



MISSOURI FERTILIZER REPORT

Volume 44, No. 1

January, 2002

REPORT OF ANALYSIS OF FERTILIZER SAMPLES COLLECTED

July 1 to December 31, 2001

BAGGED FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

AGRILIANCE LLC		KANSAS CITY, MO			
0541**	0.0- 0.0- 0.0	0.0	0.0	0.0	100.00
0542**	0.0- 0.0- 0.0	0.0	0.0	0.0	100.00
0152	6.0-24.0-24.0	6.2	25.2	24.9	104.40
0149**	13.0-13.0-13.0	12.5	13.2	12.9	98.92
0741**	13.0-13.0-13.0	13.1	12.9	13.0	100.00
#TOTALS - NO. SAMPLES	5 - SMPLS MISBRANDED	0 -	101.40		

BUCHHEIT INC		PERRYVILLE, MO			
0833	6.0-24.0-24.0	10.0	23.7	27.6	113.10
0832	12.0-12.0-12.0	11.0	12.2	12.1	97.50
#TOTALS - NO. SAMPLES	2 - SMPLS MISBRANDED	0 -	106.59		

CHOUTEAU LIME CO		PRYOR, OK			
0151	10.0-20.0-10.0	7.9*	18.1	7.5*	85.00*
0150	13.0-13.0-13.0	12.8	13.0	11.5*	97.08
0627	13.0-13.0-13.0	12.3	13.6	12.4	98.77
0148	16.0- 8.0- 8.0	21.5	4.8*	14.1	119.11
#TOTALS - NO. SAMPLES	4 - SMPLS MISBRANDED	3 -	99.02		

DOMESTIC FERTILIZER, INC		PARIS, KY			
0475	15.0- 7.0- 6.0	16.6	8.8	7.6	116.80
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0 -	116.80		

FARMLAND INDUSTRIES, INC		JOPLIN, MO			
0002	8.0-32.0-16.0	8.3	30.2	16.7	97.60
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0 -	97.60		

HOWARD JOHNSON'S ENTERPRISES, INC		MILWAUKEE, WI			
0376	12.0-22.0- 6.0	12.4	23.3	6.3	105.00
0330	13.0-13.0-13.0	12.0	11.7	12.9	92.77*
#TOTALS - NO. SAMPLES	2 - SMPLS MISBRANDED	1 -	99.28		

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

KELLY LIME & ROCK CO, INC		KIRKSVILLE, MO			
0726**	0.0- 0.0- 0.0	0.0	0.0	0.0	100.00
0955**	0.0- 0.0-22.0	0.0	0.0	24.0	109.09
#TOTALS - NO. SAMPLES	2 - SMPLS MISBRANDED	0 -	109.09		

LANGE-STEGMANN COMPANY		ST LOUIS, MO			
0375	12.0-12.0-12.0	11.4	10.7*	12.5	94.50*
0525	12.0-12.0-12.0	13.0	11.8	11.2	101.33
0742	12.0-12.0-12.0	14.6	10.4*	12.2	103.67
0829	20.0-10.0-10.0	18.9	10.1	11.0	98.57
0321	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
#TOTALS - NO. SAMPLES	5 - SMPLS MISBRANDED	2 -	99.85		

LESCO, INC		CLEVELAND, OH			
1333	34.0- 3.0-11.0	35.2	4.0	11.3	105.53
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0 -	105.53		

MADISON COUNTY FARM SUPPLY INC		FREDERICKTOWN, MO			
0524**	12.0-12.0-12.0	11.7	13.0	14.4	106.33
0628**	12.0-12.0-12.0	12.1	13.6	11.7	105.17
0523	17.0-17.0-17.0	19.4	17.2	14.2*	102.82
0522	20.0-10.0-10.0	18.3	13.8	11.1	107.57
#TOTALS - NO. SAMPLES	4 - SMPLS MISBRANDED	1 -	105.30		

MAGIC GREEN CORPORATION		SILEX, MO			
1459**	0.0- 0.0-24.0	0.0	0.0	29.8	124.17
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0 -	124.17		

MFA PLANT FOODS		COLUMBIA, MO			
0834	6.0-24.0-24.0	5.7	23.4	25.4	99.52
0830	13.0-13.0-13.0	13.8	14.2	13.2	106.46
#TOTALS - NO. SAMPLES	2 - SMPLS MISBRANDED	0 -	102.55		

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Issued Semi-Annually January, July by Fertilizer Control Service, Agricultural Experiment Station, University of Missouri-Columbia, 3600 E. New Haven Rd., Columbia, Missouri



BAGGED FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
MIRACLE-GRO LAWN PRODUCTS, INC		MARYSVILLE, OH			
0474**	15.0-30.0-15.0	15.4	31.4	15.6	104.00
0371**	27.0- 3.0- 6.0	28.4	2.9	6.6	104.85
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	0	- 104.32
BRUCE OAKLEY INC		BEEBE, AR			
0331	13.0-13.0-13.0	12.6	13.2	13.2	99.69
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 99.69
PURSELL INDUSTRIES, INC		BIRMINGHAM, AL			
0332	12.0-12.0-12.0	10.9	11.4	12.8	95.67*
0674**	12.0-12.0-12.0	10.5*	12.0	10.7*	92.83*
0373**	18.0-24.0-10.0	11.8*	15.8*	20.6	80.64*
0471	20.0-27.0- 5.0	21.1	27.3	5.6	103.43
0671**	22.0- 3.0-14.0	21.5	3.2	14.5	99.84
0670**	31.0- 2.0- 4.0	30.2	3.6	5.9	105.00
#TOTALS - NO. SAMPLES		6	- SMPLS MISBRANDED	3	- 95.90
SCHULTZ COMPANY		BRIDGETON, MO			
0370**	30.0- 3.0- 4.0	30.3	3.2	4.3	101.86
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 101.86
J.R. SIMPLOT CO.		BOISE, ID			
1221**	14.0-24.0-12.0	14.4	23.8	13.3	101.93
1220**	32.0- 5.0- 7.0	31.1	4.9	7.9	98.64
1219	35.0- 3.0- 5.0	36.3	3.2	4.6	103.21
#TOTALS - NO. SAMPLES		3	- SMPLS MISBRANDED	0	- 101.28
T AND N, INC		FORISTELL, MO			
0109	13.0-13.0-13.0	12.5	14.2	14.4	104.31
0831	13.0-13.0-13.0	12.3	12.8	12.3	96.15*
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	1	- 100.23
TETRA MICRONUTRIENTS		HOUSTON, TX			
0540**	0.0- 0.0- 0.0	0.0	0.0	0.0	100.00
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 100.00
THE SCOTTS COMPANY		MARYSVILLE, OH			
0374**	16.0-25.0-12.0	16.0	25.8	14.2	104.04
0473**	18.0-22.0- 8.0	20.0	23.3	9.0	108.64
0372	22.0- 4.0-11.0	23.1	4.3	11.6	105.40
0672	22.0- 4.0-11.0	22.4	4.2	11.8	103.17
0472	35.0- 2.0- 4.0	33.0	2.6	4.8	97.44
#TOTALS - NO. SAMPLES		5	- SMPLS MISBRANDED	0	- 103.83

* Subject to penalty (either 10% or two units deficient from guarantee in nutrient indicated, or 3% deficient in total value).

** Sample analyzed for guaranteed secondary or micronutrients, the results are tabulated beginning page 37.

Totals from July 1, 2001.

AGRISERVICES OF BRUNSWICK, LLC BRUNSWICK, MO
0098 0.0- 0.0-62.0 0.0 0.0 62.2 100.32

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
AG DISTRIBUTORS INC		NASHVILLE, TN			
0648	18.0-46.0- 0.0	17.7	45.9	0.0	99.38
1266	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	0	- 99.90
AGRILIANCE LLC		KANSAS CITY, MO			
0088	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
0490	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
0491	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0572	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
0684	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
0691	0.0- 0.0-60.0	0.0	0.0	60.5	100.83
0695	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
0961	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
1096	0.0- 0.0-60.0	0.0	0.0	60.5	100.83
1345	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
1636	0.0- 0.0-60.0	0.0	0.0	60.0	100.00
0210	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
0582	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
0708	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0444	11.0-52.0- 0.0	11.2	51.2	0.0	99.05
0450	11.0-52.0- 0.0	10.5	51.3	0.0	98.10
0639	11.0-52.0- 0.0	10.4	51.8	0.0	98.73
0642	11.0-52.0- 0.0	11.2	52.1	0.0	100.48
1049	11.0-52.0- 0.0	11.1	51.8	0.0	99.84
0066	18.0-46.0- 0.0	17.2	46.9	0.0	100.16
0167	18.0-46.0- 0.0	17.7	45.6	0.0	98.91
0344	18.0-46.0- 0.0	17.5	46.2	0.0	99.53
0453	18.0-46.0- 0.0	17.7	46.1	0.0	99.69
0463	18.0-46.0- 0.0	18.1	46.5	0.0	100.94
0465	18.0-46.0- 0.0	17.6	46.8	0.0	100.63
0466	18.0-46.0- 0.0	17.7	46.2	0.0	99.84
0467	18.0-46.0- 0.0	17.4	46.5	0.0	99.84
0538	18.0-46.0- 0.0	18.0	45.5	0.0	99.22
0544	18.0-46.0- 0.0	18.1	45.4	0.0	99.22
0545	18.0-46.0- 0.0	18.2	45.7	0.0	99.84
0546	18.0-46.0- 0.0	18.1	45.6	0.0	99.53
0549	18.0-46.0- 0.0	18.1	45.4	0.0	99.22
0647	18.0-46.0- 0.0	17.8	45.3	0.0	98.59
0658	18.0-46.0- 0.0	18.4	45.9	0.0	100.47
1326	18.0-46.0- 0.0	17.8	46.2	0.0	100.00
1633	18.0-46.0- 0.0	17.6	45.3	0.0	98.28
0104	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76
0511	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76
0595	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00
0893	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00
0896	34.0- 0.0- 0.0	35.1	0.0	0.0	103.24
0897	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35
0978	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76
1295	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65
0138	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0616	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0912	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0990	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
#TOTALS - NO. SAMPLES		48	- SMPLS MISBRANDED	0	- 100.19
AGRISERVICES OF BRUNSWICK, LLC		BRUNSWICK, MO			
0288	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
0392	0.0- 0.0-60.0	0.0	0.0	61.9	103.17
0482	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0486	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
0778	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0956	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
1086	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
1229	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
1608	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
0877	0.0- 0.0-61.0	0.0	0.0	61.4	100.66
0090	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
0096	0.0- 0.0-62.0	0.0	0.0	61.6	99.35
0097	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
0099	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
0100	0.0- 0.0-62.0	0.0	0.0	62.8	101.29

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value	MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash		No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0101	0.0- 0.0-62.0	0.0	0.0	62.8	101.29	0458	18.0-46.0- 0.0	17.4	46.4	0.0	99.69
0102	0.0- 0.0-62.0	0.0	0.0	61.4	99.03	0459	18.0-46.0- 0.0	17.5	46.1	0.0	99.38
0216	0.0- 0.0-62.0	0.0	0.0	61.9	99.84	0753	18.0-46.0- 0.0	18.0	46.1	0.0	100.16
0300	0.0- 0.0-62.0	0.0	0.0	61.9	99.84	0755	18.0-46.0- 0.0	17.7	46.7	0.0	100.63
0305	0.0- 0.0-62.0	0.0	0.0	61.7	99.52	0756	18.0-46.0- 0.0	18.0	46.3	0.0	100.47
0405	0.0- 0.0-62.0	0.0	0.0	62.3	100.48	0849	18.0-46.0- 0.0	17.7	46.0	0.0	99.53
0406	0.0- 0.0-62.0	0.0	0.0	62.4	100.65	0852	18.0-46.0- 0.0	17.7	45.0	0.0	97.97
0410	0.0- 0.0-62.0	0.0	0.0	62.9	101.45	0931	18.0-46.0- 0.0	17.4	45.9	0.0	98.91
0411	0.0- 0.0-62.0	0.0	0.0	62.0	100.00	0940	18.0-46.0- 0.0	17.7	45.6	0.0	98.91
0502	0.0- 0.0-62.0	0.0	0.0	61.8	99.68	0941	18.0-46.0- 0.0	17.9	46.1	0.0	100.00
0503	0.0- 0.0-62.0	0.0	0.0	62.6	100.97	0942	18.0-46.0- 0.0	17.6	45.2	0.0	98.13
0704	0.0- 0.0-62.0	0.0	0.0	62.3	100.48	0943	18.0-46.0- 0.0	17.3	46.1	0.0	99.06
0705	0.0- 0.0-62.0	0.0	0.0	62.5	100.81	1208	18.0-46.0- 0.0	18.0	45.6	0.0	99.38
0792	0.0- 0.0-62.0	0.0	0.0	62.8	101.29	1209	18.0-46.0- 0.0	17.9	46.4	0.0	100.47
0793	0.0- 0.0-62.0	0.0	0.0	62.2	100.32	1213	18.0-46.0- 0.0	18.0	45.2	0.0	98.75
0881	0.0- 0.0-62.0	0.0	0.0	62.6	100.97	1328	18.0-46.0- 0.0	17.6	46.4	0.0	100.00
0882	0.0- 0.0-62.0	0.0	0.0	62.6	100.97	1329	18.0-46.0- 0.0	17.6	46.8	0.0	100.63
0883	0.0- 0.0-62.0	0.0	0.0	62.9	101.45	1439	18.0-46.0- 0.0	17.9	46.8	0.0	101.09
0884	0.0- 0.0-62.0	0.0	0.0	62.4	100.65	1443	18.0-46.0- 0.0	17.9	46.8	0.0	101.09
0887	0.0- 0.0-62.0	0.0	0.0	62.6	100.97	1600	18.0-46.0- 0.0	17.3	45.7	0.0	98.44
0969	0.0- 0.0-62.0	0.0	0.0	62.7	101.13	1601	18.0-46.0- 0.0	17.6	45.8	0.0	99.06
1101	0.0- 0.0-62.0	0.0	0.0	62.9	101.45	1293**	21.0- 0.0- 0.0	20.9	0.0	0.0	99.52
1240	0.0- 0.0-62.0	0.0	0.0	62.3	100.48	0316	33.5- 0.0- 0.0	32.9	0.0	0.0	98.21
1242	0.0- 0.0-62.0	0.0	0.0	62.0	100.00	0509	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18
1246	0.0- 0.0-62.0	0.0	0.0	62.3	100.48	0510	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35
1360	0.0- 0.0-62.0	0.0	0.0	62.9	101.45	0895	34.0- 0.0- 0.0	33.5	0.0	0.0	98.53
1364	0.0- 0.0-62.5	0.0	0.0	63.0	100.80	1256	34.0- 0.0- 0.0	33.2	0.0	0.0	97.65
1365	0.0- 0.0-62.5	0.0	0.0	63.0	100.80	1562	34.0- 0.0- 0.0	33.1	0.0	0.0	97.35
1470	0.0- 0.0-62.0	0.0	0.0	62.2	100.32	0043	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1549	0.0- 0.0-62.5	0.0	0.0	63.1	100.96	0048	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1550	0.0- 0.0-62.5	0.0	0.0	62.7	100.32	0049	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1614	0.0- 0.0-62.0	0.0	0.0	62.8	101.29	0145	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1615	0.0- 0.0-62.0	0.0	0.0	62.7	101.13	0146	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1457	0.0-26.2-26.2	0.0	28.6	25.2	104.83	0234	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1458	0.0-26.2-26.2	0.0	27.3	26.8	103.56	0327	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
0082	0.0-46.0- 0.0	0.0	46.4	0.0	100.87	0435	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0083	0.0-46.0- 0.0	0.0	46.8	0.0	101.74	0436	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
0122	0.0-46.0- 0.0	0.0	47.3	0.0	102.83	0440	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
0478	0.0-46.0- 0.0	0.0	46.5	0.0	101.09	0727	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0479	0.0-46.0- 0.0	0.0	45.7	0.0	99.35	0729	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1334	0.0-46.0- 0.0	0.0	47.4	0.0	103.04	0730	46.0- 0.0- 0.0	46.0	0.0	0.0	100.00
1533	0.0-46.0- 0.0	0.0	47.2	0.0	102.61	0731	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1634	0.0-46.0- 0.0	0.0	47.2	0.0	102.61	0816	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0056	11.0-52.0- 0.0	11.3	52.9	0.0	101.90	0820	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0057	11.0-52.0- 0.0	11.2	53.2	0.0	102.22	0822	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0058	11.0-52.0- 0.0	11.3	52.8	0.0	101.75	0823	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0059	11.0-52.0- 0.0	11.5	52.4	0.0	101.43	0908	46.0- 0.0- 0.0	45.8	0.0	0.0	99.57
0240	11.0-52.0- 0.0	11.4	52.6	0.0	101.59	0913	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0447	11.0-52.0- 0.0	11.2	51.6	0.0	99.68	1155	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
0449	11.0-52.0- 0.0	11.3	51.8	0.0	100.16	1156	46.0- 0.0- 0.0	45.9	0.0	0.0	99.78
0837	11.0-52.0- 0.0	11.4	50.8	0.0	98.73	1163	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
0838	11.0-52.0- 0.0	11.6	51.5	0.0	100.16	1414	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
0839	11.0-52.0- 0.0	11.8	52.2	0.0	101.59	#TOTALS - NO. SAMPLES 137 - SMPLS MISBRANDED 0 - 100.37					
0930	11.0-52.0- 0.0	11.1	51.9	0.0	100.00	AGRISERVICES OF BRUNSWICK, LLC MENDON, MO					
1196	11.0-52.0- 0.0	11.4	51.6	0.0	100.00	1080	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
1200	11.0-52.0- 0.0	11.4	51.5	0.0	99.84	#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 102.17					
1317	11.0-52.0- 0.0	11.3	52.1	0.0	100.63	AGRIUM U.S. INC. DENVER, CO					
1521	11.0-52.0- 0.0	11.0	51.5	0.0	99.21	1541	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
0060	18.0-46.0- 0.0	17.9	46.8	0.0	101.09	0597	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65
0061	18.0-46.0- 0.0	17.6	46.5	0.0	100.16	0898	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65
0075	18.0-46.0- 0.0	17.7	45.3	0.0	98.44	0899	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35
0076	18.0-46.0- 0.0	17.6	45.5	0.0	98.59	0900	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65
0077	18.0-46.0- 0.0	17.7	45.9	0.0	99.38	0901	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
0078	18.0-46.0- 0.0	17.7	45.5	0.0	98.75	0977	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35
0079	18.0-46.0- 0.0	16.6	46.8	0.0	99.06	AGRIUM U.S. INC. DENVER, CO					
0267	18.0-46.0- 0.0	17.4	45.9	0.0	98.91	0979	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35
AGRISERVICES OF BRUNSWICK, LLC BRUNSWICK, MO						1124	34.0- 0.0- 0.0	34.7	0.0	0.0	102.06
0359	18.0-46.0- 0.0	17.5	46.4	0.0	99.84	1255	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65
0364	18.0-46.0- 0.0	17.6	46.3	0.0	99.84						
0454	18.0-46.0- 0.0	17.7	46.0	0.0	99.53						

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
1485	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65
1486	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65
1487	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94
1488	34.0- 0.0- 0.0	34.7	0.0	0.0	102.06
1564	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94
1620	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59
#TOTALS - NO. SAMPLES	16 - SMPLS MISBRANDED	0	0	0	102.33

BARTLETT & COMPANY		KANSAS CITY, MO			
0968	0.0- 0.0-62.0	0.0	0.0	62.9	101.45
1362	0.0- 0.0-62.0	0.0	0.0	63.0	101.61
0456	18.0-46.0- 0.0	17.4	46.0	0.0	99.06
1331	18.0-46.0- 0.0	17.4	46.7	0.0	100.16
#TOTALS - NO. SAMPLES	4 - SMPLS MISBRANDED	0	0	0	100.23

BEN-TREI FERTILIZER CO, LLC		TULSA, OK			
0352	18.0-46.0- 0.0	17.7	45.6	0.0	98.91
0353	18.0-46.0- 0.0	17.5	46.0	0.0	99.22
0354	18.0-46.0- 0.0	17.4	45.7	0.0	98.59
0355	18.0-46.0- 0.0	17.6	46.4	0.0	100.00
0356	18.0-46.0- 0.0	17.5	45.8	0.0	98.91
0357	18.0-46.0- 0.0	17.6	46.1	0.0	99.53
0765	18.0-46.0- 0.0	17.9	45.9	0.0	99.69
0936	18.0-46.0- 0.0	17.8	45.8	0.0	99.38
0937	18.0-46.0- 0.0	17.9	45.9	0.0	99.69
0431	33.5- 0.0- 0.0	33.0	0.0	0.0	98.51
0432	33.5- 0.0- 0.0	33.0	0.0	0.0	98.51
1631	33.5- 0.0- 0.0	33.3	0.0	0.0	99.40
1274	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
#TOTALS - NO. SAMPLES	13 - SMPLS MISBRANDED	0	0	0	99.34

CARGILL FERTILIZER, INC		RIVERVIEW, FL			
1523	11.0-52.0- 0.0	11.2	51.6	0.0	99.68
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	0	99.68

CF INDUSTRIES, INC		LONG GROVE, IL			
0536	18.0-46.0- 0.0	17.5	46.5	0.0	100.00
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	0	100.00

CONAGRA FERTILIZER		PEKIN, IL			
0683	0.0- 0.0-60.0	0.0	0.0	61.1	101.83
0157	11.0-52.0- 0.0	12.1	52.2	0.0	102.06
0337	11.0-52.0- 0.0	11.8	52.2	0.0	101.59
0531	11.0-52.0- 0.0	12.0	51.5	0.0	100.79
0640	11.0-52.0- 0.0	10.8	52.7	0.0	100.79
0259	18.0-46.0- 0.0	17.8	46.2	0.0	100.00
0468	18.0-46.0- 0.0	17.7	46.9	0.0	100.94
0548	18.0-46.0- 0.0	17.7	45.8	0.0	99.22
0550	18.0-46.0- 0.0	17.8	45.2	0.0	98.44
0598	34.0- 0.0- 0.0	34.7	0.0	0.0	102.06
1252	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
1374	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18
#TOTALS - NO. SAMPLES	12 - SMPLS MISBRANDED	0	0	0	100.67

DEBRUCE FERTILIZER		KANSAS CITY, MO			
0039	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
0084	0.0- 0.0-60.0	0.0	0.0	61.1	101.83
0126	0.0- 0.0-60.0	0.0	0.0	59.7	99.50
0204	0.0- 0.0-60.0	0.0	0.0	59.6	99.33
0698	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
0781	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0868	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
0875	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
1346	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
1347	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
1535	0.0- 0.0-60.0	0.0	0.0	59.9	99.83

DEBRUCE FERTILIZER		KANSAS CITY, MO			
0040	0.0- 0.0-61.0	0.0	0.0	61.0	100.00
0208	0.0- 0.0-61.0	0.0	0.0	59.7	97.87
0093	0.0- 0.0-62.0	0.0	0.0	61.6	99.35

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0796	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
1102	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
0750	11.0-52.0- 0.0	11.4	51.9	0.0	100.48
0065	18.0-46.0- 0.0	17.6	45.9	0.0	99.22
0114	18.0-46.0- 0.0	17.9	47.0	0.0	101.41
0177	18.0-46.0- 0.0	17.4	46.0	0.0	99.06
0181	18.0-46.0- 0.0	17.2	45.9	0.0	98.59
0347	18.0-46.0- 0.0	17.1	45.9	0.0	98.44
0558	18.0-46.0- 0.0	18.0	46.2	0.0	100.31
0664	18.0-46.0- 0.0	17.5	45.8	0.0	98.91
0666	18.0-46.0- 0.0	17.5	46.1	0.0	99.38
0761	18.0-46.0- 0.0	17.9	46.1	0.0	100.00
0762	18.0-46.0- 0.0	17.8	46.1	0.0	99.84
0763	18.0-46.0- 0.0	18.0	46.0	0.0	100.00
0843	18.0-46.0- 0.0	18.0	45.2	0.0	98.75
0853	18.0-46.0- 0.0	17.8	45.2	0.0	98.44
1058	18.0-46.0- 0.0	17.8	45.8	0.0	99.38
1316	18.0-46.0- 0.0	17.6	46.3	0.0	99.84
1404	18.0-46.0- 0.0	17.9	46.3	0.0	100.31
1526	18.0-46.0- 0.0	17.3	46.5	0.0	99.69
1567**	20.5- 0.0- 0.0	19.9	0.0	0.0	97.07
0221	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
0722	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
0806	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
0811	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76
0982	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
1372	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18
1482	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
1554	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00
1557	34.0- 0.0- 0.0	34.7	0.0	0.0	102.06
0143	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
0617	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0824	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1503	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
#TOTALS - NO. SAMPLES	48 - SMPLS MISBRANDED	0	0	0	100.06

ELDORADO CHEMICAL		EL DORADO, AR			
1088	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
0586	0.0- 0.0-62.0	0.0	0.0	62.0	100.00
0073	18.0-46.0- 0.0	18.3	46.9	0.0	101.88
0770	18.0-46.0- 0.0	17.8	45.7	0.0	99.22
1595	18.0-46.0- 0.0	17.6	45.4	0.0	98.44
1596	18.0-46.0- 0.0	17.4	45.6	0.0	98.44
1553	33.5- 0.0- 0.0	33.1	0.0	0.0	98.81
0425	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
0980	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76
1128	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
1369	34.0- 0.0- 0.0	33.6	0.0	0.0	98.82
1563	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35
1630	34.0- 0.0- 0.0	35.4	0.0	0.0	104.12
1638	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
1639	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
#TOTALS - NO. SAMPLES	15 - SMPLS MISBRANDED	0	0	0	100.35

FARMERS ELEVATOR & SUPPLY CO., INC		HAWK POINT, MO			
0950	0.0-46.0- 0.0	0.0	47.2	0.0	102.61
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	0	102.61

GLASGOW CO-OP ASSOCIATION		GLASGOW, MO			
0144	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	0	100.43

GLASGOW MFA		GLASGOW, MO			
1043**	5.0-25.5-25.5	5.4	24.9	26.2	100.35
1306**	5.0-25.5-25.5	5.4	25.1	29.0	104.05
#TOTALS - NO. SAMPLES	2 - SMPLS MISBRANDED	0	0	0	102.19

GRANITE CITY TERMINAL LLC		GRANITE CITY, IL			
0488	0.0- 0.0-60.0	0.0	0.0	61.1	101.83
0576	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
1094	0.0- 0.0-60.0	0.0	0.0	60.9	101.50

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
1234	0.0- 0.0-61.0	0.0	0.0	61.2	100.33
0130	0.0- 0.0-62.0	0.0	0.0	61.8	99.68
1358	0.0- 0.0-62.0	0.0	0.0	63.3	102.10
1475	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
0508	0.0- 0.0-63.0	0.0	0.0	61.9	98.25
0565	0.0-46.0- 0.0	0.0	47.7	0.0	103.70
0004	18.0-46.0- 0.0	17.9	46.4	0.0	100.47
0170	18.0-46.0- 0.0	17.8	46.4	0.0	100.31
1452	18.0-46.0- 0.0	17.0	43.8*	0.0	95.00*
1367	32.0- 0.0- 0.0	33.4	0.0	0.0	104.38
0005	34.0- 0.0- 0.0	32.8	0.0	0.0	96.47*
0517	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
0518	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
#TOTALS - NO. SAMPLES	16 - SMPLS MISBRANDED	2	2	100.25	

HANNIBAL BOARD OF PUBLIC WORKS		HANNIBAL, MO			
0947	0.5- 0.5- 0.0	0.9	1.8	0.0	270.00
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	270.00	

HILLER CUSTOM SPREADING		HOUSTONIA, MO			
1508	4.0-19.0-38.0	3.9	18.5	38.0	98.57
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	98.57	

HYDRO - MERSCHMANN LLC (FT MADISON)		WEST POINT, IA			
0289	0.0- 0.0-60.0	0.0	0.0	60.5	100.83
0489	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0574	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
1463	0.0- 0.0-60.0	0.0	0.0	61.1	101.83
0585	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0241	11.0-52.0- 0.0	11.0	52.5	0.0	100.79
0336	11.0-52.0- 0.0	11.0	52.4	0.0	100.63
0646	11.0-52.0- 0.0	11.0	52.5	0.0	100.79
0929	11.0-52.0- 0.0	11.2	52.0	0.0	100.32
0342	18.0-46.0- 0.0	17.6	45.5	0.0	98.59
1445	18.0-46.0- 0.0	17.8	46.2	0.0	100.00
0724	33.5- 0.0- 0.0	33.5	0.0	0.0	100.00
1497	33.5- 0.0- 0.0	33.5	0.0	0.0	100.00
#TOTALS - NO. SAMPLES	13 - SMPLS MISBRANDED	0	0	100.40	

HYDRO AGRI NORTH AMERICA, INC		TAMPA, FL			
1157	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	100.65	

IMC USA INC		LAKE FOREST, IL			
0292	0.0- 0.0-60.0	0.0	0.0	60.3	100.50
0492	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
0779	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
0876	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
1537	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
1538	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
1605	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0703	0.0- 0.0-62.0	0.0	0.0	62.0	100.00
0795	0.0- 0.0-62.0	0.0	0.0	62.0	100.00
0338	11.0-52.0- 0.0	11.4	52.1	0.0	100.79
0339	11.0-52.0- 0.0	11.2	52.2	0.0	100.63
0645	11.0-52.0- 0.0	11.3	51.5	0.0	99.68
0749	11.0-52.0- 0.0	11.8	51.5	0.0	100.48
0185	18.0-46.0- 0.0	17.7	45.7	0.0	99.06
0660	18.0-46.0- 0.0	18.1	45.9	0.0	100.00
0764	18.0-46.0- 0.0	17.6	45.6	0.0	98.75
0766	18.0-46.0- 0.0	17.9	46.1	0.0	100.00
0857	18.0-46.0- 0.0	17.6	45.3	0.0	98.28
0858	18.0-46.0- 0.0	17.7	45.2	0.0	98.28
1059	18.0-46.0- 0.0	17.8	45.6	0.0	99.06
1060	18.0-46.0- 0.0	17.9	45.6	0.0	99.22
1203	18.0-46.0- 0.0	18.1	45.9	0.0	100.00

IMC USA INC		LAKE FOREST, IL			
1327	18.0-46.0- 0.0	17.8	46.9	0.0	101.09
1448	18.0-46.0- 0.0	17.9	46.2	0.0	100.16
1589	18.0-46.0- 0.0	17.7	46.4	0.0	100.16

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
#TOTALS - NO. SAMPLES	25 - SMPLS MISBRANDED	0	0	100.04	
IMC POTASH CALRSBAD INC CARLSBAD, NM					
0886	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	100.48	
IMC USA INC REGINA, SASKATCHEWAN, CANADA					
0123	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0	0	101.00	
INTER-CHEM TULSA, OK					
1525	18.0-46.0- 0.0	17.6	45.8	0.0	99.06
0902	34.0- 0.0- 0.0	35.1	0.0	0.0	103.24
#TOTALS - NO. SAMPLES	2 - SMPLS MISBRANDED	0	0	100.51	

LANGE-STEGMANN COMPANY		ST LOUIS, MO			
0015	0.0- 0.0-60.0	0.0	0.0	60.0	100.00
0286	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0381	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0487	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
0579	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0957	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
1539	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
1604	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
0212	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
0401	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
0493	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
0497	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
0499	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
0506	0.0- 0.0-62.4	0.0	0.0	62.1	99.52
0584	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
1239	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
1339	0.0-26.0-26.0	0.0	27.2	26.2	103.33
0273	0.0-46.0- 0.0	0.0	46.3	0.0	100.65
0445	11.0-52.0- 0.0	11.2	51.4	0.0	99.37
0446	11.0-52.0- 0.0	11.3	52.4	0.0	101.11
0530	11.0-52.0- 0.0	11.2	50.6	0.0	98.10
0747	11.0-52.0- 0.0	11.1	51.8	0.0	99.84
1195	11.0-52.0- 0.0	11.2	52.1	0.0	100.48
0173	18.0-46.0- 0.0	17.9	46.3	0.0	100.31
0174	18.0-46.0- 0.0	17.9	46.5	0.0	100.63
0188	18.0-46.0- 0.0	17.6	46.4	0.0	100.00
0256	18.0-46.0- 0.0	17.7	46.4	0.0	100.16
0346	18.0-46.0- 0.0	17.3	46.2	0.0	99.22
0452	18.0-46.0- 0.0	17.4	46.4	0.0	99.69
0462	18.0-46.0- 0.0	17.9	46.5	0.0	100.63
0551	18.0-46.0- 0.0	17.9	45.4	0.0	98.91
0552	18.0-46.0- 0.0	17.7	45.3	0.0	98.44
0553	18.0-46.0- 0.0	18.0	45.8	0.0	99.69
0559	18.0-46.0- 0.0	17.6	45.9	0.0	99.22
0933	18.0-46.0- 0.0	18.0	45.8	0.0	99.69
1204	18.0-46.0- 0.0	18.1	45.7	0.0	99.69
1321	18.0-46.0- 0.0	17.4	46.2	0.0	99.38
1527	18.0-46.0- 0.0	17.8	45.6	0.0	99.06
1590	18.0-46.0- 0.0	17.6	45.4	0.0	98.44
0498**	21.0- 0.0- 0.0	20.9	0.0	0.0	99.52
0218	33.5- 0.0- 0.0	33.7	0.0	0.0	100.60
0419	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
0428	34.0- 0.0- 0.0	33.1	0.0	0.0	97.35
0429	34.0- 0.0- 0.0	33.2	0.0	0.0	97.65
0599	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76
1622	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
0008	46.0- 0.0- 0.0	46.0	0.0	0.0	100.00
0139	46.0- 0.0- 0.0	46.7	0.0	0.0	101.52
0320	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
0434	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09

LANGE-STEGMANN COMPANY		ST LOUIS, MO			
0441	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
0615	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1265	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

1504	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
#TOTALS - NO. SAMPLES	54 - SMPLS MISBRANDED	0 -	100.11		

LEE FERTILIZER INC		CAMP POINT, IL			
0570	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
0571	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
0696	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
0341	18.0-46.0- 0.0	17.3	45.8	0.0	98.59
0539	18.0-46.0- 0.0	17.8	45.3	0.0	98.59
0659	18.0-46.0- 0.0	18.0	45.9	0.0	99.84
0661	18.0-46.0- 0.0	18.0	46.1	0.0	100.16
#TOTALS - NO. SAMPLES	7 - SMPLS MISBRANDED	0 -	99.84		

MFA AGRI SERVICES		FREEBURG, MO			
0017	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00
#TOTALS - NO. SAMPLES	1 - SMPLS MISBRANDED	0 -	100.00		

MFA PLANT FOODS		COLUMBIA, MO			
0867**	0.0- 0.0- 0.0	0.0	0.0	0.0	100.00
0278**	0.0- 0.0-50.0	0.0	0.0	50.9	101.80
0085	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0086	0.0- 0.0-60.0	0.0	0.0	59.6	99.33
0087	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
0128	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
0200	0.0- 0.0-60.0	0.0	0.0	59.5	99.17
0201	0.0- 0.0-60.0	0.0	0.0	60.3	100.50
0202	0.0- 0.0-60.0	0.0	0.0	59.1	98.50
0203	0.0- 0.0-60.0	0.0	0.0	60.3	100.50
0205	0.0- 0.0-60.0	0.0	0.0	58.9	98.17
0287	0.0- 0.0-60.0	0.0	0.0	59.5	99.17
0293	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
0391	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
0483	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
0484	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
0697	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
0700	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0784	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
0869	0.0- 0.0-60.0	0.0	0.0	59.8	99.67
1082	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
1083	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
1084	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
1087	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
1091	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
1092	0.0- 0.0-60.0	0.0	0.0	60.3	100.50
1093	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
1095	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
1228	0.0- 0.0-60.0	0.0	0.0	60.5	100.83
1230	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
1231	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
1349	0.0- 0.0-60.0	0.0	0.0	60.5	100.83
1406	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
1407	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
1408	0.0- 0.0-60.0	0.0	0.0	60.3	100.50
1409	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
1460	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
1461	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
1462	0.0- 0.0-60.0	0.0	0.0	60.5	100.83
1534	0.0- 0.0-60.0	0.0	0.0	60.0	100.00
1540	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
1603	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
1609	0.0- 0.0-60.0	0.0	0.0	60.5	100.83
0089	0.0- 0.0-61.0	0.0	0.0	60.7	99.51
0129	0.0- 0.0-61.0	0.0	0.0	59.9	98.20
0294	0.0- 0.0-61.0	0.0	0.0	60.7	99.51
0295	0.0- 0.0-61.0	0.0	0.0	60.3	98.85
0296	0.0- 0.0-61.0	0.0	0.0	60.6	99.34

MFA PLANT FOODS		COLUMBIA, MO			
0297	0.0- 0.0-61.0	0.0	0.0	61.0	100.00
0395	0.0- 0.0-61.0	0.0	0.0	61.5	100.82
0396	0.0- 0.0-61.0	0.0	0.0	61.6	100.98

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

0397	0.0- 0.0-61.0	0.0	0.0	62.1	101.80
0398	0.0- 0.0-61.0	0.0	0.0	61.5	100.82
0785	0.0- 0.0-61.0	0.0	0.0	61.0	100.00
0787	0.0- 0.0-61.0	0.0	0.0	60.7	99.51
0788	0.0- 0.0-61.0	0.0	0.0	61.0	100.00
0789	0.0- 0.0-61.0	0.0	0.0	61.2	100.33
0790	0.0- 0.0-61.0	0.0	0.0	60.5	99.18
0791	0.0- 0.0-61.0	0.0	0.0	61.1	100.16
0878	0.0- 0.0-61.0	0.0	0.0	60.8	99.67
0879	0.0- 0.0-61.0	0.0	0.0	60.0	98.36
0880	0.0- 0.0-61.0	0.0	0.0	60.9	99.84
1097	0.0- 0.0-61.0	0.0	0.0	61.2	100.33
1098	0.0- 0.0-61.0	0.0	0.0	60.5	99.18
1235	0.0- 0.0-61.0	0.0	0.0	61.5	100.82
1468	0.0- 0.0-61.0	0.0	0.0	60.6	99.34
1469	0.0- 0.0-61.0	0.0	0.0	61.0	100.00
1542	0.0- 0.0-61.0	0.0	0.0	60.7	99.51
1610	0.0- 0.0-61.0	0.0	0.0	60.5	99.18
1611	0.0- 0.0-61.0	0.0	0.0	60.8	99.67
0007	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
0041	0.0- 0.0-62.3	0.0	0.0	62.0	99.52
0042	0.0- 0.0-62.3	0.0	0.0	62.0	99.52
0091	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0092	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
0094	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
0103	0.0- 0.0-62.3	0.0	0.0	61.6	98.88
0131	0.0- 0.0-62.0	0.0	0.0	61.8	99.68
0209	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
0211	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
0298	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
0299	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
0306	0.0- 0.0-62.3	0.0	0.0	62.0	99.52
0307	0.0- 0.0-62.3	0.0	0.0	62.4	100.16
0399	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
0400	0.0- 0.0-62.0	0.0	0.0	63.0	101.61
0412	0.0- 0.0-62.3	0.0	0.0	62.3	100.00
0494	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
0495	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
0496	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
0500	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
0504	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0507	0.0- 0.0-62.3	0.0	0.0	61.8	99.20
0588	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
0589	0.0- 0.0-62.3	0.0	0.0	62.6	100.48
0702	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
0706	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0707	0.0- 0.0-62.0	0.0	0.0	61.0	98.39
0712	0.0- 0.0-62.2	0.0	0.0	62.5	100.48
0713	0.0- 0.0-62.2	0.0	0.0	62.6	100.64
0797	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
0798	0.0- 0.0-62.0	0.0	0.0	62.9	101.45
0885	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
0966	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0967	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
0970	0.0- 0.0-62.3	0.0	0.0	62.3	100.00
1104	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
1105	0.0- 0.0-62.0	0.0	0.0	61.8	99.68
1241	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
1244	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
1249	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
1353	0.0- 0.0-62.0	0.0	0.0	61.6	99.35
1357	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
1471	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
1472	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
1477	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
1478	0.0- 0.0-62.2	0.0	0.0	62.0	99.68

MFA PLANT FOODS		COLUMBIA, MO			
1479	0.0- 0.0-62.2	0.0	0.0	62.3	100.16
1480	0.0- 0.0-62.3	0.0	0.0	62.4	100.16
1545	0.0- 0.0-62.0	0.0	0.0	62.1	100.16

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value	MANUFACTURER		% FOUND			% Relative Value		
No.	Grade	Nitrogen	P ₂ O ₅	Potash		No.	Grade	Nitrogen	P ₂ O ₅	Potash			
1546	0.0- 0.0-62.0	0.0	0.0	62.5	100.81	1432	11.0-52.0- 0.0	10.8	53.4	0.0	101.90		
1547	0.0- 0.0-62.0	0.0	0.0	62.5	100.81	1433	11.0-52.0- 0.0	11.3	51.1	0.0	99.05		
1548	0.0- 0.0-62.3	0.0	0.0	62.7	100.64	1435	11.0-52.0- 0.0	11.0	51.5	0.0	99.21		
1613	0.0- 0.0-62.0	0.0	0.0	62.2	100.32	1436	11.0-52.0- 0.0	11.5	52.8	0.0	102.06		
1617	0.0- 0.0-62.3	0.0	0.0	62.6	100.48	1438	11.0-52.0- 0.0	11.0	52.2	0.0	100.32		
1618	0.0- 0.0-62.3	0.0	0.0	61.9	99.36	1519	11.0-52.0- 0.0	11.0	51.3	0.0	98.89		
0217	0.0- 0.0-63.0	0.0	0.0	62.1	98.57	1522	11.0-52.0- 0.0	10.7	52.2	0.0	99.84		
0590	0.0- 0.0-63.0	0.0	0.0	62.7	99.52	1585	11.0-52.0- 0.0	11.0	51.3	0.0	98.89		
0591	0.0- 0.0-63.0	0.0	0.0	63.0	100.00	1587	11.0-52.0- 0.0	10.9	52.3	0.0	100.32		
0971	0.0- 0.0-63.0	0.0	0.0	63.0	100.00	1632	11.0-52.0- 0.0	11.0	52.1	0.0	100.16		
0080	0.0-46.0- 0.0	0.0	47.0	0.0	102.17	0003	18.0-46.0- 0.0	17.5	45.9	0.0	99.06		
0081	0.0-46.0- 0.0	0.0	46.5	0.0	101.09	0006	18.0-46.0- 0.0	17.3	46.7	0.0	100.00		
0193	0.0-46.0- 0.0	0.0	46.5	0.0	101.09	0012	18.0-46.0- 0.0	17.6	45.2	0.0	98.13		
0274	0.0-46.0- 0.0	0.0	46.7	0.0	101.52	0023	18.0-46.0- 0.0	17.4	45.4	0.0	98.13		
0275	0.0-46.0- 0.0	0.0	46.9	0.0	101.96	0028	18.0-46.0- 0.0	17.5	45.9	0.0	99.06		
0377	0.0-46.0- 0.0	0.0	47.7	0.0	103.70	0029	18.0-46.0- 0.0	18.5	47.0	0.0	102.34		
0378	0.0-46.0- 0.0	0.0	46.3	0.0	100.65	0030	18.0-46.0- 0.0	17.8	46.2	0.0	100.00		
0476	0.0-46.0- 0.0	0.0	46.7	0.0	101.52	0031	18.0-46.0- 0.0	17.7	45.9	0.0	99.38		
0477	0.0-46.0- 0.0	0.0	45.6	0.0	99.13	0032	18.0-46.0- 0.0	18.1	46.5	0.0	100.94		
0480	0.0-46.0- 0.0	0.0	46.8	0.0	101.74	0033	18.0-46.0- 0.0	18.1	46.5	0.0	100.94		
0774	0.0-46.0- 0.0	0.0	47.0	0.0	102.17	0034	18.0-46.0- 0.0	17.7	46.0	0.0	99.53		
0775	0.0-46.0- 0.0	0.0	45.8	0.0	99.57	0035	18.0-46.0- 0.0	17.4	45.5	0.0	98.28		
0776	0.0-46.0- 0.0	0.0	46.7	0.0	101.52	0036	18.0-46.0- 0.0	17.4	46.7	0.0	100.16		
0860	0.0-46.0- 0.0	0.0	46.1	0.0	100.22	0037	18.0-46.0- 0.0	17.4	45.8	0.0	98.75		
1222	0.0-46.0- 0.0	0.0	46.4	0.0	100.87	0038	18.0-46.0- 0.0	17.6	45.9	0.0	99.22		
1337	0.0-46.0- 0.0	0.0	47.0	0.0	102.17	0062	18.0-46.0- 0.0	17.4	46.7	0.0	100.16		
1405	0.0-46.0- 0.0	0.0	45.9	0.0	99.78	0063	18.0-46.0- 0.0	17.3	46.8	0.0	100.16		
1455	0.0-46.0- 0.0	0.0	46.0	0.0	100.00	0064	18.0-46.0- 0.0	18.0	47.6	0.0	102.50		
1456	0.0-46.0- 0.0	0.0	46.9	0.0	101.96	0067	18.0-46.0- 0.0	17.4	46.9	0.0	100.47		
0009	11.0-52.0- 0.0	11.2	52.4	0.0	100.95	0068	18.0-46.0- 0.0	17.9	47.0	0.0	101.41		
0010	11.0-52.0- 0.0	11.3	52.3	0.0	100.95	0069	18.0-46.0- 0.0	17.4	46.1	0.0	99.22		
0011	11.0-52.0- 0.0	10.9	52.4	0.0	100.48	0070	18.0-46.0- 0.0	17.4	46.5	0.0	99.84		
0024	11.0-52.0- 0.0	11.5	52.3	0.0	101.27	0071	18.0-46.0- 0.0	17.4	46.3	0.0	99.53		
0025	11.0-52.0- 0.0	11.2	52.9	0.0	101.75	0074	18.0-46.0- 0.0	17.5	46.8	0.0	100.47		
0026	11.0-52.0- 0.0	11.1	52.0	0.0	100.16	0112	18.0-46.0- 0.0	17.2	46.4	0.0	99.38		
0027	11.0-52.0- 0.0	11.1	52.5	0.0	100.95	0115	18.0-46.0- 0.0	17.3	46.6	0.0	99.84		
0050	11.0-52.0- 0.0	11.3	52.2	0.0	100.79	0116	18.0-46.0- 0.0	17.1	46.4	0.0	99.22		
0051	11.0-52.0- 0.0	11.2	52.5	0.0	101.11	0117	18.0-46.0- 0.0	17.4	46.5	0.0	99.84		
0052	11.0-52.0- 0.0	11.6	52.4	0.0	101.59	0119	18.0-46.0- 0.0	17.3	46.4	0.0	99.53		
0053	11.0-52.0- 0.0	11.3	52.7	0.0	101.59	0120	18.0-46.0- 0.0	17.2	46.0	0.0	98.75		
0054	11.0-52.0- 0.0	11.3	52.8	0.0	101.75	0166	18.0-46.0- 0.0	17.4	46.0	0.0	99.06		
0055	11.0-52.0- 0.0	11.3	52.7	0.0	101.59	0168	18.0-46.0- 0.0	17.8	46.9	0.0	101.09		
0111	11.0-52.0- 0.0	11.2	52.7	0.0	101.43	0169	18.0-46.0- 0.0	18.0	46.6	0.0	100.94		
0154	11.0-52.0- 0.0	10.9	52.9	0.0	101.27	0171	18.0-46.0- 0.0	17.4	45.6	0.0	98.44		
0155	11.0-52.0- 0.0	11.4	51.5	0.0	99.84	0172	18.0-46.0- 0.0	17.6	45.8	0.0	99.06		
0156	11.0-52.0- 0.0	11.2	52.8	0.0	101.59	0176	18.0-46.0- 0.0	17.7	45.6	0.0	98.91		
0158	11.0-52.0- 0.0	10.9	52.7	0.0	100.95	0179	18.0-46.0- 0.0	17.7	46.5	0.0	100.31		
0160	11.0-52.0- 0.0	11.0	52.7	0.0	101.11	0180	18.0-46.0- 0.0	17.9	46.7	0.0	100.94		
0238	11.0-52.0- 0.0	11.3	52.5	0.0	101.27	0182	18.0-46.0- 0.0	17.4	46.2	0.0	99.38		
0239	11.0-52.0- 0.0	11.1	52.1	0.0	100.32	0186	18.0-46.0- 0.0	17.7	46.1	0.0	99.69		
0243	11.0-52.0- 0.0	11.4	52.0	0.0	100.63	0187	18.0-46.0- 0.0	17.9	45.0	0.0	98.28		
0244	11.0-52.0- 0.0	11.2	52.2	0.0	100.63	0257	18.0-46.0- 0.0	17.7	46.3	0.0	100.00		
0245	11.0-52.0- 0.0	10.6	52.5	0.0	100.16	0258	18.0-46.0- 0.0	17.8	46.1	0.0	99.84		
0246	11.0-52.0- 0.0	11.4	52.7	0.0	101.75	0260	18.0-46.0- 0.0	17.8	46.1	0.0	99.84		
0247	11.0-52.0- 0.0	11.3	52.6	0.0	101.43	0263	18.0-46.0- 0.0	17.1	46.0	0.0	98.59		
0448	11.0-52.0- 0.0	11.3	52.3	0.0	100.95	0264	18.0-46.0- 0.0	17.1	46.2	0.0	98.91		
0533	11.0-52.0- 0.0	11.2	51.2	0.0	99.05	0266	18.0-46.0- 0.0	17.2	46.7	0.0	99.84		
0644	11.0-52.0- 0.0	11.2	52.3	0.0	100.79	0343	18.0-46.0- 0.0	17.4	45.7	0.0	98.59		
0745	11.0-52.0- 0.0	11.1	51.6	0.0	99.52	0345	18.0-46.0- 0.0	17.2	46.0	0.0	98.75		
0746	11.0-52.0- 0.0	11.1	52.4	0.0	100.79	0358	18.0-46.0- 0.0	17.3	45.8	0.0	98.59		
0751	11.0-52.0- 0.0	11.2	52.2	0.0	100.63	0366	18.0-46.0- 0.0	16.9	45.9	0.0	98.13		
0768	11.0-52.0- 0.0	10.8	51.0	0.0	98.10	0367	18.0-46.0- 0.0	17.6	46.0	0.0	99.38		
0841	11.0-52.0- 0.0	11.4	51.1	0.0	99.21	0368	18.0-46.0- 0.0	17.3	45.8	0.0	98.59		
1050	11.0-52.0- 0.0	11.4	51.0	0.0	99.05	0369	18.0-46.0- 0.0	17.0	45.8	0.0	98.13		
1194	11.0-52.0- 0.0	11.5	51.4	0.0	99.84	0451	18.0-46.0- 0.0	17.4	45.4	0.0	98.13		
1197	11.0-52.0- 0.0	11.4	51.9	0.0	100.48	0455	18.0-46.0- 0.0	17.8	46.7	0.0	100.78		
MFA PLANT FOODS					COLUMBIA, MO		MFA PLANT FOODS					COLUMBIA, MO	
1199	11.0-52.0- 0.0	11.4	51.7	0.0	100.16	0460	18.0-46.0- 0.0	17.6	45.7	0.0	98.91		
1401	11.0-52.0- 0.0	11.3	51.8	0.0	100.16	0461	18.0-46.0- 0.0	17.2	46.1	0.0	98.91		
1402	11.0-52.0- 0.0	11.3	52.7	0.0	101.59	0464	18.0-46.0- 0.0	18.0	46.6	0.0	100.94		

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value	MANUFACTURER		% FOUND			% Relative Value								
No.	Grade	Nitrogen	P ₂ O ₅	Potash		No.	Grade	Nitrogen	P ₂ O ₅	Potash									
0537	18.0-46.0- 0.0	17.4	45.7	0.0	98.59	0812	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35								
0562	18.0-46.0- 0.0	17.4	45.7	0.0	98.59	0891	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65								
0665	18.0-46.0- 0.0	17.6	45.6	0.0	98.75	0892	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88								
0669	18.0-46.0- 0.0	17.6	45.8	0.0	99.06	0894	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29								
0754	18.0-46.0- 0.0	17.9	46.3	0.0	100.31	1114	34.0- 0.0- 0.0	46.2	0.0	0.0	135.88								
0759	18.0-46.0- 0.0	18.1	45.7	0.0	99.69	1116	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18								
0760	18.0-46.0- 0.0	17.7	45.7	0.0	99.06	1117	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59								
0767	18.0-46.0- 0.0	17.5	45.8	0.0	98.91	1118	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94								
0771	18.0-46.0- 0.0	17.5	46.0	0.0	99.22	1125	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94								
0844	18.0-46.0- 0.0	17.8	45.3	0.0	98.59	1126	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47								
0851	18.0-46.0- 0.0	17.5	45.5	0.0	98.44	1127	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88								
0854	18.0-46.0- 0.0	17.9	45.4	0.0	98.91	1129	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76								
0855	18.0-46.0- 0.0	17.9	45.5	0.0	99.06	1130	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59								
0856	18.0-46.0- 0.0	17.4	45.4	0.0	98.13	1131	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59								
0859	18.0-46.0- 0.0	17.7	45.2	0.0	98.28	1132	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18								
1054	18.0-46.0- 0.0	18.1	45.8	0.0	99.84	1133	34.0- 0.0- 0.0	35.1	0.0	0.0	103.24								
1056	18.0-46.0- 0.0	18.1	45.4	0.0	99.22	1134	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76								
1057	18.0-46.0- 0.0	17.6	46.0	0.0	99.38	1135	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35								
1062	18.0-46.0- 0.0	17.9	45.7	0.0	99.38	1136	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76								
1064	18.0-46.0- 0.0	17.6	46.0	0.0	99.38	1137	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94								
1065	18.0-46.0- 0.0	17.8	45.2	0.0	98.44	1251	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65								
1067	18.0-46.0- 0.0	17.4	46.0	0.0	99.06	1253	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65								
1068	18.0-46.0- 0.0	17.7	45.3	0.0	98.44	1257	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59								
1205	18.0-46.0- 0.0	17.7	45.7	0.0	99.06	1258	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65								
1211	18.0-46.0- 0.0	17.7	45.7	0.0	99.06	1370	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47								
1214	18.0-46.0- 0.0	17.8	45.4	0.0	98.75	1411	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29								
1217	18.0-46.0- 0.0	17.6	45.2	0.0	98.13	1481	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94								
1332	18.0-46.0- 0.0	17.6	46.4	0.0	100.00	1483	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94								
1403	18.0-46.0- 0.0	17.3	45.7	0.0	98.44	1484	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94								
1440	18.0-46.0- 0.0	17.9	46.9	0.0	101.25	1489	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94								
1441	18.0-46.0- 0.0	18.0	46.6	0.0	100.94	1490	34.0- 0.0- 0.0	34.7	0.0	0.0	102.06								
1442	18.0-46.0- 0.0	18.0	46.8	0.0	101.25	1491	34.0- 0.0- 0.0	34.7	0.0	0.0	102.06								
1444	18.0-46.0- 0.0	18.2	46.9	0.0	101.72	1492	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18								
1446	18.0-46.0- 0.0	17.8	46.6	0.0	100.63	1493	34.0- 0.0- 0.0	34.7	0.0	0.0	102.06								
1453	18.0-46.0- 0.0	17.4	45.3	0.0	97.97	1494	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76								
1454	18.0-46.0- 0.0	17.6	46.4	0.0	100.00	1555	34.0- 0.0- 0.0	33.7	0.0	0.0	99.12								
1524	18.0-46.0- 0.0	17.6	45.7	0.0	98.91	1556	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65								
1530	18.0-46.0- 0.0	17.8	45.6	0.0	99.06	1560	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76								
1531	18.0-46.0- 0.0	17.4	46.7	0.0	100.16	1566	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35								
1532	18.0-46.0- 0.0	17.2	46.1	0.0	98.91	1621	34.0- 0.0- 0.0	33.9	0.0	0.0	99.71								
1588	18.0-46.0- 0.0	17.9	46.3	0.0	100.31	1623	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18								
1591	18.0-46.0- 0.0	17.3	45.6	0.0	98.28	1624	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76								
1592	18.0-46.0- 0.0	17.4	45.8	0.0	98.75	1421	40.0- 0.0- 0.0	44.8	0.0	0.0	112.00								
1594	18.0-46.0- 0.0	17.1	45.7	0.0	98.13	0019	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65								
0602**	21.0- 0.0- 0.0	20.7	0.0	0.0	98.57	0020	46.0- 0.0- 0.0	46.0	0.0	0.0	100.00								
0430	33.5- 0.0- 0.0	33.2	0.0	0.0	99.10	0021	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65								
0813	33.5- 0.0- 0.0	34.4	0.0	0.0	102.69	0022	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65								
1368	33.0- 0.0- 0.0	33.5	0.0	0.0	101.52	0044	46.0- 0.0- 0.0	45.8	0.0	0.0	99.57								
1498	33.0- 0.0- 0.0	33.4	0.0	0.0	101.21	0045	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87								
0132	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47	0046	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65								
0219	34.0- 0.0- 0.0	33.5	0.0	0.0	98.53	0108	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87								
0220	34.0- 0.0- 0.0	33.1	0.0	0.0	97.35	0140	46.0- 0.0- 0.0	45.9	0.0	0.0	99.78								
0223	34.0- 0.0- 0.0	33.4	0.0	0.0	98.24	0142	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87								
0224	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94	0231	46.0- 0.0- 0.0	45.6	0.0	0.0	99.13								
0314	34.0- 0.0- 0.0	35.2	0.0	0.0	103.53	0232	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09								
0426	34.0- 0.0- 0.0	34.7	0.0	0.0	102.06	0326	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87								
0427	34.0- 0.0- 0.0	33.1	0.0	0.0	97.35	0328	46.0- 0.0- 0.0	46.6	0.0	0.0	101.30								
0512	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35	0437	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09								
0513	34.0- 0.0- 0.0	33.1	0.0	0.0	97.35	0438	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43								
0596	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35	0516	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43								
0717	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00	0619	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87								
0718	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18	0728	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09								
0802	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88	0733	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65								
0803	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29	0814	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87								
0804	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18	0817	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65								
0805	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88	0818	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65								
MFA PLANT FOODS					COLUMBIA, MO					MFA PLANT FOODS					COLUMBIA, MO				
0807	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59	0819	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43								
0808	34.0- 0.0- 0.0	33.2	0.0	0.0	97.65	0821	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43								
0809	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76	0825	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87								

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0907	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0987	46.0- 0.0- 0.0	40.3*	0.0	0.0	87.61*
0988	46.0- 0.0- 0.0	46.1	0.0	0.0	100.22
0989	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1158	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1160	46.0- 0.0- 0.0	46.0	0.0	0.0	100.00
1161	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1162	46.0- 0.0- 0.0	46.1	0.0	0.0	100.22
1387	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1389	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1390	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1413	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1415	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
1416	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
1417	46.0- 0.0- 0.0	45.9	0.0	0.0	99.78
1418	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1419	46.0- 0.0- 0.0	46.1	0.0	0.0	100.22
1420	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1506	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1576	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1577	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
#TOTALS - NO. SAMPLES 417 - SMPLS MISBRANDED 1 - 100.29					

MFA PLANT FOODS

MFA PLANT FOODS		HAYTI, MO			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0280	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
0283	0.0- 0.0-60.0	0.0	0.0	60.2	100.33
0284	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
0384	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
0385	0.0- 0.0-60.0	0.0	0.0	59.8	99.67
0485	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
0871	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0872	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
0959	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
1090	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
1232	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
0786	0.0- 0.0-61.0	0.0	0.0	61.1	100.16
0272	0.0-46.0- 0.0	0.0	47.0	0.0	102.17
0380	0.0-46.0- 0.0	0.0	47.2	0.0	102.61
0563	0.0-46.0- 0.0	0.0	47.3	0.0	102.83
0773	0.0-46.0- 0.0	0.0	47.6	0.0	103.48
0862	0.0-46.0- 0.0	0.0	46.4	0.0	100.87
0948	0.0-46.0- 0.0	0.0	47.2	0.0	102.61
0949	0.0-46.0- 0.0	0.0	47.2	0.0	102.61
1223	0.0-46.0- 0.0	0.0	46.9	0.0	101.96
0250	18.0-46.0- 0.0	18.1	46.5	0.0	100.94
0252	18.0-46.0- 0.0	17.9	46.9	0.0	101.25
0350	18.0-46.0- 0.0	17.0	45.9	0.0	98.28
0351	18.0-46.0- 0.0	17.9	45.9	0.0	99.69
0757	18.0-46.0- 0.0	18.1	46.0	0.0	100.16
0845	18.0-46.0- 0.0	18.5	45.3	0.0	99.69
0848	18.0-46.0- 0.0	17.5	44.9	0.0	97.50
0935	18.0-46.0- 0.0	17.4	44.8	0.0	97.19
1216	18.0-46.0- 0.0	18.3	46.3	0.0	100.94
0317**	21.0- 0.0- 0.0	21.1	0.0	0.0	100.48
0725**	21.0- 0.0- 0.0	21.3	0.0	0.0	101.43
0866**	21.0- 0.0- 0.0	21.2	0.0	0.0	100.95
1259	21.0- 0.0- 0.0	21.2	0.0	0.0	100.95
0423	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35
0801	34.0- 0.0- 0.0	34.9	0.0	0.0	102.65
0323	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
0324	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0439	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
0815	46.0- 0.0- 0.0	46.1	0.0	0.0	100.22
0911	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1165	46.0- 0.0- 0.0	46.1	0.0	0.0	100.22
#TOTALS - NO. SAMPLES 41 - SMPLS MISBRANDED 0 - 100.84					

MIDWEST AGRI-CHEMICO, INC

MIDWEST AGRI-CHEMICO, INC		CAPE GIRARDEAU, MO			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0014	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
0016	0.0- 0.0-60.0	0.0	0.0	60.2	100.33
0125	0.0- 0.0-60.0	0.0	0.0	60.0	100.00

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0196	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
0197	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
0198	0.0- 0.0-60.0	0.0	0.0	60.0	100.00
0282	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
0285	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
0568	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0686	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0693	0.0- 0.0-60.0	0.0	0.0	59.3	98.83
0873	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
0958	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
0963	0.0- 0.0-60.0	0.0	0.0	59.7	99.50
1089	0.0- 0.0-60.0	0.0	0.0	60.3	100.50
1344	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
1466	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
1467	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
0580	0.0- 0.0-61.0	0.0	0.0	62.0	101.64
0583	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
0191	0.0-46.0- 0.0	0.0	46.9	0.0	101.96
0192	0.0-46.0- 0.0	0.0	47.3	0.0	102.83
0677	0.0-46.0- 0.0	0.0	46.8	0.0	101.74
0861	0.0-46.0- 0.0	0.0	46.1	0.0	100.22
0072	18.0-46.0- 0.0	18.1	46.9	0.0	101.56
0113	18.0-46.0- 0.0	17.7	46.7	0.0	100.63
0162	18.0-46.0- 0.0	17.9	46.3	0.0	100.31
0163	18.0-46.0- 0.0	17.4	45.4	0.0	98.13
0164	18.0-46.0- 0.0	17.9	46.1	0.0	100.00
0165	18.0-46.0- 0.0	17.6	45.3	0.0	98.28
0249	18.0-46.0- 0.0	17.7	46.6	0.0	100.47
0251	18.0-46.0- 0.0	17.1	46.2	0.0	98.91
0348	18.0-46.0- 0.0	17.4	46.4	0.0	99.69
0469	18.0-46.0- 0.0	17.6	46.6	0.0	100.31
0535	18.0-46.0- 0.0	17.7	45.7	0.0	99.06
0557	18.0-46.0- 0.0	17.9	46.4	0.0	100.47
0560	18.0-46.0- 0.0	17.8	46.7	0.0	100.78
0649	18.0-46.0- 0.0	18.3	45.9	0.0	100.31
0656	18.0-46.0- 0.0	18.6	46.2	0.0	101.25
0846	18.0-46.0- 0.0	17.9	45.7	0.0	99.38
0939	18.0-46.0- 0.0	17.9	46.5	0.0	100.63
1063	18.0-46.0- 0.0	18.0	46.8	0.0	101.25
1066	18.0-46.0- 0.0	17.9	45.3	0.0	98.75
1207	18.0-46.0- 0.0	18.0	45.6	0.0	99.38
1323	18.0-46.0- 0.0	17.7	46.2	0.0	99.84
1450	18.0-46.0- 0.0	17.7	45.7	0.0	99.06
1451	18.0-46.0- 0.0	17.6	46.5	0.0	100.16
0543**	20.5- 0.0- 0.0	19.9	0.0	0.0	97.07
1294**	20.5- 0.0- 0.0	19.6	0.0	0.0	95.61*
0318**	21.0- 0.0- 0.0	20.9	0.0	0.0	99.52
0603**	21.0- 0.0- 0.0	21.2	0.0	0.0	100.95
0310	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18
0311	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
0420	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
0421	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
0424	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
0594	34.0- 0.0- 0.0	33.8	0.0	0.0	99.41
0601	34.0- 0.0- 0.0	34.6	0.0	0.0	101.76
0720	34.0- 0.0- 0.0	33.1	0.0	0.0	97.35
0890	34.0- 0.0- 0.0	33.6	0.0	0.0	98.82
1559	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00
1628	34.0- 0.0- 0.0	34.4	0.0	0.0	101.18
1629	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
1637	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
0137	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0515	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
0610	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0909	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0910	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
#TOTALS - NO. SAMPLES 69 - SMPLS MISBRANDED 1 - 100.24					

MIDWEST FERTILIZER, INC

MIDWEST FERTILIZER, INC		PAOLA, KS			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0699	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
0865	0.0- 0.0-60.0	0.0	0.0	60.0	100.00
0964	0.0- 0.0-60.0	0.0	0.0	60.5	100.83

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
1081	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
1348	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
1465	0.0- 0.0-60.0	0.0	0.0	59.6	99.33
0394	0.0- 0.0-61.0	0.0	0.0	59.3	97.21
0710	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
0118	18.0-46.0- 0.0	17.8	46.7	0.0	100.78
0365	18.0-46.0- 0.0	17.4	46.3	0.0	99.53
0667	18.0-46.0- 0.0	18.5	45.7	0.0	100.31
0842	18.0-46.0- 0.0	17.8	45.1	0.0	98.28
0945	18.0-46.0- 0.0	18.1	45.7	0.0	99.69
0946	18.0-46.0- 0.0	17.9	45.8	0.0	99.53
1055	18.0-46.0- 0.0	17.8	45.9	0.0	99.53
1330	18.0-46.0- 0.0	17.9	46.2	0.0	100.16
1449	18.0-46.0- 0.0	18.1	45.6	0.0	99.53
0723	34.0- 0.0- 0.0	33.9	0.0	0.0	99.71
0889	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
0981	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
0983	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00
1115	34.0- 0.0- 0.0	33.5	0.0	0.0	98.53
1371	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
1495	34.0- 0.0- 0.0	34.5	0.0	0.0	101.47
1496	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
0618	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1275	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
#TOTALS - NO. SAMPLES		27	- SMPLS MISBRANDED	0	- 99.95
MIDWEST PLANT FOOD & SUPPLY, SPRINGFIELD, MO					
0013	18.0-46.0- 0.0	17.8	46.4	0.0	100.31
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 100.31
MISSISSIPPI CHEMICAL COMPANY, LP, YAZOO CITY, MS					
0578	0.0- 0.0-60.0	0.0	0.0	62.1	103.50
0783	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
0422	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00
0600	34.0- 0.0- 0.0	35.0	0.0	0.0	102.94
1625	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
1626	34.0- 0.0- 0.0	33.9	0.0	0.0	99.71
1627	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
#TOTALS - NO. SAMPLES		7	- SMPLS MISBRANDED	0	- 101.23
MISSISSIPPI POTASH INC., YAZOO CITY, MS					
0388	0.0- 0.0-60.0	0.0	0.0	62.1	103.50
0389	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
0390	0.0- 0.0-60.0	0.0	0.0	62.2	103.67
0965	0.0- 0.0-61.0	0.0	0.0	62.1	101.80
0303	0.0- 0.0-62.0	0.0	0.0	61.5	99.19
0304	0.0- 0.0-62.0	0.0	0.0	61.4	99.03
0402	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
0403	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
0404	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0505	0.0- 0.0-62.0	0.0	0.0	61.4	99.03
0581	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
1103	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
1359	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
1474	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
#TOTALS - NO. SAMPLES		14	- SMPLS MISBRANDED	0	- 100.87
BRUCE OAKLEY INC, BEEBE, AR					
0962	0.0- 0.0-60.0	0.0	0.0	59.5	99.17
1606	0.0- 0.0-60.0	0.0	0.0	61.6	102.67
1607	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
0938	18.0-46.0- 0.0	17.5	45.6	0.0	98.59
BRUCE OAKLEY INC, BEEBE, AR					
1597	18.0-46.0- 0.0	17.8	46.3	0.0	100.16
1598	18.0-46.0- 0.0	17.6	46.5	0.0	100.16
1599	18.0-46.0- 0.0	17.6	45.5	0.0	98.59
#TOTALS - NO. SAMPLES		7	- SMPLS MISBRANDED	0	- 99.88
OAKLEY MISSOURI, INC, CARUTHERSVILLE, MO					
0194	0.0- 0.0-60.0	0.0	0.0	60.3	100.50
0195	0.0- 0.0-60.0	0.0	0.0	60.1	100.17
0567	0.0- 0.0-60.0	0.0	0.0	61.2	102.00

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0569	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
0577	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
0690	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0692	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0694	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
0960	0.0- 0.0-60.0	0.0	0.0	60.2	100.33
0190	0.0-46.0- 0.0	0.0	47.3	0.0	102.83
0564	0.0-46.0- 0.0	0.0	47.6	0.0	103.48
0678	0.0-46.0- 0.0	0.0	47.2	0.0	102.61
0161	18.0-46.0- 0.0	17.6	45.8	0.0	99.06
0261	18.0-46.0- 0.0	17.7	46.5	0.0	100.31
0534	18.0-46.0- 0.0	17.8	45.8	0.0	99.38
0651	18.0-46.0- 0.0	17.9	46.3	0.0	100.31
0655	18.0-46.0- 0.0	17.8	45.4	0.0	98.75
0657	18.0-46.0- 0.0	18.3	46.3	0.0	100.94
1138**	21.0- 0.0- 0.0	21.0	0.0	0.0	100.00
0312	34.0- 0.0- 0.0	33.7	0.0	0.0	99.12
0719	34.0- 0.0- 0.0	33.8	0.0	0.0	99.41
0721	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59
0136	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0612	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
#TOTALS - NO. SAMPLES		24	- SMPLS MISBRANDED	0	- 100.76
OLD MILL GRAIN & SEED CO, HARRISONVILLE, MO					
1000	5.0-23.0-33.0	4.9	23.0	34.0	100.90
0997**	8.9-20.7-26.6	8.9	20.6	26.4	99.53
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	0	- 100.22
PCS SALES (USA) INC., NORTHBROOK, IL					
1238	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 100.97
PIKE COUNTY SERVICE COMPANY, PITTSFIELD, IL					
0290	0.0- 0.0-60.0	0.0	0.0	60.2	100.33
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 100.33
RIVER BEND AG LLC, NEW MADRID, MO					
0279	0.0- 0.0-60.0	0.0	0.0	60.2	100.33
0281	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
0383	0.0- 0.0-60.0	0.0	0.0	60.7	101.17
0386	0.0- 0.0-60.0	0.0	0.0	59.8	99.67
0685	0.0- 0.0-60.0	0.0	0.0	61.3	102.17
0687	0.0- 0.0-60.0	0.0	0.0	60.8	101.33
0688	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
0689	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
0269	0.0-46.0- 0.0	0.0	46.9	0.0	101.96
0270	0.0-46.0- 0.0	0.0	46.7	0.0	101.52
0271	0.0-46.0- 0.0	0.0	46.6	0.0	101.30
0379	0.0-46.0- 0.0	0.0	46.5	0.0	101.09
0676	0.0-46.0- 0.0	0.0	46.7	0.0	101.52
0679	0.0-46.0- 0.0	0.0	46.9	0.0	101.96
1070	0.0-46.0- 0.0	0.0	46.9	0.0	101.96
1335	0.0-46.0- 0.0	0.0	47.6	0.0	103.48
0248	18.0-46.0- 0.0	17.2	46.1	0.0	98.91
0253	18.0-46.0- 0.0	17.7	46.4	0.0	100.16
0349	18.0-46.0- 0.0	17.8	46.7	0.0	100.78
0650	18.0-46.0- 0.0	17.9	46.8	0.0	101.09
0652	18.0-46.0- 0.0	17.7	45.7	0.0	99.06
0322	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
0325	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
RIVER BEND AG LLC, NEW MADRID, MO					
0611	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
0613	46.0- 0.0- 0.0	46.6	0.0	0.0	101.30
#TOTALS - NO. SAMPLES		25	- SMPLS MISBRANDED	0	- 101.01
ROYSTER-CLARK, INC., COLLINSVILLE, IL					
0213	0.0- 0.0-62.0	0.0	0.0	62.0	100.00
ROYSTER-CLARK, INC., COLLINSVILLE, IL					
0214	0.0- 0.0-62.0	0.0	0.0	62.0	100.00
0215	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
0701	0.0- 0.0-62.0	0.0	0.0	62.4	100.65

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
0709	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0794	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
1106	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
1247	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
1248	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
1350	0.0- 0.0-62.0	0.0	0.0	61.4	99.03
1351	0.0- 0.0-62.0	0.0	0.0	61.4	99.03
1476	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
1543	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
1544	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
1612	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
1224	0.0-46.0- 0.0	0.0	45.7	0.0	99.35
1336	0.0-46.0- 0.0	0.0	47.0	0.0	102.17
0159	11.0-52.0- 0.0	11.4	50.6	0.0	98.41
0643	11.0-52.0- 0.0	11.8	52.7	0.0	102.38
1052	11.0-52.0- 0.0	11.5	50.9	0.0	99.05
1198	11.0-52.0- 0.0	11.3	51.9	0.0	100.32
1318	11.0-52.0- 0.0	11.4	52.7	0.0	101.75
1319	11.0-52.0- 0.0	11.4	52.5	0.0	101.43
1518	11.0-52.0- 0.0	10.8	52.0	0.0	99.68
1520	11.0-52.0- 0.0	10.7	51.9	0.0	99.37
0673**	18.0- 8.0- 0.0	18.2	8.9	0.0	104.23
0772**	18.0- 8.0- 0.0	18.7	8.4	0.0	104.23
0175	18.0-46.0- 0.0	17.7	46.4	0.0	100.16
0178	18.0-46.0- 0.0	17.8	46.5	0.0	100.47
0254	18.0-46.0- 0.0	17.5	46.4	0.0	99.84
0255	18.0-46.0- 0.0	17.6	46.2	0.0	99.69
0262	18.0-46.0- 0.0	17.7	45.6	0.0	98.91
0470	18.0-46.0- 0.0	17.6	45.8	0.0	99.06
0653	18.0-46.0- 0.0	17.8	45.3	0.0	98.59
0654	18.0-46.0- 0.0	17.8	46.3	0.0	100.16
0934	18.0-46.0- 0.0	17.5	45.4	0.0	98.28
1053	18.0-46.0- 0.0	17.8	45.3	0.0	98.59
1206	18.0-46.0- 0.0	18.1	45.7	0.0	99.69
1210	18.0-46.0- 0.0	18.0	45.8	0.0	99.69
1218	18.0-46.0- 0.0	18.0	45.1	0.0	98.59
1528	18.0-46.0- 0.0	17.8	45.5	0.0	98.91
1529	18.0-46.0- 0.0	17.2	45.6	0.0	98.13
0237**	21.0- 0.0- 0.0	20.9	0.0	0.0	99.52
0315	33.5- 0.0- 0.0	33.7	0.0	0.0	100.60
0222	34.0- 0.0- 0.0	33.2	0.0	0.0	97.65
0313	34.0- 0.0- 0.0	33.0	0.0	0.0	97.06
1119	34.0- 0.0- 0.0	34.0	0.0	0.0	100.00
1123	34.0- 0.0- 0.0	33.9	0.0	0.0	99.71
1558	34.0- 0.0- 0.0	33.6	0.0	0.0	98.82
1561	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
0141	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
0229	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0230	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0732	46.0- 0.0- 0.0	46.6	0.0	0.0	101.30
1159	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1166	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1505	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
#TOTALS - NO. SAMPLES		58	- SMPLS MISBRANDED	0	- 100.01

ROYSER-CLARK, INC		NEW FRANKLIN, MO			
0393	0.0- 0.0-61.0	0.0	0.0	60.7	99.51
0095	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
0301	0.0- 0.0-62.0	0.0	0.0	61.9	99.84
0302	0.0- 0.0-62.0	0.0	0.0	61.5	99.19
0407	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
0408	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
0409	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
0501	0.0- 0.0-62.0	0.0	0.0	62.1	100.16
0587	0.0- 0.0-62.0	0.0	0.0	62.6	100.97
0711	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
1099	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
#TOTALS - NO. SAMPLES		0	- SMPLS MISBRANDED	0	- 100.01

ROYSER-CLARK, INC		NEW FRANKLIN, MO			
1100	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
1107	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
1236	0.0- 0.0-62.0	0.0	0.0	62.6	100.97

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
1237	0.0- 0.0-62.0	0.0	0.0	62.5	100.81
1243	0.0- 0.0-62.0	0.0	0.0	62.4	100.65
1245	0.0- 0.0-62.0	0.0	0.0	62.2	100.32
1352	0.0- 0.0-62.0	0.0	0.0	61.0	98.39
1354	0.0- 0.0-62.0	0.0	0.0	63.0	101.61
1355	0.0- 0.0-62.0	0.0	0.0	62.0	100.00
1356	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
1361	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
1410	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
0532	11.0-52.0- 0.0	11.3	51.0	0.0	98.89
0641	11.0-52.0- 0.0	11.5	52.5	0.0	101.59
1051	11.0-52.0- 0.0	11.4	52.3	0.0	101.11
1400	11.0-52.0- 0.0	11.4	52.5	0.0	101.43
0183	18.0-46.0- 0.0	17.6	46.5	0.0	100.16
0184	18.0-46.0- 0.0	17.8	46.5	0.0	100.47
0265	18.0-46.0- 0.0	17.5	46.1	0.0	99.38
0268	18.0-46.0- 0.0	17.4	46.7	0.0	100.16
0360	18.0-46.0- 0.0	17.8	46.2	0.0	100.00
0361	18.0-46.0- 0.0	17.4	46.3	0.0	99.53
0362	18.0-46.0- 0.0	17.4	45.7	0.0	98.59
0363	18.0-46.0- 0.0	17.3	46.3	0.0	99.38
0554	18.0-46.0- 0.0	17.9	46.0	0.0	99.84
0555	18.0-46.0- 0.0	17.8	46.0	0.0	99.69
0556	18.0-46.0- 0.0	17.8	45.5	0.0	98.91
0662	18.0-46.0- 0.0	17.7	45.6	0.0	98.91
0663	18.0-46.0- 0.0	17.8	45.4	0.0	98.75
0668	18.0-46.0- 0.0	17.8	45.8	0.0	99.38
0758	18.0-46.0- 0.0	18.0	46.1	0.0	100.16
0850	18.0-46.0- 0.0	17.7	45.1	0.0	98.13
0944	18.0-46.0- 0.0	17.7	45.7	0.0	99.06
1069	18.0-46.0- 0.0	17.5	45.5	0.0	98.44
1201	18.0-46.0- 0.0	17.9	45.7	0.0	99.38
1202	18.0-46.0- 0.0	17.9	45.6	0.0	99.22
1212	18.0-46.0- 0.0	17.9	45.5	0.0	99.06
1215	18.0-46.0- 0.0	18.0	45.1	0.0	98.59
1322	18.0-46.0- 0.0	17.8	46.6	0.0	100.63
1324	18.0-46.0- 0.0	17.4	46.0	0.0	99.06
1325	18.0-46.0- 0.0	17.6	46.7	0.0	100.47
1120	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
1121	34.0- 0.0- 0.0	34.1	0.0	0.0	100.29
1122	34.0- 0.0- 0.0	33.9	0.0	0.0	99.71
1254	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59
1373	34.0- 0.0- 0.0	34.2	0.0	0.0	100.59
1565	34.0- 0.0- 0.0	33.9	0.0	0.0	99.71
0047	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
0233	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
0614	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
0991	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1164	46.0- 0.0- 0.0	45.9	0.0	0.0	99.78
1167	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1268	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1269	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
1270	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
1271	46.0- 0.0- 0.0	46.3	0.0	0.0	100.65
1272	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
1273	46.0- 0.0- 0.0	46.6	0.0	0.0	101.30
1388	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
#TOTALS - NO. SAMPLES		71	- SMPLS MISBRANDED	0	- 100.01

SCHAEPERKOETTER STORE, INC		MT STERLING, MO			
0932	18.0-46.0- 0.0	17.8	45.1	0.0	98.28
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 98.28

SHAWNEETOWN FEED & SEED CO.		JACKSON, MO			
0526	9.0-23.0-30.0	9.1	24.3	29.8	102.77
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 102.77

SOUTHEAST COOPERATIVE SERVICE CO		ADVANCE, MO			
0457	18.0-46.0- 0.0	17.8	46.1	0.0	99.84
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 99.84

BULK DRY FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
SUR-GRO PLANT FOOD		PLATTSBURG, MO			
0800	0.0- 0.0-62.4	0.0	0.0	62.2	99.68
1363	0.0- 0.0-62.4	0.0	0.0	62.8	100.64
0561	18.0-46.0- 0.0	17.7	46.1	0.0	99.69
0769	18.0-46.0- 0.0	17.0	45.9	0.0	98.28
1320	18.0-46.0- 0.0	17.6	46.5	0.0	100.16
0810	34.0- 0.0- 0.0	34.8	0.0	0.0	102.35
1375	34.0- 0.0- 0.0	35.1	0.0	0.0	103.24
#TOTALS - NO. SAMPLES		7	SMPLS MISBRANDED		0 - 100.24

UAP FERTILIZER		ST JOSEPH, MO			
0782	0.0- 0.0-60.0	0.0	0.0	61.2	102.00
1536	0.0- 0.0-60.0	0.0	0.0	60.9	101.50
1473	0.0- 0.0-62.0	0.0	0.0	62.7	101.13
0748	11.0-52.0- 0.0	10.8	52.3	0.0	100.16
0928	11.0-52.0- 0.0	11.4	51.7	0.0	100.16
1434	11.0-52.0- 0.0	11.7	51.7	0.0	100.63
1517	11.0-52.0- 0.0	11.0	51.3	0.0	98.89
1593	18.0-46.0- 0.0	17.6	46.0	0.0	99.38
#TOTALS - NO. SAMPLES		8	SMPLS MISBRANDED		0 - 100.22

UAP RICHTER		PLEASANT HILL, IL			
0199	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
0206	0.0- 0.0-60.0	0.0	0.0	59.4	99.00
0207	0.0- 0.0-60.0	0.0	0.0	59.8	99.67
#TOTALS - NO. SAMPLES		3	SMPLS MISBRANDED		0 - 99.50

UNITED SUPPLIERS, INC		ELDORA, IA			
0291	0.0- 0.0-60.0	0.0	0.0	60.3	100.50
0387	0.0- 0.0-60.0	0.0	0.0	59.6	99.33
0573	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
0575	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
0780	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
0870	0.0- 0.0-60.0	0.0	0.0	60.6	101.00
1233	0.0- 0.0-60.0	0.0	0.0	59.4	99.00
0799	0.0- 0.0-62.0	0.0	0.0	62.3	100.48
1616	0.0- 0.0-62.0	0.0	0.0	62.8	101.29
0242	11.0-52.0- 0.0	11.0	52.8	0.0	101.27
0752	11.0-52.0- 0.0	11.6	52.0	0.0	100.95
1586	11.0-52.0- 0.0	11.0	51.5	0.0	99.21
0547	18.0-46.0- 0.0	17.7	45.9	0.0	99.38
0847	18.0-46.0- 0.0	17.8	45.5	0.0	98.91
0309	34.0- 0.0- 0.0	34.3	0.0	0.0	100.88
0734	46.0- 0.0- 0.0	46.2	0.0	0.0	100.43
0735	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
0736	46.0- 0.0- 0.0	46.5	0.0	0.0	101.09
1267	46.0- 0.0- 0.0	46.4	0.0	0.0	100.87
#TOTALS - NO. SAMPLES		19	SMPLS MISBRANDED		0 - 100.38

UNITED SUPPLIERS, INC		ST JOSEPH, MO			
0124	0.0- 0.0-60.0	0.0	0.0	60.0	100.00
0127	0.0- 0.0-60.0	0.0	0.0	59.9	99.83
0382	0.0- 0.0-60.0	0.0	0.0	60.4	100.67
0874	0.0- 0.0-60.0	0.0	0.0	61.0	101.67
1085	0.0- 0.0-60.0	0.0	0.0	61.4	102.33
1464	0.0- 0.0-60.0	0.0	0.0	60.5	100.83
0110	11.0-52.0- 0.0	11.8	52.6	0.0	102.22
0340	11.0-52.0- 0.0	10.9	52.3	0.0	100.32
UNITED SUPPLIERS, INC		ST JOSEPH, MO			
0840	11.0-52.0- 0.0	10.6	51.4	0.0	98.41
1437	11.0-52.0- 0.0	12.4	52.6	0.0	103.17
0121	18.0-46.0- 0.0	17.8	46.7	0.0	100.78
1061	18.0-46.0- 0.0	17.9	45.1	0.0	98.44
1447	18.0-46.0- 0.0	17.8	46.5	0.0	100.47
#TOTALS - NO. SAMPLES		13	SMPLS MISBRANDED		0 - 100.64

VAN DIEST SUPPLY COMPANY		WEBSTER CITY, IA			
0105**	0.0- 0.0- 0.0	0.0	0.0	0.0	100.00
#TOTALS - NO. SAMPLES		1	SMPLS MISBRANDED		0 - 100.00

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

* Subject to penalty (either 10% or two units deficient from guarantee in nutrient indicated, or 3% deficient in total value).

** Sample analyzed for guaranteed secondary or micronutrients, the results are tabulated beginning page 37.

Totals from July 1, 2001.

BULK BLEND FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
A & L AG CENTER					SEDALIA, MO
1300**	7.0-25.0-25.0	6.9	24.3	27.1	100.56
1551	9.5-19.5-27.5	9.5	21.4	28.4	105.50
#TOTALS - NO. SAMPLES					2 - SMPLS MISBRANDED 0 - 102.97
ADAMS FERTILIZER INC.					SENATH, MO
0954	0.0-12.0-43.5	0.0	15.4	41.1*	106.52
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 1 - 106.52
AG COOP SERVICES INC					BOONVILLE, MO
1029	8.8-22.5-31.5	8.7	22.2	32.5	100.21
1030	8.8-22.5-31.5	8.3	22.1	33.6	100.32
#TOTALS - NO. SAMPLES					2 - SMPLS MISBRANDED 0 - 100.26
AG COOP SERVICES INC					LA MONTE, MO
1425**	8.2-21.1-31.7	8.1	20.4	32.7	99.34
1426**	8.2-21.1-31.7	7.9	20.4	32.6	98.78
#TOTALS - NO. SAMPLES					2 - SMPLS MISBRANDED 0 - 99.05
AG DISTRIBUTORS					DEXTER, MO
0622	15.5-18.5-24.5	14.6	17.2	27.0	97.95
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 97.95
AG DISTRIBUTORS					PORTAGEVILLE, MO
1183	6.0-16.0-39.0	6.4	15.7	38.0	99.04
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 99.04
AG SERVICE CENTER OF SOUTHWEST MO					LOCKWOOD, MO
0835	10.0-26.0-26.0	10.4	25.8	26.6	101.02
0415	17.5-17.5-17.5	15.7*	22.5	19.2	109.26
#TOTALS - NO. SAMPLES					2 - SMPLS MISBRANDED 1 - 104.90
AGRISERVICES OF BRUNSWICK, LLC					BRUNSWICK, MO
1189	5.1-24.3-32.5	5.0	23.3	33.8	99.01
1169	9.6-21.7-28.9	9.3	20.3	31.0	98.58
#TOTALS - NO. SAMPLES					2 - SMPLS MISBRANDED 0 - 98.79
AGRO DISTRIBUTION, LLC-SIKESTON					SIKESTON, MO
1072	0.0-26.0-26.0	0.0	26.9	26.5	102.95
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 102.95
ALLDREDGE FEED & SEED INC					STANBERRY, MO
1301	6.0-15.5-39.0	5.5	14.8	40.9	99.39
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 99.39
B & B COTTON CO					CAMPBELL, MO
0592**	12.0-12.0-27.0	12.5	12.9	25.8	102.13
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 102.13
BALL FERTILIZER C/O SMITH BROS					WYACONDA, MO
1047	4.0-19.5-37.5	4.3	19.9	37.2	101.30
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 101.30
BARING FARM SERVICE, INC					BARING, MO
0629	12.0-12.0-25.2	14.5	10.5*	26.8	104.92
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 1 - 104.92
BARTLETT & COMPANY					HIGGINSVILLE, MO
1033	8.4-21.5-33.0	8.3	21.9	33.3	100.97
1422**	9.9-20.9-20.9	10.1	21.2	21.4	101.82
1423**	9.9-20.9-20.9	9.8	21.1	21.9	101.45
1431**	15.2-30.2- 0.0	15.0	32.2	0.0	103.96
#TOTALS - NO. SAMPLES					4 - SMPLS MISBRANDED 0 - 102.06
BERNIE FARMERS FERTILIZER					BERNIE, MO
0632	9.7-24.8-27.6	10.3	24.7	27.4	100.83
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 100.83
BICHSEL SPREADING SERVICE					LEONARD, MO
1430	3.7-18.9-37.9	4.2	19.2	37.4	101.32

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
BICHSEL SPREADING SERVICE					LEONARD, MO
0972	12.0-24.0-24.0	13.0	23.2	22.9	99.27
#TOTALS - NO. SAMPLES					2 - SMPLS MISBRANDED 0 - 100.22
BROWN'S AGRI SERVICE, INC					ROCK PORT, MO
1302	6.0-28.3-28.3	5.4	25.0*	32.6	96.39*
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 1 - 96.39
BRUMBAUGH INC					TAYLOR, MO
0998	8.0-21.0-32.0	7.7	20.6	33.1	99.67
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 99.67
BUCHHEIT INC					PERRYVILLE, MO
0888	23.5-16.0- 8.0	24.1	15.0	8.6	99.77
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 99.77
BUTTERFIELD & ASSOCIATES GRAIN, INC					MEADVILLE, MO
1635	0.0-27.5-23.5	0.0	28.8	24.1	104.08
1013	10.0-26.0-26.0	10.0	25.7	26.8	100.20
#TOTALS - NO. SAMPLES					2 - SMPLS MISBRANDED 0 - 101.92
CARNEAL FARM SUPPLY, INC					BLAIRSTOWN, MO
0995	14.4-10.8-10.8	15.0	11.6	13.4	108.82
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 108.82
CENTRAL ELEVATOR, INC (OLNEY)					SILEX, MO
0914	24.7-15.4-15.4	21.4*	16.4	19.2	99.16
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 1 - 99.16
CENTRAL MISSOURI AGRISERVICE LLC					BLACKBURN, MO
1312**	4.0-22.0-32.0	4.6	21.9	33.7	103.21
1187**	5.5-27.0-27.0	5.1	23.8*	30.6	96.09*
1184	6.0-28.3-28.3	5.8	26.9	29.7	98.14
#TOTALS - NO. SAMPLES					3 - SMPLS MISBRANDED 1 - 99.01
CENTRAL MISSOURI AGRI SERVICE LLC					MALTA BEND, MO
1170**	9.6-24.6-24.6	9.9	24.6	24.4	100.43
1510**	9.0-24.0-24.0	8.9	23.6	26.4	101.56
1511**	9.0-24.0-24.0	9.0	23.4	26.7	101.67
1278**	12.0-31.0-13.0	12.6	31.4	12.9	101.92
#TOTALS - NO. SAMPLES					4 - SMPLS MISBRANDED 0 - 101.39
CENTRAL MISSOURI AGRISERVICE LLC					MARSHALL, MO
1313**	3.9-18.8-34.4	4.7	20.1	33.3	103.88
1314**	3.9-18.8-34.4	3.8	19.5	34.1	101.13
1298**	7.7-19.7-29.6	7.2	19.3	33.2	102.13
1299**	7.7-19.7-29.6	6.9*	18.2	32.0	97.39
1424**	8.8-22.4-27.3	7.7*	20.1*	30.4	95.88*
#TOTALS - NO. SAMPLES					5 - SMPLS MISBRANDED 2 - 99.97
CENTRAL MISSOURI AGRISERVICE LLC					SLATER, MO
1003	10.3-26.4-26.5	9.3	24.3*	29.5	96.80*
1276	27.5-13.7-13.7	26.6	14.3	15.3	101.04
#TOTALS - NO. SAMPLES					2 - SMPLS MISBRANDED 1 - 98.87
CO-OP SERVICE CENTER INC					WHITEWATER, MO
0527	9.0-23.0-30.0	9.1	23.1	30.2	100.64
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 100.64
CROP PRODUCTION SERVICES					PARIS, MO
1582	6.7-31.5-23.6	6.2	30.0	26.0	98.40
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 98.40
D & S FERTILIZER & PROPANE INC					CLINTON, MO
1113	17.8-17.8-17.8	17.4	17.1	19.7	99.66
#TOTALS - NO. SAMPLES					1 - SMPLS MISBRANDED 0 - 99.66
DEERFIELD GRAIN					DEERFIELD, MO
1008**	9.8-25.0-25.0	9.9	24.0	25.5	98.63
1009**	9.8-25.0-25.0	9.3	23.7	27.2	98.52

BULK BLEND FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
DEERFIELD GRAIN					DEERFIELD, MO
1007	10.2-26.0-26.0	9.9	25.8	25.4	98.37
#TOTALS	- NO. SAMPLES	3	- SMPLS MISBRANDED	0	- 98.50
DELTA GROWERS ASSOCIATION					CHARLESTON, MO
0625	8.0- 0.0-49.0	7.7	0.0	49.7	100.15
0623	13.8- 0.0-41.6	14.0	0.0	42.5	101.88
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 101.04
DELTA GROWERS ASSOC-EAST PRAIRIE					CHARLESTON, MO
1342**	0.0-13.6-35.7	0.0	13.3	37.7	102.23
0335**	8.9-22.6-29.3	8.4	21.6	30.1	97.62
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 99.48
DELTA GROWERS ASSOCIATION-MATTHEWS					CHARLESTON, MO
0277	0.0-24.6-27.7	0.0	25.3	29.0	103.51
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 103.51
DELTA GROWERS ASSOCIATION-KEWANEE					CHARLESTON, MO
0996	4.7-10.7-21.5	5.0	11.0	28.9	116.44
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 116.44
DELTA SUPPLY INC					DELTA, MO
1075	0.0-20.0-31.0	0.0	19.7	32.2	100.85
1074	0.0-20.0-33.0	0.0	19.3	35.4	101.37
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 101.11
DREXEL ELEVATOR					DREXEL, MO
0974	15.3-20.4-20.4	16.1	19.3	20.3	99.24
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 99.24
G C DUNN & SONS, INC					MIDDLETOWN, MO
1288	9.5-24.4-29.4	8.7	22.5	32.0	97.12
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 97.12
ED HELMREICH FERTILIZER & FARM					BUNCETON, MO
1002	10.9-28.0-24.1	10.4	26.5	25.6	97.55
0992	26.0-12.9-16.3	24.7	12.8	18.4	99.26
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 98.36
EX-CEL MILLING, INC					SYRACUSE, MO
0635	7.4-19.6-35.4	7.2	18.2	37.8	99.11
0636	7.4-19.6-35.4	7.0	17.8	37.9	97.87
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 98.48
FARMERS COOPERATIVE ASSOC. #301					SULLIVAN, MO
0519	19.5-19.6-19.5	17.8	20.9	20.9	100.61
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 100.61
FARMERS COOPERATIVE SERVICES, INC					EWING, MO
0952	6.0-20.0-33.0	6.4	20.3	34.3	103.18
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 103.18
FARMERS COOPERATIVE SERVICES, INC					NEW LONDON, MO
1014	10.0-26.0-26.0	10.2	27.0	26.2	102.65
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 102.65
FARMERS COOPERATIVE SERVICES, INC					HANNIBAL, MO
1391	12.0-19.0-25.0	13.0	20.6	26.9	108.16
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 108.16
FARMERS ELEVATOR AND SUPPLY CO.					CLINTON, MO
1042	5.3-13.5-18.0	6.2	15.2	19.3	111.69
1112	17.7-17.7-17.7	18.7	17.2	16.1	99.32
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 104.09
FARMERS ELEVATOR & SUPPLY CO., INC					HAWK POINT, MO
1338	0.0-26.0-26.0	0.0	27.2	26.3	103.46
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 103.46

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
GARD CROP SERVICE					PALMYRA, MO
1031	8.5-21.9-31.3	7.3*	18.9*	36.0	95.98*
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	1	- 95.98
GLASGOW MFA					GLASGOW, MO
1046**	4.0-21.0-29.0	4.7	20.8	29.4	101.77
1048**	4.0-21.0-29.0	4.8	21.8	28.4	103.29
1045**	4.5-22.0-28.0	4.9	22.5	29.0	103.46
1516**	4.5-22.0-29.0	4.7	22.6	28.6	101.46
1305**	5.0-24.5-24.5	5.2	24.6	26.8	103.47
1307**	5.0-25.5-25.5	5.6	26.2	27.5	105.32
1552	13.0-19.5-19.5	14.1	20.1	20.8	105.56
#TOTALS	- NO. SAMPLES	7	- SMPLS MISBRANDED	0	- 103.50
GOUGH CROP SERVICE/UAP RICHTER					PERRY, MO
1173	8.9-22.7-30.3	7.6*	19.7*	34.6	95.40*
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	1	- 95.40
GUIER CHEMICAL & FERTILIZER					HOUSTONIA, MO
1512	8.8-22.5-31.5	8.3	21.4	33.4	98.62
1285**	9.9-25.3-25.2	9.7	24.5	26.3	99.06
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 98.84
HANNIBAL BOARD OF PUBLIC WORKS					HANNIBAL, MO
0189	0.5- 0.5- 0.0	0.9	1.8	0.0	270.00
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 270.00
HEETCO FARM CENTER					LA BELLE, MO
1602	0.0-18.0-36.0	0.0	18.9	36.9	103.75
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 103.75
HEIMAN INC					ROCKVILLE, MO
0624	12.0-23.0-23.0	11.4	23.7	26.0	103.44
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 103.44
HEIMAN AGRI-SERVICES, IN					BUTLER, MO
0147	13.0- 6.0-13.0	14.7	6.4	14.1	110.39
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 110.39
HEIMSOOTH AGRI SERVICE INC					CORDER, MO
1041**	5.4-25.5-28.7	5.8	26.0	28.0	101.22
1036	7.1-33.4-21.5	7.1	32.0	22.6	98.34
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 99.68
HELENA CHEMICAL COMPANY					CLARKTON, MO
0680	0.0-18.0-36.0	0.0	20.8	34.6	105.83
0637	7.0-18.0-36.0	5.9*	15.5*	41.1	97.56
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	1	- 101.32
HELENA CHEMICAL COMPANY					HAYTI, MO
0521	12.0-12.0- 7.0	11.4	13.8	8.6	107.27
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 107.27
HENSON FARM SUPPLY, INC					WILLIAMSVILLE, MO
0153	9.0-38.0- 9.0	13.7	35.9*	13.9	109.81
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	1	- 109.81
HILLER CUSTOM SPREADING					HOUSTONIA, MO
1514	6.0-28.5-27.5	5.7	27.4	29.6	99.27
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 99.27
HOFFMAN & REED, INC					GILMAN CITY, MO
1429	4.0-25.0-29.0	5.7	24.4	32.2	106.21
#TOTALS	- NO. SAMPLES	1	- SMPLS MISBRANDED	0	- 106.21
JONES BROS. AGRI SERVICE, LLC					LA MONTE, MO
1178	7.5-19.0-36.0	6.9	17.7	37.6	97.53
1179	7.5-19.0-36.0	8.0	20.4	34.1	102.13
#TOTALS	- NO. SAMPLES	2	- SMPLS MISBRANDED	0	- 99.83

BULK BLEND FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
KELSO MILLING CO					SCOTT, MO
1343	0.0-10.5-28.0	0.0	11.4	30.4	108.57
0681	3.0- 7.5-49.5	3.0	7.6	50.5	101.70
#TOTALS - NO. SAMPLES		2 -	SMPLS MISBRANDED	0 -	104.51
LEGRAND'S FEED & FERTILIZER					POPLAR BLUFF, MO
1077	3.5-11.0-22.0	4.4	11.4	25.9	112.75
1078	3.5-11.0-22.0	3.8	11.0	23.9	104.90
#TOTALS - NO. SAMPLES		2 -	SMPLS MISBRANDED	0 -	108.82
LOWRY CITY FARMERS EXCHANGE/					LOWRY CITY, MO
1277	10.2-25.6-26.2	9.8	24.8	27.5	98.88
0631	10.1-26.0-26.0	9.9	25.2	26.2	98.17
0715	11.0-23.9-25.8	10.7	23.2	26.1	98.22
#TOTALS - NO. SAMPLES		3 -	SMPLS MISBRANDED	0 -	98.42
MCCORD GIN COMPANY					GIDEON, MO
0329	10.0-10.0-39.0	10.0	11.6	37.9	102.66
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	102.66
MESMER FERTILIZER					BETHEL, MO
1583	4.0-19.0-38.9	3.9	18.3	40.3	99.76
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	99.76
METZ GRAIN - JASPER					JASPER, MO
0528	9.0-23.0-30.0	8.9	24.3	29.4	101.91
0920	9.0-23.0-30.0	9.5	23.8	29.1	101.81
1290	9.0-23.0-30.0	8.4	22.1	31.4	98.30
0520	19.4-19.4-19.4	18.1	20.8	19.6	100.41
#TOTALS - NO. SAMPLES		4 -	SMPLS MISBRANDED	0 -	100.60
MFA AGRI SERVICES					ADVANCE, MO
0442	6.5- 8.5-44.0	6.3	8.3	46.2	101.89
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	101.89
MFA AGRI SERVICES					BENTON, MO
0826	19.0- 0.0-34.5	18.2	0.0	36.9	101.10
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	101.10
MFA AGRI SERVICES					BERNIE, MO
0951	0.0-27.5-23.5	0.0	30.7	22.2	106.50
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	106.50
MFA AGRI SERVICES					BOONVILLE, MO
1037**	6.3-16.1-35.0	5.9	16.0	35.6	99.50
0634**	7.9-20.4-27.5	7.3	18.8	28.9	96.43*
0714	9.1-14.0-36.5	9.0	14.5	36.3	100.73
1289	9.0-23.1-30.8	8.4	21.8	33.2	98.53
1012**	10.0-25.5-22.2	9.0	23.5	24.7	96.24*
#TOTALS - NO. SAMPLES		5 -	SMPLS MISBRANDED	2 -	98.22
MFA AGRI SERVICES					BURLINGTON JCT, MO
1315**	2.4-11.6-41.8	2.4	11.7	43.0	102.01
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	102.01
MFA AGRI SERVICES					CALIFORNIA, MO
1032	8.5-21.8-32.7	8.0	21.2	33.9	98.93
1004	10.3-26.4-26.4	9.8	25.8	27.2	98.60
1005	10.3-26.4-26.4	9.7	25.0	28.0	97.60
#TOTALS - NO. SAMPLES		3 -	SMPLS MISBRANDED	0 -	98.36
MFA AGRI SERVICES					CANTON, MO
1143	0.0-18.6-37.2	0.0	18.7	37.6	100.81
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	100.81
MFA AGRI SERVICES					CARYTOWN, MO
0235	19.4-19.4-19.4	18.8	20.7	19.2	101.24
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	101.24

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
MFA AGRI SERVICES					CENTRALIA, MO
1139	9.2-23.7-30.5	9.0	23.1	31.6	99.48
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	99.48
MFA AGRI SERVICES					CHILLICOTHE, MO
0738	13.5-20.0-27.0	12.9	19.9	28.0	99.57
0739	13.5-20.0-27.0	12.3	18.8	30.3	98.40
#TOTALS - NO. SAMPLES		2 -	SMPLS MISBRANDED	0 -	98.98
MFA AGRI SERVICES					COLE CAMP, MO
1018	9.0-23.0-30.0	8.7	22.7	30.7	99.47
1019	9.0-23.0-30.0	9.3	24.4	28.9	102.45
1020	9.0-23.0-30.0	8.2	21.9	32.6	98.72
#TOTALS - NO. SAMPLES		3 -	SMPLS MISBRANDED	0 -	100.21
MFA AGRI SERVICES					CROCKER, MO
0414	15.4-20.4-20.4	15.5	20.5	20.3	100.33
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	100.33
MFA AGRI SERVICES					ELSBERRY, MO
1366	19.4-23.3-11.6	18.1	21.3	15.3	97.01
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	97.01
MFA AGRI SERVICES					ESSEX, MO
0481	0.0-18.0-36.0	0.0	18.8	37.6	104.44
1225	0.0-23.0-30.0	0.0	23.2	31.2	102.11
#TOTALS - NO. SAMPLES		2 -	SMPLS MISBRANDED	0 -	103.24
MFA AGRI SERVICES					FREEBURG, MO
0018	0.0- 0.0-62.0	0.0	0.0	61.8	99.68
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	99.68
MFA AGRI SERVICES - WEST					HALE, MO
0743**	7.5-20.0-29.5	8.2	20.2	29.9	102.60
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	102.60
MFA AGRI SERVICES					HANNIBAL, MO
1392	10.3-20.7-31.1	9.0*	19.6	33.5	97.42
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	1 -	97.42
MFA AGRI SERVICES					HIGGINSVILLE, MO
1034**	7.2-24.6-24.6	7.3	23.2	25.4	97.96
1035**	7.2-24.6-24.6	7.1	24.1	25.8	100.00
1017**	9.7-20.6-20.6	9.8	19.5	21.6	98.77
1393**	11.6-22.5-22.4	11.6	22.5	23.6	101.32
#TOTALS - NO. SAMPLES		4 -	SMPLS MISBRANDED	0 -	99.54
MFA AGRI SERVICES					IANTHA, MO
1022	9.0-23.0-30.5	8.4	22.6	30.4	97.78
1023	9.0-23.0-30.5	8.8	23.5	29.4	99.47
1024	9.0-23.0-30.5	8.7	22.8	29.9	98.31
1025	9.0-23.0-30.5	8.7	22.9	29.5	98.10
#TOTALS - NO. SAMPLES		4 -	SMPLS MISBRANDED	0 -	98.41
MFA AGRI SERVICES					IRWIN, MO
1021	9.0-23.0-30.5	9.1	23.6	30.2	101.16
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	101.16
MFA AGRI SERVICES					JACKSON, MO
0777	11.0-29.0-22.0	9.8*	27.7	25.0	98.04
0737	19.0-19.0-19.0	17.0*	19.2	23.2	100.63
#TOTALS - NO. SAMPLES		2 -	SMPLS MISBRANDED	2 -	99.28
MFA AGRI SERVICES					KIRKSVILLE, MO
1513	8.0-20.5-34.0	7.4	19.4	37.4	100.00
1175**	8.5-22.0-30.0	8.4	21.3	30.7	99.01
#TOTALS - NO. SAMPLES		2 -	SMPLS MISBRANDED	0 -	99.50
MFA AGRI SERVICES					LABELLE, MO
1340	7.1-18.6-37.1	6.4	17.1	39.4	97.63
#TOTALS - NO. SAMPLES		1 -	SMPLS MISBRANDED	0 -	97.63

BULK BLEND FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
MFA AGRI SERVICES		LADDONIA, MO			
1142	5.4-25.6-31.9	5.4	26.0	31.7	100.64
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 100.64
MFA AGRI SERVICES		LAWSON, MO			
1109	12.0-24.0-24.0	11.7	23.2	24.8	98.54
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 98.54
MFA AGRI SERVICES		LEXINGTON, MO			
1185**	6.0-28.5-24.9	6.0	27.4	26.1	98.94
1181**	6.4-30.2-22.7	6.5	29.8	23.1	99.79
1180**	7.5-35.7-15.3	7.9	35.7	15.8	101.28
#TOTALS - NO. SAMPLES		3	- SMPLS MISBRANDED	0	- 100.03
MFA AGRI SERVICES		MACON, MO			
1399	4.0-19.0-38.5	4.4	20.0	37.6	102.25
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 102.25
MFA AGRI SERVICES		MARTINSBURG, MO			
1309	4.8-23.0-34.6	4.8	23.0	36.2	101.77
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 101.77
MFA AGRI SERVICES		MEMPHIS, MO			
1073**	0.0-22.7-29.2	0.0	22.4	30.5	100.94
0276	0.0-24.9-28.5	0.0	23.7	31.4	100.64
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	0	- 100.78
MFA AGRI SERVICES		MEXICO, MO			
1141	7.8-20.0-34.3	7.0*	18.6	36.5	97.55
1144	8.6-11.5-11.5	8.4	11.3	11.4	98.26
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	1	- 97.81
MFA AGRI SERVICES		MOBERLY, MO			
1168	13.0-13.0-19.0	12.1	16.0	22.0	110.14
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 110.14
MFA AGRI SERVICES		MONTGOMERY CITY, MO			
1308**	4.8-22.9-32.0	5.1	24.0	32.5	103.78
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 103.78
MFA AGRI SERVICES		NEOSHO, MO			
0418	22.8- 7.6-15.2	20.8	11.2	16.0	105.26
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 105.26
MFA AGRI SERVICES		NORBORNE, MO			
1570	3.4-10.4-26.0	3.6	11.2	24.0	100.00
1578**	42.4- 0.0- 0.0	43.0	0.0	0.0	101.42
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	0	- 100.86
MFA AGRI SERVICES		ODESSA, MO			
1396	5.9-27.8-27.8	6.0	27.2	28.5	99.68
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 99.68
MFA AGRI SERVICES		OZARK, MO			
0593	12.9-19.3-25.7	12.5	14.2*	28.9	91.34*
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	1	- 91.34
MFA AGRI SERVICES		SALISBURY, MO			
1193	3.4-16.1-42.9	3.2	14.3*	45.0	97.68
1192**	4.2-19.8-35.7	3.8	17.9	38.0	97.25
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	1	- 97.46
MFA AGRI SERVICES		SEDALIA, MO			
0638	2.5-11.9-47.7	2.5	11.8	48.7	101.05
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 101.05
MFA AGRI SERVICES		SHELBYNA, MO			
1507	7.2-21.7-32.6	7.1	20.6	34.2	99.12
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 99.12

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
MFA AGRI SERVICES		SHERIDAN, MO			
1283	10.0-26.0-26.0	9.8	25.3	27.1	99.29
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 99.29
MFA AGRI SERVICES		THOMPSON, MO			
1310	4.7-22.4-35.8	5.0	23.7	34.8	102.44
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 102.44
MFA AGRI SERVICES		TIPTON, MO			
1286	9.9-25.4-27.8	9.0	24.1	30.2	97.97
1287	9.9-25.4-27.8	8.8*	23.2*	30.8	96.34*
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	1	- 97.15
MFA AGRI SERVICES		VANDALIA, MO			
0926	5.0-24.0-33.9	5.1	24.2	33.8	100.54
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 100.54
MFA AGRI SERVICES		VERSAILLES, MO			
0236**	6.5-19.2-31.9	6.8	19.8	32.2	102.52
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 102.52
MFA AGRI SERVICES		WASHINGTON, MO			
0529	9.0-23.0-31.0	8.2	21.5	33.4	97.68
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 97.68
MFA AGRI SERVICES		WENTZVILLE, MO			
0566	0.0-18.5-36.9	0.0	17.5	38.8	99.86
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 99.86
MFA AGRI SERVICES		WINDSOR, MO			
0923	6.3-30.1-25.1	6.6	29.9	25.2	100.31
0917	9.0-23.0-30.0	8.9	22.6	30.7	99.68
#TOTALS - NO. SAMPLES		2	- SMPLS MISBRANDED	0	- 100.00
MFA AGRI SERVICES		COLUMBIA, MO			
0953	0.0-18.5-37.1	0.0	19.7	36.9	102.97
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 102.97
MID MO COOP ENVIRO AG SERVICES		CONCORDIA, MO			
1398**	4.2-19.9-33.8	4.0	18.6	33.7	96.22*
1188**	5.2-24.5-28.8	5.0	23.1	30.2	97.96
1584**	5.5-25.9-25.9	5.1	24.6	28.7	99.32
0716**	14.7-14.7-20.6	13.7	14.0	22.4	97.98
1250	16.9-16.9-16.9	17.3	15.6	18.0	99.17
1619	28.0- 0.0-10.5	28.3	0.0	11.0	101.65
#TOTALS - NO. SAMPLES		6	- SMPLS MISBRANDED	1	- 98.63
MO VALLEY AGRI SERVICE		ROCK PORT, MO			
1303**	6.0-30.0-20.0	6.3	30.8	20.7	103.15
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 103.15
MONROE COUNTY CO-OP AGRI SER.		PARIS, MO			
1282	10.1-26.0-26.0	10.3	26.6	26.1	101.73
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 101.73
MONTROSE AGRI SERVICE		MONTROSE, MO			
0973**	13.9-16.6-22.2	13.9	16.2	22.7	99.64
0975	15.3- 8.6- 8.6	16.8	9.5	11.2	113.12
0976**	17.1-17.1-17.1	16.8	16.7	17.5	98.83
#TOTALS - NO. SAMPLES		3	- SMPLS MISBRANDED	0	- 102.70
MRM AG SERVICE INC		EAST PRAIRIE, MO			
0863**	7.0-28.5-19.0	7.2	27.7	20.4	100.22
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 100.22
OLD MILL GRAIN & SEED CO		HARRISONVILLE, MO			
0999	5.0-23.0-33.0	5.0	22.2	34.1	99.44
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED	0	- 99.44
PILOT GROVE COOPERATIVE ELEVATOR		PILOT GROVE, MO			
1071	0.0-32.8-17.7	0.0	33.2	18.5	101.92

BULK BLEND FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
PILOT GROVE COOPERATIVE ELEVATOR PILOT GROVE, MO					
0334	9.0-23.0-31.0	8.9	23.0	31.4	100.21
1580	10.0-25.5-27.0	9.6	23.8	28.9	97.65
1581	10.0-25.5-27.0	9.4	23.9	29.0	97.55
1006	10.3-26.4-26.4	10.1	25.6	27.7	99.30
0630	11.0-28.5-23.0	11.6	29.4	22.5	102.45
1579	13.5-23.8-23.8	13.4	23.0	25.1	99.49
0994	15.0-20.0-25.0	15.1	19.5	25.6	99.79
0993	16.3-21.3-22.3	15.6	20.6	23.6	98.46
#TOTALS - NO. SAMPLES 9 - SMPLS MISBRANDED 0 - 99.61					
PRODUCE EXCHANGE GOLDEN CITY, MO					
0416	17.8-17.8-17.8	15.4*	19.6	21.6	102.92
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 1 - 102.92					
PRODUCERS GRAIN COMPANY NEVADA, MO					
1280	10.4-26.7-25.0	9.9	25.4	27.4	98.79
1281	10.4-26.7-25.0	9.9	25.8	27.4	99.60
#TOTALS - NO. SAMPLES 2 - SMPLS MISBRANDED 0 - 99.19					
PRODUCERS GRAIN CO BRONAUGH, MO					
1110	17.7-17.7-17.7	18.3	17.1	17.3	99.55
1111	17.7-17.7-17.7	18.4	16.9	17.1	99.10
#TOTALS - NO. SAMPLES 2 - SMPLS MISBRANDED 0 - 99.32					
PRODUCERS GRAIN COMPANY-WALKER EL DORADO SPRINGS, MO					
0918	9.0-23.0-30.0	8.2	21.3	32.4	97.23
0919	9.0-23.0-30.0	8.9	23.4	29.5	100.11
#TOTALS - NO. SAMPLES 2 - SMPLS MISBRANDED 0 - 98.67					
PROFESSIONAL AG SERVICE, INC LATHROP, MO					
1016	10.0-26.0-26.0	9.6	25.1	28.3	99.69
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 99.69					
QMI FERTILIZER & GRAIN, INC PARMA, MO					
0626	7.0- 7.0-14.5	7.8	7.9	17.2	114.35
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 114.35					
QUINN FARM SUPPLY, INC MONROE CITY, MO					
1140	8.0-21.5-31.0	8.5	21.2	31.3	100.78
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 100.78					
RAY CARROLL COUNTY GRAIN GROWERS BRUNSWICK, MO					
1176	8.4-21.0-33.6	7.0*	17.8*	37.7	94.48*
1171	9.0-22.5-31.5	8.4	21.5	32.8	97.99
1172	9.0-22.5-31.5	9.0	22.6	30.5	99.15
0620	19.5-19.5-19.5	18.3	16.1*	24.0	95.18*
#TOTALS - NO. SAMPLES 4 - SMPLS MISBRANDED 2 - 96.70					
RAY-CARROLL COUNTY GRAIN GROWERS CARROLLTON, MO					
1174	8.7-21.7-32.6	8.2	20.7	33.9	98.18
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 98.18					
RAY-CARROLL COUNTY GRAIN GROWERS HARDIN, MO					
1292	8.7-21.7-32.6	7.8*	20.4	35.2	98.07
1296	8.7-21.7-32.6	8.0	20.9	34.4	98.72
#TOTALS - NO. SAMPLES 2 - SMPLS MISBRANDED 1 - 98.39					
RAY-CARROLL COUNTY GRAIN GROWERS MAYVIEW, MO					
1182	6.1-28.2-28.2	6.0	27.2	29.0	98.55
0827	16.5- 0.0-39.7	16.3	0.0	40.6	100.69
0828	16.5- 0.0-39.7	14.7*	0.0	42.4	98.76
#TOTALS - NO. SAMPLES 3 - SMPLS MISBRANDED 1 - 99.25					
RICKETT'S FARM SERVICE SHELBYNA, MO					
1297**	8.2-20.5-32.9	8.1	21.3	32.6	101.22
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 101.22					

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
J.P. ROSS COTTON CO, INC ESSEX, MO					
1079	0.0-10.0-40.0	0.0	7.6*	46.2	102.33
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 1 - 102.33					
ROYSTER-CLARK AGRIBUSINESS, INC CLARENCE, MO					
0675**	8.0-17.0-34.0	7.7	16.3	36.1	100.12
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 100.12					
SALISBURY AG CENTER SALISBURY, MO					
1428**	4.0-20.1-30.2	4.4	19.5	31.9	101.66
1427**	4.4-22.5-24.8	5.4	24.8	22.6*	105.60
1190	4.5-22.0-35.5	5.1	23.0	34.3	102.26
1191	4.5-22.0-35.5	4.5	20.2	38.3	99.10
#TOTALS - NO. SAMPLES 4 - SMPLS MISBRANDED 1 - 102.06					
SCHAFFER FERTILIZER, INC MARTINSBURG, MO					
1279	10.6-26.8-26.8	9.7	25.0	29.1	96.95*
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 1 - 96.95					
SERVICE AND SUPPLY COOPERATIVE, INC BOWLING GREEN, MO					
0927	2.0-12.0-47.0	2.5	11.0	48.7	100.93
0744	6.0-15.0-40.0	6.2	15.5	41.6	103.66
#TOTALS - NO. SAMPLES 2 - SMPLS MISBRANDED 0 - 102.35					
SERVICE AND SUPPLY COOPERATIVE, INC NEW FLORENCE, MO					
1311	4.0-21.1-35.6	4.3	20.8	37.4	102.10
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 102.10					
SERVICE AND SUPPLY COOPERATIVE, INC VANDALIA, MO					
1304	5.4-27.7-27.7	6.3	27.7	30.1	104.47
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 104.47					
SHAWNEETOWN FEED & SEED CO. JACKSON, MO					
0740	8.0-15.5-36.0	7.6	14.0	39.1	99.16
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 99.16					
SOUTHEAST COOPERATIVE SERVICE CO ADVANCE, MO					
0633	8.5-22.0-28.5	8.8	21.8	28.3	100.00
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 100.00					
SOUTHEAST COOPERATIVE SERVICE CO DEXTER, MO					
1076	2.7-11.9-11.9	5.3	19.8	20.3	171.53
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 171.53					
SOUTHEAST COOPERATIVE SERVICE CO ORAN, MO					
0621	17.0-13.0-26.0	16.1	12.8	29.6	101.63
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 101.63					
ST CHARLES COUNTY COOPERATIVE CO ST CHARLES, MO					
1341	0.0-16.2-38.8	0.0	15.0	41.0	99.72
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 99.72					
STOKES-MAYBERRY GIN CO, INC MALDEN, MO					
0682	3.0- 9.0-27.5	3.1	9.3	32.1	110.49
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 110.49					
SUR-GRO PLANT FOOD BURLINGTON JCT, MO					
1284	10.0-26.0-26.0	9.8	24.2	29.0	98.98
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 98.98					
SUR-GRO PLANT FOOD FOREST CITY, MO					
1001**	16.0-30.5- 7.5	15.7	24.0*	10.9	89.85*
#TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 1 - 89.85					
SUR-GRO PLANT FOOD KING CITY, MO					
1039	6.0-16.0-19.5	5.6	14.8	24.4	102.68
1015	10.0-26.0-26.0	7.1*	18.1*	37.2	89.39*
#TOTALS - NO. SAMPLES 2 - SMPLS MISBRANDED 1 - 94.61					

BULK BLEND FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
SUR-GRO PLANT FOOD		SHERIDAN, MO			
1394	10.0-26.0-26.0	9.9	25.4	27.6	100.20
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	100.20	
THAYER PLANT FOOD		THAYER, MO			
0413	12.5-12.5-12.5	14.4	13.6	14.2	112.32
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	112.32	
U.A.P. MIDSOUTH		COOTER, MO			
1227	0.0-11.0-45.0	0.0	13.0	43.5	103.73
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	103.73	
UAP MID SOUTH		PORTAGEVILLE, MO			
1040	6.0-16.0-38.0	6.3	16.7	39.8	104.63
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	104.63	
UAP/MIDSOUTH - BENTON		SIKESTON, MO			
0836	6.5-16.5-27.5	7.0	17.7	28.4	105.85
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	105.85	
UAP/MIDSOUTH		SIKESTON, MO			
0443**	5.0-14.0-38.0	5.9	14.1	39.6	104.74
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	104.74	
UAP MIDSOUTH		SENATH, MO			
0864	0.0-10.0-46.0	0.0	9.8	48.0	102.42
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	102.42	
UAP/RICHTER		BOWLING GREEN, MO			
1291	9.0-23.0-30.0	8.5	23.2	31.4	100.85
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	100.85	
UAP/RICHTER		KAHOKA, MO			
1515	5.0-26.0-30.0	5.2	24.7	31.4	99.13
1044**	5.0-28.0-26.0	6.3	27.4	27.5	103.15
#TOTALS - NO. SAMPLES		2 - SMPLS MISBRANDED	0 -	101.14	
UNITED COOPERATIVES INC		PLATTSBURG, MO			
1395	9.0-23.0-30.0	8.2	21.6	32.0	97.45
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	97.45	
VANDUSER GIN CO INC		VANDUSER, MO			
1226	0.0-15.0-40.0	0.0	14.5	40.7	99.57
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	99.57	
VEST FERTILIZER LIME & SEED		POLK, MO			
0333	12.2-31.3-21.1	12.1	30.7	19.7	97.41
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	97.41	
WEST CENTRAL AGRISERVICES, LLC		ADRIAN, MO			
0921	8.0-20.6-33.0	7.4	19.6	34.8	98.45
0922	8.0-20.6-33.0	7.7	20.2	33.3	98.78
0308	14.5-14.5-14.4	14.0	14.8	15.6	101.10
#TOTALS - NO. SAMPLES		3 - SMPLS MISBRANDED	0 -	99.32	
WEST CENTRAL AGRISERVICES, LLC		BUTLER, MO			
0915**	9.6-16.4-16.4	9.8	17.4	16.6	103.80
0916**	9.6-16.4-16.4	9.5	16.9	17.0	102.05
#TOTALS - NO. SAMPLES		2 - SMPLS MISBRANDED	0 -	102.92	
WEST CENTRAL AGRISERVICES, LLC		HARRISONVILLE, MO			
1108	6.9-17.1-34.4	7.4	16.5	35.1	100.61
1026	8.9-22.7-30.3	8.7	23.0	30.7	100.64
#TOTALS - NO. SAMPLES		2 - SMPLS MISBRANDED	0 -	100.62	
WEST CENTRAL AGRISERVICES, LLC		HOLDEN, MO			
0924	5.9-28.2-28.2	6.1	27.8	28.9	100.31
0925	5.9-28.2-28.2	6.6	30.2	25.7*	103.01
1186	5.9-28.2-28.2	6.1	27.1	28.8	98.76
#TOTALS - NO. SAMPLES		3 - SMPLS MISBRANDED	1 -	100.69	

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	
WEST CENTRAL AGRI SERVICES LLC		RICH HILL, MO			
1027	8.9-22.7-30.3	8.6	22.7	32.1	101.28
1028	8.9-22.7-30.3	8.6	21.5	31.7	98.29
1010	10.1-26.0-26.0	9.9	26.3	26.7	100.92
1011	10.1-26.0-26.0	9.9	25.9	27.2	100.61
1509	10.1-26.0-26.0	9.8	25.2	27.6	99.39
#TOTALS - NO. SAMPLES		5 - SMPLS MISBRANDED	0 -	100.10	
WEST CENTRAL AGRI SERVICES LLC		URICH, MO			
1038	6.0-17.0-17.0	6.7	17.8	19.0	107.94
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	107.94	
WILLIAMS FERTILIZER SERVICE		OREGON, MO			
1397	5.0-28.0-28.0	5.8	27.7	29.7	102.87
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	102.87	
WORTHINGTON AG SERVICE, INC		WORTHINGTON, MO			
1177	8.0-21.0-33.5	9.0	22.8	31.1*	103.50
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	1 -	103.50	
YOUNG'S PRODUCE, INC		ALTON, MO			
0417	22.0-13.0-12.5	22.6	12.0	12.7	99.27
#TOTALS - NO. SAMPLES		1 - SMPLS MISBRANDED	0 -	99.27	

* Subject to penalty (either 10% or two units deficient from guarantee in nutrient indicated, or 3% deficient in total value).

** Sample analyzed for guaranteed secondary or micronutrients, the results are tabulated beginning page 37.

Totals from July 1, 2001.

LIQUID FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

AG DISTRIBUTORS PORTAGEVILLE, MO
 0319 32.0- 0.0- 0.0 32.6 0.0 0.0 101.88
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 101.88

AGRISERVICES OF BRUNSWICK, LLC BRUNSWICK, MO
 1572 3.0- 9.0-27.0 3.1 9.0 25.2 96.86*
 1152 4.0-11.9- 9.5 3.9 11.9 9.5 99.52
 1153 4.0-11.9- 9.5 4.2 12.7 9.4 104.60
 1145 10.0-30.0- 0.0 9.9 30.6 0.0 101.25
 1382 10.0-30.0- 0.0 9.1 28.9 0.0 95.00*
 #TOTALS - NO. SAMPLES 5 - SMPLS MISBRANDED 2 - 99.01

ANNADA ELEVATOR CO, INC ANNADA, MO
 0903** 4.1-12.3-24.6 4.0 12.3 24.7 99.83
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 99.83

BARTLETT & COMPANY WAVERLY, MO
 1386** 2.7- 4.5-25.1 1.6* 3.4* 7.1* 43.29*
 1380** 3.3- 4.7-18.8 3.4 5.1 20.6 108.05
 1571 3.0- 9.0-27.0 3.0 9.0 27.9 101.76
 1378** 4.1- 9.9-16.6 3.8 9.3 17.0 96.86*
 1379** 4.1- 9.9-16.6 3.9 9.6 16.3 97.09
 1568** 5.2-12.0-12.0 4.8 11.7 13.0 99.14
 1569** 5.2-12.0-12.0 5.1 11.9 11.5 98.06
 1385** 5.4-13.0- 7.4 4.8* 12.6 6.0* 92.31*
 0905 10.0-30.0- 0.0 10.5 30.7 0.0 103.00
 1574 28.0- 0.0- 0.0 28.0 0.0 0.0 100.00
 #TOTALS - NO. SAMPLES 10 - SMPLS MISBRANDED 3 - 95.13

BIOKYOWA/KYOWA FOODS CAPE GIRARDEAU, MO
 1154** 4.0- 0.0- 0.0 5.7 0.0 0.0 142.50
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 142.50

CENTRAL MISSOURI AGRISERVICE LLC BLACKBURN, MO
 1149** 4.8-10.9-12.5 5.0 10.9 12.9 101.82
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 101.82

CUNNINGHAM FERTILIZER MEMPHIS, MO
 1499 4.0-12.0-24.0 4.4 12.8 23.4 103.21
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 103.21

GAGE'S FERTILIZER & GRAIN INC STANBERRY, MO
 1381 3.0- 9.0-15.0 3.4 9.4 14.4 102.56
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 102.56

GRANITE CITY TERMINAL LLC GRANITE CITY, IL
 1573 28.0- 0.0- 0.0 28.2 0.0 0.0 100.71
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 100.71

HODGES FERTILIZER PERRY, MO
 0984 3.9-13.1-26.2 4.1 13.9 25.9 102.82
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 102.82

HYDRO MERSCHMANN LLC (BRLNGTN RVR) WEST POINT, IA
 0133 2.0- 6.0-12.0 4.7 6.8 14.6 134.29
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 134.29

LITER FERTILIZER & CHEMICAL INC CENTER, MO
 0985 10.0-14.5-15.5 10.9 14.9 16.4 105.43
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 105.43

GABE LOGSDON & SON INC WAYLAND, MO
 0986 28.0- 0.0- 0.0 28.6 0.0 0.0 102.14
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 102.14

MFA AGRI SERVICES CARYTOWN, MO
 0904 13.0-13.0-13.0 12.7 12.4 13.6 98.15
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 98.15

MFA LIQUID PLANT - CENTRALIA CENTRALIA, MO
 1262 10.0-30.0- 0.0 8.8* 28.7 0.0 93.75*

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

MFA LIQUID PLANT - CENTRALIA CENTRALIA, MO
 1502 10.0-30.0- 0.0 9.7 27.2* 0.0 92.25*
 #TOTALS - NO. SAMPLES 2 - SMPLS MISBRANDED 2 - 93.00

MFA AGRI SERVICES CHAFFEE, MO
 0604** 3.4- 9.4-18.0 3.1 9.1 19.4 100.46
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 100.46

MFA AGRI SERVICES LEVASY, MO
 1384** 5.6-14.3- 4.8 6.0 13.8 4.4 98.65
 1377 5.4-16.4-16.4 5.7 16.6 15.3 99.83
 1383** 7.1-16.6- 8.9 7.0 17.5 8.0* 101.24
 #TOTALS - NO. SAMPLES 3 - SMPLS MISBRANDED 1 - 100.00

MFA AGRI SERVICES NORBORNE, MO
 1146 13.2-11.0- 8.8 12.1 11.1 10.2 98.95
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 98.95

MFA PLANT FOODS COLUMBIA, MO
 0107 28.0- 0.0- 0.0 28.7 0.0 0.0 102.50
 0106 32.0- 0.0- 0.0 31.8 0.0 0.0 99.38
 1412 32.0- 0.0- 0.0 32.3 0.0 0.0 100.94
 #TOTALS - NO. SAMPLES 3 - SMPLS MISBRANDED 0 - 100.86

MIDWEST AGRICHEMICO, INC CAPE GIRARDEAU, MO
 0134 28.0- 0.0- 0.0 28.3 0.0 0.0 101.07
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 101.07

MORGAN FERTILIZER, INC WYACONDA, MO
 1500 2.0- 6.0-12.0 2.0 5.9 11.9 98.93
 0605 8.3-12.5-16.6 8.4 12.7 17.1 101.89
 #TOTALS - NO. SAMPLES 2 - SMPLS MISBRANDED 0 - 100.92

OLD MONROE ELEVATOR & SUPPLY CO OLD MONROE, MO
 1261 3.4- 8.4-10.0 2.4* 8.2 9.2 90.48*
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 1 - 90.48

RICKETTS FARM SERVICE INC SALISBURY, MO
 1150** 4.7-11.0-19.5 5.3 10.6 18.9 99.61
 1147** 5.5-12.3-16.4 5.7 12.1 15.6 98.46
 1148** 5.4-13.1-17.5 5.8 12.6 17.4 99.45
 0606 28.0- 0.0- 0.0 28.3 0.0 0.0 101.07
 0607 28.0- 0.0- 0.0 28.1 0.0 0.0 100.36
 0608 28.0- 0.0- 0.0 28.4 0.0 0.0 101.43
 0609 28.0- 0.0- 0.0 28.4 0.0 0.0 101.43
 #TOTALS - NO. SAMPLES 7 - SMPLS MISBRANDED 0 - 100.28

SDS COMPANY OMAHA, NE
 1376 10.0-34.0- 0.0 14.4 22.2* 0.0 83.18*
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 1 - 83.18

SERVICE AND SUPPLY COOPERATIVE, INC BELLFLOWER, MO
 1260 3.0-10.2-12.8 3.5 11.0 13.6 108.67
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 108.67

TERRA NITROGEN CORP SIOUX CITY, IA
 0906 28.0- 0.0- 0.0 27.8 0.0 0.0 99.29
 0135 32.0- 0.0- 0.0 32.0 0.0 0.0 100.00
 0514 32.0- 0.0- 0.0 32.8 0.0 0.0 102.50
 #TOTALS - NO. SAMPLES 3 - SMPLS MISBRANDED 0 - 100.65

UAP FERTILIZER ST JOSEPH, MO
 1575 32.0- 0.0- 0.0 32.0 0.0 0.0 100.00
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 100.00

VEHIGE ENTERPRISES, INC FORISTELL, MO
 1151 3.0- 9.0-22.0 3.3 9.0 21.3 99.78
 #TOTALS - NO. SAMPLES 1 - SMPLS MISBRANDED 0 - 99.78

YIELD-PLUS, INC CAPE GIRARDEAU, MO
 0433 3.0-18.0-18.0 3.0 18.3 18.1 101.17

LIQUID FERTILIZER

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

YIELD-PLUS, INC		CAPE GIRARDEAU, MO			
1263	3.0-18.0-18.0	3.2	18.0	18.5	101.50
1264	10.0-20.0-10.0	10.1	19.2	10.2	98.29
#TOTALS - NO. SAMPLES		3	- SMPLS MISBRANDED		0 - 100.21

YOCUM FERTILIZER, INC		FAIRFAX, MO			
1501	5.5-12.0- 9.0	5.9	14.2	9.4	112.73
#TOTALS - NO. SAMPLES		1	- SMPLS MISBRANDED		0 - 112.73

YOCUM SERVICE, INC		MOUND CITY, MO			
0225	28.0- 0.0- 0.0	28.2	0.0	0.0	100.71
0226	28.0- 0.0- 0.0	28.0	0.0	0.0	100.00
0227	28.0- 0.0- 0.0	28.0	0.0	0.0	100.00
0228	32.0- 0.0- 0.0	31.9	0.0	0.0	99.69
#TOTALS - NO. SAMPLES		4	- SMPLS MISBRANDED		0 - 100.08

MANUFACTURER		% FOUND			% Relative Value
No.	Grade	Nitrogen	P ₂ O ₅	Potash	

* Subject to penalty (either 10% or two units deficient from guarantee in nutrient indicated, or 3% deficient in total value).

** Sample analyzed for guaranteed secondary or micronutrients, the results are tabulated beginning page 21.

Totals from July 1, 2001.

SECONDARY AND MICRONUTRIENTS IN FERTILIZER

Lab No. 01F#	Grade	% Ca		% Mg		% S		% B		% Cl		% Cu		% Fe		% Mn		% Zn		
		G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	
A & L AG CENTER, SEDALIA, MO																				
01F-1300	7.0-25.0-25.0	....	....	....	....	2.0	3.2	....	....	....	....	....	....	....	....	....	....	....	.50	.85
AG COOP SERVICES INC., LA MONTE, MO																				
01F-1425	8.2-21.1-31.7	....	....	....	....	2.6	3.2	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1426	8.2-21.1-31.7	....	....	....	....	2.6	3.2	....	....	....	....	....	....	....	....	....	....	....	....	....
AGRISERVICES OF BRUNSWICK, L.L.C. WEST, BRUNSWICK, MO																				
01F-1293	21.0-0.0-0.0	....	....	....	....	24.0	24.2	....	....	....	....	....	....	....	....	....	....	....	....	....
AGRILIANCE, KANSAS CITY, MO																				
01F-0149	13.0-13.0-13.0	....	....	....	....	12.0	12.2	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-0541	0.0-0.0-0.0	....	....	....	....	....	....	15.0	15.0	....	....	....	....	....	....	....	....	....	....	....
01F-0542	0.0-0.0-0.0	....	....	....	....	90.0	94.8	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-0741	13.0-13.0-13.0	....	....	....	....	12.0	12.5	....	....	....	....	....	....	....	....	....	....	....	....	....
ANNADA ELEVATOR CO. INC, MO																				
01F-0903	4.1-12.3-24.6	....	....	....	....	1.2	0.9*	....	....	....	....	....	....	....	....	....	....	....	.49	.53
B & B COTTON CO., CAMPBELL, MO																				
01F-0592	12.0-12.0-27.0	....	....	....	....	4.0	5.4	....	....	....	....	....	....	....	....	....	....	....	....	....
BARTLETT & COMPANY, HIGGINSVILLE, MO																				
01F-1422	9.9-20.9-20.9	....	....	....	....	6.3	7.1	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1423	9.9-20.9-20.9	....	....	....	....	6.3	6.7	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1431	15.2-30.2-0.0	....	....	....	....	10.1	10.3	....	....	....	....	....	....	....	....	....	....	....	....	....
BARTLETT & COMPANY, WAVERLY, MO																				
01F-1378	4.1-9.9-16.6	....	....	....	....	1.7	1.9	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1379	4.1-9.9-16.6	....	....	....	....	1.7	2.0	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1380	3.3-4.7-18.8	....	....	....	....	3.8	3.6	.19	.18	....	....	....	....	....	....	....	....	....	....	....
01F-1385	5.4-13.0-7.4	....	....	....	....	2.2	1.8*	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1386	2.7-4.5-25.1	....	....	....	....	2.7	1.1*	.18	.07*	....	....	....	....	....	....	....	....	....	....	....
01F-1568	5.2-12.0-12.0	....	....	....	....	2.1	2.2	.12	.12	....	....	....	....	....	....	....	....	....	.28	.26
01F-1569	5.2-12.0-12.0	....	....	....	....	2.1	2.2	.12	.12	....	....	....	....	....	....	....	....	....	.28	.34
BIOKYOWA/KYOWA FOODS, CAPE GIRARDEAU, MO																				
01F-1154	4.0-0.0-0.0	....	....	....	....	4.0	5.2	....	....	....	....	....	....	....	....	....	....	....	....	....
CENTRAL MISSOURI AGRISERVICE LLC, BLACKBURN, MO																				
01F-1149	4.8-10.9-12.5	....	....	....	....	2.6	2.7	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1187	5.5-27.0-27.0	....	....	....	....	2.5	3.8	....	....	....	....	....	....	....	....	....	....	....	.50	.68
01F-1312	4.0-22.0-32.0	....	....	....	....	4.0	5.4	....	....	....	....	....	....	....	....	....	....	....	....	....
CENTRAL MISSOURI AGRISERVICE LLC., MALTA BEND, MO																				
01F-1170	9.6-24.6-24.6	....	....	....	....	6.0	6.8	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1278	12.0-31.0-13.0	....	....	....	....	9.9	10.6	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1510	9.0-24.0-24.0	....	....	....	....	6.1	6.8	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-1511	9.0-24.0-24.0	....	....	....	....	6.1	6.9	....	....	....	....	....	....	....	....	....	....	....	....	....
CENTRAL MISSOURI AGRISERVICE LLC, MARSHALL, MO																				
01F-1298	7.7-19.7-29.6	....	....	....	....	6.6	4.8*	....	....	....	....	....	....	....	....	....	....	....	.60	.83
01F-1299	7.7-19.7-29.6	....	....	....	....	6.6	7.6	....	....	....	....	....	....	....	....	....	....	....	.60	.93
01F-1313	3.9-18.8-34.4	....	....	....	....	6.7	7.8	....	....	....	....	....	....	....	....	....	....	....	.20	.56
01F-1314	3.9-18.8-34.4	....	....	....	....	6.7	9.8	....	....	....	....	....	....	....	....	....	....	....	.20	.59
01F-1424	8.8-22.4-27.3	....	....	....	....	4.0	5.3	....	....	....	....	....	....	....	....	....	....	....	.47	1.2
DEBRUCE FERTILIZER, KANSAS CITY, MO																				
01F-1567	20.5-0.0-0.0	....	....	....	....	24.0	23.4	....	....	....	....	....	....	....	....	....	....	....	....	....
DEERFIELD GRAIN, DEERFIELD, MO																				
01F-1008	9.8-25.0-25.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.7	1.2
01F-1009	9.8-25.0-25.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.7	1.2

Deficient in the constituent indicated. The Missouri Fertilizer Law does not authorize assessment of penalty for deficiencies in additional plant nutrients.

SECONDARY AND MICRONUTRIENTS IN FERTILIZER

Lab No. 01F#	Grade	% Ca		% Mg		% S		% B		% Cl		% Cu		% Fe		% Mn		% Zn	
		G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F
DELTA GROWERS ASSN., EAST PRAIRIE, CHARLESTON, MO																			
01F-0335	8.9-22.6-29.3	....	....	....	....	1.9	3.2	....	....	....	....	....	....	....	....	....	....	....	....
01F-1342	0.0-13.6-35.7	....	....	....	....	5.0	6.6	.60	.59	....	....	....	....	....	....	....	....	....	....
GLASGOW MFA, GLASGOW, MO																			
01F-1043	5.0-25.5-25.5	....	....	....	....	4.0	5.4	....	....	....	....	....	....	....	....	....	....	....	.40 .62
01F-1045	4.5-22.0-28.0	....	....	....	....	4.0	5.3	....	....	....	....	....	....	....	....	....	....	....	.70 1.2
01F-1046	4.0-21.0-29.0	....	....	....	....	5.0	6.9	....	....	....	....	....	....	....	....	....	....	....	.70 1.0
01F-1048	4.0-21.0-29.0	....	....	....	....	5.0	6.7	....	....	....	....	....	....	....	....	....	....	....	.70 1.0
01F-1305	5.0-24.5-24.5	....	....	....	....	6.0	8.1	....	....	....	....	....	....	....	....	....	....	....	.90 1.2
01F-1306	5.0-25.5-25.5	....	....	....	....	4.5	6.2	....	....	....	....	....	....	....	....	....	....	....	....
01F-1307	5.0-25.5-25.5	....	....	....	....	4.5	6.1	....	....	....	....	....	....	....	....	....	....	....	....
01F-1516	4.5-22.0-29.0	....	....	....	....	7.0	8.6	....	....	....	....	....	....	....	....	....	....	....	....
GUIER CHEMICAL & FERTILIZER, HOUSTONIA, MO																			
01F-1285	9.9-25.3-25.2	....	....	....	....	3.7	4.8	....	....	....	....	....	....	....	....	....	....	....	....
HEIMSOOTH AGRI SERVICE INC, CORDER, MO																			
01F-1041	5.4-25.5-28.7	....	....	....	....	2.9	4.1	....	....	....	....	....	....	....	....	....	....	....	....
KELLY LIME & ROCK CO. INC., KIRKSVILLE, MO																			
01F-0726	0.0-0.0-0.0	30.0	34.7	1.0	1.4	....	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-0955	0.0-0.0-22.0	14.0	15.9	....	....	7.5	7.1	....	....	....	....	....	....	....	....	....	....	....	....
LANGE-STEGMANN COMPANY, ST. LOUIS, MO																			
01F-0498	21.0-0.0-0.0	....	....	....	....	24.0	24.3	....	....	....	....	....	....	....	....	....	....	....	....
MADISON COUNTY FARM SUPPLY INC., FREDERICKTOWN, MO																			
01F-0524	12.0-12.0-12.0	12.0	11.8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-0628	12.0-12.0-12.0	12.0	12.2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
MAGIC GREEN CORPORATION, SILEX, MO																			
01F-1459	0.0-0.0-24.0	15.0	13.7*	....	....	5.0	11.2	....	....	....	....	....	....	....	....	....	....	....	....
MFA AGRI SERVICES, BOONVILLE, MO																			
01F-0634	7.9-20.4-27.5	....	....	....	....	4.4	5.8	....	....	....	....	....	....	....	....	....	....	....	2.2 2.6
01F-1012	10.0-25.5-22.2	....	....	....	....	4.5	5.9	....	....	....	....	....	....	....	....	....	....	....	1.1 1.4
01F-1037	6.3-16.1-35.0	....	....	....	....	5.2	5.6	....	....	....	....	....	....	....	....	....	....	....	.89 1.3
MFA AGRI SERVICES, BURLINGTON JCT, MO																			
01F-1315	2.4-11.6-41.8	....	....	....	....	4.6	4.6	.23	.24	....	....	....	....	....	....	....	....	....	.47 .50
MFA AGRI SERVICES, CHAFFEE, MO																			
01F-0604	3.4-9.4-18.0	....	....	....	....	0.5	0.8	....	....	....	....	....	....	....	....	....	....	....	....
MFA AGRI SERVICES-WEST, HALE, MO																			
01F-0743	7.5-20.0-29.5	....	....	....	....	5.0	5.9	....	....	....	....	....	....	....	....	....	....	....	.56 .66
MFA AGRI SERVICES, HIGGINSVILLE, MO																			
01F-1017	9.7-20.6-20.6	....	....	....	....	6.1	7.6	....	....	....	....	....	....	....	....	....	....	....	....
01F-1034	7.2-24.6-24.6	....	....	....	....	2.5	4.2	....	....	....	....	....	....	....	....	....	....	....	.52 .75
01F-1035	7.2-24.6-24.6	....	....	....	....	2.5	4.1	....	....	....	....	....	....	....	....	....	....	....	.52 .93
01F-1393	11.6-22.5-22.4	....	....	....	....	3.2	4.1	....	....	....	....	....	....	....	....	....	....	....	....
MFA AGRI SERVICES, KIRKSVILLE, MO																			
01F-1175	8.5-22.0-30.0	....	....	....	....	0.7	1.3	.24	.29	....	....	....	....	....	....	....	....	....	....
MFA AGRI SERVICES, LEVASY, MO																			
01F-1383	7.1-16.6-8.9	....	....	....	....	1.7	1.8	....	....	....	....	....	....	....	....	....	....	....	.89 .95
01F-1384	5.6-14.3-4.8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.96 1.1
MFA AGRI SERVICES, LEXINGTON, MO																			
01F-1180	7.5-35.7-15.3	....	....	....	....	2.5	3.6	....	....	....	....	....	....	....	....	....	....	....	1.0 .87*
01F-1181	6.4-30.2-22.7	....	....	....	....	1.9	3.4	....	....	....	....	....	....	....	....	....	....	....	.77 .75
01F-1185	6.0-28.5-24.9	....	....	....	....	2.1	3.6	....	....	....	....	....	....	....	....	....	....	....	.72 .81
MFA AGRI SERVICES, MEMPHIS, MO																			
01F-1073	0.0-22.7-29.2	....	....	....	....	3.2	3.8	....	....	....	....	....	....	....	....	....	....	....	....

Deficient in the constituent indicated. The Missouri Fertilizer Law does not authorize assessment of penalty for deficiencies in additional plant nutrients.

SECONDARY AND MICRONUTRIENTS IN FERTILIZER

Lab No. 01F#	Grade	% Ca		% Mg		% S		% B		% Cl		% Cu		% Fe		% Mn		% Zn		
		G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	
MFA AGRI SERVICES, MONTGOMERY CITY, MO																				
01F-1308	4.8-22.9-32.0	....	....	....	....	1.8	2.5	.08	.09	....	....	.05	.10	.18	.73	.28	.40	.28	.33
MFA AGRI SERVICES, NORBORNE, MO																				
01F-1578	42.4-0.0-0.0	....	....	....	....	5.7	5.6	....	....	....	....	....	....	....	....	....	....	.58	.19*
MFA AGRI SERVICES, SALISBURY, MO																				
01F-1192	4.2-19.8-35.7	....	....	....	....	3.9	5.3	....	....	....	....	....	....	....	....	....	....	....	....
MFA AGRI SERVICES, VERSAILLES, MO																				
01F-0236	6.5-19.2-31.9	....	....	....	....	2.6	3.1	....	....	....	....	....	....	....	....	....	....	....	....
MFA PLANT FOODS, COLUMBIA, MO																				
01F-0278	0.0-0.0-50.0	....	....	....	....	18.0	18.5	....	....	....	....	....	....	....	....	....	....	....	....
01F-0602	21.0-0.0-0.0	....	....	....	....	24.0	24.3	....	....	....	....	....	....	....	....	....	....	....	....
01F-0867	0.0-0.0-0.0	....	....	....	....	90.0	94.3	....	....	....	....	....	....	....	....	....	....	....	....
MFA PLANT FOODS, HAYTI, MO																				
01F-0317	21.0-0.0-0.0	....	....	....	....	24.0	24.2	....	....	....	....	....	....	....	....	....	....	....	....
01F-0725	21.0-0.0-0.0	....	....	....	....	24.0	24.4	....	....	....	....	....	....	....	....	....	....	....	....
01F-0866	21.0-0.0-0.0	....	....	....	....	24.0	24.4	....	....	....	....	....	....	....	....	....	....	....	....
MID MO COOP ENVIRO AG SERVICES, CONCORDIA, MO																				
01F-0716	14.7-14.7-20.6	....	....	....	....	2.9	4.3	....	....	....	....	....	....	....	....	....	....	....	....
01F-1188	5.2-24.5-28.8	....	....	....	....	4.3	6.2	....	....	....	....	....	....	....	....	....	....	....	....
01F-1398	4.2-19.9-33.8	....	....	....	....	3.1	6.1	....	....	....	....	....	....	....	....	....	....	.80	.93
01F-1584	5.5-25.9-25.9	....	....	....	....	5.1	6.3	....	....	....	....	....	....	....	....	....	....	.52	.60
MIDWEST AGRI-CHEMICO, INC., CAPE GIRARDEAU, MO																				
01F-0318	21.0-0.0-0.0	....	....	....	....	24.0	24.0	....	....	....	....	....	....	....	....	....	....	....	....
01F-0543	20.5-0.0-0.0	....	....	....	....	23.5	23.3	....	....	....	....	....	....	....	....	....	....	....	....
01F-0603	21.0-0.0-0.0	....	....	....	....	24.0	24.3	....	....	....	....	....	....	....	....	....	....	....	....
01F-1294	20.5-0.0-0.0	....	....	....	....	23.5	23.5	....	....	....	....	....	....	....	....	....	....	....	....
MIRACLE-GRO LAWN PRODUCTS, INC., MARYSVILLE, OH																				
01F-0371	27.0-3.0-6.0	....	....	....	....	3.0	3.4	....	....	....	....	....	....	....	....	....	....	....	....
01F-0474	15.0-30.0-15.0	....	....	....	....	....	....	.02	.02	....	....	.07	.09	.15	.21	.05	.06	.06	.07
MO VALLEY AGRI SERVICE, ROCK PORT, MO																				
01F-1303	6.0-30.0-20.0	....	....	....	....	4.8	4.9	....	....	....	....	....	....	....	....	....	....	1.4	1.6
MONTROSE AGRI SERVICE, MONTROSE, MO																				
01F-0973	13.9-16.6-22.2	....	....	....	....	4.1	5.2	....	....	....	....	....	....	....	....	....	....	....	....
01F-0976	17.1-17.1-17.1	....	....	....	....	2.7	4.4	....	....	....	....	....	....	....	....	....	....	....	....
MRM AG SERVICE INC., EAST PRAIRIE, MO																				
01F-0863	7.0-28.5-19.0	....	....	....	....	4.6	6.2	....	....	....	....	....	....	....	....	....	....	....	....
OAKLEY MISSOURI INC., CARUTHERSVILLE, MO																				
01F-1138	21.0-0.0-0.0	....	....	....	....	24.0	24.5	....	....	....	....	....	....	....	....	....	....	....	....
OLD MILL GRAIN & SEED CO., HARRISONVILLE, MO																				
01F-0997	8.9-20.7-26.6	....	....	....	....	2.9	3.5	....	....	....	....	....	....	....	....	....	....	....	....
PURSELL INDUSTRIES, INC., BIRMINGHAM, AL																				
01F-0373	18.0-24.0-10.0	....	....	....	....	....	....	.020	.005*	....	....	.050	.003*	.10	.37	.050	.015*	.050	.013*
01F-0670	31.0-2.0-4.0	....	....	....	....	....	....	....	....	....	....	....	....	2.0	1.4*	....	....	....	....
PURSELL INDUSTRIES, INC., BIRMINGHAM, AL																				
01F-0671	22.0-3.0-14.0	....	....	....	....	1.4	1.9	....	....	....	....	....	....	....	....	....	....	....	....
01F-0674	12.0-12.0-12.0	....	....	....	....	....	....	.020	.017	....	....	.05	.03*	.10	.56	....	....	.05	.06
RICKETTS FARM SERVICE INC., SALISBURY, MO																				
01F-1147	5.5-12.3-16.4	....	....	....	....	3.0	3.4	....	....	....	....	....	....	....	....	....	....	....	....
01F-1148	5.4-13.1-17.5	....	....	....	....	2.1	2.6	....	....	....	....	....	....	....	....	....	....	....	....
01F-1150	4.7-11.0-19.5	....	....	....	....	2.4	3.0	....	....	....	....	....	....	....	....	....	....	....	....
RICKETT'S FARM SERVICE, SHELBINA, MO																				
01F-1297	8.2-20.5-32.9	0.70	1.04

Deficient in the constituent indicated. The Missouri Fertilizer Law does not authorize assessment of penalty for deficiencies in additional plant nutrients.

SECONDARY AND MICRONUTRIENTS IN FERTILIZER

Lab No. 01 F#	Grade	% Ca		% Mg		% S		% B		% Cl		% Cu		% Fe		% Mn		% Zn		
		G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	
ROYSTER-CLARK AGRIBUSINESS, INC., CLARENCE, MO																				
01F-0675	8.0-17.0-34.0	....	....	....	....	1.7	2.7	....	....	....	....	....	....	....	....	....	....	....	.19	.20
ROYSTER-CLARK AGRIBUSINESS, INC., COLLINSVILLE, IL																				
01F-0237	21.0-0.0-0.0	....	....	....	....	24.0	24.2	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-0673	18.0-8.0-0.0	....	....	....	....	18.0	18.2	....	....	....	....	....	....	....	....	....	....	....	2.0	1.9
01F-0772	18.0-8.0-0.0	....	....	....	....	18.0	19.6	....	....	....	....	....	....	....	....	....	....	....	2.0	2.1
SALISBURY AG CENTER, SALISBURY, MO																				
01F-1427	4.4-22.5-24.8	....	....	....	....	12.0	13.3	.50	.29*	....	....	....	....	....	....	....	....	....	....	....
01F-1428	4.0-20.1-30.2	....	....	....	....	8.5	9.6	.40	.12*	....	....	....	....	....	....	....	....	....	....	....
SCHULTZ COMPANY, BRIDGETON, MO																				
01F-0370	30.0-3.0-4.0	....	....	....	....	5.0	8.4	....	....	....	....	....	....	2.0	1.9	....	....	....	....	....
J.R. SIMPLOT CO., BOISE, ID																				
01F-1220	32.0-5.0-7.0	....	....	....	....	....	....	....	....	....	....	.05	.07	1.0	1.7	.13	.24	.05	.26	....
01F-1221	14.0-24.0-12.0	....	....	....	....	5.2	7.2	....	....	....	....	....	....	....	....	....	....	....	....	....
SUR-GRO PLANT FOOD, FOREST CITY, MO																				
01F-1001	16.0-30.5-7.5	....	....	....	....	5.1	7.8	....	....	....	....	....	....	....	....	....	....	....	....	....
TETRA MICRONUTRIENTS, HOUSTON, TX																				
01F-0540	0.0-0.0-0.0	....	....	....	....	17.5	16.3*	....	....	....	....	....	....	....	....	....	....	....	35.5	36.0
THE SCOTTS COMPANY, MARYSVILLE, OH																				
01F-0374	16.0-25.0-12.0	....	....	....	....	3.0	5.3	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-0473	18.0-22.0-8.0	....	....	....	....	2.8	4.2	....	....	....	....	....	....	....	....	....	....	....	....	....
UAP/MIDSOUTH, SIKESTON, MO																				
01F-0443	5.0-14.0-38.0	....	....	....	....	3.0	4.2	....	....	....	....	....	....	....	....	....	....	....	....	....
UAP/RICHTER, KAHOKA, MO																				
01F-1044	5.0-28.0-26.0	....	....	....	....	9.0	2.7*	....	....	....	....	....	....	....	....	....	....	....	....	....
VAN DIEST SUPPLY COMPANY, WEBSTER CITY, IA																				
01F-0105	0.0-0.0-0.0	....	....	....	....	90.0	93.1	....	....	....	....	....	....	....	....	....	....	....	....	....
WEST CENTRAL AGRISERVICES, LLC., BUTLER, MO																				
01F-0915	9.6-16.4-16.4	....	....	....	....	2.7	3.4	....	....	....	....	....	....	....	....	....	....	....	....	....
01F-0916	9.6-16.4-16.4	....	....	....	....	2.7	3.6	....	....	....	....	....	....	....	....	....	....	....	....	....

Deficient in the constituent indicated. The Missouri Fertilizer Law does not authorize assessment of penalty for deficiencies in additional plant nutrients.

YIELD GOAL HAS LIMITED ABILITY TO PREDICT NITROGEN NEED IN CORN.

John A. Lory and Peter Scharf
Department of Agronomy, University of Missouri

Nitrogen fertilizer needs of corn can vary widely, both among fields (Schmitt and Randall, 1994; Bundy and Andraski, 1995, Scharf and Lory, 2001) and within fields (Malzer et al., 1996; Blackmer and White, 1998). This variation in corn N response has been attributed to differences in soil N supply, corn nitrogen use efficiency and crop N need (Meisinger, 1984). For example, high inorganic N concentration in the soil profile at the start of the growing season can reduce fertilizer N need in low-rainfall regions (Olson, 1984) and humid regions of the U.S. (Schmitt and Randall, 1994; Blackmer et al., 1989). Legumes, such as alfalfa, preceding corn in a crop rotation can also reduce fertilizer N need (Shrader et al., 1966; Lory et al., 1995).

The accuracy of corn N fertilizer recommendations has important water quality implications. Fertilizer N application in excess of crop need dramatically increases residual N in the soil profile at the end of the growing season (Olsen et al, 1970; Schuman et al., 1975; Andraski et al, 2000). Excess residual nitrate in the soil profile in the fall is likely to move into ground or surface waters in humid regions of the U.S. (Olsen et al., 1970; Schuman et al., 1975; Andraski et al., 2000). Accurate fertilizer N recommendations can reduce residual N in the soil profile,

Under-application of N fertilizer N is costly to the corn grower (Black, 1993). Investment in fertilizer on a field that needs N is returned many times over in the value of the increased grain yield. Fertilizer recommendations must balance the risk of over application to our water resources with the risk of under application to the profitability of the farmer.

Yield goal is a component of many U.S. corn grain fertilizer N recommendations with most follow the general form:

$$N_f = 1.2 \times YG - N_s \quad [1]$$

where N_f is the fertilizer requirement for a selected yield goal, N_s is the quantity of N supplied by the soil and YG is the expected grain yield in bu/ac. States following this general approach include Illinois (Hoeft and Peck, 2000, Minnesota (Schmitt et al, 1998), Missouri, Nebraska (Hergert et al., 1995), North Dakota (Dahnke et al., 1992), Pennsylvania (Beagle and Wolf, undated), South Dakota (Gerwig and Gelderman, 1996). Indiana, Michigan and Ohio follow the same approach but uses the equation $1.36 \times YG - N_s - 27$ (Vitosh et al., 1995). Yield goal-based N recommendation methods also have been incorporated into many regulatory and technical standards (NRCS, 1999; USEPA, 2001).

Methods and Materials

To test the utility of yield goal to predict corn N need we used data from 197 fertilizer N response experiments in Illinois (n=54), Minnesota (n=54), Missouri (n=32) and Pennsylvania (n=57). These sites represented a wide range of management systems, soil types and climate conditions within the humid region of the US. Tillage systems included no till, moldboard plow and chisel plow. Previous crops included corn (n=110), soybean (n=63), small grain (n=15), and alfalfa (n=9); 38 locations had a recent application of animal manure. Further details of the experiment locations and the management of the fertilizer N response experiments can be found in Brown (1996), Schmitt and Randall (1994), Scharf and Lory (2001), Scharf and Lory (*in press*) and Fox and Piekielek (1995).

We obtained an estimate of control grain yield (no fertilizer N applied), the economic optimum fertilizer N rate and the yield at the economic for each experimental site-year. Typically, the quadratic plateau model had been used by the authors to model fertilizer N response at most sites responsive to applied N. For the Missouri and Pennsylvania data we had access to the regression coefficients and calculated economic optimum fertilizer N rate and the associated optimum yield based on a fertilizer:crop value ratio of 0.1 (e.g. fertilizer N = \$0.15/lb.:

corn grain = \$1.50/bu.). In the remaining 2 states we relied on reported economic optimum fertilizer N rates and control yield.

Results and Discussion

Economic optimum yield for corn grain yield at the 197 locations in Pennsylvania, Missouri, Minnesota and Illinois had a mean of 155 bu/ac (SD=30), a range from 68 to 226 bu/ac and a normal distribution ($P < W = 0.41$). Yield did not respond to fertilizer at 50 of 197 locations (optimum N rate =0). Across the 147 responsive locations, the mean optimum N fertilizer rate was 116 lb N/ac (SD=37) and ranged from 38 to 198 lb N/ac. Grain yield of the control plot (plots that received no fertilizer N) had a mean of 116 bu/ac (SD=38) and a range from 30 to 223 bu/ac.

Grain yield at responsive sites was positively but poorly correlated with fertilizer need (Fig. 1). The limited ability of yield goal alone to predict fertilizer N need is anticipated in yield-goal based N recommendation systems. Fertilizer N need is a function of yield goal and soil nitrogen supply (Equation 1). Yield goal will be poorly correlated with fertilizer N need if soil nitrogen supply is variable among years and locations and is a significant source of grain N in at least some years and locations.

Soil N supply is expected to vary among years and location. Corn N recommendations typically include a system of N credits to account for conditions that increase the quantity soil nitrogen available to the crop. Components of nitrogen supply include soil organic matter, residual organic and inorganic N from previous N applications, atmospheric N fixed by legumes and free-living N-fixing bacteria and atmospheric deposition (Legg and Meisinger, 1982). Missouri routinely adjusts corn nitrogen recommendations for soil organic matter. Missouri farmers are expected to adjust their own fertilizer recommendation with N credits for elevated inorganic N in the profile, recent cropping history that includes legumes and recent applications of manure.

This result was consistent with others that have observed that maximum or optimum yield is a poor predictor of fertilizer N need (Vanotti and Bundy, 1994; Fox and Piekielek, 1995; Kachanoski et al., 1996; Bundy, 2000).

The standard “rule of thumb” recommendation of 1.2 lbs N/bu yield recommended more N than needed at most locations (Fig. 2). Application of 1.2 lbs N/bu is a strategy that will rarely leave you short of N; almost all data points in Fig. 2 fall above the 1:1 line implying this strategy

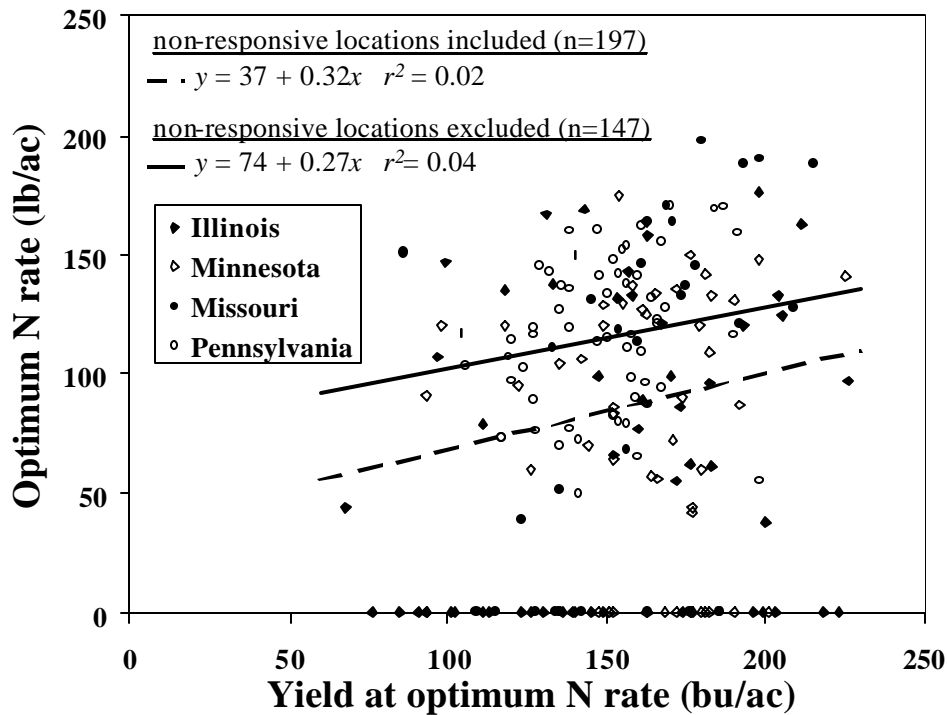


Figure 1. Yield is a poor predictor of optimum fertilizer N rates.

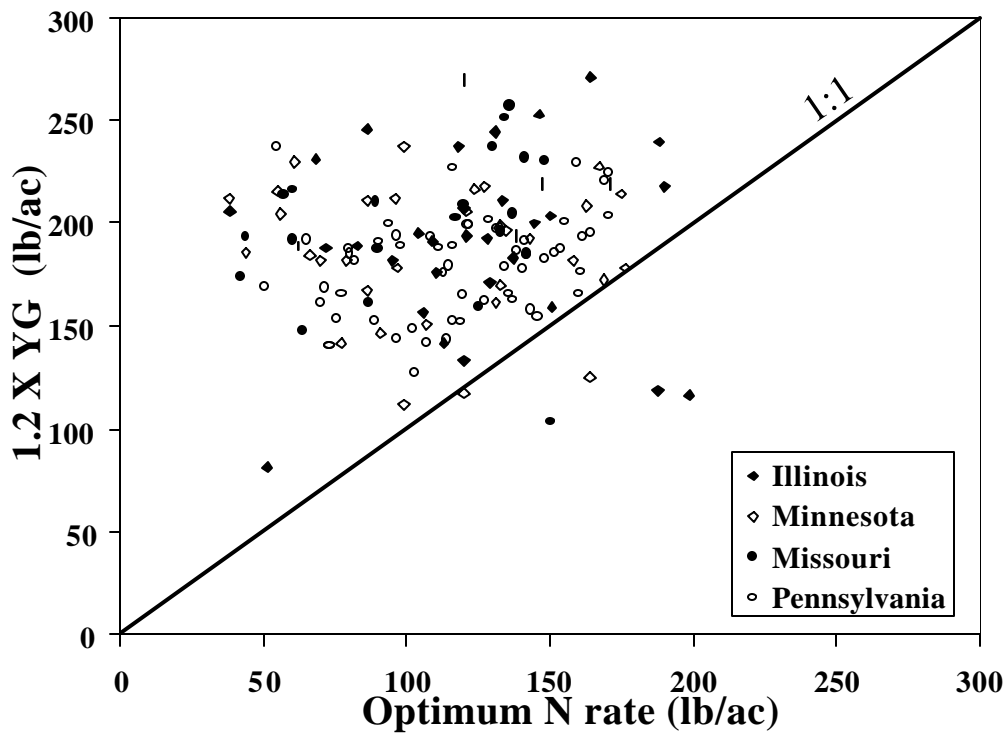


Figure 2. The correlation between optimum N rate and optimum N rate calculated as 1.2 X yield goal. The two approaches are equivalent at locations that fall on the 1:1 line. More fertilizer than is needed is recommended by 1.2 X yield goal when points fall above the line. Data summarizes 147 fertilizer N response experiments in 4 states where fertilizer N increased yield.

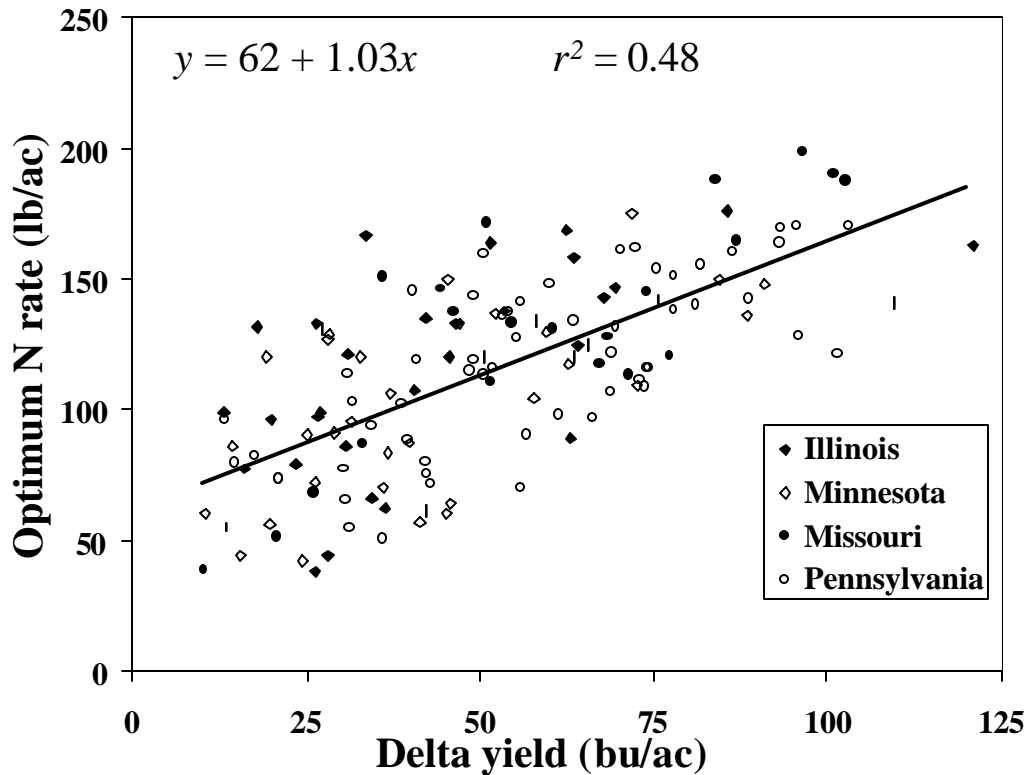


Figure 3. The effectiveness of delta yield (Grain yield at the optimum fertilizer N rate minus grain yield of the 0N control) as a predictor of optimum fertilizer N rates. Data summarizes 147 fertilizer N response experiments in 4 states where fertilizer N increased yield.

recommended more than the optimum N rate. This implies that most fertilizer N recommendations need some adjustment for nitrogen supply using a nitrogen credit.

We evaluated the effect of delta yield, the yield at optimum N rate minus the control yield, on optimum N rate (Fig. 3). Delta yield is the portion of yield directly attributable to fertilizer N. Delta yield was highly correlated with optimum nitrogen rate (Fig. 3). Locations that had higher yield increases from fertilizer N had a higher optimum fertilizer N rate. Yield goal alone did a poor job of predicting fertilizer N need (Fig. 1). But when yield was adjusted for soil N supply (delta yield) it was a good predictor of fertilizer N need.

This research emphasizes the importance of the N credit system to provide accurate fertilizer N recommendations for corn. Failure to account for soil nitrogen contributed from soil organic matter, legume crops such as soybean and alfalfa and organic fertilizers such as manure will likely result in over application of fertilizer N to corn.

Farmers interested in the accuracy of their fertilizer N rate should consider testing for delta yield in their field. Withhold nitrogen from a small portion of a field and measure the yield. Delta yield is the difference between the yield with fertilizer N and the yield with no fertilizer applied. The amount of fertilizer needed can be predicted from the following equation:

$$\text{Fertilizer N need} = 62 + 1.03 \times \text{delta yield} \quad \text{Eq. 2}$$

It is likely more fertilizer was applied than needed if the amount of fertilizer applied exceeds the amount predicted by delta yield by more than 50 lbs/acre.

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**Combined Fertilizer/Ag Lime Budget
FY01 Income & Disbursements**

	Ag Lime Fees	Fertilizer Fees	Combined
REVENUE:			
Tonnage Fees	112,979	956,605	1,069,584
Audits	1,840	23,266	25,106
Permit Fees	21,400	106,000	127,400
Deficiency Payments		4,050	4,050
Late Payment Fees	1,247	6,553	7,801
Total Funds Available	137,467	1,096,475	1,233,942

DISBURSEMENTS:

Inspection Services	491,249
Analytical Services	352,629
Experiment Station Chem Lab Support ¹	42,935
Special Equipment Reserve ²	35,000
Annual Research Report	2,300
Contingency	50,000
Fertilizer/Lime Funded Research S&W:	85,143
Total Expenditures	1,059,256

COMMITMENT:

Fert/Lime Research Projects	174,686
Total Expenditures/Commitments	1,233,942

Footnotes:

¹ S&W Support to Experiment Station Chem Lab administrative personnel

² Per June 30, 1998 Fertilizer and Ag Lime Committee meeting minutes, a \$50,000 (later changed to \$35,000) equipment reserve has been made available to T. Mawhinney for equipment upgrades in Analytical Services.

How to Diagnose Soil Acidity and Alkalinity Problems in Crops: A Comparison of Soil pH Test Kits

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Farmers often bring sick crop plants into county extension offices requesting that agronomy agents provide a quick diagnosis of the problem. Sometimes, agents are able to determine from leaf symptoms whether the crop is suffering from a specific pest or fertility problem. In other cases, agents have difficulty determining the cause of poor plant health. Extension agents usually consider soil acidity or alkalinity first because it is a common fertility problem and is easy to measure in the field with a pH test kit. Soil acidity (low pH) is common in the eastern United States. Soil alkalinity (high pH) is more common in low rainfall areas of the West. Low soil pH causes aluminum and manganese toxicity in plants and reduces the availability of soil phosphorus. High soil pH also reduces soil phosphorus availability and reduces micronutrients such as zinc and boron to plants.

Soil acidity is a major limiting factor to crop production in Southeast Missouri. Approximately 35% of the soil samples submitted to the Delta Regional Soils Testing Lab from cotton producers have a soil water pH values less than 5.5. The soil test recommendation for these soils is to apply agricultural lime to prevent yield reductions.

Cotton plant symptoms from low soil pH include crinkled leaves, stunted plants, and low boll counts. Sometimes these same symptoms can be caused by insects or diseases. To help extension agronomists diagnose pH problems in the field, all agents in Southeast Missouri were supplied with hand held pH meters in 1995. A study was recently conducted to answer questions concerning the accuracy of these meters compared to other soil pH test kits.

Weaknesses in pH Test Methods

Inherent weaknesses in test methods are a possible source of error with in-field pH tests. To evaluate test methods, soil pH was measured in limed and no lime cotton plots at the University of Missouri-Delta Center at Portageville, Missouri (Figure 1). In limed plots, agricultural lime was incorporated before planting in 2000. Cotton yields in limed plots averaged 155 kg lint ha⁻¹ more than in plots without lime.



(a) hand held meter



(b) color test kit



(c) test probe

Figure 1. Three methods of measuring soil pH in the field.

Table 1. Manufacturers of in-field soil pH test kits.

(a) pH Pro hand held meter	Shindengen Electric Manufacturing Company, Limited, Shin-ohtemachi-Building, Ohtemachi, Chiyoda-ku, Tokyo, Japan
(b) Soil color test kit Model EL	LoMotte Company, Chestertown, Maryland, 21620
(c) Mini pH Rapidtest probe	Luster Leaf Products, Incorporated, 2220 Techcourt, Woodstock, IL 60098

Four pH meters, kits, and probes were purchased and used in the field on each cotton plot in 2001 (Table 1). Instructions supplied with the units were followed. For comparing in-field and laboratory results, soil samples were collected from plots and tested at the Delta Center Soil Laboratory. Samples were tested in the lab for water pH using an Accumet Bench top pH meter.

Table 2. Soil pH measurement in cotton field plots.

pH measurement	No Lime Soil	Limed Soil
Soil Lab bench pH meter	5.6	6.8
Handheld pH meter	5.5	6.5
Color kit	5.8	7.0
Mini pH probe	6.0	6.0

In-field measurements with hand held pH meters and color kits showed that lime increased pH (Table 2). Despite careful attention to moistening the soil and shining the tip of pH test probes, all four probes read 6 in limed and non-limed soils. More graduations on the color chart are needed. Color chips are only in whole pH units (4.0, 5.0, 6.0, and 8.0). Interpolations were made to the nearest 0.5 pH unit but this increases the potential for human error.

Soil samples provided by the North American Proficiency Testing (NAPT) Program were also used to evaluate the test methods. Eighty-two labs had previously participated in testing of the soil samples.

Table 3. Soil pH measurements on North American Proficiency Test soils.

pH measurement	Soil 00-103	Soil 00-107	Soil 00-113
82 other soil labs	7.9	6.3	5.6
Bench pH meter	7.8	6.5	6.0
Handheld pH meter	7.7	6.3	5.5
Color kit	8.0	6.5	5.5
pH probe	6.0	6.0	6.0

All in-field pH test methods, except the test probe, produced satisfactory measurements of soil pH as compared to results from 82 laboratories testing the same soils (Table 3). Results from the Accumet bench top pH meter and a single hand held pH meter were similar. Both were found to be accurate to within 2.5 X Median Absolute Deviation (MAD) for 89% of the analysis performed. Median readings from both types of meters compared favorably with the median from 82 soil labs participating in the NAPT program. When four different hand held pH meters were used, the hand held meter had a higher MAD than the 82 NAPT labs for 8 of the 9 analysis performed. The MAD value for the labs was 0.08 while the value for the four hand held meters was 0.11.

Human Error in Using Hand held Meter

Extension agents should learn how to calibrate and test soil samples with hand held pH meters before going to the field. To determine how large of an error inexperience can cause, one hand held meter and one NAPT soil were selected. Seventeen untrained personnel were given an instruction sheet, a soil sample, standard pH solutions, and distilled water. Each person measured the pH of the soil without supervision. Results were compared to results from 82 NAPT labs (Figure 2). Some persons followed the instructions and calibrated the meter with pH 4.0 and 7.0 standards. Others did not. The median pH from the group was 6.3 and the MAD value was 0.15. This is very close to the median from 82 soils labs which was 6.34. However, the MAD value from the inexperience group was more than twice as great as the soil labs.

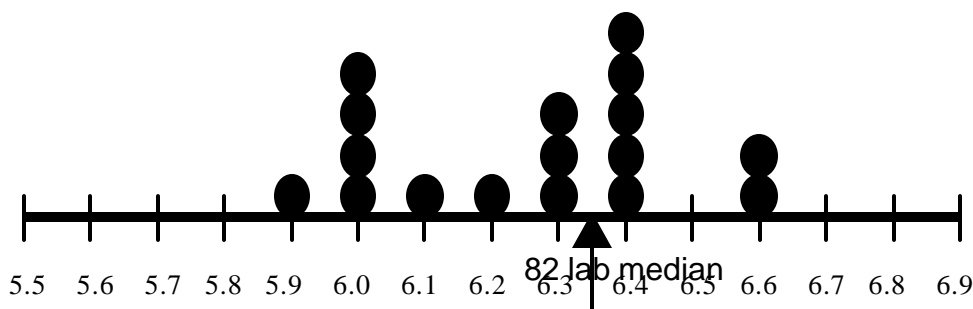


Figure 2. Distribution of soil pH results from 17 people testing the same soil (00-107) with the same handheld meter.

Conclusion

Soil test pH kits can be used by extension agents to quickly determine whether soil acidity or alkalinity is a probable cause of poor crop health. Hand held pH meters and pH color indicator kits were found to provide reliable in-field soil pH measurements. Personnel using a pH color kit were able to distinguish between soils with and without lime. However, interpolating between whole pH values with the color kit was difficult. A soil probe that was inserted into moist soil in plots provided poor response to soil pH and is not suitable for diagnosis of soil pH problems. Extension agents should use soil pH test kits primarily as fast response diagnostic tools. If a problem is found, a soil sample should be sent to a qualified soil test laboratory for recommendations on rates of material to adjust soil pH to optimum levels for the specific crop.

Abstract

Extension agronomists are often asked by farmers to determine why crop plants are stunted or have abnormally colored leaves. Soil acidity and alkalinity are common fertility problems that can cause these symptoms. In a study to measure the accuracy of in-field pH test kits, hand held pH meters and pH color indicator kits provided fast and reliable results. Soil pH probes gave poor measurements of soil acidity and should not be used by extension agents. Results by untrained personnel with hand held pH meters varied by individual. Agents using pH test kits should read instructions carefully before using these instruments.



Agricultural Experiment Station
University of Missouri-Columbia

Office of the Director
Fertilizer Control Services

Columbia, MO 65211

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(573) 882-4891

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April 15, 2002

TO: FERTILIZER INDUSTRY

SUBJECT: ADDITIONAL PERMITS ISSUED TO SELL COMMERCIAL FERTILIZERS IN
MISSOURI FOR FISCAL YEAR 2001-02.

The following distributors have been issued permits to sell commercial fertilizer in Missouri for the fiscal year ending June 30, 2002.

Notification of additional permits issued.

Sales to other registered distributors are exempt from inspection fee, but must be reported as a sales transaction monthly.

The **last** distributor selling fertilizer to a **non-distributor** is responsible for paying the tonnage fee to the Director.

00625 D	ASTARIS LLC	622 EMERSON RD, STE 500	ST LOUIS, MO 63141
01132	CATTLEMAN'S FERT. & FARM SUPPLY	6979 HWY 65 NORTH	HARRISON, AR 72601
01325	COLLINS FERT LLC	409 MAIN	EVEREST, KS 66424
01983 D	EL DORADO CHEMICAL COMPANY	49 MONSANTO ROAD	BELLS, TN 38006-9550
01984	CHEROKEE NITROGEN	1080 INDUSTRIAL DR	CHEROKEE, AL 35616
01987	EL DORADO CHEMICAL COMPANY	2801 ROCK ROAD	GRANITE CITY, IL 62040
01988 D	EL DORADO CHEMICAL COMPANY	803 LEXINGTON	LAMAR, MO 64759
01989	EL DORADO CHEMICAL COMPANY	PO BOX 68	NEWBORN, TN 38059-0068
01991 D	EL DORADO CHEMICAL COMPANY	4200 N CEMENT CITY RD	SUGAR CREEK, MO 64054
02275	GREEN & HAGSTROM, INC	PO BOX 658	FAIRVIEW, TN 37062-0658
02585	GREEN & HAGSTROM, INC	PO BOX 658	FAIRVIEW, TN 37062
02605	GREEN SENSE	1651 WALL ST	GARLAND, TX 75041
03593	MACZUK INC. RETAIL	1629 PACIFIC	ATCHISON, KS 66002
03594 L/D	MACZUK INC. RETAIL	169 PEERS BLUFF RD	MARTHASVILLE, MO 63357
03595 L/D	MACZUK INC. RETAIL	18563 US HWY 69	PATTONSBURG, MO 64670
03596 L/D	MACZUK INC. RETAIL	609 MAIN	RIDGEWAY, MO 64481
03625 D	LITTRELL FEED & SEED, INC	4446 AUDRAIN RD 395	THOMPSON, MO 65285
03805 D	MFA AGRI SERVICES - ALMA	PO BOX 508	HIGGINSVILLE, MO 64037-2411
04335 D	MFA AGRI SERVICES - MACON	PO BOX 340	MACON, MO 63552
04962	MICHEL FERTILIZER	1313 SHAWNEE ST	MT VERNON, IL 62864
04975 L/D	MID MISSOURI AGRI SERVICES	PO BOX 172	CONCORDIA, MO 64020
05175 L	MORGAN FERTILIZER, INC - CANTON	PO BOX 197	WYACONDA, MO 63474
05205 D	LEGRAND FERTILIZER	421 HWY 158	POPLAR BLUFF, MO 63901
05317 D	NATURE'S BLEND ORGANIC FERTILIZER	150 FIRMA ROAD	O'FALLON, MO 63366
05395	NORTHERN AG SUPPLIERS, INC.	1514 EAST 122nd ST	BURNSVILLE, MN 55337
06035 D	RANDOLPH MACHINE SER., INC.	1017 HWY 278	GIDEON, MO 63848
06557	SDS COMPANY	14911 CUMMING STREET	OMAHA, NE 68154
06696	SOIL SOLUTIONS INC.	303 LAMP-KASTNER DRIVE	HOLSTEIN, IA 51025
07165	TETRA TECHNOLOGIES, INC	25025 I-45 NORTH	THE WOODLANDS, TX 77380
07275 L/D	TNT GENERAL CONTRACTING, INC	RR3 BOX 78C	KAHOKA, MO 63445
07855	WOLFKILL FEED & FERTILIZER CORP.	10115 HWY 142 N	COVINGTON, GA 30014

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MISSOURI FERTILIZER REPORT

Fertilizer Control Service
Agricultural Experiment Station
University of Missouri-Columbia
Columbia, MO 65211-8080
Volume 44, No. 1, January 2002

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