Table 8. Evaluation of banding phosphorous and manganese fertilizer, and foliar Mn and P applications for improving productivity of onions on muck soils - small-plot field trials, 2010: Yield and bulb size.

|  |  |
| --- | --- |
| **CY Batavia** | **Weight from a sample of 50 bulbs (lb)** |
| **Harvested: Sept 16, 2010** | **Marketable Yield** | **Bulb size distribution** |
| **Small** | **Medium** | **Jumbo** | **Culls** |
| **Treatment** | **Total** | **%** | **1.25-2"** | **2-3"** | **3-4"** | **undersized** | **Decay** |
| Broadcast NP | 16.1 | 95.3 | 0.5 | 10.5 | 5.0 | 0.6 | 0.0 |
| Broadcast NP + foliar Mn | 21.0 | 98.4 | 0.4 | 12.6 | 7.9 | 0.3 | 0.0 |
| Broadcast NP + foliar P | 18.0 | 95.2 | 0.4 | 10.9 | 6.6 | 0.6 | 0.0 |
| Band P+Mn\* | 13.1 | 97.0 | 0.7 | 7.3 | 5.1 | 0.4 | 0.0 |
| Band P+Mn\* + foliar Mn | 17.0 | 96.2 | 0.7 | 9.8 | 6.5 | 0.5 | 0.0 |
| Band P+Mn\* + foliar Mn+P | 18.5 | 96.5 | 0.7 | 9.5 | 8.3 | 0.4 | 0.0 |
| ***p-value:*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***~*** |
| Broadcast NP | 18.3 | 96.3 | 0.4 b | 11.3 a | 6.5 | 0.5 | 0.0 |
| Band P+Mn\* | 16.2 | 87.7 | 0.7 a | 8.9 b | 6.6 | 0.5 | 0.0 |
| ***p-value:*** | ***NS*** | ***NS*** | ***0.0272*** | ***0.0194*** | ***NS*** | ***NS*** | ***~*** |

|  |  |
| --- | --- |
| **Star Webster** | **Weight from a sample of 50 bulbs (lb)** |
| **Harvested August 19, 2010** | **Marketable Yield** | **Bulb size distribution** |
| **Small** | **Medium** | **Jumbo** | **Culls** |
| **Treatment** | **Total** | **%** | **1.25-2"** | **2-3"** | **3-4"** | **undersized** | **decay** |
| Broadcast N | 4.7 | 95.6 | 3.9 | 0.8 | 0.0 | 0.2 | 0.0 |
| Broadcast N + foliar Mn | 4.8 | 95.9 | 4.2 | 0.6 | 0.0 | 0.2 | 0.0 |
| Broadcast N + foliar P | 4.9 | 96.0 | 4.1 | 0.8 | 0.0 | 0.2 | 0.0 |
| Band P+Mn\* | 5.0 | 96.2 | 4.2 | 0.8 | 0.0 | 0.1 | 0.0 |
| Band P+Mn\* + foliar Mn | 5.1 | 95.9 | 4.2 | 0.9 | 0.0 | 0.2 | 0.0 |
| Band P+Mn\* + foliar Mn+P | 5.4 | 97.2 | 3.9 | 1.5 | 0.0 | 0.1 | 0.0 |
| ***p-value:*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***~*** | ***NS*** | ***NS*** |
| Broadcast N | 4.8 | 95.8 | 4.0 | 0.7 | 0.0 | 0.2 | 0.0 |
| Band P+Mn\* | 5.2 | 96.4 | 4.1 | 1.1 | 0.0 | 0.1 | 0.0 |
| ***p-value:*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***~*** | ***NS*** | ***NS*** |

|  |  |
| --- | --- |
| **Mortellaro Elba** | **Weight from a sample of 50 bulbs (lb)** |
| **Harvested Sept. 8, 2010** | **Marketable Yield** | **Bulb size distribution** |
| **Small** | **Medium** | **Jumbo** | **Culls** |
| **Treatment** | **Total** | **%** | **1.25-2"** | **2-3"** | **3-4"** | **undersized** | **decay** |
| Broadcast NPK | 13.5 | 98.1 ab | 0.7 | 12.8 | 0.0 | 0.1 | 0.2 |
| Broadcast NPK + foliar Mn | 12.3 | 95.7 b | 0.6 | 11.5 | 0.2 | 0.2 | 0.5 |
| Broadcast NPK + foliar P | 13.3 | 98.2 ab | 0.7 | 12.5 | 0.1 | 0.1 | 0.1 |
| Band P+Mn\* | 12.5 | 95.5 b | 0.6 | 11.7 | 0.2 | 0.3 | 0.3 |
| Band P+Mn\* + foliar Mn | 13.0 | 95.4 b | 1.1 | 11.6 | 0.3 | 0.2 | 0.5 |
| Band P+Mn\* + foliar Mn+P | 14.0 | 99.1 a | 0.7 | 12.9 | 0.5 | 0.1 | 0.0 |
| ***p-value:*** | ***NS*** | ***0.0369*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** |
| Broadcast NPK | 13.0 | 97.3 | 0.7 | 12.3 | 0.1 | 0.1 | 0.2 |
| Band P+Mn\* | 13.2 | 96.7 | 0.8 | 12.1 | 0.4 | 0.2 | 0.3 |
| ***p-value:*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** | ***NS*** |

\*N and K were applied broadcast and incorporated pre-plant.