**Table 1. Effect of spent lime application on Beta 6447 and Crystal 999 sugarbeet root yields, sucrose percentage, recoverable sugar production, harvest population and gross return.**
**(September 23), north of Fargo Airport, Fargo, 2003. Dr. Joseph Giles, Soil Science Department, NDSU.**

| LIME TREATMENT T/A | ROOT YIELD Tons/A | SUCROSE Percent | REC SUGAR Lbs/A | REC SUGAR Lbs/T | HARVEST BEETS /100 FT | GROSS RETURN $/T | GROSS RETURN $/A |
|---|---|---|---|---|---|---|---|
| **Beta 6447 *** | | | | | | | |
| 0 | 22.0 | 17.0 | 6702 | 305 | 161 | 34.25 | 752 |
| 3 | 21.8 | 17.9 | 7060 | 325 | 164 | 38.76 | 840 |
| 6 | 21.5 | 17.9 | 7351 | 342 | 165 | 42.55 | 914 |
| 9 | 22.6 | 18.0 | 7594 | 336 | 171 | 41.11 | 929 |
| **LSD (.05)** | ns | 1.8 | 26 | ns | ns | 5.80 | ns |
| **Crystal 999 **** | | | | | | | |
| 0 | 23.5 | 17.4 | 7395 | 315 | 194 | 36.49 | 856 |
| 3 | 24.1 | 17.6 | 7720 | 320 | 188 | 37.58 | 906 |
| 6 | 24.4 | 17.9 | 8009 | 328 | 199 | 39.41 | 962 |
| 9 | 24.3 | 18.0 | 8004 | 329 | 201 | 39.66 | 963 |
| **LSD (.05)** | ns | ns | ns | ns | ns | ns | ns |
| **Mean** | | | | | | | |
| 0 | 22.7 | 17.2 | 7048 | 310 | 178 | 35.37 | 804 |
| 3 | 22.9 | 17.7 | 7390 | 323 | 176 | 38.17 | 873 |
| 6 | 22.9 | 18.3 | 7680 | 335 | 182 | 40.98 | 938 |
| 9 | 23.5 | 18.2 | 7799 | 333 | 186 | 40.38 | 946 |
| **LSD (.05)** | ns | 0.8 | 611 | 18 | 9 | 3.99 | 105 |

*** Susceptible Variety**
**** Tolerant Variety**

**Table 4. Yields, nitrogen (N), phosphorus (P) accumulation in crops grown in the 2004 growing season at the Breckenridge and Hillsboro Spent Lime Trial sites. Dr. Carol Windels, NWROC – U of Minnesota**

| Lime Rates | Total Dry Matter | N Accumulation | P accumulation | Grain Yield |
|---|---|---|---|---|
| Tons $A^{-1}$ | lbs. A-1 | lbs. A-1 | lbs. A-1 | bu A-1 |
| | | **Hillsboro Corn**[§] | | |
| 0 | 14933 | 175 | 30.1 | 144 |
| 5 | 14933 | 175 | 31.2 | 140 |
| 10 | 14933 | 175 | 31.5 | 138 |
| 20 | 14933 | 175 | 32.3 | 134 |
| 30 | 14933 | 175 | 32.4 | 136 |
| | | **Single degree of freedom contrast of Spent lime Rates**[§§] | | |
| Linear | ns | ns | * | ** |
| Quadratic | ns | ns | ns | ns |
| | | **Breckenridge Spring Wheat**[§] | | |
| 0 | 9728 | 167 | 20.0 | 67.1 |
| 5 | 9728 | 167 | 20.6 | 65.7 |
| 10 | 9728 | 167 | 20.2 | 65.4 |
| 15 | 9728 | 167 | 23.5 | 61.6 |
| 20 | 9728 | 167 | 21.3 | 61.4 |
| | | | | |
| | | **Single degree of freedom contrast of Spent lime Rates**[§§] | | |
| Linear | ns | ns | ** | ** |
| Quadratic | ns | ns | ns | ns |

[§] **Where statistical analysis indicated no significant difference, the recorded value for each of the five spent lime rates are the average of the five rates.**

[§§] **ns, ***, **, and * indicate non-significance and significance at the 0.001, 0.01, and 0.05 level of probability, respectively.**

**Table 5. Yields, nitrogen (N), phosphorus (P) accumulation in crops grown in the 2005 growing season at the Breckenridge Spent lime Trial site. Dr. Carol Windels, NWROC – U of Minneosta.**

| Lime rates | Total Dry Matter | N Accumulation | P Accumulation | Grain Yield |
|---|---|---|---|---|
| Tons [A-1] | lbs. [A-1] | lbs. [A-1] | lbs. [A-1] | bu [A-1] |
| | | **Breckenridge Spring Wheat[§]** | | |
| 0 | 6623 | 77.0 | 10.9 | 36.2 |
| 5 | 7184 | 90.2 | 13.4 | 43.5 |
| 10 | 7434 | 90.1 | 13.9 | 44.8 |
| 15 | 7796 | 99.9 | 15.2 | 45.9 |
| 20 | 7714 | 95.3 | 12.8 | 46.0 |
| | | **Single degree of freedom contrast of Spent lime Rates** | | |
| Linear | *** | *** | * | ** |
| Quadratic | * | * | ** | ns |

[§] **Where statistical analysis indicated no significant difference, the recorded value for each of the five spent lime rates are the average of the five rates.**

[§§] **ns,***,**, and * indicate non-significance and significance at the 0.001,0.01, and 0.05 level of probability, respectively.**