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Vegetable and Grain Crops Agent

Langlade, Lincoln and Marathon Counties

WI Fertilizer, Aglime, Pest Mgmt Conf

January 19, 2005

PMR Potential Benefits

35 paper mills in WI

12 are land applying residuals

- Reduced landfill use; cost - \$18/ton
- 180 ton /dy 65,700 ton/yr (Brokaw)
- 35 mills = **\$41,391,000**
- At \$2.50 value/ton = \$164,250 fert value
- 35 mills = **\$5,775,000**
- Plus liming benefit and added organic matter
- **Fertilizer and Lime Value = \$11-\$12 Million**

- Nutrient Availability (#/wet ton)
- 1st Year Availability

	<u>Ave (02-04)</u>	<u>2004</u>
– Nitrogen	4.68	3.26
– P ₂ O ₅	6.57	4.33
– K ₂ O	.54	.36
– Sulfur	1.85	.57

• Total	<u>Ave (02-04)</u>	<u>2004</u>
– Nitrogen	12.91	12.95
– P ₂ O ₅	8.13	15.66
– K ₂ O	.76	.12
– Sulfur	2.04	6.58

	<u>05/02</u>	<u>05/03</u>	<u>05/04</u>
Ca – (ppm)	8,700	12,500	28,200
Mg – (ppm)	12,100	37,150	55,100
C:N ratio –	10.73:1	16.3:1	36.7:1
Nutrlzng Index –	25.2%	16.5%	27.9%
		(4 smpl ave)	

Dry matter basis ppm

Potential Nutrient Savings (1st yr)

2004

<u>Sample</u>	<u>#/wt</u>	<u>38 ton</u>			<u>cost</u>	<u>Fert Value</u>
N	3.26	124#	Urea	269#	\$269/tn	\$36.18
P	4.33	164#	TSP	356#	\$265/tn	\$47.17
K	.36	14#	Pot	23#	\$183/tn	<u>\$2.10</u>
						\$85.45/a
						\$2.25/ ton
Value as a Liming Agent						
Full Application = 5 ton of aglime / acre						<u>\$125/a</u>
Total Potential Value per acre						\$210

Paper Mill Residuals 2004

- Control plus 5 treatments
 - 4 replications

Treatment No.

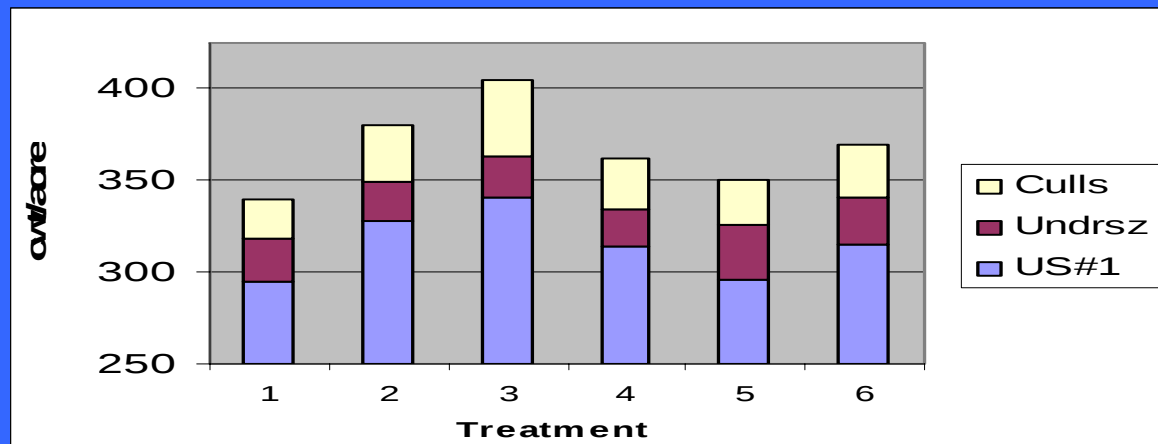
1 - 0 PMR + Com fert	150-179-164
2 - ½ rate PMR 314# /plot, 19.0 WT/A	150-179-164
3 - ½ rate PMR (50% credit)	150-179-164 (181-220-177)
4 - Full rate PMR 628#/plot, 38.0 WT/A	150-179-164
5 - Full rate PMR (50% credit)	150-179-164 (212-261-183)
6 - 1 ½ rate PMR 942#/plot, 57.0 WT/A	201-261-171



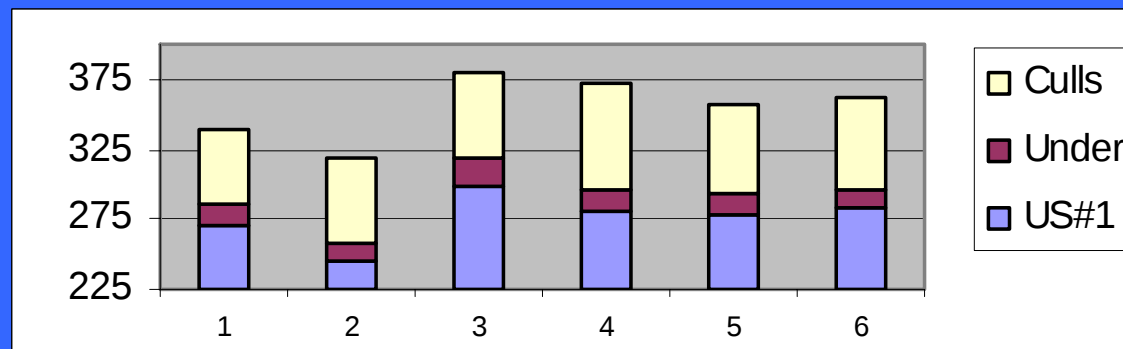


26.5 T/A

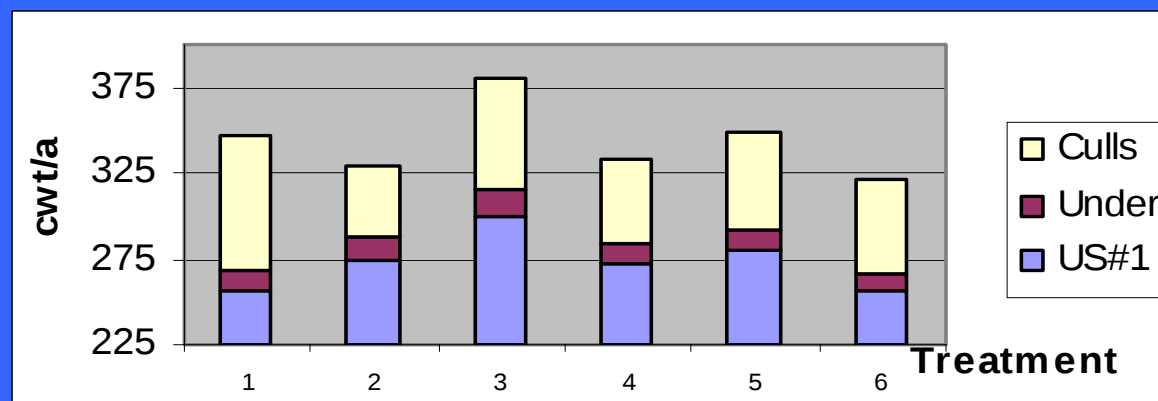
Potato Yield 2002



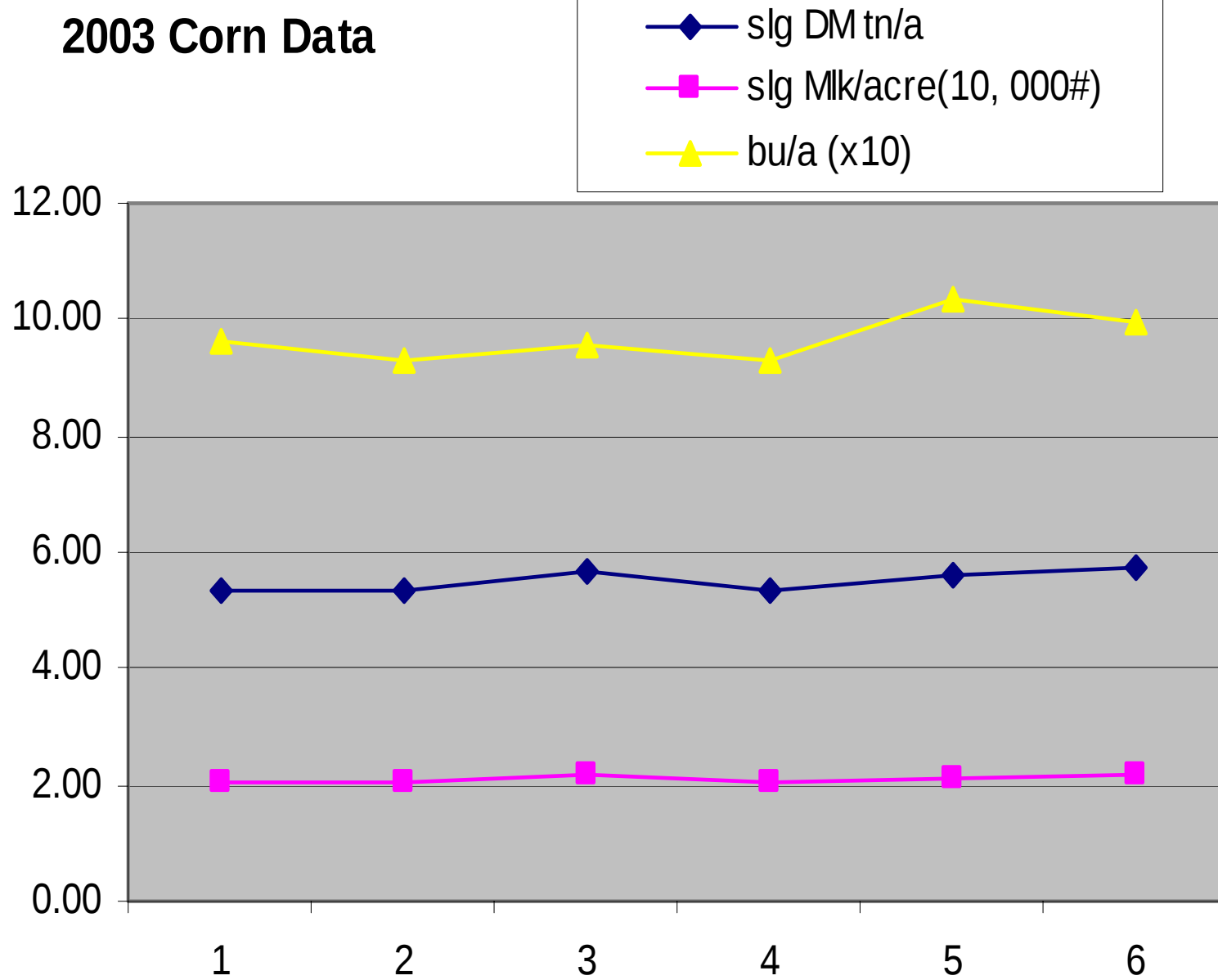
Yield 2003



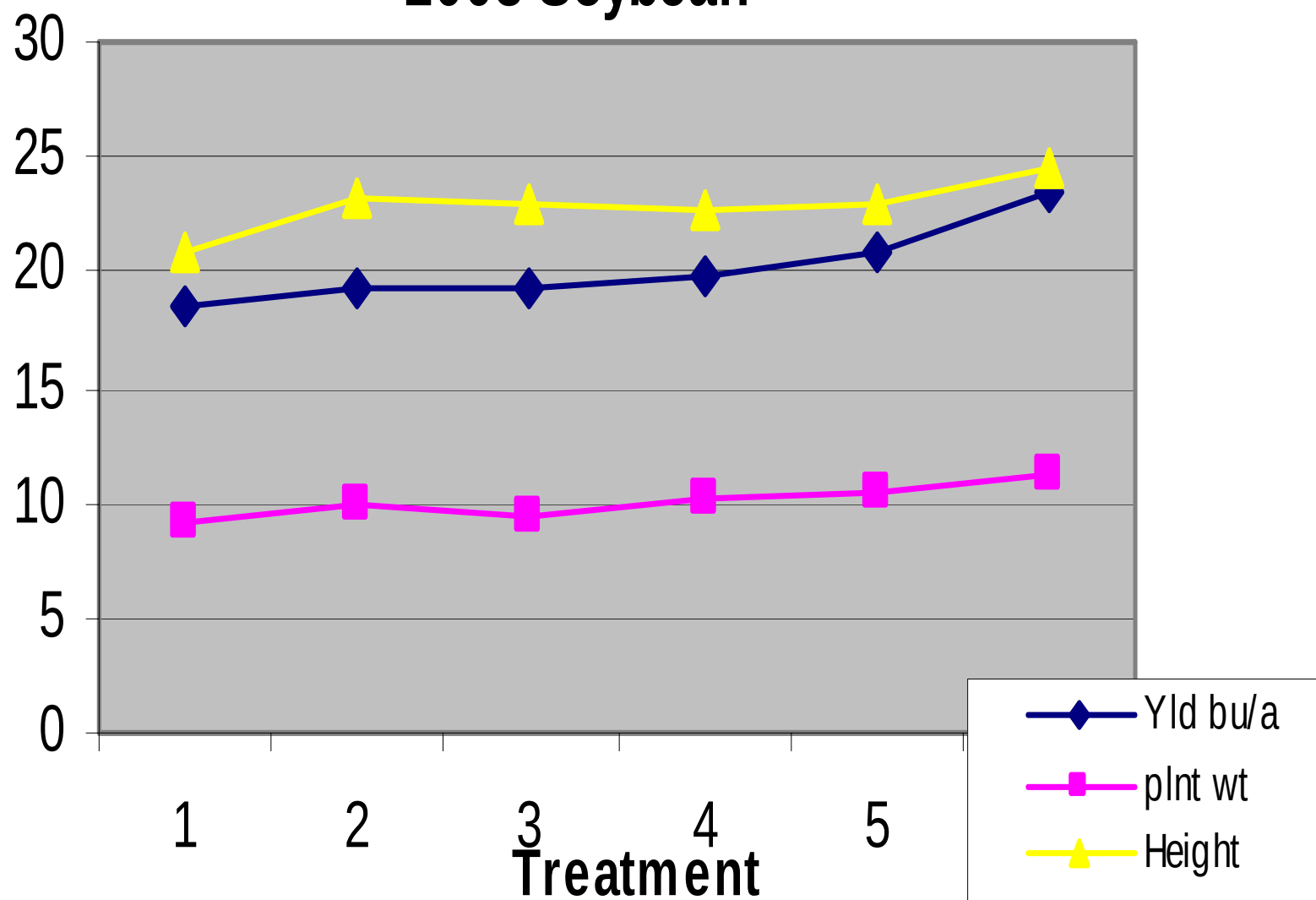
Yield 2004



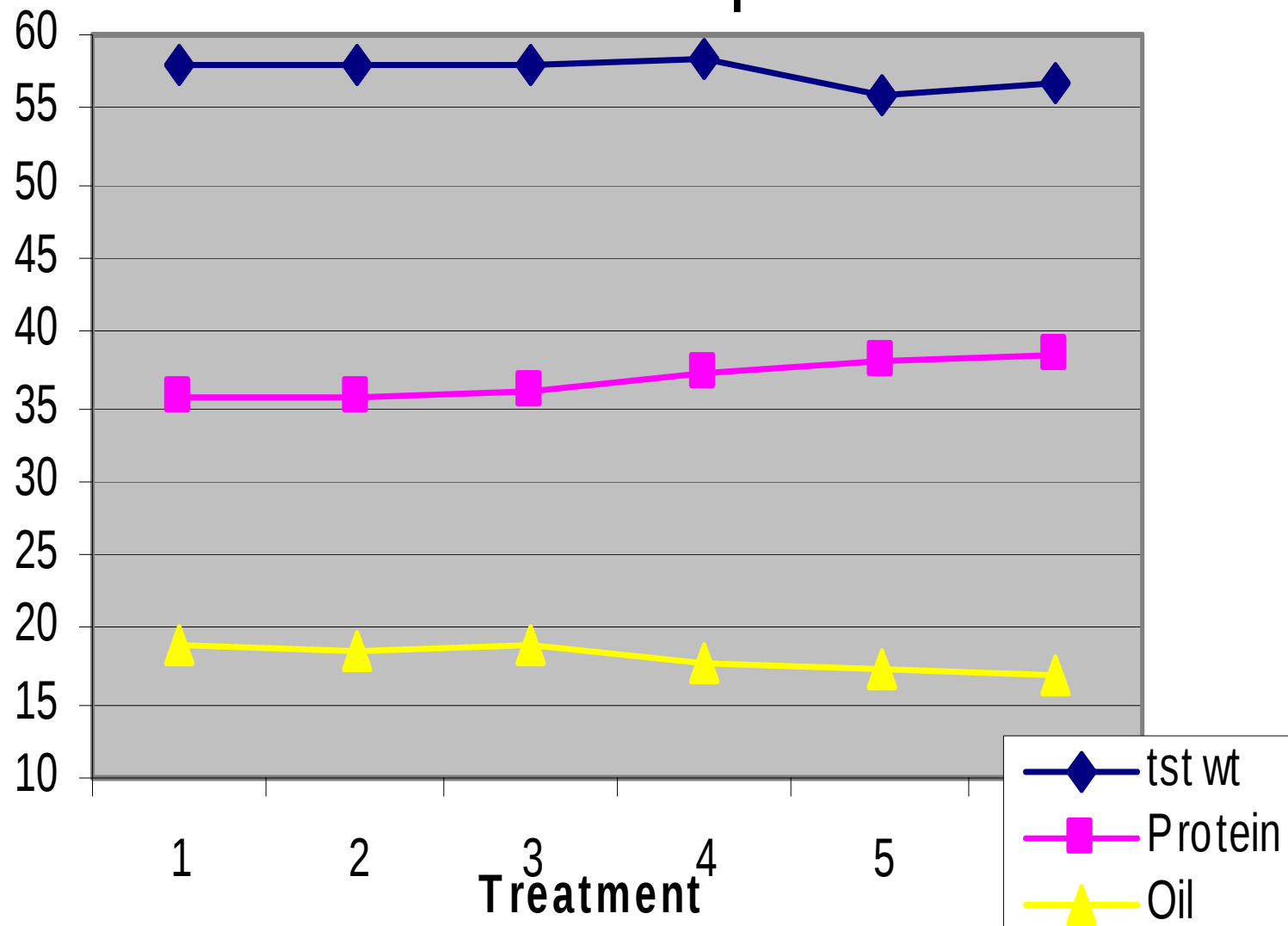
2003 Corn Data



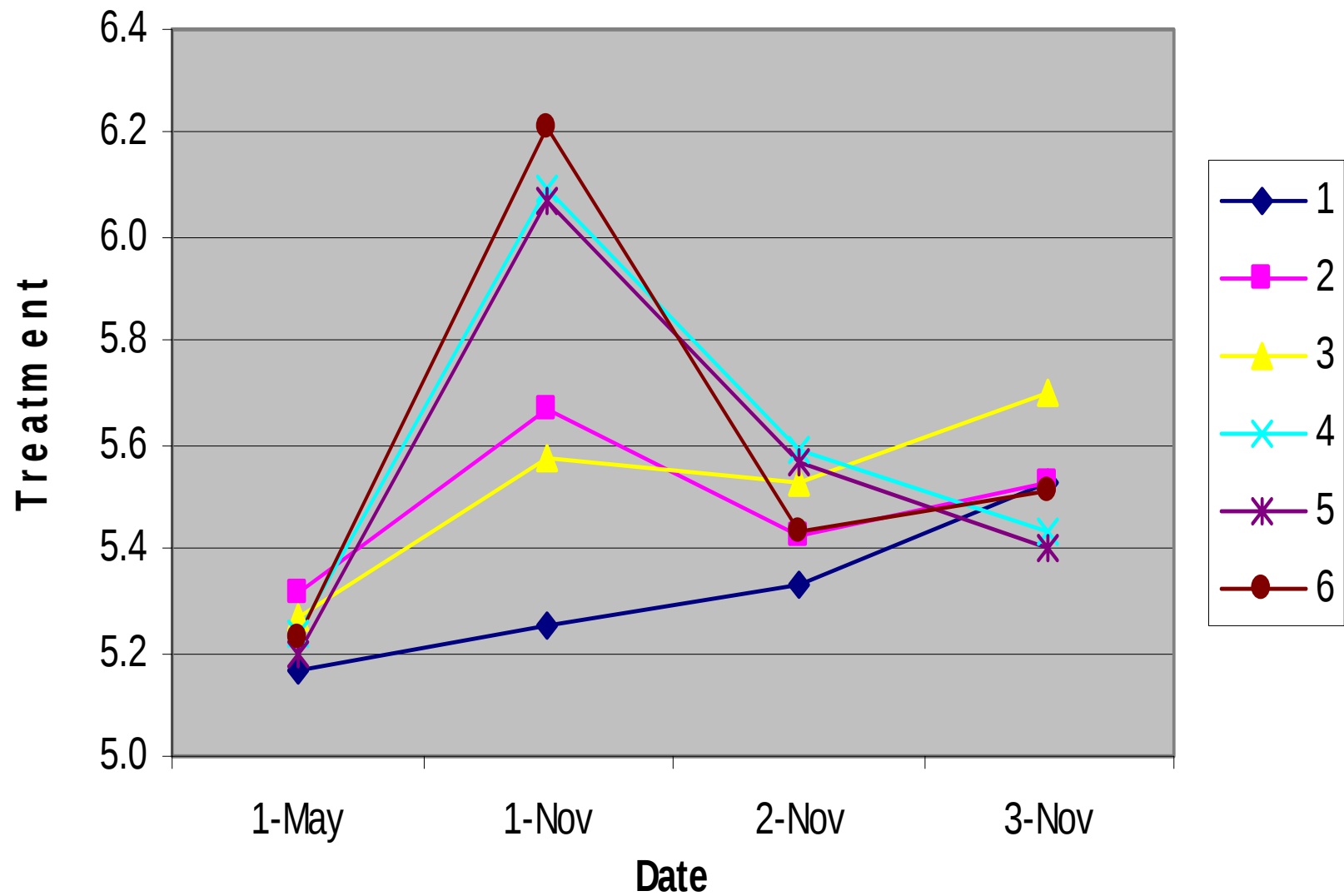
2003 Soybean



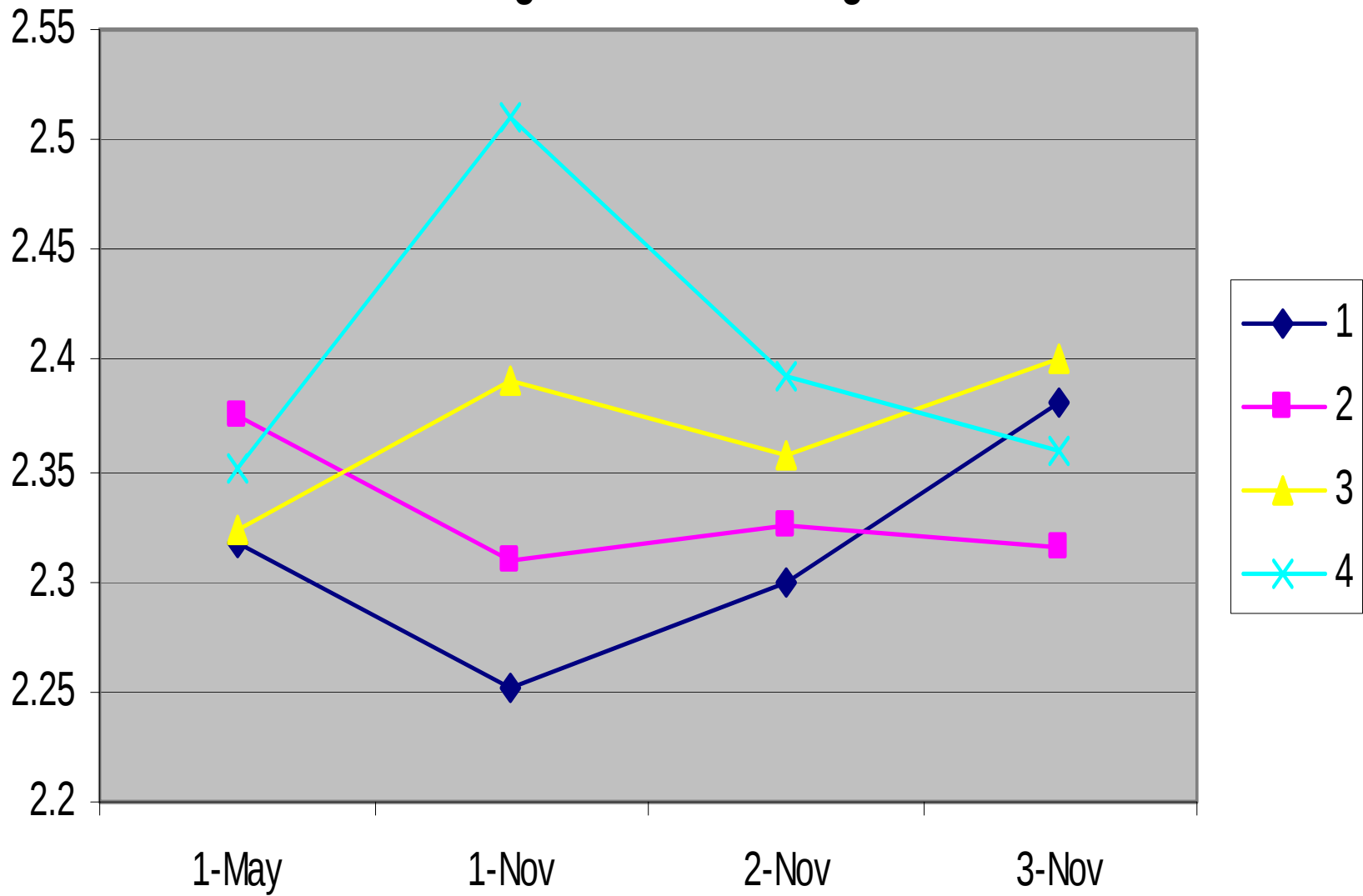
2003 Seed Composition



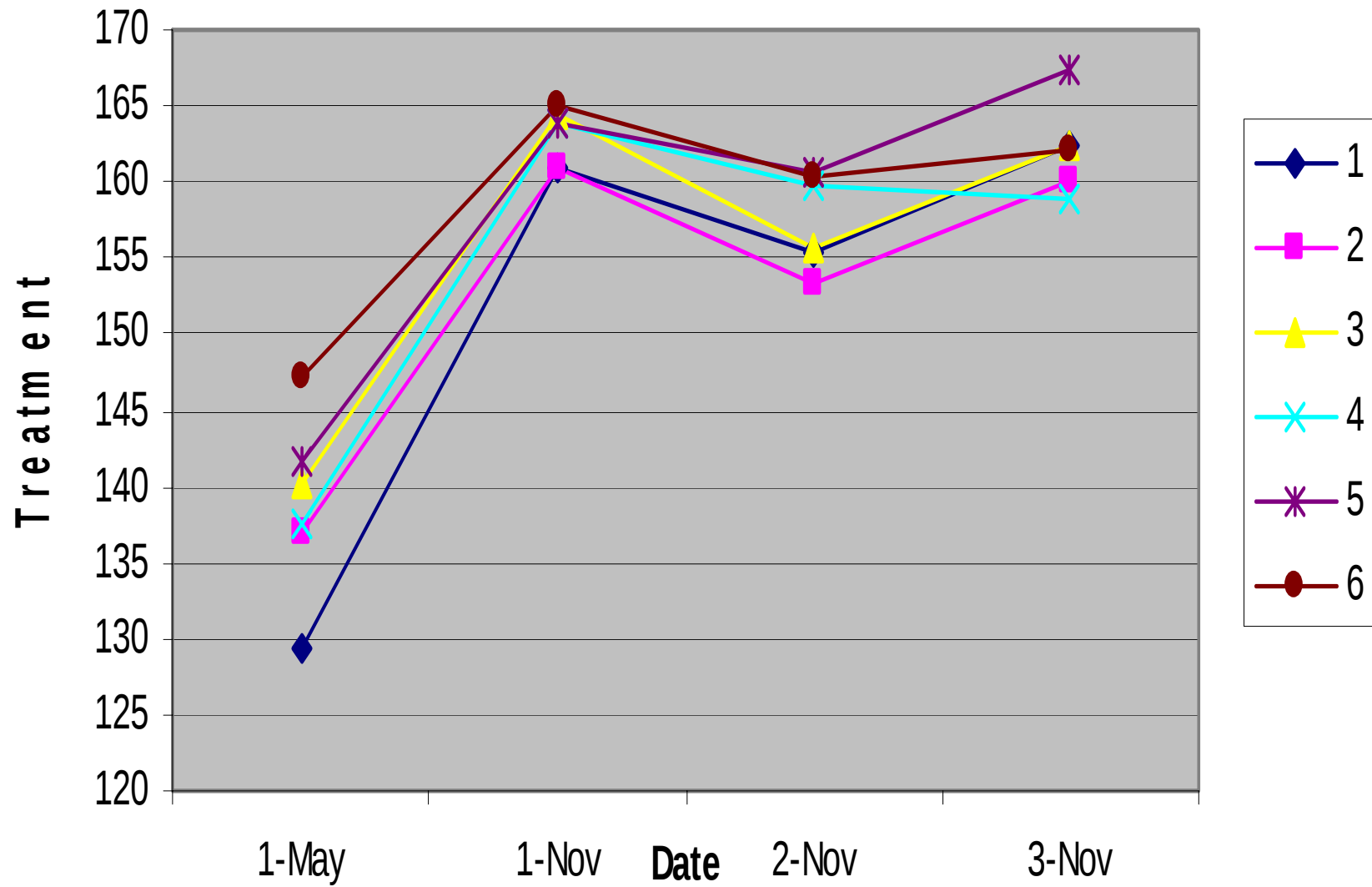
pH Ave



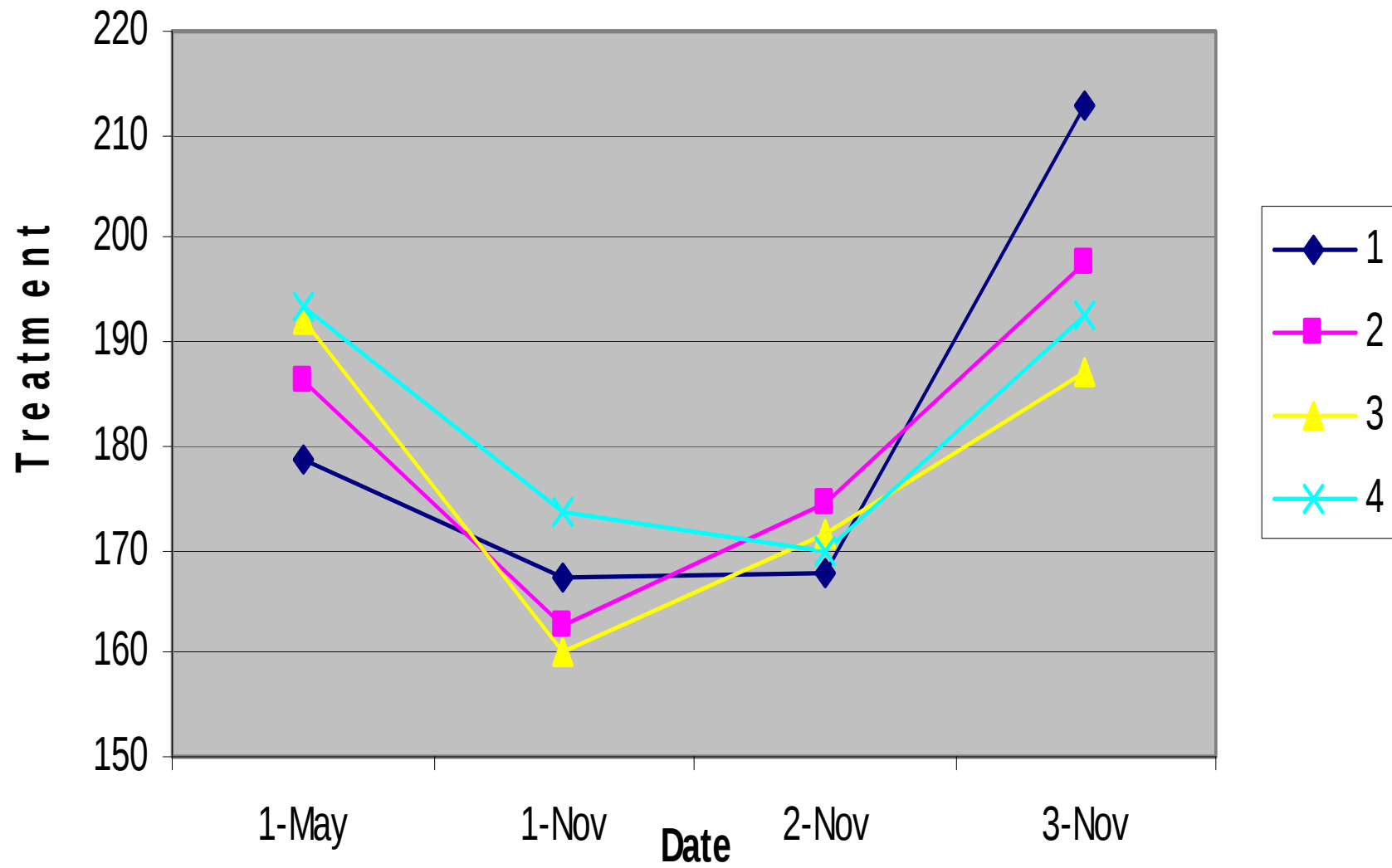
Organic Matter Average

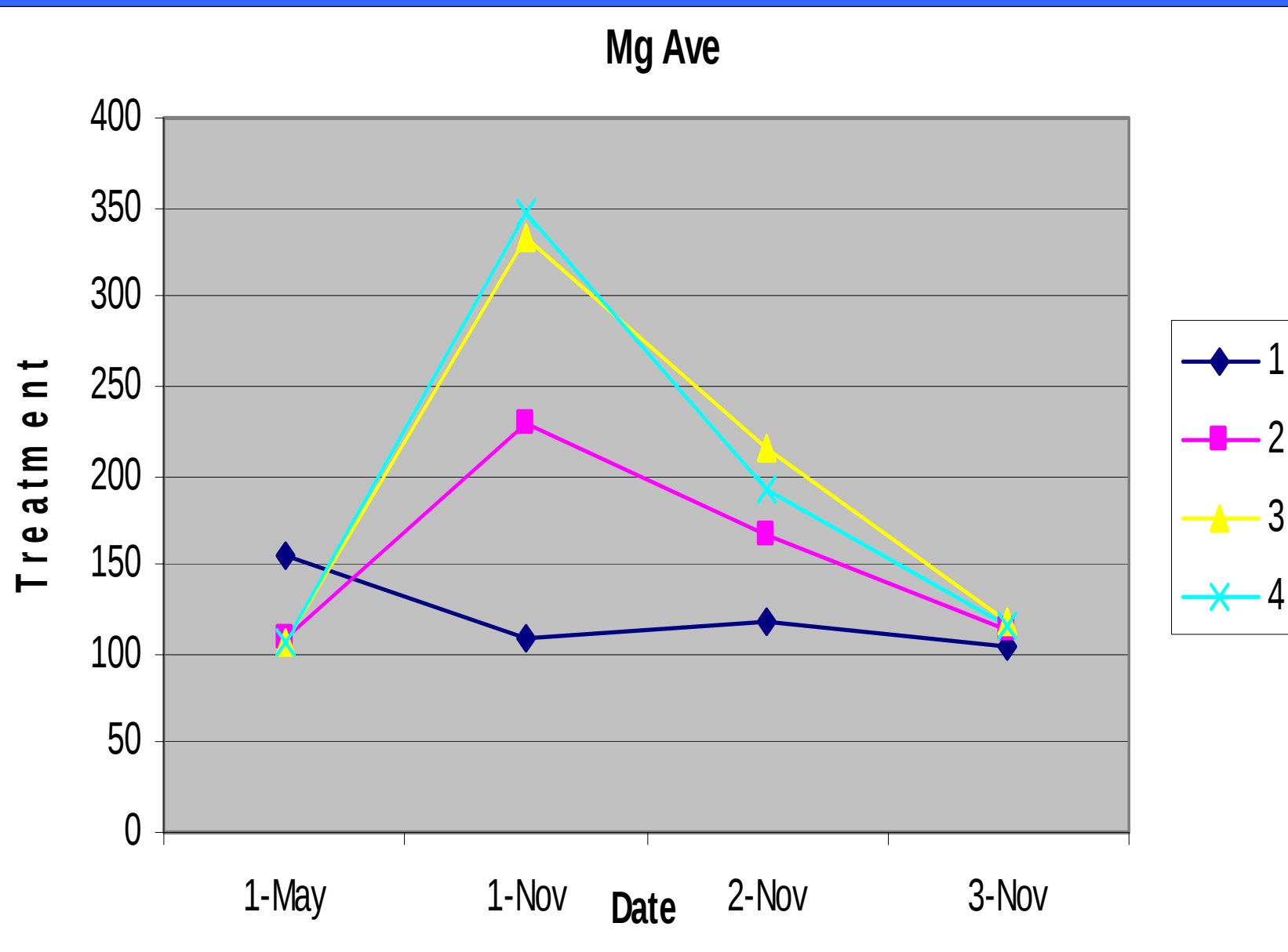


P Ave

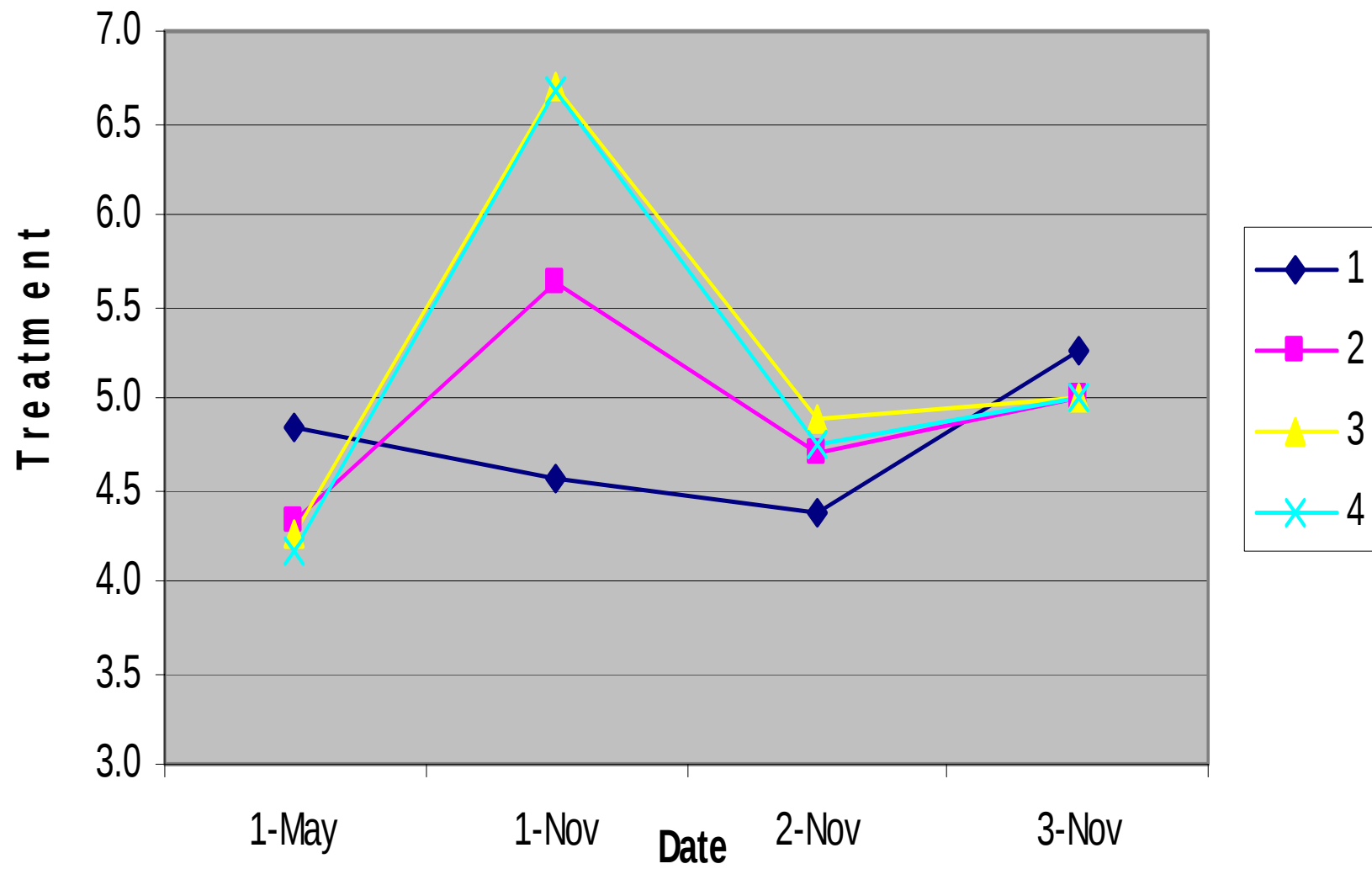


K Ave

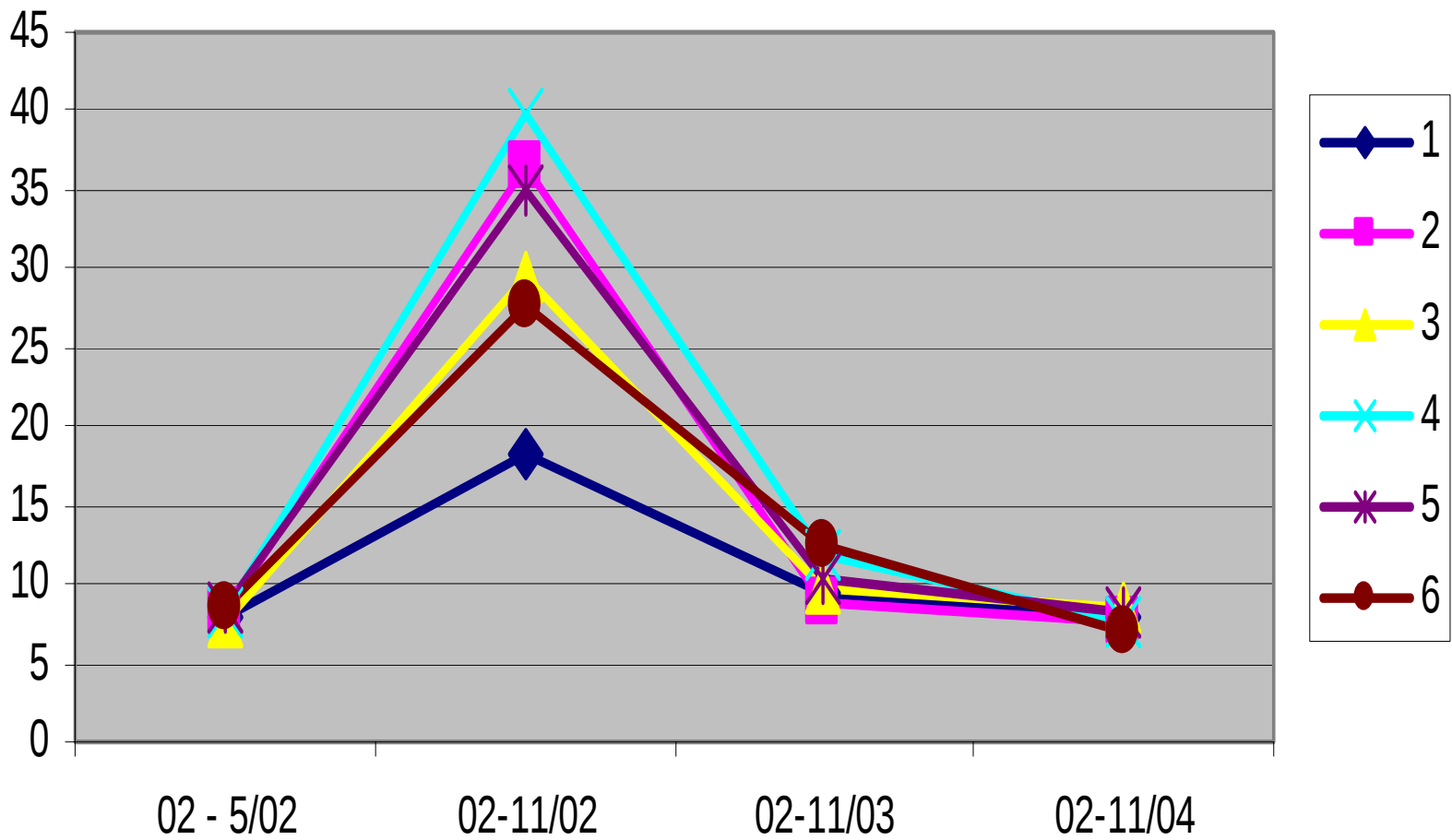




CEC Ave



Sulfur Average



Summary

- Fertilizer value
- Lime value
- No metal problem
- Corn / alfalfa value



Thank You