*
20-10-18	44669	21.1	10.5	18.1		102
GREENLEAF PLANT FGD'S		DANVILLE		KY		
GRADE	NUM	N	APA	PCT	XS CL	RV
0-10-30	43845	0.0	9.4	29.7		97*
0-10-30	43846	0.0	9.4	29.7		97*
0-15-30	43852	0.0	15.0	28.9		98
0-20-20	43843	0.0	20.3	17.5*		96*
0-20-20	43847	0.0	18.5*	20.8		97*
0-20-20	43853	0.0	18.3*	21.1		97*
0-20-20	44001	0.0	18.4*	21.5		98
4-16-4	43667	5.2	14.9*	5.9		107
5-10-10	44406	5.7	10.3	10.9		108
5-10-15	43456	5.1	11.0	9.6*		91*
5-10-15	43721	5.0	9.7	15.3		99
5-10-15	43727	6.1	11.8	13.7*		109
5-10-15	43728	5.8	10.9	14.8		107
5-10-15	43730	5.2	10.3	15.3		103
5-10-15	43841	5.5	9.5	15.6		102
5-10-15	43996	5.6	10.5	14.8		104
5-10-15	44002	5.8	11.1	15.4		109
5-10-15	44404	4.9	9.3	16.0		99
5-10-15	44906	4.5	9.0*	16.3		97*
5-10-15	44933	5.7	10.4	15.0		105
5-10-15	45046	5.3	10.1	15.1		102
5-10-15	45351	7.4	13.2	12.1*		117
5-10-15	45352	7.1	14.7	13.8*		125
5-20-20	43840	5.6	20.5	19.0		101
5-20-20	43844	5.2	20.3	19.1		100
5-20-20	43850	5.4	20.5	18.8*		101
5-20-20	44005	4.2*	17.3*	26.3		101
6-6-18	45045	6.8	6.9	16.3*		103
6-12-12	44412	5.5	11.3	13.5		99
6-12-18	43848	6.5	14.2	16.3*		105
6-12-18	43854	5.6	11.8	19.7		101
6-24-24	43851	6.3	23.1	22.8*		97*
7-0-0	43668	6.7	0.0	0.0		96*
10-10-10	43372	9.7	9.6	9.5		96*
10-10-10	43457	10.1	12.7	9.8		109
10-10-10	43666	9.1*	9.7	11.6		98
10-10-10	43726	11.6	10.8	8.3*		106
10-10-10	43839	10.8	10.6	9.8		105

TABLE 1. (Continued)

GREENLEAF PLANT FOCDS		DANVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
10-10-10	43998	10.1	10.0	9.9		100
10-10-10	44004	12.7	11.1	7.5*		110
10-10-10	44403	9.1*	9.9	10.4		97*
10-10-10	44411	9.8	9.6	9.2*		96*
10-10-10	44524	9.5	10.4	10.3		100
10-10-10	44723	12.1	12.8	11.0		121
10-10-10	44934	10.6	11.5	10.0		108
10-10-10	45047	10.0	10.4	10.0		101
10-20-20	43725	11.3	24.4	15.7*		107
12-12-12	43723	10.2*	10.6*	8.7*		83*
19-19-19	43539	18.1	18.9	19.5		98
19-19-19	43724	19.9	20.0	15.5*		100
19-19-19	44405	19.0	18.0*	16.0*		95*
19-19-19	45133	18.1	19.4	18.2		98
22- 0-20	44003	22.2	0.0	18.4*		98
GREEN VALLEY FARM SUPPLY		CALHOUN		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-12-42	44139	0.0	13.7	42.7		102
0-21-29	45255	0.0	22.2	29.7		101
0-22-30	44288	0.0	23.4	29.8		103
0-23-30	43317	0.0	24.0	28.9		101
9-23-30	44140	8.6	22.0	31.4		99
9-23-30	45256	8.8	23.6	30.3		101
GREEN VALLEY FARM SUPPLY		ISLAND		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-22-30	45252	0.0	15.3*	39.7		100
0-22-30	45253	0.0	25.6	26.8*		104
GRC-GREEN CHEMICAL CO., INC.		SHELBYVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0- 6-26	45361	0.0	6.6	30.9		114
0-13-15	44190	0.0	13.8	14.9		100
0-13-23	44210	0.0	14.2	16.3*		88*
0-13-27	44189	0.0	13.3	28.2		99
0-19-19	43819	0.0	17.6*	19.7		96*
3- 4-12	43821	3.8	5.0	12.3		107
4- 9-14	45358	5.7	9.0	15.4	*	104
5-10-15	44103	6.5	11.9	14.8	*	114
5-10-15	44437	3.0*	6.1*	16.8	*	80*
5-10-15	45338	6.7	12.8	14.8	*	118
5-20-20	44105	5.8	22.3	13.0*		97*
5-20-20	43820	5.5	20.4	20.5		103
8-10-15	43818	8.1	9.6	16.0	*	101
8-10-15	44123	7.2*	8.8*	15.7	*	94*
8-12-15	44104	11.5	17.5	11.7*		124
8-24-10	44106	8.0	23.5	11.6		101
9- 8-12	45359	11.0	9.1	10.5*		104
10-10-10	44108	11.9	12.4	11.4		119
10-10-10	44438	8.7*	8.6*	11.9		94*
10-10-10	44209	9.9	10.3	8.3*		97*
12-12-12	44107	15.3	16.4	11.8		124
12-12-12	44208	12.8	13.2	8.4*		100
18- 9- 9	45360	16.8*	10.3	13.2		101
22- 7-10	44207	22.0	6.6*	6.8*		92*
23- 8- 8	44206	21.0*	8.2	7.9		94*
33- 0- 0	44121	33.6	0.0	0.0		100
33- 0- 0	44439	33.5	0.0	0.0		100

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 31

TABLE 1. (Continued)

GRO-GREEN SALES CO.		LEBANON		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-14-39	43340	0.0	12.7*	40.0		96*
5-10-27	44101	5.7	11.1	28.0		102
6-24-24	44099	6.3	25.1	23.6*		100
9- 9- 9	44100	10.8	9.9	9.7		105
26- 7-20	44102	26.0	7.5	19.2		99
GRO-GREEN PAYNES, INC.		LEXINGTON		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
8-10-15	45029	8.1	8.1*	13.5*		91*
10- 8-12	45232	9.9*	8.4	13.5		101
10-10-10	45030	9.4	9.7	11.0		99
16- 8- 8	44678	14.8*	8.2	11.1		102
23- 0-28	44200	24.1	0.0	27.2		99
24- 6-17	44679	20.6*	6.3	23.0		95*
GROWER SERVICE CCRP		LANSING		MI		
GRADE	NUM	N	APA	POT	XS CL	RV
6-18- 6	44793	6.6	20.8	7.9		116
10-10-10	44930	11.4	11.8	15.0		123
HANCOCK COUNTY FARM SUPPLY		HAWESVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-24-26	44296	0.0	28.1	22.9*		103
3-12-12	45413	3.7	14.0	11.8		111
7-18-36	44295	7.6	19.6	34.9		102
18-46- 0	44297	17.7	46.7	0.0		100
HARDIN GRAIN ELEVATOR, INC.		HARDIN		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
24-11-18	44826	24.8	10.8	19.1		99
24-11-18	44827	24.4	11.0	19.1		99
HOLLINGSWORTH FERT.		MT. HERMON		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
15-10-10	44155	14.4	10.2	9.8		98
HOPKINSVILLE ELEVATOR CO, INC.		HOPKINSVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
6-15-13	43301	8.9	18.0	15.8		123
6-26-25	44300	6.7	27.0	25.6		102
10-26-26	43303	10.1	25.3	27.5		100
12-30-20	43302	12.3	32.0	19.8		103
HOWE-HILLIARD GRAIN CO.		MAYFIELD		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
9-23-30	44226	9.1	22.5	31.0		100
9-23-30	44227	8.9	22.3	31.1		100
10-27-24	44225	10.8	26.3	25.9		100
12-31-18	44228	11.3*	28.2*	20.5		93*
HUTSON'S AG SERVICE		MURRAY		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
9-23-30	45095	9.3	23.4	30.3		102
13-20-20	45094	13.6	20.8	21.8		101
24-15-14	45093	24.0	16.6	15.1		101
33- 0- 0	45399	29.2*	0.0	0.0		87*
HUTSON CHEMICAL COMPANY		MURRAY		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
6-24-24	43866	6.4	22.1*	25.7		100
6-24-24	44595	6.7	23.6	24.6		102
12-18-18	45092	12.9	20.3	17.0*		106
16-17-17	45091	16.0	14.0*	20.6	*	99
34- 0- 0	44308	33.7	0.0	0.0		99
46- 0- 0	43628	44.8	0.0	0.0		97

TABLE 1. (Continued)

INTERNATIONAL MIN & CHEM CORP		FLCRENCE		AL		
GRADE	NUM	N	APA	POT	XS CL	RV
0-0-22	43577	0.0	0.0	21.1		96
JOHNSON CITY CHEMICAL INC.		JOHNSON CITY TN				
GRADE	NUM	N	APA	POT	XS CL	RV
5-10-10	44728	4.6	9.3	9.8		94*
6-12-12	44498	5.5	11.2*	12.3		95*
6-12-12	44729	5.7	11.7	12.5		99
7-0-0	44621	7.0	0.0	0.0		100
7-0-0	44771	6.9	0.0	0.0		98
JANES FERTILIZER		COLUMBIA		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
4-9-14	44903	6.0	7.4*	16.5		103
4-9-15	45037	4.5	9.6	16.2		99
4-19-19	43958	4.5	18.1*	22.9		100
5-20-10	44076	4.5	19.1	10.7		96*
5-23-24	44074	5.3*	22.7*	25.8		98
7-9-13	44904	5.4*	3.3*	19.7		83*
9-8-12	45039	9.5	7.7*	14.3		101
10-10-10	44075	8.1*	10.0	10.0		91*
12-11-9	45038	13.2	9.6*	11.3		102
14-6-9	45040	14.2	6.4	11.0		103
20-10-10	44905	18.1*	10.4	11.5		97*
K-MART CORP.		TRCY		MI		
GRADE	NUM	N	APA	POT	XS CL	RV
10-10-10	44274	10.1	10.9	11.0		105
10-10-10	45196	9.9	11.2	10.3		104
10-10-10	45197	9.7	10.5	11.2		103
KAISER AGRI. CHEM.		LOUISVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
6-12-12	45376	6.2	13.4	14.5		112
KAISER AGRI. CHEM.		LOUISVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
4-16-4	43550	4.3	17.0	5.7		110
4-16-4	43865	4.9	17.2	6.3		116
4-16-4	43871	4.6	16.2	6.7		112
5-10-15	43684	6.1	10.7	15.4		109
5-10-15	43870	4.9	11.4	16.6	*	108
5-10-15	44082	5.2	9.2*	16.3		101
5-10-15	44170	4.8	9.9	16.0		101
5-10-15	44205	5.1	9.7	13.8*		96*
5-10-15	44379	8.3	11.2	13.0*	*	116
5-10-15	44383	5.2	10.6	14.8		103
5-10-15	44385	4.8	11.5	16.0		107
5-10-15	44515	5.7	12.4	16.9	*	117
5-10-15	44648	5.1	10.1	15.0		100
5-10-15	44794	4.8	11.3	16.4		107
5-10-15	44878	5.2	10.7	15.5		105
5-10-15	44931	5.5	11.2	16.6		111
5-10-15	45025	4.7	9.9	16.6		102
5-10-15	45169	4.6	10.3	15.9		101
5-10-15	45192	4.3*	11.3	17.7		108
5-10-15	45262	4.6	11.2	15.5		104
5-10-15	45378	5.0	6.1*	17.0		90*
5-20-20	43305	5.9	15.7*	15.6*		85*
5-20-20	43547	4.9	18.7*	20.2		97*
5-20-20	43672	3.8*	15.0*	23.5		89*
5-20-20	44017	5.3	19.6	20.0		100
5-20-20	44069	4.5*	18.2*	19.7		93*

TABLE 1. (Continued)

KAISER AGRI. CHEM. GRADE	NUM	LOUISVILLE			XS CL	RV
		N	APA	POT		
5-20-20	44234	5.3	17.3*	17.4*		90*
5-20-20	44347	5.3	20.9	20.1		103
5-20-20	44349	5.3	20.6	17.9*		99
5-20-20	44458	6.1	18.4*	20.5		100
5-20-20	45257	5.9	17.2*	20.0		96*
5-20-20	44072	5.1	19.8	21.9		103
6-12-6	44044	6.4	12.5	11.5		119
6-12-12	43940	9.4	11.3	12.7		115
6-12-12	44233	6.8	12.1	13.8		108
6-12-12	44351	6.9	15.0	10.4*		111
6-12-12	44608	5.7	20.3	22.3		153
6-12-12	44880	6.5	11.1*	13.7		103
6-24-24	43548	6.2	23.0	22.0*		96*
6-24-24	43696	5.6	22.7*	23.2		95*
6-24-24	43873	6.6	22.2*	23.8		98
6-24-24	43941	6.9	22.2*	24.7		100
6-24-24	44045	8.1	20.0*	19.5*		91*
6-24-24	44380	5.5	21.9*	25.5		96*
6-24-24	44423	5.7	22.8*	24.1		97*
6-24-24	45364	5.8	23.0	24.1		97*
6-24-24	43320	7.0	22.5*	22.5*		97*
6-24-24	43420	5.8	23.4	23.5		98
9-10-15	43564	8.5	10.6	15.4		100
9-10-15	43817	9.0	10.8	15.8		104
9-10-15	44015	9.1	10.3	16.4		104
9-10-15	44348	9.0	10.0	15.6	*	101
9-10-15	44350	8.7	10.4	15.9		102
9-10-15	44384	9.1	10.7	16.4		105
9-10-15	44812	8.5	11.0	15.5		102
9-10-15	44814	8.5	10.9	15.6		102
10-10-10	43304	9.8	10.3	10.5		101
10-10-10	43345	9.9	10.9	11.8		106
10-10-10	43434	8.8*	10.9	10.2		98
10-10-10	43532	9.6	10.1	10.9		100
10-10-10	43626	9.8	11.3	11.9		107
10-10-10	43673	9.8	10.1	9.9		99
10-10-10	43683	8.9*	10.5	12.4		102
10-10-10	43692	9.8	10.0	10.2		99
10-10-10	43729	10.2	11.2	11.9		109
10-10-10	44081	9.8	10.6	11.8		105
10-10-10	44128	9.8	10.7	10.9		104
10-10-10	44346	10.2	10.1	10.8		103
10-10-10	44356	9.9	10.2	11.4		103
10-10-10	44381	10.1	9.9	12.7		106
10-10-10	44382	9.8	11.0	11.9		107
10-10-10	44427	11.9	10.1	11.8		113
10-10-10	44609	9.3*	9.6	10.7		97*
10-10-10	44736	11.2	9.7	11.2		107
10-10-10	44877	10.3	9.8	11.1		103
10-10-10	44909	10.1	11.1	10.9		106
10-10-10	44932	9.2*	10.4	11.5		101
10-10-10	45166	5.9	10.8	11.9		107
10-10-10	45167	9.7	10.0	10.8		101
10-10-10	45168	10.2	10.8	11.1		106
10-10-10	45258	9.8	10.4	11.2		103
10-10-10	45263	6.4*	10.5	12.6		91*
10-10-10	45386	9.5	10.5	11.5		103

TABLE 1. (Continued)

KAISER AGRI. CHEM.		LOUISVILLE			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
10-10-10	45395	9.7	10.8	10.9		103
10-10-15	43869	9.0*	11.4	13.4*	*	97*
10-10-15	43898	11.1	10.2	14.8		104
12-12-12	43549	11.8	10.6*	12.9		97*
12-12-12	44388	11.6	11.6	13.7		100
12-12-12	44737	12.2	12.1	13.7		104
12-12-12	44813	10.1*	10.9*	13.9		93*
12-12-12	44879	10.3*	11.4	13.6		95*
12-12-12	45193	11.5	12.0	12.9		100
13-13-13	43282	10.9*	14.0	14.2		97*
15-10-10	45405	14.6	10.7	11.1		102
15-15-15	43872	12.9*	15.2	14.9		94*
15-15-15	44070	12.9*	15.2	15.5		95*
33- 0- 0	44068	32.3	0.0	0.0		96
33- 0- 0	45401	32.0*	0.0	0.0		96*
33- 0- 0	43421	33.4	0.0	0.0		100
KAISER AGRI CHEM		SAVANNAH			GA	
GRADE	NUM	N	APA	POT	XS CL	RV
10-10-10	45198	9.9	10.9	11.3		105
KALIUM CHEMICALS		ATLANTA			GA	
GRADE	NUM	N	APA	POT	XS CL	RV
0- 0-62	43401	0.0	0.0	61.4		99
KENTUCKY FERTILIZER WORKS		WINCHESTER			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
4-16- 4	43802	4.3	17.8	5.6		113
4-16- 4	43836	4.5	17.9	5.3		114
4-16- 4	44167	4.3	16.2	5.2		106
5-10-10	43956	4.6	8.4*	10.4		92*
5-10-15	43955	4.2*	7.8*	16.7		92*
5-10-15	44114	5.0	9.9	15.9		102
5-10-15	44115	4.7	9.2*	16.0		98
5-10-15	44117	4.8	9.4	16.4		100
5-10-15	44118	4.6	9.1*	15.4		96*
5-10-15	44522	4.7	11.3	15.9		106
5-10-15	44939	5.3	10.5	15.9		106
6- 6-18	44441	5.1*	5.6	20.0		99
8-10-15	44940	8.1	11.0	15.6		105
10-10-10	43803	9.3*	8.8*	11.9		97*
10-10-10	44119	9.1*	9.1*	11.3		96*
10-10-10	44120	8.8*	8.6*	11.5		93*
10-10-10	44523	9.2*	9.3*	11.2		97*
10-10-10	44886	9.5	10.4	9.8		99
10-10-10	45190	8.0*	10.0	13.3		98
10-10-10	45322	10.4	7.9*	17.1		111
10-10-20	45145	9.5	9.9	21.6		101
12-12-12	44113	11.6	11.5	13.1		99
33- 0- 0	44112	33.2	0.0	0.0		99
33- 0- 0	44116	32.7	0.0	0.0		98
LEBANON CHEMICAL CG.		LEBANON			PA	
GRADE	NUM	N	APA	POT	XS CL	RV
20- 4- 4	44273	23.5	4.4	4.1		115
30- 4- 4	44060	29.8	5.2	4.8		103
LIVINGSTON CC. FARM & HOME SUP		SMITHLAND			KY	
GRADE	NUM	N	APA	PCT	XS CL	RV
0-26-25	44589	0.0	25.9	25.6		99

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 35

TABLE 1. (Continued)

LIVINGSTON CO. CCOB		SMITHLAND		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
23-30- 0	44470	22.2	32.6	0.0		101
LCRETTO FEED & FERT.		LORETTO		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
9-23-22	44719	8.6	20.2*	28.5		101
24-13- 7	44718	24.8	12.5	8.9		100
27-13-12	44720	25.1*	14.5	15.8		100
28-12-12	44717	26.7*	14.9	12.5		100
33-19- 0	44721	34.9	18.3*	0.0		101
MCCAULEY BROS SEED CO		VERSAILLES		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
12- 0-16	44682	11.2*	0.0	17.1		98
12- 0-23	44681	11.5*	0.0	24.7		100
22- 0-20	44684	22.8	0.0	20.3		101
22- 0-20	44680	23.3	0.0	20.5		102
22- 0-20	44683	23.1	0.0	20.7		102
MARSHALL CTY SOIL IMP. ASSOC.		BENTON		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-25-25	44828	0.0	26.8	26.3		103
6-25-26	44340	6.6	26.4	25.8		103
23-11-11	44341	23.4	11.5	12.0		100
MAYFIELD MILLING CC.		MAYFIELD		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
5-17-17	45151	7.2	18.7	13.5*		100
8- 9-14	45205	8.8	8.0*	13.0*		90*
MEADE FARMERS SUPPLY		BRANDENBURG		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-24-24	43341	0.0	26.0	22.6*		99
4-26-22	44147	5.4	27.2	22.5		104
6-26-25	45104	8.4	30.1	21.8*		107
21-12-12	45103	20.8	12.5	13.5		100
21-17-17	45102	22.5	15.8*	18.6		100
22-15-15	45101	21.6	19.0	14.8*		103
METCALFE CO. FARMERS SUPPLY		EDMONTON		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-19-19	44027	0.0	19.3	21.9		104
5-20-20	44029	5.5	24.0	18.8*		110
10-10-10	44028	12.1	11.6	11.0		117
10-10-10	44030	11.3	12.1	9.8		113
10-10-10	44031	12.1	10.8	10.0		112
MID-OHIO CHEMICAL CO., INC.		MT. STERLING OH		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
5-10-10	44874	4.8	10.1	12.2		106
5-10-10	45194	5.3	9.5	12.6		107
5-20-20	44875	5.2	21.2	20.3		104
10-10-10	43953	9.5	15.7	13.3		124
10-10-10	44876	9.2*	10.2	10.8		99
10-20-20	45366	9.5	20.7	19.8		100
10-20-20	45367	8.7*	19.6	20.6		96*
12-12-12	43952	10.3*	11.0*	14.6		96*
12-12-12	45368	11.4	12.0	10.3*		94*
MILES FARM SUPPLY, INC.		OWENSBORO		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-46- 0	43884	0.0	45.7	0.0		99
4-10-15	45406	5.2	10.0	16.5		105
5-26-25	45407	5.9	25.6	27.2		100
9-23-30	44646	8.2*	20.0*	34.9		98
9-23-30	44647	7.9*	19.8*	35.2		98

TABLE 1. (Continued)

MILES FARM SUPPLY, INC.		OWENSBORO		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
9-23-30	45408	7.1*	18.2*	36.1		94*
10-34- 0	43888	15.6	22.2*	0.0		91*
10-34- 0	43890	10.2	35.7	0.0		104
10-34- 0	45049	10.1	32.1*	0.0		96*
18-46- 0	43886	18.3	45.5	0.0		100
28- 0- 0	43889	25.2*	0.0	0.0		90*
28- 0- 0	45050	28.1	0.0	0.0		100
33- 0- 0	43885	34.0	0.0	0.0		101
45- 0- 0	43937	45.2	0.0	0.0		100
MISSISSIPPI CHEMICAL CORP		YAZOO CITY		MS		
GRADE	NUM	N	APA	POT	XS CL	RV
32- 0- 0	44804	31.2	0.0	0.0		97
34- 0- 0	43437	33.5	0.0	0.0		99
MONSANTO AGRI CENTER		SLAUGHTERS		KY		
GRADE	NUM	N	APA	PCT	XS CL	RV
0-23-30	45070	0.0	22.3	29.7		98
5-23-20	45068	7.3	21.6*	19.7		101
6-26-26	44650	5.9	24.8*	26.7		98
7-20-20	44649	9.1	18.6*	18.5*		101
17-11-15	45069	18.1	8.8*	16.4		99
MOORE-HUTCHESON CO.		MORGANTOWN		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
6-25-26	44056	6.2	24.6	27.1		99
MORRISON FARM SVC		HODGENVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
9- 9- 9	44024	13.9	12.1	11.1		129
10-26-26	44023	10.4	25.9	26.6		101
15-22-22	44032	16.1	22.4	21.9		101
17-17-17	44033	16.0*	12.2*	25.0		94*
17-17-17	44034	17.8	16.9*	18.8		99
NORTH AMERICAN FERTILIZER CC.		LOUISVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0- 0-60	43353	0.0	0.0	59.6		99
0-18-36	43651	0.0	17.9	35.0		98
0-25-25	43238	0.0	27.3	24.1		104
0-25-25	43291	0.0	22.8*	26.7		98
0-25-25	45392	0.0	25.9	24.7		102
3-13-39	44193	3.1	12.7	37.9		98
4-16- 4	43644	5.6	13.6*	5.6		103
5-10-15	43543	4.4*	7.3*	18.4		96*
5-10-15	43606	4.7	8.0*	16.9		96*
5-10-15	43645	4.2*	6.0*	22.6		100
5-10-15	43652	4.4*	6.3*	18.9		93*
5-10-15	43654	4.4*	6.5*	19.0		94*
5-10-15	43700	6.4	12.6	11.7*		108
5-10-15	44086	4.8	8.8*	16.8		99
5-10-15	44152	4.8	8.9*	16.6		98
5-10-15	44196	5.7	10.2	15.1		104
5-10-15	44198	5.0	9.6	16.8		103
5-10-15	44893	4.9	10.6	14.8		101
5-10-15	44894	4.8	9.2*	16.8		100
5-20-20	43343	5.2	18.8*	20.9		99
5-20-20	43544	4.0*	16.7*	23.4		94*
5-20-20	43649	3.9*	16.5*	22.8		92*
5-20-20	43653	3.8*	15.9*	23.5		91*
5-20-20	44145	5.3	20.2	19.3		100
6-24-24	43350	6.0	23.9	23.5		99

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 37

TABLE 1. (Continued)

NORTH AMERICAN FERTILIZER CO.		LOUISVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
6-24-24	43541	3.6*	13.5*	36.7		89*
6-24-24	44191	6.5	23.0	24.4		100
6-24-24	44773	6.4	23.5	25.3		102
9- 9-17	43546	8.7	6.7*	18.2		94*
9- 9-17	44195	9.1	7.7*	16.8		96*
10-10-10	43346	9.5	10.2	10.1		99
10-10-10	43352	9.7	10.8	10.9		103
10-10-10	43605	9.9	8.7*	11.7		99
10-10-10	43646	11.0	8.9*	9.2*		99
10-10-10	43702	10.4	10.4	10.1		103
10-10-10	44146	5.8	9.5	10.1		97*
10-10-10	44151	10.8	10.5	9.9		105
10-10-10	44197	10.3	10.5	9.9		103
10-10-10	44840	9.9	9.8	10.6		100
10-10-10	44895	9.8	9.1*	10.2		97*
10-10-10	45391	10.1	7.9*	9.4		92*
10-10-15	44772	9.0*	7.5*	17.7		94*
12-12-12	43351	11.8	11.1*	11.8		96*
12-12-12	43542	12.2	8.5*	12.7		92*
12-12-12	44195	10.9*	10.8*	12.3		93*
12-12-12	44839	9.1*	9.3*	15.8		89*
12-24-24	44194	11.5	23.7	25.6		100
15-15-15	43540	13.3*	12.7*	17.6		94*
15-15-15	44087	13.7*	13.6*	14.8		93*
19-19-19	43290	18.3	19.5	20.2		101
19-19-19	43545	16.2*	16.3*	25.4		96*
19-19-19	43563	15.4*	14.5*	25.5		91*
19-19-19	44144	18.2	18.3	19.2		97*
19-19-19	44192	17.6*	17.9*	22.3		99
33- 0- 0	43650	34.4	0.0	0.0		103
33- 0- 0	43655	33.1	0.0	0.0		99
OHIO VALLEY FERTILIZER, INC.		MAYSVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
4-16- 4	43569	4.5	14.0*	6.8		102
5-10-15	43815	5.3	10.3	15.7		104
5-10-15	44511	5.4	9.9	15.1		102
5-10-15	45325	5.1	9.9	15.2		100
5-10-15	43365	5.6	10.6	14.8		105
9- 9-19	44861	10.1	10.6	21.1		105
10- 6- 4	43568	11.0	8.1	7.1		125
10-10-10	43814	5.8	10.4	9.8		100
10-10-10	44361	11.6	12.4	10.6		116
10-10-10	44510	9.6	10.0	10.0		98
10-10-10	45324	8.3*	8.8*	9.8		88*
10-10-10	44625	12.9	9.7	10.6		113
10-10-10	44626	10.4	9.2*	13.3		106
10-10-10	44630	10.9	11.2	16.3		122
10-10-20	43816	10.0	10.4	21.7		104
10-10-20	44362	8.5*	7.7*	17.3*		83*
10-10-20	44513	9.5	10.3	21.9		103
12-12-12	43364	12.4	13.3	11.3		104
16-16-16	44512	13.0*	13.3*	21.5		93*
16-16-16	44631	15.0*	14.7*	17.8		97*
19-19-19	45023	16.7*	18.8	18.2		93*
OLIN CORP.		LITTLE ROCK		AR		
GRADE	NUM	N	APA	POT	XS CL	RV
6-24-24	43629	6.4	24.4	24.3		102

TABLE 1. (Continued)

ROBERT B. PETERS, INC.		ALLENTOWN		PA		
GRADE	NUM	N	APA	POT	XS CL	RV
20-20-20	43404	19.8	20.2	19.4		99
J. PETTY CO.		GRACEY		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
18-12-7	44331	17.8	10.4*	10.9		102
20-11-4	44332	18.9*	12.3	4.1		100
PHELPS FARM SERVICE		PADUCAH		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
7-19-34	44338	8.0	20.3	34.4		102
7-19-34	44339	8.4	20.9	33.0		102
PLANT FOODS, INC.		MAYFIELD		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
5-17-21	45152	5.3	17.4	21.3		100
16-9-12	45206	16.3	9.5	12.4		100
PRICES MILL FARM SUPPLY		FRANKLIN		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-26-26	44245	0.0	27.3	24.7*		99
RICH POND CROP SERVICE		BCWLING GREENKY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-23-30	44566	0.0	25.7	27.2*		102
10-25-26	43930	9.0*	23.4*	29.6		97*
17-15-20	43931	17.5	17.5	19.2		104
RICH POND FEED & SEED CO.		BCWLING GREENKY				
GRADE	NUM	N	APA	POT	XS CL	RV
5-15-40	44561	8.4	21.3	33.4*		110
RUDOLPH FARM SUPPLY		SALEM		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-23-30	45379	0.0	23.2	30.2		101
6-26-26	45380	6.0	26.8	25.7		101
20-19-19	45381	18.2*	21.3	18.8		98
WILLIAM RUDY & SCN		BANDANA		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
9-23-30	44218	9.4	23.0	30.5		102
SACRAMENTO FEED MILL, INC.		SACRAMENTO		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-23-30	44141	0.0	23.0	31.6		102
9-23-30	45077	8.7	22.0	32.5		100
11-8-12	45078	10.4*	8.2	13.5		96*
SCHCCHOH CROP SERVICE		RUSSELLVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-23-30	44995	0.0	25.5	26.6*		101
SEWERAGE COM., CITY MILWAUKEE		MILWAUKEE		WI		
GRADE	NUM	N	APA	POT	XS CL	RV
6-2-0	44504	6.9	1.9	0.0		110
6-2-0	44774	6.5	2.3	0.0		110
SEYMOUR CHEMICAL COMPANY		SEYMOUR		IN		
GRADE	NUM	N	APA	POT	XS CL	RV
5-10-15	44148	5.1	10.6	15.9		105
5-20-20	44545	5.3	20.2	21.1		103
6-24-24	44544	6.7	24.8	24.4		104
12-12-12	43344	12.1	12.3	13.1		103
12-12-12	44150	12.3	11.8	13.2		103
12-12-12	44543	12.4	12.9	11.8		104
SHAKER GRAIN ELEVATOR		SOUTH UNION		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
0-23-30	44046	0.0	22.9	31.1		101
19-19-19	44043	17.3*	18.5	18.7		95*

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 39

TABLE 1. (Continued)

SHOCKLEES FARM SUPPLY		UTICA		KY		XS CL	RV
GRADE	NUM	N	APA	POT			
9- 8-12	45268	9.8	9.3	12.8			105
9-23-31	45292	8.1*	22.0	32.4			98
10- 7-11	45290	11.8	7.8	11.8			104
SMITH-DOUGLAS DIV		RUSSELLVILLE KY					
GRADE	NUM	N	APA	POT	XS CL		RV
0- 0-60	43259	0.5	1.0	59.6			99
0- 0-60	43392	0.0	0.0	60.1			100
0- 0-60	43451	0.0	0.0	51.6*			86*
0- 0-60	43505	0.0	0.0	59.2			99
0- 0-60	44998	0.0	0.0	58.1			97
0-46- 0	43260	0.6	44.9	0.0			98
0-46- 0	43391	0.0	46.2	0.0			101
5-10-15	43559	6.0	15.2	18.2	*		132
5-10-15	43758	5.7	10.5	16.3			108
5-10-15	43905	5.7	10.6	15.6			107
5-10-15	44924	5.5	10.6	15.6			106
5-10-15	45384	5.1	10.4	16.1			105
5-10-15	44567	8.0	9.0*	15.9			114
5-10-15	44571	5.4	10.7	15.6			106
5-10-15	44922	5.5	10.5	16.2			107
5-10-15	44996	5.4	10.4	15.9			106
5-20-20	43254	3.5*	17.4*	17.0*			84*
6-12-18	44999	6.3	15.0	17.8			110
6-21-18	44584	6.2	22.2	18.0			104
6-24-24	43292	6.1	22.7*	26.1			100
6-24-24	43332	6.1	21.8*	29.1			103
6-24-24	43398	6.4	21.8*	27.8			102
6-24-24	43408	6.2	22.9*	27.5			103
6-24-24	43410	6.3	25.3	22.9			102
6-24-24	44585	6.2	23.5	27.1			104
6-24-24	45048	5.9	23.7	25.2			101
6-24-24	43269	6.3	23.1	26.4			102
6-24-24	43293	6.6	20.7*	29.3			102
6-24-24	43362	6.0	24.1	25.3			102
6-24-24	43371	6.1	25.1	23.8			102
6-24-24	43390	6.1	24.4	24.9			102
6-24-24	43517	6.4	24.6	25.2			104
6-24-24	44309	5.9	25.2	24.8			103
6-24-24	44503	5.7	25.0	25.1			103
6-24-24	44572	5.8	22.2*	24.8			97*
6-24-24	44997	6.1	25.7	23.8			103
7-21-10	44583	6.9	20.2	11.4			100
8-16-24	44557	7.4	17.0	25.1			102
10-10-10	43331	10.0	11.5	11.2			108
10-10-10	43409	9.7	11.5	11.1			106
10-10-10	43560	9.7	11.4	11.8			107
10-10-10	43775	10.6	11.6	10.0			107
10-10-10	44586	9.9	11.8	11.5			109
10-10-10	44896	10.1	11.3	11.6			108
10-10-10	44897	10.1	11.1	11.8			108
10-10-10	45377	9.4	14.7	12.6			118
10-10-10	43361	9.9	9.7	13.5			106
10-10-10	43516	10.6	11.9	10.0			109
10-10-10	44501	10.0	10.8	10.6			104
10-10-10	44923	10.2	11.2	11.4			108
16- 8- 8	43255	13.3*	8.4	9.0			93*
16- 8- 8	43337	12.4*	9.1	9.6			92*

TABLE 1. (Continued)

SMITH-DOUGLAS DIV		RUSSELLVILLE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
16-8-8	44777	16.1	7.6	8.9		101
17-17-17	45385	13.4*	17.7	18.8		94*
18-46-0	43270	17.4	45.8	0.0		99
18-46-0	43498	17.9	46.4	0.0		100
33-0-0	43411	32.9	0.0	0.0		98
33-0-0	43476	33.2	0.0	0.0		99
SMITHS GROVE FERTILIZER CO		SMITHS GROVE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
5-20-20	43893	5.4	19.6	20.5		101
9-8-12	45307	8.9*	8.6	13.8		100
10-5-8	45308	9.1*	6.3	9.9		95*
10-10-10	44916	13.0	14.5	13.0		135
25-23-0	43785	26.3	21.1*	0.0		98
SOUTHEAST CHEMICAL		LONDON KY				
GRADE	NUM	N	APA	POT	XS CL	RV
10-10-10	43691	9.7	9.6	10.6		99
SOUTHERN STATES COOP., INC.		RICHMOND VA				
GRADE	NUM	N	APA	POT	XS CL	RV
0-0-50	43388	0.0	0.0	51.6		103
7-0-0	44164	6.7	0.0	0.0		96*
7-0-0	44376	7.4	0.0	0.0		106
7-0-0	44482	7.1	0.0	0.0		102
28-0-0	44747	28.1	0.0	0.0		100
34-0-0	44440	34.0	0.0	0.0		100
SOUTHERN STATES COOP., INC.		LOUISVILLE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-25-25	44012	0.0	26.9	23.4*		102
0-25-25	44396	0.0	25.9	24.6		102
4-16-4	43484	4.2	15.3	4.7		100
4-16-4	43538	4.3	16.2	4.8		105
4-16-4	43551	4.3	16.0	4.7		104
4-16-4	43557	4.4	15.2	5.5		103
4-16-4	43583	4.6	15.4	5.0		103
4-16-4	43867	4.4	15.8	4.9		104
5-10-15	43488	6.1	11.2	14.6		109
5-10-15	43490	5.8	10.7	15.3		107
5-10-15	43496	5.3	9.8	16.2		103
5-10-15	43558	5.7	10.9	13.3*		103
5-10-15	43572	5.3	10.2	16.2		105
5-10-15	43582	4.8	8.7*	15.6		95*
5-10-15	43632	5.5	10.4	15.2		104
5-10-15	43789	5.5	9.8	17.5		108
5-10-15	44370	5.4	9.7	18.9		111
5-10-15	44389	6.1	11.6	15.0		111
5-10-15	45272	5.7	11.3	13.9*		106
5-10-15	45329	4.7	9.2*	16.8		100
5-10-15	44392	5.9	10.8	11.4*		98
5-20-20	43497	5.8	21.2	19.8		105
5-20-20	43849	5.5	21.0	19.9		104
5-20-20	44397	5.2	20.9	19.2		102
5-20-20	44910	4.5	17.8*	20.1		93*
5-20-20	44391	5.6	20.7	19.7		103
6-12-12	43369	6.4	12.6	11.5		103
6-12-12	43495	6.7	13.5	12.7		110
6-12-12	43574	6.2	11.8	10.5*		96*
6-12-12	43711	7.5	13.9	13.3		117
6-12-12	44371	6.5	12.8	12.8		107

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 41

TABLE 1. (Continued)

SOUTHERN STATES CCCP., INC.		LOUISVILLE		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
6-12-12	44390	6.3	12.6	11.8		103	
10-10-10	43342	10.2	7.8*	13.2		101	
10-10-10	43422	9.4	9.3*	10.7		96*	
10-10-10	43423	10.1	11.3	10.2		105	
10-10-10	43491	8.9*	9.6	9.3*		92*	
10-10-10	43573	10.6	11.1	11.4		110	
10-10-10	43584	10.3	9.4	10.8		101	
10-10-10	43627	11.4	10.5	11.2		111	
10-10-10	43710	10.1	11.0	10.4		104	
10-10-10	43788	9.6	9.1*	8.8*		93*	
10-10-10	44345	12.8	8.4*	11.7		111	
10-10-10	44534	8.2*	9.7	10.6		92*	
10-10-10	44911	7.7*	9.4	10.2		88*	
10-10-10	44393	9.9	9.0*	11.9		100	
10-10-20	44811	8.8*	9.9	23.0		101	
12-12-12	44408	11.2*	10.2*	13.2		94*	
15-15-15	43507	13.8*	16.0	15.2		99	
15-15-15	43585	12.9*	14.8	15.9		95*	
15-15-15	44369	15.1	15.7	15.4		102	
15-15-15	44395	12.6*	16.1	14.9		95*	
15-15-15	44483	14.7	14.9	15.9		100	
15-15-15	45112	12.9*	14.2	15.7		93*	
15-15-15	44394	13.6*	16.7	14.8		99	
SOUTHERN STATES COCP., INC.		RUSSELLVILLE		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
0- 0-50	43325	0.0	0.0	50.5		101	
0- 0-50	43474	0.0	0.0	52.0		104	
0- 0-60	43475	0.0	0.0	60.5		101	
5-10-15	43389	4.8	11.2	14.5		102	
5-10-15	43439	5.2	9.9	15.3		101	
5-10-15	43442	5.1	9.8	15.6		101	
5-10-15	43449	5.3	9.7	15.3		101	
5-10-15	43467	5.3	10.2	15.5		103	
5-10-15	43468	5.2	10.5	14.8		102	
5-10-15	43486	5.4	10.3	15.0		103	
5-10-15	43589	5.5	9.8	15.8		104	
5-10-15	44052	5.5	10.6	15.8		107	
5-10-15	45052	5.3	11.1	14.2		104	
5-20-20	43298	5.3	18.7*	21.8		101	
5-20-20	43308	5.3	21.5	14.2*		95*	
5-20-20	43591	5.4	20.9	19.8		103	
5-20-20	44466	5.2	21.2	19.9		103	
5-20-20	45056	5.5	19.7	21.2		103	
6-12-12	43294	6.4	11.6	13.3		103	
6-12-12	44054	6.3	12.9	13.3		108	
6-12-18	44448	5.8	14.6	16.9*	*	105	
6-24-24	43448	6.4	24.2	23.4		101	
6-24-24	43555	6.0	23.8	24.8		100	
6-24-24	43590	6.4	24.4	23.3		101	
6-24-24	43874	6.3	24.4	23.8		101	
6-24-24	44055	6.0	24.8	23.8		101	
6-24-24	45051	6.4	24.7	22.8*		101	
10-10-10	43239	8.2*	13.3	13.7		111	
10-10-10	43295	9.5	11.8	10.0		104	
10-10-10	43348	10.2	10.9	9.9		104	
10-10-10	43359	10.6	11.0	10.7		107	
10-10-10	43375	9.7	10.8	9.9		101	

TABLE 1. (Continued)

SOUTHERN STATES COOP., INC.		RUSSELLVILLE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
10-10-10	43393	9.5	11.3	9.7		101
10-10-10	43394	9.6	11.4	9.9		103
10-10-10	43395	9.3*	11.5	9.0*		100
10-10-10	43440	9.6	10.4	10.1		99
10-10-10	43441	9.6	12.7	10.3		108
10-10-10	43443	9.4	10.9	10.1		100
10-10-10	43466	9.8	10.9	10.0		102
10-10-10	43489	9.4	11.2	11.0		104
10-10-10	43506	10.3	10.6	10.3		104
10-10-10	43588	9.7	11.1	10.3		103
10-10-10	43596	9.6	10.7	9.8		100
10-10-10	44053	9.7	11.2	10.7		104
10-10-10	44464	10.4	11.7	9.8		107
10-10-10	44706	10.0	10.0	10.7		101
10-10-10	44853	9.8	10.5	11.2		103
10-10-10	44914	10.0	11.0	10.0		104
10-10-10	44928	9.4	10.8	8.6*		97*
10-10-10	44972	9.8	9.9	10.7		100
18-18-18	43465	17.7	18.4	18.2		100
18-18-18	44465	17.7	19.6	19.4		104
18-18-18	44472	18.0	18.0	19.0		101
18-18-18	44845	18.4	19.7	17.4		103
18-18-18	44927	18.4	17.2	19.7		101
18-18-18	45055	17.4	18.9	18.1		100
SOUTHERN STATES COOP., INC.		WINCHESTER KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-12-40	43275	0.0	17.5	31.6*		100
0-12-40	43737	0.0	11.4	33.9*		88*
5-10-15	43374	4.6	8.4*	16.2		95*
5-10-15	43378	5.0	9.4	16.5		101
5-10-15	43419	5.2	10.2	17.5		108
5-10-15	43483	5.1	10.2	16.0		104
5-10-15	43503	5.5	10.2	16.5		107
5-10-15	43537	5.1	10.4	16.3		105
5-10-15	43612	5.2	10.1	16.5		105
5-10-15	43704	5.8	10.6	16.2		109
5-10-15	43787	5.3	10.0	16.1		104
5-10-15	43939	5.6	10.1	16.6		107
5-10-15	43994	5.5	9.8	16.3		105
5-10-15	44165	4.8	9.2*	16.4		99
5-10-15	44168	5.0	9.7	16.5		103
5-10-15	44409	6.9	12.4	10.9*		108
5-10-15	44424	4.8	9.5	16.3		100
5-10-15	44514	5.7	10.2	16.3		108
5-10-15	44531	4.7	9.8	16.6		102
5-10-15	44775	5.9	11.3	15.5		111
5-10-15	44810	5.2	9.1*	17.5		104
5-10-15	44862	5.1	9.1*	16.9		102
5-10-15	44944	5.2	9.9	18.1		109
5-20-20	43316	5.2	20.4	20.1		102
5-20-20	43533	5.6	21.7	19.3		105
5-20-20	43680	5.6	21.6	18.3*		103
5-20-20	43703	5.8	21.1	19.7		105
5-20-20	43786	5.6	20.5	19.7		103
5-20-20	43809	5.3	20.7	19.7		102
5-20-20	43938	5.7	22.3	17.9*		104
5-20-20	43948	5.4	20.2	19.8		101

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 43

TABLE 1. (Continued)

SOUTHERN STATES COOP., INC.		WINCHESTER		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
5-20-20	44529	5.2	20.3	21.1		103
5-20-20	44824	5.7	21.1	19.1		103
5-20-20	44863	5.2	19.8	20.8		101
6- 6-18	44169	6.7	5.9	19.8		107
6-12-12	43738	6.4	10.9*	11.8		97*
6-12-12	44410	5.4*	11.3	11.8		94*
6-12-12	44500	5.7	11.9	12.0		98
6-12-12	44865	5.8	12.8	12.7		104
6-24-24	43240	6.2	26.8	19.9*		101
8-10-15	43624	7.9	11.8	15.5		106
8-10-15	44426	7.3*	10.1	16.0		99
10-10-10	43246	10.0	11.0	13.2		110
10-10-10	43280	10.4	13.5	12.7		119
10-10-10	43296	11.0	10.3	11.9		110
10-10-10	43379	9.4	10.7	9.1*		97*
10-10-10	43396	10.3	9.4	10.0		99
10-10-10	43504	10.0	10.0	10.1		100
10-10-10	43531	9.4	11.0	8.9*		98
10-10-10	43552	10.0	10.8	10.4		103
10-10-10	43618	9.7	10.6	10.3		101
10-10-10	43949	10.0	10.7	9.8		102
10-10-10	44011	9.3*	9.7	10.8		98
10-10-10	44367	9.1*	9.7	9.8		95*
10-10-10	44368	9.4	10.5	10.2		99
10-10-10	44425	8.7*	9.8	10.2		94*
10-10-10	44497	9.0*	9.5	10.4		94*
10-10-10	44499	10.7	10.3	9.9		104
10-10-10	44530	9.3*	10.4	10.8		100
10-10-10	44808	9.4	10.2	10.8		99
10-10-10	44809	9.9	11.3	9.8		104
10-10-10	44820	10.2	9.1*	9.9		98
10-10-10	44864	9.6	10.3	10.5		100
10-10-20	44807	9.0*	10.0	21.9		100
12-12-12	43534	10.8*	13.5	9.0*		94*
15-15-15	43617	14.8	16.3	14.9		102
S. S. BARDSTOWN COOP.		BARDSTOWN		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
12-30-20	44691	11.8	30.4	20.9		100
17-17-17	44689	18.0	17.9	17.7		101
17-17-17	44692	18.0	17.6	17.9		101
25- 5- 7	44688	27.5	5.2	6.3*		103
26-23- 0	44690	25.9	23.5	0.0		101
S. S. BOYLE COOP.		DANVILLE		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
12-10-26	45353	11.0*	9.1*	26.8		94*
19-19-19	44805	19.4	18.7	19.6		99
SS BOWLING GREEN COOP		BOWLING GREEN		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
5-21-21	45312	5.4	22.0	21.9		100
6-26-25	45313	6.2	26.6	25.6		100
12-12-12	43330	14.1	16.0	14.4		116
12-12-12	45311	11.9	12.8	15.4		105
16-16-16	43932	16.9	18.3	17.7		104
19-19-19	43933	17.9*	20.1	20.5		99
S. S. BRECK COOP.		HARDINSBURG		KY		
GRADE	NUM	N	APA	POT	XS CL	RV
6-26-25	45296	5.4*	22.5*	30.1		96*

TABLE 1. (Continued)

S. S. BRECK COOP.		HARDINSBURG KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
9-23-30	45295	8.8	22.9	30.4			100
12-15-27	45297	12.0*	13.5*	30.0			97*
17-17-18	45294	16.2*	18.2	20.0			100
19-16-16	45298	18.4	15.5*	17.8			98
S.S. COOP-CALDWELL SERVICE		PRINCETON KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
6-25-25	45246	8.3	23.5*	25.2			99
10- 8-13	45247	11.7	10.0	12.8			110
S.S. CAMPBELLSVILLE COOP.		CAMPBELLSVILLE KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
9-19-18	43919	10.0	18.4*	18.7			100
17-17-17	43911	18.6	18.0	19.0			104
17-17-17	43913	18.9	19.8	15.2*			103
19-19-19	43912	19.6	19.9	19.2			101
19-19-19	43920	22.2	19.8	15.2*			102
S. S. BULLITT COOP.		SHEPHERDSVILLE KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
0-25-25	45226	0.0	26.3	25.8			103
9-18-27	45228	9.5	18.7	27.8			101
15-15-23	45229	14.4	16.4	23.8			100
19-19-19	45227	19.3	19.9	19.2			101
32-10-10	45230	32.1	10.0	10.4			100
S.S. CARLISLE COOP		CARLISLE KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
7-14-22	45138	7.2	16.8	22.0			104
7-18-18	45139	6.6	18.7	19.6			101
7-18-18	45142	7.7	16.4*	20.7			101
10-13-19	45141	10.2	13.9	20.2			102
18-11-11	45140	18.4	11.4	10.4*			97*
S.S. CLARK COOP		WINCHESTER KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
9-17-27	45340	8.5*	16.5	29.5			99
9-17-27	45342	8.7	16.9	29.0			100
15-13-19	45341	14.8*	13.4	21.7			100
17-13-17	45343	16.1*	12.9	19.3			98
S.S. COOP. CLAY PETROL SVC.		CLAY KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
7-17-36	45063	7.4	19.3	35.8			102
S.S. CYNTHIANA COOP.		CYNTHIANA KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
6-25-26	45146	6.2	25.7	27.2			101
9-18-27	44953	8.2*	17.8	29.6			100
14-12-14	45147	13.9	14.1	15.3			103
15-13-19	44954	15.3	13.4	21.1			100
24- 0-16	44952	24.8	0.0	16.9			101
S.S. FLEMINGSBURG COOP		FLEMINGSBURG KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
7-22-15	44162	6.9*	25.5	14.9			103
17-17-17	44633	17.7	18.3	19.0			102
25- 9- 9	44635	23.4*	10.4	12.9			101
27- 7- 7	44634	26.0*	8.0	8.9			99
28- 6- 6	44632	29.2	5.9	5.4*			101
S.S. GLASGOW COOP		GLASGOW KY			XS	CL	RV
GRADE	NUM	N	APA	POT			
4-18-18	43329	5.1	19.1	19.0			107
15-15-15	43748	16.5	16.9	15.7			105
17-17-17	43747	14.1*	13.3*	27.1			94*

TABLE 1. (Continued)

S. S. GLASGOW COOP		GLASGOW			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
17-17-17	43749	17.6	18.4	17.6		101
17-17-17	43750	17.2	19.7	17.2		101
17-17-17	43751	17.8	18.2	17.5		100
S. S. COOP., INC. GRAVES SER.		MAYFIELD			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
11-10-15	45155	12.4	10.9	15.9		104
12- 9-14	45153	13.7	10.1	14.5		105
24-13-17	45154	24.5	13.1	18.0		100
S. S. COOP-NICHOLASVILLE SVC.		NICHOLASVILLE			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
14-10-17	45350	11.7*	11.8	20.6		101
17- 0-29	43722	16.7	0.0	30.4		100
S. S. GRAYSON COOP		GRAYSON			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
6-25-25	44821	6.7	26.4	25.7		101
9-18-27	45199	5.3	19.2	27.7		102
15-16-26	44822	15.8	16.1	26.7		100
19-19-19	44823	19.2	19.4	20.1		101
22-13-12	45200	22.2	14.5	12.6		100
S. S. GREENVILLE SERVICE		GREENVILLE			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
0-25-25	45085	0.0	29.2	22.8*		105
0-26-26	45082	0.0	27.2	25.8		102
0-29-20	45084	0.0	31.2	20.4		105
6-25-26	45081	6.1	26.1	27.2		101
15-14-13	45083	15.0	15.5	13.8		102
S. S. HARDIN COOP		ELIZABETHTOWN			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
19-19-19	43281	17.1*	21.0	19.9		98
19-19-19	44766	18.7	19.6	20.2		100
19-19-19	44768	19.0	19.5	21.0		101
19-19-19	44770	19.2	18.8	21.0		101
21-18-18	44769	21.1	16.8*	19.5		99
26-14-14	44767	26.6	14.2	15.1		101
S. S. HARRODSBURG COOP		HARRODSBURG			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
21-11-22	45014	20.3*	12.4	22.8		98
23- 0-25	45013	23.5	0.0	25.2		102
27- 0-24	44705	27.6	0.0	25.1		101
S. S. HENDERSON COOP		HENDERSON			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
0-25-25	44666	0.0	26.1	26.5		104
10-26-25	44665	8.4*	26.3	26.2		96*
S. S. HOPKINSVILLE COOP		HOPKINSVILLE			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
19-15-15	44293	19.5	18.3	13.9*		102
19-15-15	44294	19.5	16.6	15.6		101
S. S. HOPKINSVILLE COOP.		CADIZ			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
10-12-18	45208	10.3	12.3	19.1		103
12-12-16	45209	13.0	13.8	16.7		104
14-10-16	45207	13.5*	11.8	16.9		101
S. S. HORSE CAVE COOP		HORSE CAVE			KY	
GRADE	NUM	N	APA	POT	XS CL	RV
0-25-25	43765	0.0	26.6	25.2		103
6-25-25	43766	6.4	26.3	26.1		101
6-25-25	43773	6.1	30.4	18.4*		101

TABLE 1. (Continued)

S.S. HORSE CAVE COOP		HORSE CAVE			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
19-19-19	43763	20.7	17.7*	19.2			100
19-19-19	43764	19.2	19.2	19.9			100
S.S. COOP. HUSTONVILLE SER.		HUSTONVILLE			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
0-24-24	45182	0.0	25.4	25.0			102
17-12-18	45181	16.7	13.8	18.6			102
S.S. BRECK COOP.		IRVINGTON			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
17-17-17	44249	18.4	18.2	17.9			103
25- 9- 9	45163	24.7	11.4	9.5			101
S.S. COOP. LANCASTER SER.		LANCASTER			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
6-12-18	45020	7.7	12.3	18.8			108
19-19-19	44525	17.1*	21.3	21.0			100
26-14-14	45022	27.8	14.7	14.9			105
28-12-12	45021	27.5*	13.4	13.3			99
S.S. LAWRENCEBURG COOP		LAWRENCEBURG			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
0-15-39	45215	0.0	15.0	40.1			101
9-18-27	45214	10.1	20.0	26.0*			105
11- 0-16	45216	11.4	0.0	22.0			113
17-12-18	45213	17.7	12.9	17.9			101
22- 0-17	45212	20.6*	0.0	19.6			98
S.S. LEBANON COOP.		LEBANON			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
9-32- 9	44722	9.3	34.4	9.0			103
19-19-19	44111	18.9	20.6	19.3			101
S. S. LEITCHFIELD COOP		LEITCHFIELD			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
6-26-26	44143	6.8	26.6	25.9			102
19-19-19	44040	19.4	17.7*	21.0			99
19-19-19	44041	18.6	18.6	21.8			100
19-19-19	44042	18.6	18.8	20.8			99
19-19-19	44142	19.1	18.9	20.3			100
S.S. LEXINGTON COOP		LEXINGTON			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
10-10-21	45233	10.5	12.8	21.7			104
17- 0-23	45231	16.9*	0.0	24.2			97*
17- 0-25	45234	17.8	0.0	23.2*			100
S.S. LONDON COOP		LONDON			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
0-25-25	44489	0.0	24.8	28.7			104
0-30- 3	44484	0.0	32.5	5.1			109
6-25-25	45032	6.3	24.1*	27.7			99
17-17-17	44485	17.1	18.7	18.5			101
17-17-17	44486	16.7*	16.7*	20.3			99
17-17-17	44487	17.3	19.6	17.9			103
17-17-17	45034	16.9*	16.7*	19.9			98
19-19-19	44488	18.3*	19.4	20.9			99
S.S. MADISONVILLE COOP.		MADISONVILLE			KY		
GRADE	NUM	N	APA	POT	XS	CL	RV
0-17-35	45073	0.0	20.4	33.2*			102
0-25-23	45072	0.0	28.2	21.2*			102
6-18- 6	43891	6.6	18.7	6.2			105
6-25-25	45075	6.0	26.6	25.6			100
15-15-15	43358	15.7	14.1*	16.9			100
16-18-24	45074	16.2	18.8	25.3			102

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 47

TABLE 1. (Continued)

S.S. MADISONVILLE COOP.		MADISONVILLE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
29- 7-10	45076	26.8*	9.5	12.5		98
S.S. MAYSVILLE CCOP		MAYSVILLE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
12-12-24	44628	13.3	13.6	25.4		104
15-13-19	44624	15.4	14.4	21.4		103
17-17-17	44623	18.0	18.3	18.2		102
17-17-17	44627	18.2	17.4	18.0		101
17-17-17	44625	17.5	18.8	17.6		101
S.S. MORGANFIELD CCOP		MORGANFIELD KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-16-37	43307	0.0	16.6	37.7		101
S.S. OWENSBORO COOP		OWENSBORO KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-25-25	43299	0.0	24.5	26.9		100
0-27-22	44859	0.0	27.4	23.3		101
10- 8-12	44860	10.9	8.8	12.6		104
10-25-25	44858	10.6	27.6	24.3*		103
S.S. PENDLETON COOP		FALMOUTH KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-25-25	45149	0.0	26.5	25.5		103
2-14-40	44519	2.6	15.4	40.8		101
2-14-40	44520	2.9	15.5	40.5		102
2-14-40	44521	2.8	14.7	40.9		101
20- 6-13	45150	20.0	7.0	15.5		100
S. S. COOP--RICHMOND SERVICE		RICHMOND KY				
GRADE	NUM	N	APA	POT	XS CL	RV
9-18-27	45175	9.4	19.5	27.4		104
16-12-18	45174	16.3	13.1	19.2		101
17-17-17	43995	17.9	18.4	17.7		101
S.S. RUSSELLVILLE COOP		RUSSELLVILLE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-25-25	44278	0.0	26.1	25.8		102
5-20-20	44277	6.0	22.3	21.8		109
6-25-25	44276	16.9	8.9*	27.1		96*
6-25-25	44279	7.0	26.7	24.4*		101
14-13-20	45000	17.1	12.1*	15.3*		97*
26-11-16	44280	25.6	9.6*	18.5		98
S. S. COOP. SEBREE SERVICE		SEBREE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-22-29	45067	0.0	26.5	24.6*		101
0-23-30	45065	0.0	27.6	25.1*		103
14-21-19	45064	13.9*	24.0	17.5*		100
21- 6- 9	45066	20.1*	9.2	9.1		103
S.S. SHELBYVILLE COOP.		SHELBYVILLE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
6-15-40	44215	6.2	15.4	39.9		100
9-23-30	44184	8.8	23.1	30.3		100
10- 0-40	44181	10.7	0.0	38.6		99
10- 9-24	44182	10.9	9.9	25.8		103
12-19-24	44214	12.9	19.8	24.1		101
17-15-20	44213	17.3	15.9	19.8		101
21- 0-29	44183	20.6*	0.0	31.3		100
S.S. SIMPSON COOP		FRANKLIN KY				
GRADE	NUM	N	APA	POT	XS CL	RV
10-17-26	45121	9.8	16.3*	29.0		100
13-14-22	45118	13.4	13.6*	24.6		99
17-17-17	44239	16.6*	18.1	18.4		98

TABLE 1. (Continued)

S.S. SIMPSON COOP		FRANKLIN			KEY		
GRADE	NUM	N	APA	POT	XS	CL	RV
19- 3-20	45119	19.3	4.2	20.6			100
21- 9-14	45120	20.9	9.3	15.4			100
S.S. SOMERSET COOP		SOMERSET			KEY		
GRADE	NUM	N	APA	POT	XS	CL	RV
11-14-20	43967	10.9	15.3	21.9			103
12-24-24	43965	11.0*	22.9*	26.6			99
13-13-13	43966	14.6	14.5	17.6			114
14-12-17	44073	12.0*	13.6	20.5			100
17-17-17	43968	16.3*	17.1	21.1			99
17-17-17	44616	17.4	17.3	18.7			99
17-17-17	44617	17.4	16.8*	18.9			99
S.S. COOP STANFORD SER.		STANFORD			KEY		
GRADE	NUM	N	APA	POT	XS	CL	RV
0-22-30	45015	0.0	21.8	31.3			102
3- 7-11	44802	4.1	7.8	11.6			106
6-24-24	44006	5.9	24.5	25.0			101
9-18-27	45016	10.3	19.8	26.9			104
12-17-17	43674	17.4	17.0	18.6			118
17-11-15	45180	16.5	10.9	15.3			99
19-19-19	44007	18.2*	17.8*	22.4			98
S.S. COOP-TODD SVC.		ELKTON			KEY		
GRADE	NUM	N	APA	POT	XS	CL	RV
6-25-25	43924	6.3	25.9	26.8			101
6-25-26	45128	6.3	26.7	25.4			101
6-25-26	45129	6.9	27.0	24.0*			101
11- 7-10	45126	14.0	7.5	9.9*			107
21-14-14	45127	21.0	14.3	13.9			100
SPARROWS FARM SERVICE, INC.		SHELBYVILLE			KEY		
GRADE	NUM	N	APA	POT	XS	CL	RV
0-15-40	43823	0.0	16.3	39.2			101
4-10-27	43822	4.8	10.7	27.5			102
6-17-37	44211	7.8	20.2	34.0*			104
10-34- 0	43338	11.0	31.6*	0.0			98
10-34- 0	43345	10.7	32.9	0.0			100
14- 7- 7	43825	19.3	4.6*	3.8*			108
18-18-18	43824	17.5*	19.3	18.3			99
24-11-18	44212	25.3	13.5	16.9*			103
SPENCER FARM SERVICE		TAYLORSVILLE			KEY		
GRADE	NUM	N	APA	POT	XS	CL	RV
0-18-36	45220	0.0	19.1	34.2*			99
12-12-18	45218	11.9	12.4	19.3			101
13- 9-23	45221	12.9	11.6	22.0*			100
14-11-16	45219	13.9	11.8	16.3			100
25- 0-15	45217	26.3	0.0	13.7*			100
SPRINGFIELD FARM SERVICE		SPRINGFIELD			KEY		
GRADE	NUM	N	APA	POT	XS	CL	RV
11-12-31	44709	12.1	11.5	32.6			101
17-17-17	44710	17.7	18.3	18.1			101
17-17-17	44714	17.4	17.2	19.0			99
19-13-19	44711	20.5	13.8	19.6			103
19-16-16	44715	19.2	16.7	16.2			101
19-19-19	44713	19.3	18.5	20.7			100
21-21- 9	44712	21.3	22.3	9.3			102
23-11-18	44708	23.7	11.5	19.4			101
27-13-13	44707	28.2	13.6	13.8			102

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 49

TABLE 1. (Continued)

STANLEY CROP SERVICE		STANLEY			KY	XS CL	RV
GRADE	NUM	N	APA	POT			
6-24-24	44661	5.2*	22.8*	24.2		95*	
9-23-30	44660	8.6	22.3	31.8		100	
15-16-15	44658	14.1*	15.0*	19.7		100	
16-12-19	44659	15.8	12.6	21.4		102	
STEWART FERTILIZER SERVICE		MT. VERNON		KY	XS CL	RV	
GRADE	NUM	N	APA	POT			
5-10-15	43827	4.7	9.1*	14.9		95*	
5-10-15	43974	5.2	10.6	14.8		102	
5-10-15	44533	5.0	9.6	16.2		101	
5-10-15	44798	6.3	11.7	14.8		112	
5-10-15	44938	4.9	9.6	15.1		98	
5-20-20	43973	4.9	20.1	20.6		101	
10-10-10	43665	11.7	12.1	10.8		116	
10-10-10	43826	10.6	10.1	11.9		107	
10-10-10	43829	8.9*	8.1*	12.8		95*	
10-10-10	43835	12.0	10.1	6.2*		101	
10-10-10	44532	13.8	13.4	13.1		135	
10-10-10	44937	10.7	11.3	10.3		108	
11- 7-11	45175	10.8	8.4	12.5		102	
12- 6- 4	44795	13.0	6.4	5.9		106	
15-15-15	43828	12.8*	12.2*	17.8		91*	
17-17-17	45177	15.5*	16.9	19.4		99	
19-14-14	45178	18.2*	15.0	15.1		98	
SWIFT AGRI CHEM CORP		CHICAGO			IL	XS CL	RV
GRADE	NUM	N	APA	POT			
6-10- 4	45321	7.2	11.7	5.0		119	
10-10-10	43954	9.2*	10.2	9.3*		96*	
10-10-10	43978	11.2	10.9	7.5*		103	
10-10-10	45203	9.0*	10.3	10.4		98	
10-10-10	45245	8.8*	9.1*	9.2*		90*	
10-10-10	45251	9.1*	9.5	9.9		94*	
10-10-10	45254	12.9	8.3*	8.6*		104	
10-10-10	45268	9.9	9.4	10.7		99	
10-10-10	45310	9.6	10.0	9.8		98	
10-10-10	45320	9.1*	10.2	9.9		97*	
10-10-10	45363	8.5*	10.2	10.8		96*	
10-10-10	45382	8.6*	9.9	10.2		94*	
10-10-10	45409	11.0	7.3*	7.8*		91*	
13-13-13	43630	12.9	13.1	14.5		102	
13-13-13	43997	11.1*	11.9*	19.0		101	
15-15-15	43266	14.3	14.3	16.8		99	
24- 4- 8	45195	20.6*	5.9	10.7		98	
33- 0- 0	43607	33.5	0.0	0.0		100	
33- 0- 0	44399	34.8	0.0	0.0		104	
SWIFT CHEMICAL CC.		COLUMBIA			KY	XS CL	RV
GRADE	NUM	N	APA	POT			
5-10-15	43481	5.4	11.1	14.1*		104	
5-10-15	43990	5.0	12.4	14.8		108	
5-10-15	44750	5.5	9.2*	14.3		98	
6-12-12	43991	6.2	12.4	13.4		106	
6-12-12	44127	5.3*	10.6*	14.3		97*	
7-18- 9	44124	6.7	15.7*	10.8		93*	
10-10-10	43482	10.6	12.5	9.8		111	
10-10-10	43608	9.6	8.6*	11.1		96*	
10-10-10	44077	8.8*	6.5*	12.0		87*	
10-10-10	44125	9.2*	9.0*	11.9		97*	
10-10-10	44126	9.2*	9.5	10.8		97*	

TABLE 1. (Continued)

SWIFT CHEMICAL CC.		COLUMBIA			KY	XS	CL	RV
GRADE	NUM	N	APA	POT				
15-15-15	44749	13.6*	15.2	15.3				97*
SWIFT AGRICULTURAL CHEM CORP		HOPKINSVILLE			KY	XS	CL	RV
GRADE	NUM	N	APA	POT				
3-10-30	45053	3.0	7.8*	28.3*				90*
5-10-15	43793	4.7	8.5*	15.9				95*
5-10-15	43909	5.9	10.8	14.8	*			107
5-10-15	44318	5.7	10.1	14.8	*			103
5-10-15	44474	5.8	10.5	16.8				110
5-10-15	44575	4.0*	11.9	16.1				105
5-10-15	44751	5.1	9.7	16.0				102
5-10-15	44754	5.2	9.4	15.8				100
5-10-15	44846	5.2	10.5	15.1				103
5-20-20	43908	5.4	19.6	19.9				100
5-20-20	44289	5.7	19.2	20.4				101
5-20-20	44476	5.7	19.2	20.3				101
5-20-20	44574	5.0	18.8*	20.4				98
5-20-20	44480	4.3*	15.1*	15.2*				77*
6-12-12	44328	6.0	12.7	13.8				107
6-12-18	44329	6.5	9.6*	18.3				95*
6-12-18	44475	7.7	11.9	19.4				110
6-12-18	44675	4.7*	7.4*	20.0				84*
6-12-18	44920	7.6	13.4	20.8				117
6-12-18	45130	6.0	11.4	18.8				100
6-24-24	43861	5.6	21.9*	25.4				96*
6-24-24	44058	6.1	23.3	21.9*				96*
6-24-24	44330	6.6	23.7	23.1				100
6-24-24	44831	5.8	23.9	22.7*				97*
10-10-10	43370	10.7	11.3	10.9				109
10-10-10	43794	10.0	10.2	10.4				101
10-10-10	43910	9.6	9.7	10.1				97*
10-10-10	44057	9.7	10.1	11.0				101
10-10-10	44059	9.8	10.0	10.5				100
10-10-10	44477	9.4	12.0	11.5				107
10-10-10	44576	9.6	10.0	10.3				99
10-10-10	44752	9.3*	9.5	9.8				95*
10-10-10	44753	8.7*	10.7	11.7				100
10-10-10	44479	7.1*	7.8*	8.7*				77*
13-13-13	43631	11.2*	14.3	15.5				102
13-13-13	44478	12.4	13.4	15.2				102
13-13-13	45054	12.9	13.4	14.3				103
15-15-15	44573	14.8	13.4*	14.8				95*
15-15-15	44847	14.4	14.2	16.8				99
15-15-15	44915	13.7*	13.5*	16.1				94*
SWIFT CHEMICAL CC.		MORGANTOWN			KY	XS	CL	RV
GRADE	NUM	N	APA	POT				
5-18-18	45400	2.3*	13.9*	14.4*				70*
SWIFT AGRICULTURAL CHEM CORP		RICHMOND			KY	XS	CL	RV
GRADE	NUM	N	APA	POT				
0-25-25	44401	0.0	25.4	26.6				103
5-10-10	44935	4.4*	8.8*	11.9				97*
5-10-15	43637	4.4*	8.2*	15.4				91*
5-10-15	44400	5.1	8.9*	16.3				100
6-12-12	44494	6.1	11.3	12.9				100
6-12-18	43638	3.9*	3.2*	23.0	*			74*
6-12-18	44398	4.8*	10.6*	21.0				97*
10-10-10	44402	9.1*	9.8	9.2*				94*
10-10-10	44493	9.8	10.3	9.8				99

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 51

TABLE 1. (Continued)

SWIFT AGRICULTURAL CHEM CORP		RICHMOND		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
10-10-10	44795	9.8	11.1	10.3			103
11-11-19	44796	10.7	11.3	20.6			102
14-16-16	45176	15.5	15.3*	16.5			100
15-15-15	44797	14.8	16.7	14.8			103
TENNESSEE FARMERS COOPERATIVE		LAVERGNE		TN			
GRADE	NUM	N	APA	POT	XS	CL	RV
28- 0- 0	45137	28.2	0.0	0.0			101
THCMAS AGRI SUPPLY INC.		BLCOMFIELD		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
6-26-26	44699	6.8	27.2	25.8			103
6-26-26	44701	6.8	26.4	26.2			102
9- 8-12	45225	9.0*	6.8*	13.1			92*
19-19-19	44700	19.1	19.4	19.3			99
28- 8-11	44698	28.3	8.6	12.5			100
THURSTON FERTILIZER CO.		PADUCAH		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
22- 8-23	44337	23.3	8.6	24.4			104
25-12-16	44335	25.9	13.1	17.2			103
25-14-14	44336	25.3	15.2	15.4			102
TODD COUNTY SEED		TRENTON		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
14- 8-14	44558	13.8	8.1*	15.0			97*
TOMPKINSVILLE FERTILIZER CO.		TGMPKINSVILLE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
2- 9- 9	43286	3.7	10.3	7.9*			113
5-20-20	44232	5.4	21.0	21.0			105
12-24-24	44159	11.8	24.5	24.4			101
TRI-CO. FARM SUPPLY		CORBIN		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-17-35	45267	0.0	19.6	33.5*			101
6-25-26	44490	6.5	25.2	27.5			101
14-14-14	43736	14.3	15.8	14.1			101
20- 9-10	44491	18.7*	11.5	11.5			100
UNION FERTILIZER		MORGANFIELD		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-25-26	44264	0.0	28.7	24.2*			103
9-23-28	44134	9.5	24.1	29.6			102
19-19-19	44265	17.9*	19.8	21.9			100
US 60 FARM SVC. CENTER		HARDINSBURG		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
8- 8-13	45172	9.3	8.8	12.9			102
10-20-31	43333	10.8	20.6	30.8			101
17-17-18	45171	18.3	18.5	16.7*			101
23-11-11	45170	23.7	12.0	11.8			102
23-11-11	45173	24.9	11.5	8.9*			100
23-11-11	45278	22.9	11.8	11.6			99
USS AGRI-CHEMICAL		ADAIRVILLE		KY			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-25-27	44502	0.0	12.0*	45.0			95*
19-10-10	43901	20.3	9.4	9.9			103
USS AGRI-CHEMICALS		ATLANTA		GA			
GRADE	NUM	N	APA	POT	XS	CL	RV
0-46- 0	43492	0.0	44.4	0.0			97
5-10-15	44110	5.5	9.9	15.0			102
10-10-10	44109	10.4	9.5	9.9			100
18-46- 0	43493	17.8	46.5	0.0			100
18-46- 0	43494	17.7	46.3	0.0			100

TABLE 1. (Continued)

USS AGRI-CHEMICALS		BOWLING GREENKY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-20-33	45316	0.0	21.8	32.0		101
11- 7-11	45318	8.6*	7.4	10.9		88*
11- 7-11	45319	8.4*	7.9	12.0		91*
18- 4- 7	45317	18.7	5.5	7.3		101
25-23- 0	43934	25.6	23.2	0.0		101
USS FARM SERVICE CENTER		CAMPBELLSVILKY				
GRADE	NUM	N	APA	POT	XS CL	RV
6-25-25	44434	6.3	26.8	25.5		101
6-26-26	44433	7.8	27.6	24.0*		104
6-26-26	44450	6.8	27.2	25.8		102
17-17-17	44435	17.5	18.6	18.2		101
19-15-15	44449	19.8	17.6	17.5		106
USS AGRI-CHEMICALS		FRANKLIN KY				
GRADE	NUM	N	APA	POT	XS CL	RV
0-26-26	44246	0.0	26.0	26.7		100
7- 9-13	44784	7.6	9.2	14.7		103
USS AGRI-CHEMICALS		GUTHRIE KY				
GRADE	NUM	N	APA	POT	XS CL	RV
6-24-26	44306	7.1	26.3	23.4*		101
6-24-26	44307	7.2	27.1	23.6*		103
USS AGRI-CHEMICALS		JEFFERSONVILLIN				
GRADE	NUM	N	APA	POT	XS CL	RV
5-10- 5	43643	5.6	9.7	5.9		106
5-10- 5	43679	5.5	9.3	5.9		103
5-10- 5	44549	6.3	10.2	8.1		120
5-10-15	43363	5.1	9.2*	16.6		101
5-10-15	43367	4.7	10.1	14.8		98
5-10-15	43380	5.0	9.8	15.5		101
5-10-15	43406	5.3	9.8	15.0		100
5-10-15	43427	4.7	9.6	14.9		97*
5-10-15	43459	4.8	9.7	15.8		100
5-10-15	43512	4.8	9.7	14.8		97*
5-10-15	43536	4.9	10.2	15.9		102
5-10-15	43648	5.6	9.7	15.1		102
5-10-15	43699	5.5	10.4	15.3		105
5-10-15	43714	5.6	10.6	15.4		106
5-10-15	43776	5.4	10.6	15.5		105
5-10-15	43778	5.2	11.5	15.6		108
5-10-15	43806	5.5	10.7	15.3		106
5-10-15	43906	5.5	10.4	15.0		104
5-10-15	43942	5.3	9.7	15.5		101
5-10-15	43943	4.7	9.8	15.0		98
5-10-15	44013	5.2	10.3	15.1		102
5-10-15	44014	5.2	9.6	15.1		100
5-10-15	44085	5.5	10.4	15.7		105
5-10-15	44093	5.7	10.8	15.4		107
5-10-15	44161	5.4	10.6	15.3		105
5-10-15	44166	5.2	10.5	15.1		103
5-10-15	44202	4.7	10.4	16.7		104
5-10-15	44203	5.4	9.4	16.0		102
5-10-15	44275	5.9	9.8	14.8		103
5-10-15	44453	5.5	9.9	15.1		103
5-10-15	44518	5.5	9.7	15.4		102
5-10-15	44657	5.4	10.0	16.7		106
5-10-15	44836	4.7	10.6	16.1		103
5-10-15	44936	4.7	10.7	15.8		103
5-10-15	44959	4.4*	10.6	15.9		101

TABLE 1. (Continued)

USS AGRI-CHEMICALS	JEFFERSONVILLIN					
GRADE	NUM	N	APA	POT	XS CL	RV
5-10-15	44966	5.2	10.0	15.4		102
5-10-15	44975	4.9	10.4	15.9		103
5-10-15	45164	5.5	10.8	15.8	*	107
5-10-15	45189	5.3	10.5	15.1		103
5-10-15	45323	5.5	11.0	14.9		106
5-10-15	45326	5.0	10.3	16.0		104
5-10-15	45333	5.4	10.8	14.8		104
5-20-20	43247	5.2	21.0	18.4*		100
5-20-20	43328	5.4	21.8	19.8		105
5-20-20	43366	5.2	20.8	19.8		102
5-20-20	43381	5.2	20.2	19.7		101
5-20-20	43424	6.8	23.9	17.9*		112
5-20-20	43428	5.6	20.3	18.7*		101
5-20-20	43619	5.6	19.3	19.9		100
5-20-20	44071	7.9	17.7*	18.2*		101
5-20-20	44366	6.4	19.8	19.8		104
5-20-20	44375	5.6	20.4	18.2*		100
5-20-20	44516	7.4	19.1	18.0*		102
5-20-20	44898	5.5	18.4*	19.2		96*
5-20-20	44967	6.2	19.5	18.3*		100
5-20-20	45027	5.0	19.4	20.6		99
5-20-20	45328	6.0	19.0	20.0		101
5-20-20	45393	6.0	18.2*	19.8		99
6-12-12	44418	5.9	12.1	11.9		99
6-12-12	44610	5.9	12.0	12.3		100
6-24-24	43594	6.6	23.8	22.6*		99
6-24-24	44089	6.2	22.6*	23.9		97*
6-24-24	44090	6.1	23.2	24.1		99
6-24-24	44092	5.8	24.4	23.7		100
6-24-24	44365	6.0	23.7	24.4		100
7-28-28	44263	7.5	28.6	27.0		101
10-10-10	43244	10.0	11.2	9.8		103
10-10-10	43248	10.5	10.8	9.9		105
10-10-10	43297	10.1	10.7	10.1		103
10-10-10	43327	10.0	10.7	9.3		101
10-10-10	43339	10.3	10.7	10.3		104
10-10-10	43382	9.7	10.4	10.9		102
10-10-10	43407	10.3	10.3	9.3		101
10-10-10	43418	10.5	9.5	10.0		100
10-10-10	43425	10.1	11.0	9.8		103
10-10-10	43429	10.4	10.5	10.2		104
10-10-10	43510	10.7	11.5	10.4		109
10-10-10	43535	10.1	9.8	10.6		101
10-10-10	43578	9.3	10.3	11.6		101
10-10-10	43620	10.5	9.3*	9.8		100
10-10-10	43759	9.9	11.0	10.0		103
10-10-10	43777	10.8	10.0	9.8		103
10-10-10	43805	11.0	9.9	10.2		104
10-10-10	43944	10.7	10.6	9.8		105
10-10-10	43957	10.4	9.9	10.1		102
10-10-10	44163	10.3	10.0	9.8		101
10-10-10	44201	10.3	10.7	10.0		104
10-10-10	44374	10.5	10.8	9.8		104
10-10-10	44454	10.3	10.8	10.6		105
10-10-10	44517	10.1	10.0	10.8		102
10-10-10	44551	10.2	10.0	10.9		103
10-10-10	44838	10.0	11.0	10.1		103

TABLE 1. (Continued)

USS AGRI-CHEMICALS		JEFFERSONVILLIN				
GRADE	NUM	N	APA	POT	XS CL	RV
10-10-10	44974	9.8	11.1	9.8		102
10-10-10	44984	10.1	10.1	10.1		101
10-10-10	45327	10.3	10.7	9.9		103
10-10-10	45332	9.5	11.9	10.2		104
10-10-10	45369	10.2	9.7	10.3		101
10-10-10	45394	10.1	9.3*	11.0		100
10-10-20	43426	10.0	10.4	18.9*		99
10-10-20	43458	9.8	10.4	19.5		99
10-10-20	43808	10.3	10.1	18.6*		99
10-10-20	44204	10.1	10.7	19.7		102
10-10-20	44364	10.0	10.1	19.9		100
12- 4- 8	44547	11.8	5.1	9.2		106
13-13-13	43616	12.2	12.0*	13.9		96*
13-13-13	43647	12.7	13.3	13.0		100
13-13-13	43713	12.8	12.4	12.3		97*
13-13-13	43807	12.3	11.5*	14.4		96*
13-13-13	43907	12.9	12.4	13.2		98
13-13-13	44091	13.2	13.0	12.4		100
13-13-13	44363	12.6	13.2	13.3		99
13-13-13	44417	12.5	13.1	13.2		99
13-13-13	44837	13.6	13.7	10.8*		100
13-13-13	44960	12.5	12.9	12.9		98
13-13-13	44973	12.1*	13.3	13.4		98
14-14-14	44286	13.9	15.4	13.1*		102
15-40- 5	43576	15.4	42.4	4.8		104
16- 4- 8	43274	15.4	4.2	9.2		101
19- 5- 9	44546	18.7	5.0	9.5		100
25- 5-10	44548	26.1	5.9	8.8*		104
33- 0- 0	43416	32.8	0.0	0.0		98
33- 0- 0	43595	33.4	0.0	0.0		100
33- 0- 0	43676	33.4	0.0	0.0		100
33- 0- 0	43842	33.1	0.0	0.0		99
33- 0- 0	44444	34.1	0.0	0.0		102
USS AGRI-CHEMICALS		NASHVILLE				
GRADE	NUM	N	APA	POT	XS CL	RV
0- 0-62	43472	0.0	0.0	62.2		100
0-46- 0	43258	0.0	45.3	0.0		98
0-46- 0	43264	0.0	45.1	0.0		98
0-46- 0	43283	0.0	44.3	0.0		96*
0-46- 0	43471	0.0	46.0	0.0		100
3-12-24	44560	3.3	12.4	22.8*		100
5-10-15	44025	4.9	9.9	14.8		98
5-10-15	44236	5.1	9.7	15.1		99
5-10-15	44248	5.8	11.3	13.8*		106
5-10-15	44432	5.0	10.3	14.2		99
5-10-15	44785	5.0	10.1	15.3		101
5-10-15	44243	4.7	10.9	14.8		101
5-20-20	44926	5.2	19.6	20.5		101
5-20-20	45086	4.9	19.4	21.0		100
6-12-12	44026	5.7	11.7	12.0		98
6-12-12	44049	6.0	11.6	11.8		98
6-12-12	44231	6.0	11.7	12.7		101
6-12-12	44925	5.8	11.7	12.0		98
6-12-12	45061	6.3	11.7	12.0		100
6-12-18	44225	8.1	10.8*	12.8*	*	94*
6-12-18	44457	5.0*	13.0	18.5	*	100
6-12-18	44786	5.5	12.1	18.4		99

TABLE 1. (Continued)

USS AGRICHEMICALS		NASHVILLE			TN	XS CL	RV
GRADE	NUM	N	APA	POT			
6-12-18	44830	5.8	11.5	19.3		100	
6-12-18	45058	5.8	11.7	17.7		98	
6-12-18	44305	4.9*	12.1	17.8		95*	
6-24-24	43868	6.8	22.4*	23.7		98	
7-28-28	43399	7.2	28.7	26.4*		100	
7-28-28	43477	7.9	29.5	25.7*		102	
7-28-28	43561	7.4	28.8	27.9		102	
7-28-28	43739	7.8	28.6	25.9*		101	
7-28-28	43923	7.5	28.2	27.7		101	
7-28-28	44506	7.4	28.8	27.8		102	
7-28-28	44829	7.4	28.6	27.7		102	
7-28-28	44912	8.0	29.9	26.1*		104	
7-28-28	45060	7.7	29.6	25.8*		102	
7-28-28	45087	7.9	30.1	25.5*		103	
7-28-28	43257	7.6	29.6	26.3*		102	
7-28-28	43263	7.5	28.9	27.9		102	
7-28-28	43276	7.9	30.3	24.6*		102	
7-28-28	43285	7.4	30.3	25.4*		102	
7-28-28	43877	9.6	27.8	25.0*		102	
7-28-28	44304	8.1	30.9	24.5*		104	
7-28-28	44459	7.9	29.6	26.4*		103	
8-24-24	44843	7.6	22.9*	28.1		102	
8-32-16	43740	10.9	35.5	12.5*		109	
8-32-16	44471	9.0	33.2	16.1		105	
8-32-16	43473	8.8	33.7	15.8		105	
10-10-10	43571	9.8	10.9	10.1		102	
10-10-10	43712	9.5	10.6	10.6		101	
10-10-10	44050	9.9	9.9	9.9		99	
10-10-10	44230	8.6*	10.3	11.1		97*	
10-10-10	44247	9.5	10.5	10.2		100	
10-10-10	44428	9.6	10.2	10.6		100	
10-10-10	44461	9.4	10.4	9.8		98	
10-10-10	44788	9.8	9.7	11.0		100	
10-10-10	44855	9.7	9.8	10.0		98	
12- 4- 8	44326	11.5	4.6	8.9		102	
13-13-13	44787	12.2*	12.3	13.5		96*	
14-14-14	43587	13.9	14.8	13.8		101	
14-14-14	44051	14.2	14.1	14.4		101	
14-14-14	44317	14.2	14.2	12.8*		99	
14-14-14	44588	13.7	15.4	15.4		105	
15-40- 5	43586	15.2	41.4	5.7		103	
15-40- 5	43741	15.4	40.6	4.6		101	
15-40- 5	44844	15.3	40.1	6.6		102	
15-40- 5	45059	15.1	39.8	6.8		102	
15-40- 5	44244	15.8	42.3	4.2*		104	
18-46- 0	43265	17.7	46.6	0.0		100	
18-46- 0	43284	17.8	46.6	0.0		100	
18-46- 0	43470	17.7	46.5	0.0		100	
33- 0- 0	43450	33.5	0.0	0.0		100	
33- 0- 0	43469	33.3	0.0	0.0		99	
USS FARM SERVICE CENTER		UTICA		KY		XS CL	RV
GRADE	NUM	N	APA	POT			
0-23-31	44138	0.0	24.0	30.4		101	
9-23-31	45079	8.3*	21.8*	33.1		99	
9-23-31	45080	8.5	22.2	31.9		99	

TABLE 1. (Continued)

THE VANCE CO.		CHILHOWIE		VA			
GRADE	NUM	N	APA	POT	XS CL	RV	
5-10-10	44732	5.8	10.8	9.2*		106	
6-12-12	44496	6.1	12.6	12.8		104	
10-10-10	44495	10.8	10.2	10.3		105	
WARNER FERTILIZER CO.		ALBANY		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
5-10-15	43499	5.2	11.2	14.7		105	
5-10-15	44319	4.9	10.3	14.8		100	
5-10-15	44779	5.0	9.7	15.7		100	
5-20-20	43501	5.4	19.6	19.6		100	
5-20-20	43707	5.0	20.1	19.5		100	
10-10-10	43500	9.8	10.9	11.1		104	
10-10-10	44133	10.0	10.1	10.2		101	
10-10-10	44778	9.8	9.9	11.2		101	
10-10-10	43708	9.4	10.7	11.0		102	
12-24-24	43705	12.1	24.3	23.1		100	
15-15-15	43502	14.8	15.9	15.6		102	
15-15-15	44132	15.7	15.9	14.3		103	
15-15-15	44907	12.8*	15.4	17.5		98	
15-15-15	44908	12.4*	15.1	17.7		96*	
15-15-15	43709	14.2*	15.6	14.8		99	
19-19-19	43706	17.7*	20.4	19.6		100	
WARNER FERTILIZER CO.		COLUMBIA		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
4-19-19	44079	4.6	19.2	21.5		101	
5-10-30	44745	4.8	9.4	32.9		103	
5-20-20	44078	4.6	19.3	20.8		98	
6-12-12	44080	7.1	11.5	13.6		107	
9- 9- 9	43992	8.4*	9.3	11.0		101	
10-10-10	43993	9.4	10.1	12.5		103	
15-15-15	44746	14.8	15.9	16.5		104	
16- 7- 7	45036	19.5	6.1*	5.4*		104	
17-17-17	44744	17.1	18.0	19.1		101	
18-11-12	45035	18.8	11.9	12.4		101	
WARNER FERTILIZER CO		SOMERSET		KY			
GRADE	NUM	N	APA	POT	XS CL	RV	
0- 0-60	43964	0.0	0.0	60.2		100	
0-20-20	44985	0.0	19.8	20.5		100	
0-25-25	43963	0.0	25.5	23.7*		99	
4-16- 4	43478	4.2	15.2	4.1		98	
4-16- 4	43485	4.1	15.3	4.2		98	
5-10-15	43461	5.0	9.8	14.9		99	
5-10-15	43479	5.0	10.4	15.1		102	
5-10-15	43521	5.2	10.0	15.4		102	
5-10-15	43677	5.3	9.9	15.8		103	
5-10-15	44352	4.9	10.4	15.4		102	
5-10-15	44355	5.1	9.9	15.5		101	
5-10-15	44615	5.0	9.9	15.5		100	
5-20-20	43524	5.3	20.2	19.8		101	
5-20-20	43670	5.0	19.6	20.3		99	
5-20-20	43678	4.9	19.3	19.7		97*	
5-20-20	44614	4.7	19.5	20.7		99	
5-20-20	44067	4.9	20.0	20.0		100	
6-12-12	43462	6.4	11.4	13.9		104	
6-12-12	43733	5.9	12.0	12.8		101	
6-12-12	44353	6.0	12.0	12.5		101	
6-12-12	44611	5.6	11.6	13.1		99	
6-17-37	44980	6.5	16.4	38.9		100	

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 57

TABLE 1. (Continued)

WARNER FERTILIZER CO		SOMERSET		KY		XS CL	RV
GRADE	NUM	N	APA	POT			
8-12-16	45266	7.4*	12.1	17.3			100
10-10-10	43460	8.8*	10.3	11.4			99
10-10-10	43480	9.5	10.2	10.5			99
10-10-10	43522	8.9*	10.0	11.3			98
10-10-10	43625	9.3*	11.0	10.6			101
10-10-10	43671	8.4*	9.8	10.7			94*
10-10-10	43790	8.9*	10.1	10.5			96*
10-10-10	43837	9.1*	10.2	10.9			98
10-10-10	43838	9.2*	10.4	10.5			99
10-10-10	43971	9.5	10.5	10.3			100
10-10-10	44354	8.6*	9.7	10.5			94*
10-10-10	44582	9.5	10.2	9.8			98
10-10-10	44612	8.8*	9.8	11.0			96*
10-10-10	44613	9.1*	10.6	10.9			100
10-10-10	44986	9.4	10.0	11.1			100
10-10-10	43969	8.5*	10.1	11.5			97*
10-10-10	43970	9.5	10.1	10.6			99
10-10-15	44443	10.7	10.8	14.8			105
12-24-24	43575	11.7	23.7	26.1			101
14-14-14	45135	13.0*	15.5	17.5			99
15-15-15	43791	13.4*	14.8	16.7			97*
15-15-15	44094	15.5	15.4	15.9			104
15-15-15	44095	15.0	15.7	14.7			101
15-15-15	44098	14.7	15.8	15.0			101
15-15-15	44442	15.1	14.3	17.8			103
15-15-15	43799	12.9*	15.3	17.6			98
15-15-15	45134	13.7*	15.0	17.0			99
15-15-15	45136	12.9*	14.9	16.4			96*
15-40-5	43237	14.5	39.0	4.0*			96*
19-19-19	43972	17.7*	19.4	20.7			99
WARNER FERTILIZER CO.		RUSSELL SPR. KY			XS CL	RV	
GRADE	NUM	N	APA	POT			
5-20-20	43985	4.5	19.4	21.7			100
7-9-14	45270	7.2	11.1	13.9			107
10-10-10	43986	12.0	12.2	12.4			122
10-10-10	44738	8.9*	10.3	12.8			102
10-20-30	45269	8.8*	18.5*	33.7			97*
19-19-19	43987	16.1*	17.7*	25.0			98
19-19-19	44899	17.8*	18.6	23.1			101
20-14-14	44900	17.3*	16.0	17.4			100
45-0-0	44620	45.9	0.0	0.0			102
WEST KY. FERTILIZER		MORGANFIELD KY			XS CL	RV	
GRADE	NUM	N	APA	POT			
10-25-26	44135	12.0	30.2	21.6*			106
N B WHEELER & SON		SEDALIA KY			XS CL	RV	
GRADE	NUM	N	APA	POT			
9-23-30	45156	9.3	23.6	30.7			102
9-23-30	45157	8.8	22.9	30.7			100
9-23-30	45159	9.0	23.0	31.0			101
19-15-16	44219	18.8	13.6*	18.6			98
21-9-14	45158	25.3	12.3	6.5*			104
WOODFORD FEED CO., INC.		VERSAILLES KY			XS CL	RV	
GRADE	NUM	N	APA	POT			
10-10-20	44835	9.7	10.4	20.8			102
11-6-14	45235	11.4	6.9	15.1			101
16-8-8	44687	15.1*	8.8	9.6			102
19-0-20	45236	17.4*	0.0	23.3			97*
WOODFORD FEED CO., INC.		VERSAILLES KY			XS CL	RV	
GRADE	NUM	N	APA	POT			
19-0-25	44685	20.2	0.0	25.6			103
20-0-22	44676	19.6*	0.0	25.3			100
20-0-24	44686	20.2	0.0	25.6			103
22-0-20	44677	22.2	0.0	20.8			101

TABLE 2. AVERAGE ANALYSIS (AA), OVERALL PERCENT OF GUARANTEE ACHIEVED (% OF GUAR.), AND COEFFICIENTS OF VARIATION (CV) OF OFFICIAL FERTILIZER SAMPLES OF CERTAIN GRADES AND COMPANIES.

GRADE	NUMBER SAMPLES	ANALYTICAL AND STATISTICAL FINDINGS					
		N		P ₂ O ₅		K ₂ O	
		AA	CV	AA	CV	AA	CV
AG/GRO FERTILIZER COMPANY Winchester, KY							
5-10-15	12	4.9	5.7	9.5	7.4	16.2	5.8
5-20-20	5	5.0	7.8	19.2	5.8	20.9	6.1
10-10-10	5	9.9	5.5	9.9	5.4	11.1	28.7
ALL GRADES, % OF GUAR.		98.5		96.7		106.9	
CV, %		5.7		5.7		11.9	
NUMBER OF ANALYSES		27		30		31	
AGRICO CHEMICAL COMPANY Cecilia, KY							
5-10-15	7	5.3	3.9	10.8	4.0	15.5	3.6
10-10-10	11	9.8	11.9	10.3	5.4	10.2	3.2
15-15-15	5	18.1	10.3	17.1	11.4	11.7	10.3
ALL GRADES, % OF GUAR.		104.9		106.2		98.3	
CV, %		11.8		7.4		11.1	
NUMBER OF ANALYSES		27		27		27	
AIR PRODUCTS & CHEMICALS INC. Pensacola, FL							
34- 0- 0	5	33.9	1.3	--	--	--	--
ALL GRADES, % OF GUAR.		99.6		--		--	
CV, %		1.3		--		--	
NUMBER OF ANALYSES		5		--		--	
BARREN RIVER FERT. CO., INC. Glasgow, KY							
5-10-15	5	5.2	17.9	9.9	9.4	16.4	11.5
5-20-20	5	5.0	8.9	19.9	12.1	19.7	8.9
12-24-24	5	11.8	5.2	24.2	4.1	23.9	16.8
ALL GRADES, % OF GUAR.		100.9		102.2		100.1	
CV, %		12.4		9.2		9.2	
NUMBER OF ANALYSES		31		30		30	
BURLEY BELT CHEMICAL COMPANY Lexington, KY							
5-10-15	10	5.2	15.3	10.2	10.9	15.6	9.7
5-20-20	7	5.6	18.2	20.4	12.6	19.3	10.3
10-10-10	13	9.4	7.5	10.2	9.8	12.0	13.5
18-46- 0	5	17.5	4.8	45.2	4.2	--	--
ALL GRADES, % OF GUAR.		101.0		101.6		104.1	
CV, %		11.7		11.8		11.3	
NUMBER OF ANALYSES		59		56		53	

TABLE 2. Continued

GRADE	NUMBER SAMPLES	ANALYTICAL AND STATISTICAL FINDINGS					
		N		P ₂ O ₅		K ₂ O	
		AA	CV	AA	CV	AA	CV
BURLEY BELT CHEMICAL COMPANY (continued) Cynthiana, KY							
5-10-15	6	5.3	10.8	11.0	3.4	15.7	1.5
10-10-10	7	9.6	8.4	10.5	10.0	11.7	10.8
ALL GRADES, % OF GUAR.		96.9		106.3		108.5	
CV, %		16.5		9.5		10.5	
NUMBER OF ANALYSES		23		24		23	
London, KY							
5-10-15	26	5.2	8.2	10.4	7.1	15.4	5.6
5-20-20	10	5.4	4.6	20.1	5.1	20.6	3.7
10-10-10	22	9.8	5.8	10.8	8.8	10.7	9.4
10-10-20	5	9.7	0.9	10.5	3.3	20.6	2.1
13-13-13	6	12.9	1.3	13.0	1.3	14.0	1.7
ALL GRADES, % OF GUAR.		101.3		104.5		103.4	
CV, %		7.0		7.5		7.8	
NUMBER OF ANALYSES		89		88		87	
Ferguson, KY							
5-10-15	8	5.2	8.8	9.7	14.0	15.9	3.8
5-20-20	5	5.2	6.8	19.4	2.0	20.9	4.4
10-10-10	10	9.2	8.1	10.1	6.9	10.5	6.1
ALL GRADES, % OF GUAR.		96.9		99.6		103.7	
CV, %		10.3		9.3		7.1	
NUMBER OF ANALYSES		31		35		36	
Harrodsburg, KY							
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ALL GRADES, % OF GUAR.		98.5		100.7		105.1	
CV, %		2.1		9.1		5.5	
NUMBER OF ANALYSES		10		8		11	
Russell Springs, KY							
-----	--	--	--	--	--	--	--
ALL GRADES, % OF GUAR.		92.2		97.6		106.5	
CV, %		17.0		4.9		5.9	
NUMBER OF ANALYSES		10		10		10	
CF INDUSTRIES, INC. Long Grove, IL							
34- 0- 0	6	33.6	1.3	--	--	--	--
ALL GRADES, % OF GUAR.		99.4		--		--	
CV, %		2.2		--		--	
NUMBER OF ANALYSES		10		--		--	

TABLE 2. Continued

GRADE	NUMBER SAMPLES	ANALYTICAL AND STATISTICAL FINDINGS					
		N		P ₂ O ₅		K ₂ O	
		AA	CV	AA	CV	AA	CV
FOURTH ST. FERT. CO., INC. Lexington, KY							
5-10-15	8	4.9	5.3	9.7	7.0	15.9	3.3
10-10-10	6	9.2	4.7	9.1	8.0	10.6	6.3
ALL GRADES, % OF GUAR.		97.6		96.8		105.5	
CV, %		6.9		6.6		5.0	
NUMBER OF ANALYSES		25		25		26	
GLASGOW FERTILIZER COMPANY Glasgow, KY							
5-10-15	11	5.0	7.1	9.8	5.1	16.0	6.1
5-20-20	9	5.2	4.4	20.0	4.2	20.1	1.9
10-10-10	17	10.4	5.9	10.5	5.5	10.2	3.1
15-15-15	5	15.3	2.0	14.9	4.3	15.2	2.8
ALL GRADES, % OF GUAR.		103.0		100.9		103.6	
CV, %		6.1		5.8		5.1	
NUMBER OF ANALYSES		58		56		56	
W. R. Grace & Company Memphis, TN							
5-10-15	7	5.4	7.7	10.9	6.8	15.2	8.4
6-24-24	10	6.6	8.0	24.4	3.7	22.6	6.4
10-10-10	7	10.0	6.8	12.0	12.2	12.1	19.4
15-15-15	6	14.4	3.2	15.6	5.8	15.5	5.1
ALL GRADES, % OF GUAR.		103.4		105.3		106.5	
CV, %		8.6		10.5		16.8	
NUMBER OF ANALYSES		43		42		40	
New Albany, IN							
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ALL GRADES, % OF GUAR.		103.0		105.0		103.2	
CV, %		6.9		10.1		10.4	
NUMBER OF ANALYSES		16		18		16	
GREENLEAF PLANT FOODS Danville, KY							
5-10-15	13	5.5	12.9	10.5	10.7	14.5	12.5
10-10-10	13	10.4	10.8	10.7	10.1	9.8	10.8
ALL GRADES, % OF GUAR.		105.4		100.9		98.2	
CV, %		11.7		10.1		13.8	
NUMBER OF ANALYSES		45		50		51	

TABLE 2. Continued

GRADE	NUMBER SAMPLES	ANALYTICAL AND STATISTICAL FINDINGS					
		N		P ₂ O ₅		K ₂ O	
		AA	CV	AA	CV	AA	CV
GRO-GREEN CHEMICAL CO., INC. Shelbyville, KY							
-----	--	--	--	--	--	--	--
ALL GRADES, % OF GUAR.		106.9		104.5		98.2	
CV, %		17.4		16.8		18.4	
NUMBER OF ANALYSES		22		25		25	
JANES FERTILIZER Columbia, KY							
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ALL GRADES, % OF GUAR.		94.1		88.2		114.9	
CV, %		15.6		21.2		10.4	
NUMBER OF ANALYSES		11		11		11	
KAISER AGRI. CHEMICALS Louisville, KY							
5-10-15	18	5.2	16.9	10.5	12.9	15.8	7.3
5-20-20	11	5.2	12.7	18.3	10.4	19.7	10.9
6-24-24	10	6.4	13.1	22.4	4.2	23.3	7.2
9-10-15	8	8.8	3.2	10.6	3.2	15.8	2.4
10-10-10	28	9.8	9.1	10.4	4.5	11.3	6.3
12-12-12	6	11.2	7.6	11.4	5.2	13.4	3.2
ALL GRADES, % OF GUAR.		101.4		101.4		108.6	
CV, %		13.3		9.3		14.1	
NUMBER OF ANALYSES		99		96		96	
KENTUCKY FERTILIZER WORKS Winchester, KY							
5-10-15	7	4.8	7.2	9.6	11.6	16.0	2.6
10-10-10	8	9.2	7.4	9.4	10.6	12.1	18.5
ALL GRADES, % OF GUAR.		95.9		96.9		115.5	
CV, %		8.1		10.6		14.1	
NUMBER OF ANALYSES		25		23		23	
MILES FARM SUPPLY, INC. Owensboro, KY							
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ALL GRADES, % OF GUAR.		101.1		91.3		113.9	
CV, %		17.9		13.2		5.3	
NUMBER OF ANALYSES		13		10		5	

TABLE 2. Continued

GRADE	NUMBER SAMPLES	ANALYTICAL AND STATISTICAL FINDINGS					
		N		P ₂ O ₅		K ₂ O	
		AA	CV	AA	CV	AA	CV
NORTH AMERICAN FERTILIZER COMPANY Louisville, KY							
5-10-15	12	4.9	12.7	8.7	22.7	17.0	15.6
5-20-20	5	4.4	16.7	17.6	10.3	22.0	8.3
10-10-10	11	10.1	4.6	9.7	9.5	11.2	6.7
19-19-19	5	17.1	7.5	17.3	11.2	22.5	12.9
ALL GRADES, % OF GUAR.		96.6		90.1		109.3	
CV, %		13.0		15.1		13.3	
NUMBER OF ANALYSES		51		53		54	
OHIO VALLEY FERTILIZER, INC. Maysville, KY							
10-10-10	7	10.5	14.2	10.2	12.0	11.5	21.3
ALL GRADES, % OF GUAR.		101.6		101.0		114.4	
CV, %		11.6		13.0		22.7	
NUMBER OF ANALYSES		21		21		21	
SMITH-DOUGLAS DIVISION Russellville, KY							
0- 0-60	5	--	--	--	--	57.7	6.0
5-10-15	8	5.8	15.8	10.3	5.3	15.9	1.8
6-24-24	17	6.1	3.8	23.6	6.2	25.8	7.0
10-10-10	12	10.0	3.5	11.5	10.0	11.4	8.7
ALL GRADES, % OF GUAR.		101.3		105.5		107.6	
CV, %		12.1		11.8		8.6	
NUMBER OF ANALYSES		50		50		51	
SOUTHERN STATES COOP., INC. Louisville, KY							
4-16- 4	6	4.4	3.1	15.6	2.6	4.9	6.1
5-10-15	13	5.5	7.9	10.3	8.3	15.4	12.4
5-20-20	5	5.3	9.5	20.3	7.0	19.7	1.7
6-12-12	6	6.6	7.2	12.9	5.7	12.1	8.5
10-10-10	13	9.9	13.2	9.7	10.9	10.8	10.5
15-15-15	7	13.7	7.0	15.5	5.7	15.4	3.0
ALL GRADES, % OF GUAR.		103.7		101.0		105.8	
CV, %		11.1		8.4		10.9	
NUMBER OF ANALYSES		52		54		54	
Russellville, KY							
5-10-15	10	5.3	3.9	10.3	5.2	15.2	3.6
5-20-20	5	5.3	2.1	20.4	5.7	19.4	15.6
6-24-24	6	6.2	3.2	24.4	1.5	23.6	2.9
10-10-10	23	9.7	4.9	11.1	6.9	10.3	9.2
18-18-18	6	17.9	2.3	18.6	5.2	18.6	4.7
ALL GRADES, % OF GUAR.		100.9		106.7		101.7	
CV, %		5.5		7.2		8.0	
NUMBER OF ANALYSES		53		53		56	

TABLE 2. Continued

GRADE	NUMBER SAMPLES	ANALYTICAL AND STATISTICAL FINDINGS					
		N		P ₂ O ₅		K ₂ O	
		AA	CV	AA	CV	AA	CV
SOUTHERN STATES COOP., INC. (continued) Winchester, KY							
5-10-15	21	5.3	9.6	10.0	8.3	16.3	8.3
5-20-20	11	5.5	4.1	20.9	3.6	19.6	4.8
10-10-10	21	9.8	5.9	10.4	8.7	10.5	10.0
ALL GRADES, % OF GUAR.		102.3		103.2		103.0	
CV, %		8.8		9.3		10.3	
NUMBER OF ANALYSES		64		66		66	
STEWART FERTILIZER SERVICE Mt. Vernon, KY							
5-10-15	5	5.2	12.1	10.1	10.2	15.2	3.9
10-10-10	6	11.2	14.6	10.8	17.0	10.8	23.3
ALL GRADES, % OF GUAR.		103.8		103.3		107.9	
CV, %		13.6		12.9		15.1	
NUMBER OF ANALYSES		17		17		17	
SWIFT AGRI CHEMICAL CORP. Chicago, IL							
10-10-10	12	9.7	13.5	9.6	10.3	9.5	11.3
ALL GRADES, % OF GUAR.		97.8		100.3		104.1	
CV, %		12.6		15.6		17.7	
NUMBER OF ANALYSES		19		17		17	
Columbia, KY							
10-10-10	5	9.5	7.2	9.2	23.4	11.1	8.1
ALL GRADES, % OF GUAR.		97.3		97.2		107.4	
CV, %		8.1		17.6		8.9	
NUMBER OF ANALYSES		12		12		12	
Hopkinsville, KY							
5-10-15	8	5.2	12.2	10.2	10.0	15.7	4.5
5-20-20	5	5.2	11.3	18.4	10.1	19.2	11.8
6-12-18	5	6.5	19.1	10.7	21.5	19.5	5.1
10-10-10	10	9.4	10.1	10.1	11.0	10.5	8.3
ALL GRADES, % OF GUAR.		100.1		97.4		104.2	
CV, %		12.0		11.9		8.3	
NUMBER OF ANALYSES		40		40		40	
Richmond, KY							
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ALL GRADES, % OF GUAR.		93.0		91.3		106.7	
CV, %		12.5		23.4		9.2	
NUMBER OF ANALYSES		12		13		13	

TABLE 2. Continued

GRADE	NUMBER SAMPLES	ANALYTICAL AND STATISTICAL FINDINGS					
		N		P ₂ O ₅		K ₂ O	
		AA	CV	AA	CV	AA	CV
USS AGRI-CHEMICALS Jeffersonville, IN							
5-10-15	39	5.2	6.8	10.2	5.0	15.5	3.4
5-20-20	16	5.9	14.0	19.9	7.6	19.1	4.6
6-24-24	5	6.1	4.8	23.5	2.9	23.7	2.9
10-10-10	32	10.2	3.5	10.4	5.9	10.2	4.8
10-10-20	5	10.0	1.8	10.3	2.4	19.3	2.8
13-13-13	11	12.7	3.5	12.8	5.1	13.0	7.2
33- 0- 0	5	33.4	1.4	--	--	--	--
ALL GRADES, % OF GUAR.		104.5		102.3		101.6	
CV, %		9.3		6.3		8.0	
NUMBER OF ANALYSES		125		120		120	
Nashville, TN							
5-10-15	6	5.1	7.4	10.4	5.9	14.7	3.8
6-12-12	5	6.0	3.9	11.7	0.4	12.1	2.9
6-12-18	6	5.8	20.0	11.9	6.2	17.4	13.4
7-28-28	17	7.8	6.9	29.3	2.9	26.3	4.4
10-10-10	9	9.5	4.1	10.3	3.9	10.4	4.6
15-40- 5	5	15.4	1.8	40.8	2.5	5.6	20.8
ALL GRADES, % OF GUAR.		103.2		102.1		99.5	
CV, %		10.0		4.8		10.1	
NUMBER OF ANALYSES		67		69		63	
WARNER FERTILIZER COMPANY Albany, KY							
15-15-15	5	14.0	9.8	15.6	2.2	16.0	9.7
ALL GRADES, % OF GUAR.		97.5		103.4		104.0	
CV, %		6.7		4.1		7.1	
NUMBER OF ANALYSES		16		16		16	
Columbia, KY							
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ALL GRADES, % OF GUAR.		99.8		97.9		107.7	
CV, %		9.7		5.8		12.3	
NUMBER OF ANALYSES		10		10		10	
Somerset, KY							
5-10-15	7	5.1	2.7	10.0	2.5	15.4	1.9
5-20-20	5	5.0	4.4	19.7	1.9	20.1	2.0
10-10-10	16	9.1	4.1	10.2	3.2	10.8	4.1
15-15-15	8	14.2	7.4	15.2	3.3	16.4	6.9
ALL GRADES, % OF GUAR.		95.6		100.5		105.4	
CV, %		6.6		3.3		6.3	
NUMBER OF ANALYSES		49		51		52	

TABLE 3. RESULTS OF THE ANALYSES OF CERTAIN OFFICIAL FERTILIZER SAMPLES FOR SECONDARY AND MINOR ELEMENTS AND FOR ORGANIC NITROGEN (WIN). Deficiencies are indicated with an asterisk "*" and excessive amounts with an "E".

COMPANY	SAMPLE NUMBER	GRADE	ELEMENT	GUARANTEED, %	FOUND, %
AG/GRO FERTILIZER CO. WINCHESTER KY	45024	0- 0-22	MG	11.0000	11.1500
AGRI-CHEM, INC. HOPKINSVILLE KY	43300	9-23-22	MG	2.1100	2.0900
			CU	0.1200	0.0860*
			MN	0.2900	0.3800
			ZN	0.4400	1.1300E
AGRICO FARM CENTER CADIZ KY	44216	8-22-28	MG	0.8740	1.3100
			ZN	0.4370	0.3700
AGRICO CHEMICAL CO HARTFORD KY	45388	4-21-33	B	0.3600	0.3000*
AGRICO CHEMICAL CO HODGENVILLE KY	44018	5-25-25	B	0.5400	0.7200
AGRICO CHEMICAL CO HORSE CAVE KY	43756	0-25-24	B	0.6220	0.4700*
	43767	6-24-24	B	0.8680	0.8600
AGRICO CHEMICAL CO MORGANFIELD KY	44262	0-15-37	B	0.1830	0.1100*
			ZN	0.5600	0.3600*
BALLARD CO. COOP. LA CENTER KY	45161	8-22-29	B	0.2400	0.2900
BARREN RIVER FERT. CO., INC GLASGOW KY	45004	10- 0- 0	WIN	9.3000	9.7200
BURLEY BELT CHEMICAL CO. LEXINGTON KY	43880	0-10-30	B	0.5000	1.0000E
	45089	0-10-30	B	0.5000	0.4200*
	43454	7- 0- 0	WIN	6.3000	6.3700
	44852	7- 0- 0	WIN	6.5000	7.4400
	44881	7- 0- 0	WIN	6.3000	6.6400
	43883	10-10-10	B	0.7500	0.7900
	45090	10-10-10	B	0.7500	0.4300*
	43858	12-12-12	MG	2.0000	0.1800*
	44867	13-13-13	MG	1.0000	1.4100
			ZN	1.0000	0.9900

TABLE 3. (Continued)

COMPANY	SAMPLE NUMBER	GRADE	ELEMENT	GUARANTEED, %	FOUND, %
BURLEY BELT CHEMICAL CO. LONDON KY	43961	6-12-18	MG	2.0000	1.8000*
	43567	7- 0- 0	WIN	6.3000	6.6400
	44009	10-10-15	MG	1.0000	1.3200
	43732	10-10-20	MG	1.0000	1.2200
	44172	10-10-20	MG	1.0000	1.6100
	44508	10-10-20	MG	1.0000	1.5200
	44791	10-10-20	MG	1.0000	1.4800
	44731	12-12-12	MG	2.0000	0.2200*
	43600	13-13-13	MG	1.0000	1.1400
			ZN	1.0000	0.7600*
	43661	13-13-13	MG	1.0000	1.1600
			ZN	1.0000	0.9000
	43982	13-13-13	MG	1.0000	1.1000
			ZN	1.0000	0.7300*
	44010	13-13-13	MG	1.0000	1.1400
			ZN	1.0000	0.6600*
	44603	13-13-13	MG	1.0000	1.2800
			ZN	1.0000	0.9700
	44990	13-13-13	MG	1.0000	1.5700
			ZN	1.0000	1.0900
BURLEY BELT CHEMICAL CO. HARRODSBURG KY	45354	0-18-35	B	0.1000	0.1000
FRIT INDUSTRIES OZARK AL	44792	0- 0- 0	ZN	33.0000	31.9400
GLASGOW FERTILIZER CO. GLASGOW KY	43779	5-20-20	B	0.5700	0.1300*
	43752	7-28-14	MG	1.2000	1.1200
			B	0.3750	0.3100*
			ZN	1.1250	0.7400*
	43899	7-28-14	MG	1.2000	1.1400
			B	0.3750	0.5500
			ZN	1.1250	0.8100*
	45005	10- 0- 0	WIN	9.2300	9.5400
45007	10- 0- 0	WIN	9.2300	9.4900	
W.R. GRACE & CO. AG CHEM GRUP MEMPHIS TN	43518	6-38- 6	MG	0.5000	0.4250*
			MN	0.5000	0.4000*
			ZN	1.5000	1.1400*
	44550	7-40- 6	MG	12.0000	12.9600
			WIN	5.0000	5.3100
GREENLEAF PLANT FOODS DANVILLE KY	43845	0-10-30	B	0.5700	0.4700*
	43846	0-10-30	B	0.5700	0.4800*
	43852	0-15-30	B	0.5700	0.2400*
	43840	5-20-20	B	0.5700	0.1300*
	43668	7- 0- 0	WIN	6.3000	5.9900
	43723	12-12-12	ZN	1.5300	0.3900*
GREEN VALLEY FARM SUPPLY CALHCUN KY	45255	0-21-29	ZN	0.3500	0.3900

TABLE 3. (Continued)

COMPANY	SAMPLE NUMBER	GRADE	ELEMENT	GUARANTEED, %	FOUND, %
GRD-GREEN CHEMICAL CO., INC. SHELBYVILLE KY	45361	0- 6-26	B	0.6700	0.7200
			ZN	0.5700	0.5600
	44210	0-13-23	B	0.8100	0.7900
	44189	0-13-27	B	1.5600	2.6500
	43819	0-19-19	B	0.4000	0.6100
			ZN	0.6900	0.5200*
	44104	8-12-15	MG	2.0000	2.5900
			B	0.1000	0.0600*
	44106	8-24-10	MG	1.0000	1.7400
GRD-GREEN SALES CO. LEBANON KY	43340	0-14-39	B	0.6800	0.6550
	44101	5-10-27	B	0.3700	0.3800
	44099	6-24-24	B	0.4600	0.4000*
INTERNATIONAL MIN & CHEM CORP FLORENCE AL	43577	0- 0-22	MG	11.0000	14.4600
JOHNSON CITY CHEMICAL INC. JOHNSON CITY TN	44621	7- 0- 0	WIN	6.3000	5.8000
	44771	7- 0- 0	WIN	6.3000	6.1000
KAISER AGRI. CHEM. LOUISVILLE KY	44044	6-12- 6	MG	1.0000	1.0000
			ZN	0.8000	0.2300*
	43898	10-10-15	MG	1.5000	1.2400*
			CU	0.0500	0.0490
			MO	0.0005	0.0006
			ZN	0.0500	0.0780
MCCAULEY BROS SEED CO VERSAILLES KY	44682	12- 0-16	B	0.1300	0.1200
			CU	0.0780	0.0750
			ZN	0.1000	0.1150
	44681	12- 0-23	B	0.1300	0.1100*
			CU	0.1590	0.1660
		ZN	0.2000	0.1900	
MEADE FARMERS SUPPLY BRANDENBURG KY	43341	0-24-24	B	0.8800	0.8300
METCALFE CO. FARMERS SUPPLY EDMONTON KY	44027	0-19-19	B	0.4100	0.4100
NCRTH AMERICAN FERTILIZER CO. LOUISVILLE KY	43651	0-18-36	B	0.5700	0.2700*
	44193	3-13-39	MG	1.2000	1.9700
	43546	9- 9-17	MG	1.2000	1.1400
			MN	0.2700	0.2000*
			ZN	0.2500	0.2400
	44199	9- 9-17	MG	1.2000	2.2800
			MN	0.2700	0.1900*
			ZN	0.2500	0.2000*

TABLE 3. (Continued)

COMPANY	SAMPLE NUMBER	GRADE	ELEMENT	GUARANTEED, %	FOUND, %
SEWERAGE COM., CITY MILWAUKEE MILWAUKEE WI	44504	6- 2- 0	WIN	5.5000	6.4800
	44774	6- 2- 0	WIN	5.5000	6.2300
SMITH-DOUGLAS DIV RUSSELLVILLE KY	44920	6-12-18	MG	0.5000	0.4700
			CU	0.0500	0.0040*
			MN	0.0500	0.0500
			MO	0.0005	0.0005
	43292	6-24-24	ZN	0.0500	0.0750
			MG	0.5000	0.2700*
			MN	0.0500	0.0680
ZN	0.0500	0.0810			
SOUTHERN STATES COOP., INC. RICHMOND VA	44164	7- 0- 0	WIN	6.3000	5.7100
	44376	7- 0- 0	WIN	6.5000	6.1800
	44482	7- 0- 0	WIN	6.3000	6.1100
SOUTHERN STATES COOP., INC. WINCHESTER KY	43275	0-12-40	B	0.4500	0.6500
	43737	0-12-40	B	0.4500	0.5000
S.S. HORSE CAVE COOP HORSE CAVE KY	43773	6-25-25	B	0.6190	0.6500
S.S. COOP. HUSTONVILLE SER. HUSTONVILLE KY	45182	0-24-24	B	0.5700	0.7000
S.S. MADISONVILLE COOP. MADISONVILLE KY	45072	0-25-23	ZN	0.4200	0.8900E
S.S. OWENSBORO COOP OWENSBORO KY	44858	10-25-25	B	0.2300	0.2100
S. S. COOP. SEBREE SERVICE SEBREE KY	45067	0-22-29	B	0.2200	0.2400
	45064	14-21-19	B	0.3200	0.5100
			ZN	0.3200	0.4600
S.S. SHELBYVILLE COOP. SHELBYVILLE KY	44181	10- 0-40	B	0.7360	0.8400
	44214	12-19-24	B	0.1230	0.1700
			ZN	0.4460	0.5500
S.S. SIMPSON COOP FRANKLIN KY	45119	19- 3-20	ZN	0.1300	0.1700
SPRINGFIELD FARM SERVICE SPRINGFIELD KY	44708	23-11-18	B	0.1300	0.2700E
SWIFT AGRICULTURAL CHEM CCRP HOPKINSVILLE KY	44329	6-12-18	MG	0.5000	5.9400E
			CU	0.0500	0.0055*
			MN	0.0500	0.0920
			MO	0.0005	0.0005
			ZN	0.0500	0.1000E
	44475	6-12-18	MG	0.5000	0.4300*
			CU	0.0500	0.0037*
			MN	0.0500	0.0310*
			MO	0.0050	0.0003*
			ZN	0.0500	0.7400E

TABLE 3. (Continued)

COMPANY	SAMPLE NUMBER	GRADE	ELEMENT	GUARANTEED, %	FOUND, %
SWIFT AGRICULTURAL CHEM CCRP (CONTINUED)	44057	10-10-10	MG	0.5000	0.5300
			CU	0.0500	0.0011*
			MN	0.0500	0.0091*
			MO	0.0005	0.0003*
			ZN	0.0500	0.0065*
	44576	10-10-10	MG	0.5000	0.4500*
			CU	0.0500	0.0013*
			MN	0.0500	0.0093*
			MO	0.0005	0.0003*
			ZN	0.0500	0.0060*
SWIFT AGRICULTURAL CHEM CCRP RICHMOND KY	43638	6-12-18	MG	0.5000	0.9650
			CU	0.0500	0.0027*
			MN	0.0500	0.0185*
			ZN	0.0500	0.0180*
USS FARM SERVICE CENTER CAMPBELLSVILL KY	44434	6-25-25	B	0.4300	0.3200*
USS AGRI-CHEMICALS GUTHRIE KY	44306	6-24-26	B	0.1000	0.1500
	44307	6-24-26	ZN	0.4280	0.4800
USS AGRI-CHEMICALS JEFFERSONVILL IN	44307	6-24-26	ZN	0.4500	0.3900
	43776	5-10-15	MO	0.0005	0.0004*
	43778	5-10-15	MO	0.0005	0.0003*
	43806	5-10-15	MO	0.0005	0.0003*
	43906	5-10-15	MO	0.0005	0.0004*
	43942	5-10-15	MO	0.0005	0.0004*
	44013	5-10-15	MO	0.0005	0.0005
	44014	5-10-15	MO	0.0005	0.0004*
	44085	5-10-15	MO	0.0050	0.0004*
	44093	5-10-15	MO	0.0005	0.0004*
	44161	5-10-15	MO	0.0005	0.0005
	44166	5-10-15	MO	0.0005	0.0004*
	44202	5-10-15	MO	0.0005	0.0005
	44275	5-10-15	MO	0.0005	0.0004*
	44453	5-10-15	MO	0.0005	0.0005
	44518	5-10-15	MO	0.0005	0.0003*
	44657	5-10-15	MO	0.0005	0.0005
	44836	5-10-15	MO	0.0005	0.0005
	44936	5-10-15	MO	0.0005	0.0005
	44959	5-10-15	MO	0.0005	0.0005
	44966	5-10-15	MO	0.0005	0.0005
	44975	5-10-15	MO	0.0005	0.0005
	45164	5-10-15	MO	0.0005	0.0005
	45189	5-10-15	MO	0.0005	0.0005
	45323	5-10-15	MO	0.0005	0.0005
	45326	5-10-15	MO	0.0005	0.0005
	45333	5-10-15	MO	0.0005	0.0005
44090	6-24-24	MN	0.0000	0.0420	
		ZN	0.0000	0.0290	
	43808	10-10-20	MO	0.0005	0.0003*
	44204	10-10-20	MO	0.0005	0.0004*
	44364	10-10-20	MO	0.0005	0.0004*
	43576	15-40-5	ZN	1.0000	0.4000*
	43274	16-4-8	MG	1.2000	1.7400
			MN	0.0500	0.0590

TABLE 3. (Continued)

COMPANY	SAMPLE NUMBER	GRADE	ELEMENT	GUARANTEED, %	FOUND, %
USS AGRI-CHEMICALS (CONTINUED)	44546	19- 5- 9	MG	0.6000	0.5400*
			CU	0.0500	0.0440
			MN	0.0500	0.0450
			ZN	0.0500	0.0630
			MG	1.2000	1.0100*
USS AGRI-CHEMICALS NASHVILLE TN	44242	0- 0- 0	MG	36.0000	29.7600*
	44560	3-12-24	B	0.2000	0.2300
	45086	5-20-20	MN	0.0500	0.0520
			ZN	0.0500	0.0690
	43263	7-28-28	MN	0.0500	0.0640
			ZN	0.0500	0.0570
	43477	7-28-28	MN	0.0500	0.0665
			ZN	0.0500	0.0870
	43739	7-28-28	MN	0.0500	0.0850
			ZN	0.0500	0.0760
	44829	7-28-28	MN	0.0500	0.0880
			ZN	0.0500	0.0850
	45060	7-28-28	MN	0.0500	0.0490
			ZN	0.0500	0.0910
	45087	7-28-28	MN	0.0500	0.0620
			ZN	0.0500	0.0690
	43473	8-32-16	MN	0.0500	0.0460
			ZN	0.0500	0.0575
	43740	8-32-16	MN	0.0500	0.0510
			ZN	0.0500	0.0770
	44326	12- 4- 8	MG	1.2000	1.8900
			CU	0.0500	0.0270*
			MN	0.0500	0.0500
			ZN	0.0500	0.0740
	44051	14-14-14	MN	0.0500	0.0630
			ZN	0.0500	0.0580
	44317	14-14-14	MN	0.0500	0.0580
			ZN	0.0500	0.1300E
43586	15-40- 5	ZN	1.0000	0.5500*	
43741	15-40- 5	ZN	1.0000	0.7200*	
44844	15-40- 5	ZN	1.0000	0.8900	
45059	15-40- 5	ZN	1.0000	0.6500*	
WARNER FERTILIZER CO SOMERSET KY	44985	0-20-20	B	0.5000	0.4700
			B	0.4110	0.1300*
			MG	3.0000	0.3610*
			CU	0.0500	0.0410
			MN	0.0500	0.1100E
			ZN	0.0500	0.2900E
WESTERN KY FARM SERVICES ELKTON KY	45130	6-12-18	MG	0.5000	0.5800
			CU	0.0500	0.0081*
			MN	0.0500	0.0560
			MO	0.0005	0.0005
			ZN	0.0500	0.1600E

TABLE 4. COMPANIES REGISTERED TO SELL FERTILIZER IN KENTUCKY AS OF JUNE 30, 1978.

ADAIR FARMERS SERVICE, INC. 210 MERCHANT ST. COLUMBIA KY 42728	AGRICO CHEMICAL CO BOX 8 CLARKSON KY 42726
AG/GRO FERTILIZER CO. 28 HILL STREET WINCHESTER KY 40391	AGRICO CHEMICAL CO BOX 395 CLAY KY 42404
AG-MAD FERTILIZER P.C. BOX 253 MADISON IN 47250	AGRICO FARM CENTER BOYD FARM SUPPLY CROFTON KY 42217
AG SERVICES OF CLAY BOX 486 CLAY KY 42404	AGRICO FARM CENTER BOYD FARM SUPPLY FREDONIA KY 40549
AG. SUPPLY CO. 1517 INDUSTRIAL DR. HOPKINSVILLE KY 42240	AGRICO CHEMICAL CO FREDONIA KY 42411
AGRI-CHEM, INC. BOX 31 HOPKINSVILLE KY 42240	AGRICO FARM CENTER HIGHWAY 41 GUTHRIE KY 42234
AGRICO CHEMICAL CO. P.O. BOX 3166 TULSA OK 74101	AGRICO CHEMICAL CO BOX 145 HARTFORD KY 42347
AGRICO CHEMICAL CO WASHINGTON CH OH 43160	AGRICO CHEMICAL CO. BOX 25 HENDERSON KY 42420
AGRICO CHEMICAL CO BOX 873 BOWLING GREEN KY 42101	AGRICO CHEMICAL CO. BOX 1349 HENDERSON KY 42420
AGRICO FARM CENTER R.R. #1, BOX 290 CADIZ KY 42211	AGRICO CHEMICAL CO 307 W MAIN ST HODGENVILLE KY 42748
AGRICO CHEMICAL CO BOX 7 CECILIA KY 42724	AGRICO CHEMICAL CO BOX 575 HORSE CAVE KY 42749

TABLE 4. (Continued)

AGRICO CHEMICAL CO BOX 65 IRVINGTON KY 40146	ALLEN CO. FARMERS SERVICE 409 EAST MAIN STREET SCOTTSVILLE KY 42164
AGRICO CHEMICAL CO ROUTE 3 MADISONVILLE KY 42431	ALLENSVILLE CROP SERVICE ALLENSVILLE KY 42204
AGRICO CHEMICAL CO BOX 86 MORGANFIELD KY 42437	ALLERGAN PHARMACEUTICALS, INC. 2525 DUPONT DR. IRVINE CA 92713
AGRICO CHEMICAL CO 108 RIVER RD OWENSBORO KY 42302	ALLIED CHEM CORP.-AGRI DIV. BOX 2120 HOUSTON TX 77001
AGRICO FARM CENTER P.O. BOX 129 PEMEROKE KY 42266	AMERICAN CYANAMID CO. P. O. BOX 400 PRINCETON NJ 08540
AGRICO CHEMICAL CO BOX 284 RUSSELLVILLE KY 42276	AMERICAN PELLETIZING CORP. BOX 3628 DES MOINES IA 50322
AGRICO CHEMICAL CO SACRAMENTO KY 42372	AMWAY CORP. 7575 E. FULTON ROAD ADA MI 49355
AGRICO CHEMICAL CO BOX 266 STURGIS KY 42459	ANCO PRODUCTS COMPANY P.O. BOX 24343 DAYTON OH 45424
AGRILAWN INC. P.O. BOX 994 OWENSBORO KY 42301	THE ANDERSONS, SPECIALTIES DIV BOX 119 MAUMEE OH 43537
AIR PRODUCTS & CHEMICALS INC. P. O. BOX 467 PENSACOLA FL 32592	ANVIL MINERAL PRODUCTS CORP. BOX Q BAY SPRINGS MS 39422
ALBERTO-CULVER COMPANY 2525 ARMITAGE AVE. MELROSE PARK IL 60160	AREX CORPORATION 1301 DOTHAN RD. BAINBRIDGE GA 31717

TABLE 4. (Continued)

ASKEW FARM SERVICE ROUTE 1 HOPKINSVILLE KY 42240	BIG FOUR FEED & IMPLEMENT CO. WEST MAPLE ST. SCOTTSVILLE KY 42164
AYERS SEED & FERTILIZER BOX 308 MORGANTOWN KY 42261	BIG 4 FERT & CHEM CO. ROUTE #1 BARDSTOWN KY 40004
AYR WAY STORES INDIANAPOLIS IN 46268	BIOCHEMICAL RES & DEV CORP P.O. BOX 14682 AUSTIN TX 78761
BALLARD CO. COOP. LA CENTER KY 42056	BISHOP CO.-DIV LEBANON CHEM P. O. BOX 317 LEBANON PA 17042
BARDWELL FARM SUPPLY BARDWELL KY 42023	BLACK LEAF PRODUCTS CO 667 N STATE ST ELGIN IL 60120
BARLOWS FARM CENTER P.C. BOX 155 GLENDALE KY 42740	BLOOMFIELD FERT. & CHEM CO. BLOOMFIELD KY 40008
BARREN RIVER FERT. CO., INC P.C. BOX 156 GLASGOW KY 42141	BLUEGRASS PLANT FOODS BOX 310 CYNTHIANA KY 41031
BEAUCHAMPS FARM SERVICE ROUTE 2 LEITCHFIELD KY 42754	BOUREON FARM SERVICE 1488 SOUTH MAIN ST. PARIS KY 40361
BEAVER DAM GRAIN BEAVER DAM KY 42320	BRANET CHEMICAL CO. BOX 276 PLEASANT PLNS IL 62677
BELL CO. FARM SUPPLY, INC. BOX 89 MIDDLESBORO KY 40965	OTIS BRYANT & SON MILLING CO. CANEYVILLE KY 42721
BEREA FARM SERVICE BOX 150-PROSPECT ST. BEREA KY 40403	RAY BRYANT & SON 130 THOMAS AVE BOWLING GREEN KY 42101

TABLE 4. (Continued)

BUGG BROS. FEED & SUPPLY CLINTON KY 42031	BURLEY BELT CHEMICAL CO. E.O. BOX 490 HARRODSBURG KY 40330
BUNTON SEED CO. 939 E. JEFFERSON ST. LOUISVILLE KY 40206	BURLEY BELT CHEMICAL CO. HAYES WAREHOUSE RUSSELL SPRNG KY 42642
BURGESS VIBROCRAPTERS, INC. RT. 83 GRAYSLAKE IL 60030	BURLEY BELT CHEMICAL CO. WAREHOUSE STANFORD KY 40484
BURKHART FEED MILL BCX 127 AUBURN KY 42206	BURLEY BELT-BAKER BOX 108 VERONA KY 41092
BURKESVILLE FERTILIZER PLANT BURKESVILLE KY 42717	CALLOWAY CO. SOIL IMP. ASSN. BOX 351 MURRAY KY 42071
BURLEY BELT CHEMICAL CO. BCX 5150 LEXINGTON KY 40505	CAMPBELLSVILLE CROP SERVICE P O BOX 7 CAMPBELLSVILL KY 42718
BURLEY BELT CHEMICAL CO. P. C. BOX 310 CYNTHIANA KY 41031	CAR-REN INCORPORATED P.O. BOX 964 COLUMBUS MS 39701
BURLEY BELT CHEMICAL CO. EKRCN KY 40117	CAR-REN INCORPORATED P.O. BOX 9300 MINNEAPOLIS MN 55440
BURLEY BELT CHEMICAL CO. BCX 130 LONDON KY 40741	CAREFREE GARDEN PRODUCTS P.O. BOX 383 W. CHICAGO IL 60185
BURLEY BELT CHEMICAL CO. BCX 306 FERGUSON KY 42533	CARGILL, INC. P.O. BOX 9300 MINNEAPOLIS MN 55440
BURLEY BELT CHEMICAL CO. RCUTE 1 GEORGETOWN KY 40324	DONALD CARNEY & SON RT. 1 SPRINGFIELD KY 40069

TABLE 4. (Continued)

CARPOLE'S INC. BOX 32 GARFIELD MN 56332	CHEM-LAWN CORP. 2700 E DUBLIN-GRNVIL COLUMBUS OH 43229
CAUDILL SEED CO. BOX 348 SHELBYVILLE KY 40065	CHEM-LAWN CORP. 7980 KENTUCKY DR. FLORENCE KY 41042
CAYCE LIME & FERTILIZER ROUTE 4 FULTON KY 42041	CHEM-LAWN CORP. LEXINGTON 731 WERNE DRIVE LEXINGTON KY 40504
C & D STORE MACKVILLE KY 40040	CHEM-LAWN CORP. LOUISVILLE 10100 BUNSEN WAY LOUISVILLE KY 40299
C & E PRODUCTS, INC. BOX 192, R#3 LE MARS IA 51031	CHEM-LAWN CORP. PROGRESS BLVD. NEW ALBANY IN 47150
CENTRAL FARMERS SUPPLY P.O. BOX 1 GREENSBURG KY 42743	CHEVRON CHEMICAL CO. P.O. BOX 242 FORT MADISON IA 52627
CENTRAL KY AERIAL SPRAY INC. BOX 509 DANVILLE KY 40422	CHEVRON CHEMICAL CO-ORTHO DIV 940 HENSLEY ST. RICHMOND CA 94804
CENTRAL SERVICE, INC. KEVIL KY 42053	CHILEAN NITRATE SALES CORP. 1 WORLD TRADE CTR NEW YORK NY 10048
C.F. CHEMICALS, INC. PC BOX 1479 BARTOW FL 33830	CIBA-GEIGY. CORP. P.O. BOX 11422 GREENSBORO NC 27409
CF INDUSTRIES, INC. SALEM LAKE DRIVE LONG GROVE IL 60047	CIRCLE 'J' RR#1 CLINTON KY 42031
CHEM-LAWN CORP. 47 PERIMETER CENTER ATLANTA GA 30346	CIRCLE O FARM CENTER MARION KY 42064

TABLE 4. (Continued)

CIRCLE O FARM CENTER 2ND & MONROE ST. STURGIS KY 42459	D. H. & R. CO., INC. P.O. BOX 333 LA PORTE IN 46350
COLONIAL GARDENS CENTER 4432 NICHOLASVILLE RD LEXINGTON KY 40503	DOW CHEMICAL 2030 DOW CENTER MIDLAND MI 48640
COMINCO AMERICAN INC. W 818 RIVERSIDE AVE. SPOKANE WA 99220	DRAGON CHEMICAL CORP. P.O. BOX 7311 ROANOKE VA 24019
CONSUMER GOODS INTER., INC. JONATHAN INDUST. CTR CHASKA MN 55318	EAGLE PICHER P.O. BOX 83 JOPLIN MO 64801
CONTINENTAL PEAT CO. P O BOX 7368 TCLEDO OH 43615	ELKTON CROP SERVICE ROUTE #3 GUTHRIE KY 42234
CCNWOOD CORP, DIV NEW VENTURES MEMPHIS TN 38117	ENCAP PRODUCTS CO BOX 278 MT PROSPECT IL 60056
CRAFTON & DUNCAN INC. 1228 2ND ST. HENDERSON KY 42420	EXCELAWN, CORP. OF AMERICA P.O. BOX 43072 LOUISVILLE KY 40243
CRITTENDEN CO. FARM SUPPLY P.O. BOX 130 MARION KY 42064	FAESY & BESTHOFF INC 143 RIVER RD EDGEWATER NJ 07020
DECO PLANTS CO. 10575 KATY FREEWAY HOUSTON TX 77024	FARMERS CROP SERVICE INC P.O. BOX 534 PRINCETON KY 42445
DELTA EARTH, INC. P.O. BOX 8045 CHICAGO IL 60680	FARMERS FEED & FERTILIZER BOX 527 SCOTTSVILLE KY 42164
DELTA CORPORATION BOX 127 WYNNBURG TN 38077	FARMERS FERTILIZER COMPANY P. O. BOX 127 SMITHS GROVE KY 42171

ANALYSIS OF OFFICIAL FERTILIZER SAMPLES IN KENTUCKY JULY 1977 - JUNE 1978 77

TABLE 4. (Continued)

FARMERS GIN COMPANY BOX 95 CLINTON KY 42031	FRASIER SUPPLY CO. 104 TRABUE ST. GLASGOW KY 42141
FARMERS LIME CO. P.O. BOX 636 SOUTH FULTON TN 42041	FREE FLOW FERTILIZER CO. P. O. BOX 119 MAUMEE OH 43537
FARMERS SUPPLY & PRODUCE CO. BOX 433 MCNTICELLO KY 42633	FRIT INDUSTRIES P.O. BOX 850 OZARK AL 36360
FARMLAND INDUSTRIES INC. 3315 N OAK TRAFFICWY KANSAS CITY MO 64116	GALLATIN CO. FARM SVC WARSAW KY 41095
FAYETTE SEED CO. 630 S. BROADWAY LEXINGTON KY 40503	GAMALIEL BULK FERTILIZER INC RT #1 TOMPKINSVILLE KY 42167
FELTY CROP SERVICE BOX 186 BEAVER DAM KY 42320	GARDINIER INC BOX 3269 TAMPA FL 33601
FIRSTMISS, INC. BOX 328 FORT MADISON IA 52627	GENES AG SUPPLY BOX 187 STURGIS KY 42459
FLEMING CO. FARM SUPPLY FLEMINGSBURG KY 41041	GIBSON'S FERTILIZER LAWRENCEBURG KY 40342
FOURTH ST. FERT. CO., INC. 4TH & BLACKBURN LEXINGTON KY 40508	GLASGOW FERTILIZER CO. BOX 198 GLASGOW KY 42141
FOURTH ST. FERT. CO., INC. P.C. BOX 723 WINCHESTER KY 40391	GLASGOW TRADING CENTER GLASGOW KY 42141
FRANKLIN CROP SERVICE ROUTE 2 FRANKLIN KY 42134	W R GRACE & CO-DAV CHEM DIV BARTOW FL 33830

TABLE 4. (Continued)

W.R. GRACE & CO.-AGR PROD. DIV R. R. #1 CADIZ KY 42211	GRAVES CO. SOIL IMP. ASSN. BOX 567 MAYFIELD KY 42066
W. R. GRACE & CO. R. #1, BOX 175 CECILIA KY 42724	GREAT SALT LAKE MIN. & CHEM. P.O. BOX 1190 OGDEN UT 84402
W R GRACE & CO BOX 148 COLUMBUS OH 43216	GREEN GRASS RECLAMATION DRAKESBORO KY 42337
W R GRACE & CO-AGR PROD DIV GUTHRIE KY 42234	GREEN GENIE PRODUCTS P.O. BOX 7713 COLUMBUS GA 31908
W. R. GRACE & CO. P.C. BOX 362 IRVINGTON KY 40146	GREEN CO. FARM SUPPLY P.O. BOX 0 GREENSBURG KY 42743
W R GRACE & CO BOX 257 LA CENTER KY 42056	GREEN-LAWN, INC. 5343 OLD BOONVILLE EVANSVILLE IN 47715
W. R. GRACE & CO. 1606 INDUSTRIAL DR. HOPKINSVILLE KY 42240	GREEN-LAWN, INC. 976 DELAWARE AVE. LEXINGTON KY 40508
W.R. GRACE & CO. AG CHEM GRoup BOX 277 MEMPHIS TN 38101	GREEN-LAWN, INC. 6102 HITT LANE LOUISVILLE KY 40222
W. R. GRACE & CO. P.C. BOX 90166 NASHVILLE TN 37209	GREENLEAF PLANT FOODS P.O. BOX 113 DANVILLE KY 40422
W.R. GRACE & CO. AG CHEM GROUP BCX 742 NEW ALBANY IN 47150	GREENLIFE PRODUCTS CO. P.O. BOX 72 WEST POINT VA 23181
W. R. GRACE, TERRA LITE PROD. 62 WHITTEMORE AVE. CAMBRIDGE MA 02140	GREEN THUMB, DIV RALSTON PURIN P.O. DRAWER 760 APOPKA FL 32703

TABLE 4. (Continued)

EARL GRISSMER COMPANY, INC. 7950 CASTLEWAY DR. INDIANAPOLIS IN 46250	GUTHRIE FARM SERVICE BOX 191 EMINENCE KY 40019
GREEN VALLEY FARM SUPPLY ATTN. R. D. WOOD CALHOUN KY 42327	HANCOCK COUNTY FARM SUPPLY P.O. BOX 95 HAWESVILLE KY 42348
GREEN VALLEY FARM SUPPLY ISLAND KY 42350	HARDIN GRAIN ELEVATOR, INC. BOX 131 HARDIN KY 42048
GREENAID CO. JCNATHAN INDSTR L CTR CHASKA MN 55318	HERCULES INC 900 LIFE OF GA TOWER ATLANTA GA 30308
GRO-GREEN CHEMICAL CO., INC. BOX 388 SHELBYVILLE KY 40065	HERCULES INC. 910 MARKET ST. WILMINGTON DE 19899
GRO-GREEN SALES CO. BOX 493 LEBANON KY 40033	HERITAGE HOUSE PRODUCTS 787 W. LAFAYETTE RD. MEDINA OH 44256
GRO-GREEN PAYNES, INC. ROUTE 11 LEXINGTON KY 40507	HERNDON FARM & SEED CO. ROUTE #4 MURRAY KY 42071
GROVE COMPOST CO. BOX 570 D FRANKSVILLE WI 53126	HIGHLAND DISTRIBUTORS INC. P.O. BOX 7 SADLERSVILLE TN 37154
GROWER SERVICE CORP 16713 INDUS. PKWY LANSING MI 48901	GEO W HILL & CO INC 8010 DIXIE HWAY FLORENCE KY 41042
GROWER SERVICE CORP 1091 W HIGH ST. LEXINGTON KY 40501	HOBBS FEED & SUPPLY CO. BOX 48 FANCY FARM KY 42039
GROWERS CHEMICAL CORP. LCKWOOD RD. MILAN OH 44846	A. H. HOFFMAN, INC. P.O. BOX 8 LANDISVILLE PA 17538

TABLE 4. (Continued)

HOLLINGSWORTH FERT. R#1 MT. HERMON KY 42157	INTERNATIONAL MIN & CHEM CORP. IMC PLAZA LIBERTYVILLE IL 60060
HOPKINSVILLE ELEVATOR CO, INC. SKYLINE DR. BOX 95 HOPKINSVILLE KY 42240	INTERNATIONAL SPIKE INC 462 E HIGH ST LEXINGTON KY 40508
HORTIGRO INC. 243 MERRICK RD. LYNBROOK NY 11563	JOHNSON CITY CHEMICAL INC. P. O. BOX 760 JOHNSON CITY TN 37601
HCWE-HILLIARD GRAIN CO. P.O. BOX 406 MAYFIELD KY 42066	JANES FERTILIZER R#2 COLUMBIA KY 42728
HUTSON'S AG SERVICE 204 W. RAILROAD AVE. MURRAY KY 42071	K-MART CORP. 3100 W BIG BEAVER RD TROY MI 48084
HUTSON CHEMICAL COMPANY 103 MAPLE ST. MURRAY KY 42071	KAISER AGRI. CHEM. P.O. BOX 327 HUMBOLDT TN 38343
HYDRO FLORA INC. P.O. BOX 8427 DALLAS TX 75205	KAISER AGRI. CHEM. 1400 SOUTH HANCOCK LOUISVILLE KY 40217
THE HYPONEX COMPANY, INC. 3489 SAWMILL RD. COPLEY OH 44321	KAISER AGRI. CHEM. 646 STARKS BLDG. LOUISVILLE KY 40202
I & H FARM SUPPLY, INC. 602 N. MAGNOLIA ST. TOMPKINSVILLE KY 42167	KAISER AGRI CHEM SAVANNAH GA 31402
INDIANA FARM BUREAU COOP. 47 S. PENNSYLVANIA INDIANAPOLIS IN 46204	KAISER AGRI. CHEM. P.O. BOX 7605 NASHVILLE TN 37209
INTERNATIONAL MIN & CHEM CORP P. O. BOX 158 FLORENCE AL 35630	KALIUM CHEM 400 BK OF CAN BLDG REGINA SASK CANADA S4P0M9

TABLE 4. (Continued)

KALIUM CHEMICALS P.O. BOX 95666 ATLANTA GA 30347	LEEMING DIV., PFIZER, INC 235 E. 42ND ST. NEW YORK NY 10017
KALC LABORATORIES 9233 WARD PARKWAY KANSAS CITY MO 64114	LEMARCO INTERNATIONAL INC. 1342 ITM BLDG. NEW ORLEANS LA 70130
G. T. KASEY IRVINGTON KY 40140	JACOB LEVY & BROS., INC. LOUISVILLE KY 40210
KENLAKE INTERNATIONAL, INC. 204 W. RAILROAD AVE. MURRAY KY 42071	LIVINGSTON CO. FARM & HOME SUP RFD 3 SMITHLAND KY 42081
KENTUCKY FERTILIZER WORKS 222 COOK AVE. WINCHESTER KY 40391	LIVINGSTON CO. COOP BOX 38 SMITHLAND KY 42081
KNOX FERT & CHEM CO., INC. P.O. BOX 248 KNOX IN 46534	LORETTO FEED & FERT. ROUTE #1 LORETTO KY 40037
KOOS, INC. 4500 13TH COURT KENOSHA WI 53140	LOUISVILLE SEED CO., INC. BOX 120 LOUISVILLE KY 40201
S. S. KRESGE CO. 3100 W. BIG BEAVER TROY MI 48084	MCCAULEY BROS SEED CO 111 BROADWAY VERSAILLES KY 40383
LAWN-A-MAT CHEM. & EQUIP. CORP 153 JEFFERSON AVE. MINEOLA NY 15301	MCWHORTER BROS. FARM SVC., INC ALBANY KY 42602
LAWN-AID INC. 2010 PLANTSIDE DRIVE LOUISVILLE KY 40299	MACANDREWS & FORBES CO. 3RD & JEFFERSON AVE. CAMDEN NJ 08104
LEBANON CHEMICAL CO. P. C. BOX 180 LEBANON PA 17042	MAG CAR, INC. R#2 BOX 76 APEX NC 27502

TABLE 4. (Continued)

MAPCO INC. INDIAN POINT DIV. ATHENS IL 62613	MILES FARM SUPPLY, INC. CARTER & KELLER RDS. OWENSBORO KY 42301
MARSHALL CTY SOIL IMP. ASSOC. 501 POPLAR BENTON KY 42025	MILES FARM SUPPLY, INC. HWY 431S OWENSBORO KY 42301
J. J. MAUGET CO., INC. P.O. BOX 3422 BURBANK CA 91504	MINN MINING & MFG CO 3M CENTER BLDG 209 ST PAUL MN 55101
MAYFIELD MILLING CO. P.O. BOX 311 MAYFIELD KY 42066	MISSISSIPPI CHEMICAL CORP BOX 388 YAZOO CITY MS 39194
MEACHEM NITROGEN SERVICE RT 3-BOX 188 MORGANFIELD KY 42437	MONSANTO AGRI CENTER BOX 203 SLAUGHTERS KY 42456
MEADE FARMERS SUPPLY BRANDENBURG KY 40108	MONSANTO COMPANY 800 N LINDBERGH ST. LOUIS MO 63166
METCALFE CO. FARMERS SUPPLY P.O. BOX 127 EDMONTON KY 42129	MONTGOMERY FARMERS COOP. R#11 CLARKSVILLE TN 37040
MEDINA AGRICULTURE PRODUCTS P.O. BOX 309 HCNDO TX 78861	MONTGOMERY WARD & CO., INC. CHICAGO IL 60607
MID-OHIO CHEMICAL CO., INC. P.C. BOX 193 MT. STERLING OH 43143	MOORE-HUTCHESON CO. MORGANTOWN KY 42261
MICHIGAN CHEMICAL CORP. 2 N. RIVERSIDE PLAZA CHICAGO IL 60601	MORRISON FARM SVC HODGENVILLE KY 42748
MILES FARM SUPPLY RT 3 OWENSBORO KY 42301	M-S FARM SERVICE RT #3 BOX 387 HENDERSON KY 42420

TABLE 4. (Continued)

NA-CHURS PLANT FOOD COMPANY 421 MONROE STREET MARION OH 43302	CLDHAM BROS FULTON AVE SHAWNEETOWN IL 62984
NATURAL DEVELOPMENT CO BOX 215 BAINBRIDGE PA 17502	OLIN CORP. 120 LONG RIDGE RD. STAMFORD CT 06904
NEW PLANT LIFE PO BOX 45 LA PORTE IN 46350	OLIN CORP. P.O. BOX 991 LITTLE ROCK AR 72203
NCRSK HYDRO OSLO NORWAY	ORGANIC COMPOST CORP. P.O. BOX 217 GERMANTOWN WI 53022
NORTH AMERICAN FERTILIZER CO. 1419 S. PRESTON LCUISVILLE KY 40217	ORGANIC LABORATORIES, INC. 1656-E TOWNHURST HOUSTON TX 77043
OBION FARMERS COOP. WEST PALMER ST. UNION CITY TN 38261	OTASCO, INC. BOX 885 TULSA OK 74102
OBION GRAIN CO OBION TN 38240	PARRISH SHOP & SALES RT4. BOX 578 HENDERSON KY 42420
OCCIDENTAL CHEMICAL CO. 2000 SO. POST OAK RD HCUSTON TX 77001	PAYGRO DIV. MEAD CORP. COURTHOUSE PLAZA NE DAYTON OH 45463
OHIO FEED LOT, INC. 11000 HUNTINGTON RD S. CHARLESTON OH 45368	ROBERT B. PETERS, INC. 2833 PENNSYLVANIA ST ALLEN TOWN PA 18104
OHIO VALLEY FERTILIZER, INC. BOX 36 MAYSVILLE KY 41056	J. PETTY CO. P O BOX 151 GRACEY KY 42232
OLD FORT INDUSTRIES, INC. 2013 S. ANTHONY BLVD FORT WAYNE IN 46803	PHELPS DODGE 300 PARK AVE. NEW YORK NY 10022

TABLE 4. (Continued)

PHELPS FARM SERVICE 424 SOUTH THIRD ST. PADUCAH KY 42001	PURE PLANT FOOD INT. LIMITED 1401 N. CLEVELAND SIOUX FALLS SD 57101
PHILLIPS SEED & SUPPLY INC. CAMPBELLSVILL KY 42718	PRO-LAWN PRODUCTS INC. BOX 4908 SYRACUSE NY 13221
PICKETT FARMERS COOP. P.C. BOX 155 BYRDSTOWN TN 38549	RA-PID-GRO CORPORATION 88 OSSIAN STREET DANSVILLE NY 14437
PLANT FOOD ENTERPRISES, INC. P.C. BOX 254 ADAMSVILLE TN 38310	RHODES FEED MILL ROUTE #1 MAYFIELD KY 42066
PLANT FOODS, INC. 309 W. NORTH ST. MAYFIELD KY 42066	RHODIA INC. AGRI. DIV. P.O. BOX 125 MONMOUTH JUNC NJ 08852
PLANT MARVEL LABORATORIES 624 W 119TH ST. CHICAGO IL 60628	RICH POND CROP SERVICE R#3 BOWLING GREEN KY 42101
PLANT RESEARCH LABORATORIES 2525 PULLMAN ST. SANTA ANA CA 92705	RICH POND FEED & SEED CO. R#3 BOWLING GREEN KY 42101
PLANTABBS CORP. TIMONIUM MD 21093	RINGER CORP. 6860 FLYING CLOUD DR EDEN PRAIRIE MN 55343
POOLE MILLING CO. P.C. BOX 110 POOLE KY 42444	RINKS BARGAIN CITY 3115 FRENCHMAN ROAD TOLEDO OH 43607
PRICES MILL FARM SUPPLY RCUTE #2 FRANKLIN KY 42134	ROBERTSON-CHEATHAM FARM. COOP. SPRINGFIELD TN 37172
PRINCETON GRAIN & SUPPLY CO. P.O. BOX 388 PRINCETON KY 42445	ROBIN JONES PHOSPHATE CO. BOX 50236 NASHVILLE TN 37205

TABLE 4. (Continued)

ROCKLAND CHEMICAL CO., INC. BOX 809 W. CALDWELL NJ 07006	SCHOCHOH FARM CENTER R#1 ADAIRVILLE KY 42202
ROHM & HAAS INDEPENDENCE MALL W PHILADELPHIA PA 19105	SCHULTZ COMPANY 11730 NORTHLINE MARYLAND HGTS MO 63043
RCSS DANIELS INC 1720 FULLER RD W DES MOINES IA 50265	SCOTT FARMERS COOP. ROUTE 2 BOX 301 ONEIDA TN 37841
ROYSTER COMPANY BOX 6986 TCLEDO OH 43612	O. M. SCOTT & SONS MARYSVILLE OH 43040
ROYSTER CO. & MR. WOMBLE DRAWER 1940 NORFOLK VA 23501	SEA-BORN INC. 2000 ROCKFORD RD. CHARLES CITY IA 50616
RUDOLPH FARM SUPPLY BCX 278 SALEM KY 42078	SEARS, ROEBUCK & CO. SEARS TOWER CHICAGO IL 60684
WILLIAM RUDY & SON BANDANA KY 42022	SEBREE FEED & GRAIN, INC. SEBREE KY 42455
SACRAMENTO FEED MILL, INC. WEST 4TH SACRAMENTO KY 42372	J. SENG LAWN & TREE SVC. 551 WALNUT ST. CRESNT SPRING KY 41017
M E SANDEFUR & SONS FARM SUP ROUTE 2 CALHOUN KY 42327	SEWERAGE COM., CITY MILWAUKEE 700 E. JONES ST. MILWAUKEE WI 53201
SATUREX INC. 4555 N. BROADWAY CHICAGO IL 60640	SEYMOUR CHEMICAL COMPANY P.O. BOX 307 SEYMOUR IN 47274
SCHOCHOH CROP SERVICE ROUTE 5 RUSSELLVILLE KY 42276	SHAKER GRAIN ELEVATOR BOX 23 SOUTH UNION KY 42283

TABLE 4. (Continued)

SHOCKLEES FARM SUPPLY R#4 UTICA KY 42376	SOUTHERN STATES COOP., INC. CURTIS BAY BALTIMORE MD 21226
SIERRA CHEMICAL COMPANY 1001 YOSEMITE DR. MILPITAS CA 95035	SOUTHERN STATES COOP., INC. ROUTE 5, BOX 70 BRISTOL VA 24201
SIMPSON MILLING CO WAYNESBURG KY 40489	SOUTHERN STATES COOP., INC. BOX 7611 CHESAPEAKE VA 23324
SMITH-DOUGLAS DIV P O BOX 438 RUSSELLVILLE KY 42276	SOUTHERN STATES COOP., INC. BOX 26234 RICHMOND VA 23260
SMITH-DOUGLASS, BORDEN INC. BOX 419 NCRFOLK VA 23501	SOUTHERN STATES COOP., INC. BOX 13065 C. T. STA LOUISVILLE KY 40213
SMITHERS-OASIS DIVISION 919 MAPVIN AVE. KENT OH 44240	SOUTHERN STATES COOP., INC. BOX 408 RUSSELLVILLE KY 42276
SMITHS GROVE FERTILIZER CO BOX E SMITHS GROVE KY 42171	SOUTHERN STATES COOP., INC. BOX 516 WINCHESTER KY 40391
SMYLES LABORATORIES, INC. 6908 CRESTON RD., MINNEAPOLIS MN 55435	S. S. BARDSTOWN COOP. 403 CATHEDRAL MANOR BARDSTOWN KY 40004
SCUTHEAST CHEMICAL P.O. BOX 130 LCNDON KY 40741	S. S. BOYLE COOP. R-4 LEBANON ROAD DANVILLE KY 40422
SOUTH FULTON LIME & FERT., INC P. O. BOX 66 SCUTH FULTON TN 42041	SS BOWLING GREEN COOP 920 CLAY STREET BOWLING GREEN KY 42101
SOUTHERN IMPORTERS, INC. P. O. BOX 8616 GREENSBORO NC 27410	S. S. BRECK COOP. ROUTE 1 HARDINBURG KY 40143

TABLE 4. (Continued)

S.S. COOP-CALDWELL SERVICE ROUTE #3 PRINCETON KY 42445	S.S. GLASGOW COOP 504 WEST FRONT ST. GLASGOW KY 42141
S.S. CAMPBELLSVILLE COOP. P. O. BOX 428 CAMPBELLSVILLE KY 42718	S.S. COOP., INC. GRAVES SER. ROUTE 4 BOX F MAYFIELD KY 42066
S. S. BULLITT COOP. BOX 644 SHEPHERDSVILLE KY 40165	S. S. COOP-NICHOLASVILLE SVC. THIRD & DEPOT ST. NICHOLASVILLE KY 40356
S.S. CARLISLE COOP MAIN STREET CARLISLE KY 40311	S.S. GRAYSON COOP PO BOX 547 GRAYSON KY 41143
S.S. CLARK COOP PENDLETON STREET WINCHESTER KY 40391	S. S. GREENVILLE SERVICE W. DEPOT ST. GREENVILLE KY 42345
S.S. COOP. CLAY PETROL SVC. P.O. BOX 175 CLAY KY 42404	S.S. HARDIN COOP ROUTE 2 -- BOX 175 ELIZABETHTOWN KY 42701
S.S. CYNTHIANA COOP. P.O. BOX 337 CYNTHIANA KY 41031	S.S. HARRODSBURG COOP P. O. BOX 308 HARRODSBURG KY 40330
S.S. FLEMINGSBURG COOP P.O. BOX 167 FLEMINGSBURG KY 41041	S.S. HENDERSON COOP 146 MCKINLEY ST HENDERSON KY 42420
S.S. FRANKFORT COOP. WILKINSON BLVD. FRANKFORT KY 40601	S.S. HENRY COOP BOX 167-EAST ELM ST. EMINENCE KY 40019
S.S. COOP FULTON SVC 201 CENTRAL AVE. FULTON KY 42041	S.S. HOPKINSVILLE COOP 501 EAST 13TH ST HOPKINSVILLE KY 42240
S.S. GEORGETOWN COOP. BOX 514-US 460 GEORGETOWN KY 40324	S.S. HOPKINSVILLE COOP. CADIZ BRANCH R#1 CADIZ KY 42211

TABLE 4. (Continued)

S.S. HORSE CAVE COOP 206 S. DIXIE HWY HORSE CAVE KY 42749	S.S. MAYSVILLE COOP BOX 668-US 68 S. MAYSVILLE KY 41056
S.S. COOP. HUSTONVILLE SER. BOX 170 HUSTONVILLE KY 40437	S.S. MORGANFIELD COOP 304 N. TOWNSEND ST. MORGANFIELD KY 42437
S.S. BRECK COOP. IRVINGTON BRANCH IRVINGTON KY 40146	S.S. OWENSBORO COOP 800 CRABTREE AVENUE OWENSBORO KY 42301
S.S. LAGRANGE COOP 2ND & WASHINGTON STS LA GRANGE KY 40031	S.S. OWENTON COOP BOX 97 OWENTON KY 40359
S.S. COOP. LANCASTER SER. RICHMOND RD. LANCASTER KY 40444	S.S. PENDLETON COOP P.O. BOX 231-PT. #2 PALMOUTH KY 41040
S.S. LAWRENCEBURG COOP R. R. #3 LAWRENCEBURG KY 40342	S. S. COOP--RICHMOND SERVICE P.O. BOX 299 RICHMOND KY 40475
S.S. LEBANON COOP. 215 DEPOT STREET LEBANON KY 40033	S.S. RUSSELLVILLE COOP P.O. BOX 309 RUSSELLVILLE KY 42276
S. S. LEITCHFIELD COOP 118 W. WHITE OAK ST. LEITCHFIELD KY 42754	S. S. COOP. SEBREE SERVICE BOX 345 SEBREE KY 42455
S.S. LEXINGTON COOP 949 PINE ST. LEXINGTON KY 40508	S.S. SHELBYVILLE COOP. 7TH & BRADSHAW STS. SHELBYVILLE KY 40065
S.S. LONDON COOP P.O. BOX 604 LCNDON KY 40741	S.S. SIMPSON COOP 301 FINN ST-BOX 210 FRANKLIN KY 42134
S.S. MADISONVILLE COOP. R#5 PRIDE AVE. MADISONVILLE KY 42431	S.S. SOMERSET COOP BOX 500-N. HWY 27 SOMERSET KY 42501

TABLE 4. (Continued)

S.S. COOP STANFORD SER. BOX 94 CRAB ORCHARD STANFORD KY 40484	STEWART FERTILIZER SERVICE MT. VERNON KY 40456
S.S. COOP-TODD SVC. P. O. BOX 278 ELKTON KY 42220	SUDBURY LABS INC. 572 DUTTON ROAD SUDBURY MA 01776
SPARROWS FARM SERVICE, INC. P.O. BOX 228 SHELBYVILLE KY 40065	STIM-U-PLANT LABORATORIES 2077 PARKWOOD AVE. COLUMBUS OH 43219
SPARTA FERTILIZER INC. SPARTA KY 41086	SUMNER FARMERS COOP. PORTLAND TN 37148
SPENCER FARM SERVICE TAYLORSVILLE KY 40071	SWIFT AGRI CHEM CORP. BARDWELL FARM SUP BARDWELL KY 42023
SPRINGFIELD FARM SERVICE ROUTE #2 SPRINGFIELD KY 40069	SWIFT AGRI CHEM CORP. CALHOUN FEED SERVICE MADISONVILLE KY 42431
STA-GREEN PLANT FOOD CO. P.O. BOX 540 SYLACAUGA AL 35150	SWIFT AGRI CHEM CORP 111W JACKSON BLVD CHICAGO IL 60604
STANLEY CROP SERVICE BOX #37 STANLEY KY 42375	SWIFT CHEMICAL CO. COLUMBIA KY 42728
STANLEY CROP SVC/SMITH-DOUGLAS BOX 419 NORFOLK VA 23501	SWIFT CHEMICAL CO. % CARL DEXTER CROFTON KY 42217
THE HERBERT STANLEY CO. 8140 N. RIDGEWAY SKOKIE IL 60076	SWIFT CHEMICAL CO. C/O MARTIN & DEWEESE CUNNINGHAM KY 42035
STERNS NURSERIES INC 404 WILLIAM STREET GENEVA NY 14456	SWIFT FARM CENTER E BERNSTADT KY 40729

TABLE 4. (Continued)

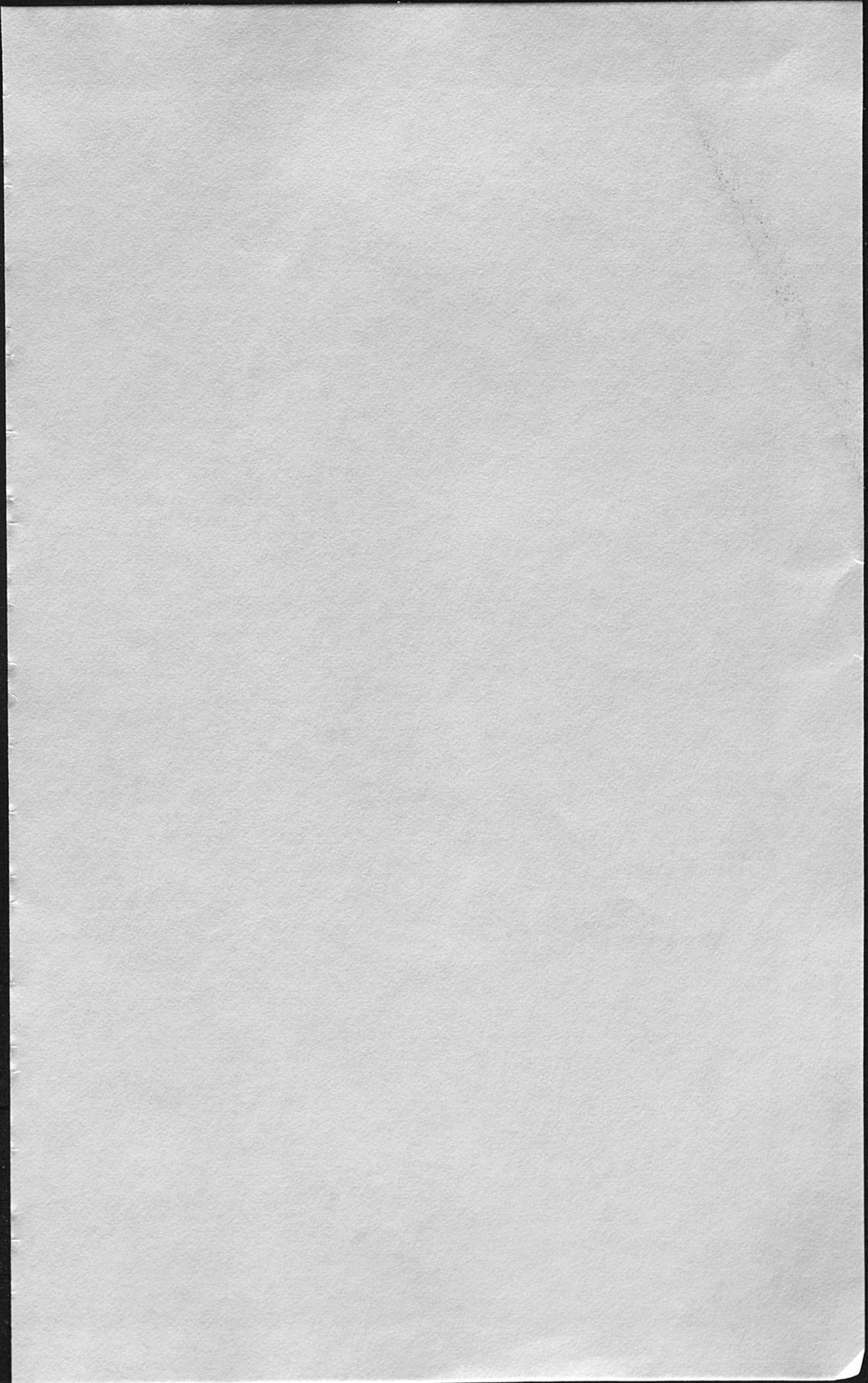
SWIFT AGRICULTURAL CHEM. CORP. P.O. BOX 338 E. ST. LOUIS IL 62202	THOMAS AGRI SUPPLY INC. P.O. BOX 89 BLOOMFIELD KY 40008
SWIFT AGRICULTURAL CHEM CORP BCX 548 HOPKINSVILLE KY 42240	THOMPSON SALES COMPANY P. O. BOX 246 MONTGOMERY AL 36101
SWIFT CHEMICAL CO. % MORGANTOWN FD MILL MORGANTOWN KY 42261	THURSTON FERTILIZER CO. 1500 BLOW AVE. PADUCAH KY 42001
SWIFT AGRICULTURAL CHEM CORP S ESTILL AVE RICHMOND KY 40475	TOBACCO STATES CHEMICAL CO. BOX 12046 LEXINGTON KY 40512
SWIFT AGRI CHEM CORP. % BUCKS B & T SALES UTICA KY 42376	TODD COUNTY SEED TRENTON KY 42286
G. M. TAYLOR SEED CO. P.C. BOX 485 GEORGETOWN KY 40324	TRANSAGRA CORP. 1355 LYNNFIELD RD. MEMPHIS TN 38138
TEATER BROS. & TEATER BOX 113 DANVILLE KY 40422	TOMPKINSVILLE FERTILIZER CO. ARMORY RD. TOMPKINSVILLE KY 42167
TENNESSEE FARMERS COOPERATIVE LAVERGNE TN 37086	TRACE CHEMICALS, INC. P.O. BOX 518 PEKIN IL 61554
TERRA CHEMICALS INT., INC. P.C. BOX 1828 SIOUX CITY IA 51102	TRAYLOR CHEM. & SUP. CO. P.O. BOX 343 ROYAL CENTER IN 46978
TEXAS SULPHUR PRODUCTS CO. 2801 W OSBORN RD. PHOENIX AZ 85017	TRICO AG PRODUCTS BOX 1104 STORM LAKE IA 50588
THERMOGAS CO. OF HARDINBURG HARDINBURG KY 40143	TRI-CO. FARM SUPPLY BOX 495 US 25E CORBIN KY 40701

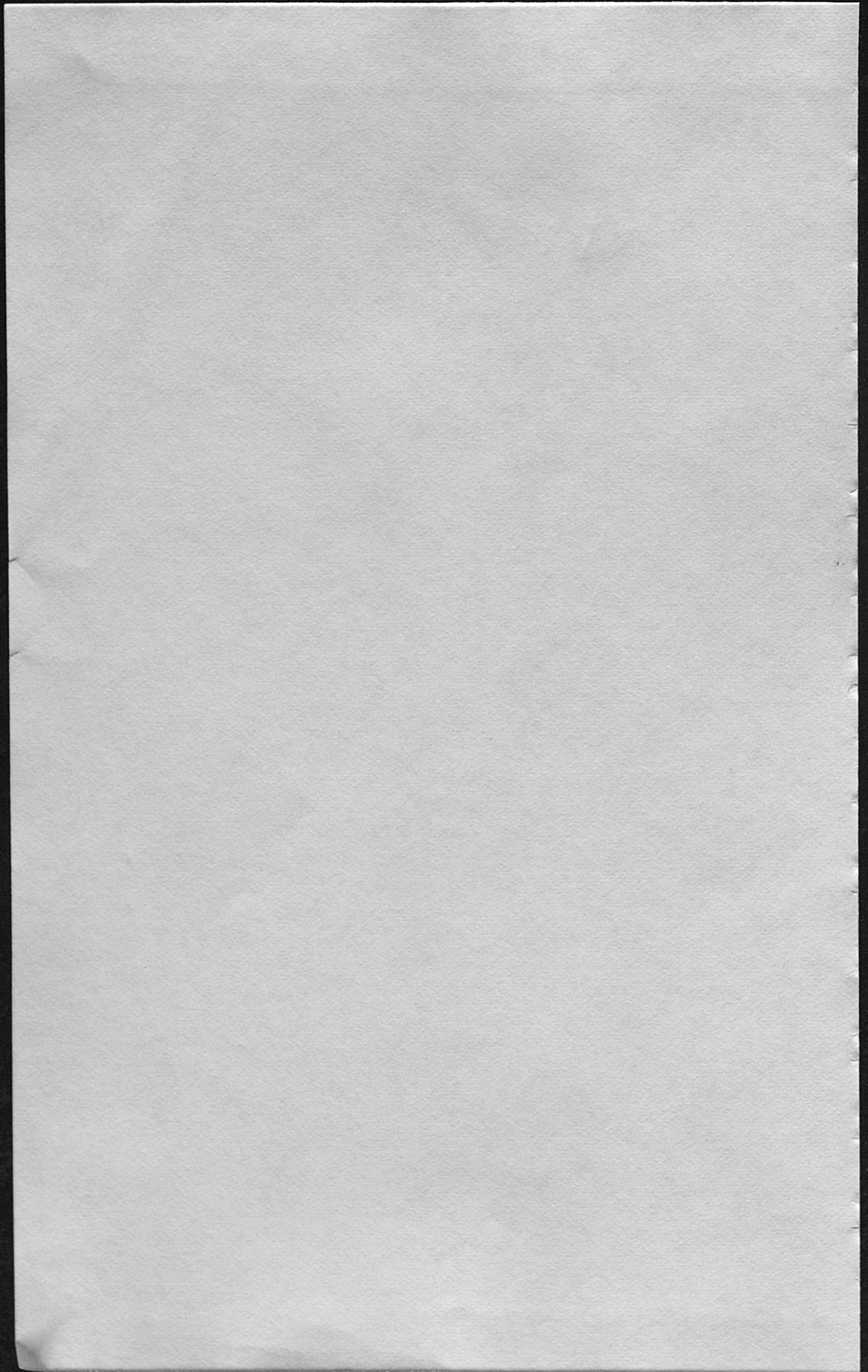
TABLE 4. (Continued)

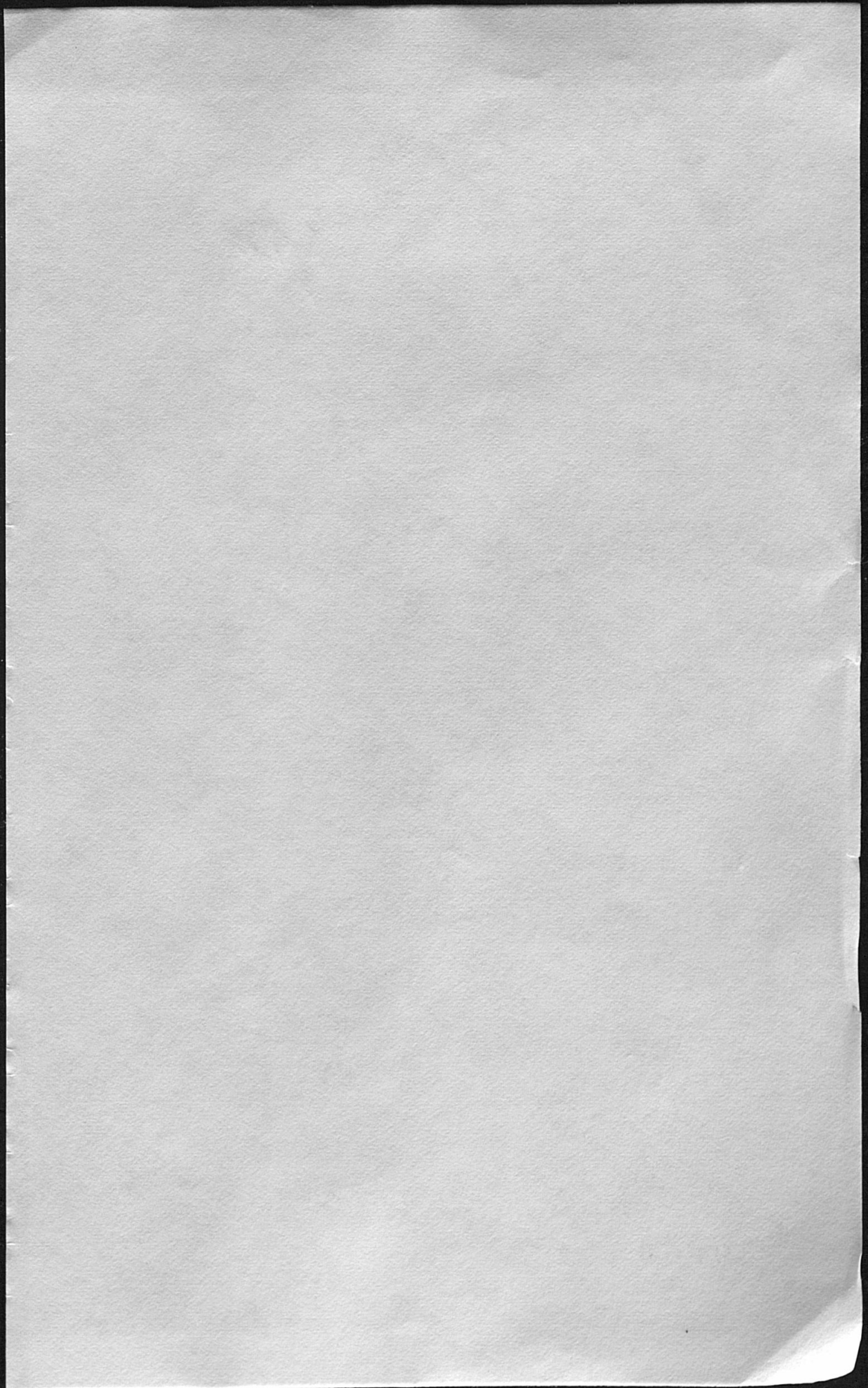
TRIMBLE COOP., INC. MILTON KY 40045	USS AGRI-CHEMICALS COMMERCE ST. FRANKLIN KY 42134
TRIPLE T CHEMICALS, INC. R.R. #1 VINCENNES IN 47591	USS AGRI-CHEMICALS GUTHRIE KY 42234
TRIPLE T INC. R.R. #1 VINCENNES IN 47591	USS AGRI-CHEMICALS 14TH & WATT ST. JEFFERSONVILL IN 47130
TUPPERWARE HOME PARTIES P.O. BOX 2353 ORLANDO FL 32802	USS AGRI-CHEMICALS P.O. BOX 90447 NASHVILLE TN 37209
UNION FERTILIZER 518 N. MORGAN MORGANFIELD KY 42437	USS AGRI-CHEMICALS BOX 90446 NASHVILLE TN 37209
US 60 FARM SVC. CENTER BOX 515 HARDINBURG KY 40143	USS FARM SERVICE CENTER BOX 128 UTICA KY 42376
USS AGRI-CHEMICAL RT. 1 ADAIRVILLE KY 42202	U. S. STEEL CORP-FAIRFIELD P. O. BOX 599 FAIRFIELD AL 35064
USS AGRI-CHEMICALS P. O. BOX 1685 ATLANTA GA 30301	THE VANCE CO. P. O. BOX 588 CHILHOWIE VA 24319
USS AGRI-CHEMICALS P.O. BOX 472 BOWLING GREEN KY 42101	THE VANCE CO. P.O. BOX 67 EWING VA 24248
USS FARM SERVICE CENTER BOX 87 CAMPBELLSVILL KY 42718	VENTURI, INC. P.O. BOX 1888 GRAND RAPIDS MI 49501
USS AGRI-CHEMICALS 685 DEKALB IND. WAY DECATUR GA 30033	VICKSBURG CHEMICAL CO. P. O. BOX 3 VICKSBURG MS 39180

TABLE 4. (Continued)

VISTRON CORP. BOX 628 LIMA OH 45802	WEST KY. FERTILIZER R. #4 BOX 63 MORGANFIELD KY 42437
VOLUNTARY PURCHASING GROUPS BOX 460 BCNHAM TX 75418	WESTERN KY FARM SERVICES R#1 ELKTON KY 42220
WABASH VALLEY SERVICE CO. 909 NORTH COURT GRAYVILLE IL 62844	N B WHEELER & SON BOX 8 SEDALIA KY 42079
WARNER FERTILIZER CO. N. HWY 127 ALBANY KY 42602	MR. WIGGS 23175 COMMERCE PK RD CLEVELAND OH 44122
WARNER FERTILIZER CO. P.O. BOX 274 CCLUMBIA KY 42728	WILSON & GEO. MEYER CO. 270 LAWRENCE AVE. S. SAN FRAN. CA 94080
WARNER FERTILIZER CO PO BOX 764 SCMERSET KY 42501	WOODFORD FEED CO., INC. BOX 116 VERSAILLES KY 40383
WARNER FERTILIZER CO. P.O. BOX 30 RUSSELL SPR. KY 42642	YODER COMPOST, INC. BOX 256-A ARCHBOLD OH 43502
WARRENS TURF NURSERY 6300 DONNELLY RD ANDERSON IN 46011	ZINC NATIONAL S.A. APT. 985 HILDALGO 640 PTE MONTEREY, N.L MX
WARRENS TURF NURSERY 8400 W. 111TH ST. PALOS PARK IL 60464	
WARSAW CHEMICAL CO., INC. BOX 658 ARGONNE RD WARSAW IN 46580	
WEGRO DIV., OLD FORT IND., INC P.C. BOX 460 GRAND RAPIDS OH 43522	







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