Table 6. Evaluation of banding phosphorous and manganese, and foliar Mn and P applications for improving productivity of onions on muck soils - small-plot field trials, 2010: Plant tissue analysis, 8-10 leaf stage.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Grower Location** | **CY Batavia**  **July 29** | | | | | **Star Webster**  **July 30** | | | | | | **Mortellaro Elba**  **July 29** | | | | | |
| **Treatment\*\*** | **Mn (ppm)** | | **P (ppm)** | | | **Mn (ppm)** | | | **P (ppm)** | | | **Mn (ppm)** | | | **P (ppm)** | | |
| Broadcast NPK | 43 | | 3,169 | | | 64.9 | | | 4,224 | | | 123 | | | 4,445 | | |
| Broadcast NPK + foliar Mn | 34 | | 3,082 | | | 64.3 | | | 4,174 | | | 125 | | | 4,328 | | |
| Broadcast NPK + foliar P | 42 | | 3,070 | | | 76.1 | | | 3,482 | | | 116 | | | 4,094 | | |
| Band P+Mn\* | 34 | | 2,854 | | | 54.6 | | | 4,295 | | | 114 | | | 4,452 | | |
| Band P+Mn\* + foliar Mn | 39 | | 3,077 | | | 66.5 | | | 4,285 | | | 118 | | | 4,061 | | |
| Band P+Mn\* + foliar Mn+P | 27 | | 2,945 | | | 76.5 | | | 3,793 | | | 117 | | | 4,394 | | |
| ***P Value (α=0.05)*** | ***NS*** | | ***NS*** | | | ***NS*** | | | ***NS*** | | | ***NS*** | | | ***NS*** | | |
| **Broadcast vs. Band (pooled across foliar applications)** | | | | | | | | | | | | | | | | | |
| Broadcast NPK | 40 | | | 3,107 | | | 68.4 | | | 3,960 | | | 121 | | | 4,289 | |
| Band P+Mn\* | 33 | | | 2,959 | | | 65.9 | | | 4,124 | | | 117 | | | 4,303 | |
| ***P Value (α=0.05)*** | ***NS*** | | | ***NS*** | | | ***NS*** | | | ***NS*** | | | ***NS*** | | | ***NS*** | |
| **Foliar applications (pooled across soil applications)** | | | | | | | | | | | | | | | | | |
| None | 38 | | | 3,012 | | | 59.8 | | | 4,259 | | | 119 | | | 4,448 | |
| Mn | 37 | | | 3,080 | | | 65.4 | | | 4,229 | | | 122 | | | 4,194 | |
| P | 42 | | | 3,070 | | | 76.1 | | | 3,482 | | | 116 | | | 4,094 | |
| Mn + P | 27 | | | 2,945 | | | 76.5 | | | 3,793 | | | 117 | | | 4,394 | |
| ***P Value (α=0.05)*** | ***NS*** | | | ***NS*** | | | ***NS*** | | | ***NS*** | | | ***NS*** | | | ***NS*** | |
| **Summary of plant tissue results for other nutrients** | | | | | | | | | | | | | | | | | |
| **ppm** | **CY Batavia** | | | | | | **Star Webster** | | | | | | **Mortellaro Elba** | | | | |
| **avg** | **min** | | | **max** | | **avg** | **min** | | | **max** | | **avg** | **min** | | | **max** |
| K | 29,120 | 21,571 | | | 35,458 | | 29,708 | 5,470 | | | 39,361 | | 27,764 | 24,791 | | | 31,705 |
| Ca | 12,838 | 10,180 | | | 17,528 | | 23,228 | 16,357 | | | 29,674 | | 12,262 | 9,947 | | | 16,016 |
| Mg | 2,452 | 1,783 | | | 3,350 | | 2,249 | 1,871 | | | 2,502 | | 1,379 | 1,160 | | | 1,619 |
| Al | 15.6 | 5.7 | | | 39.4 | | 26.0 | 14.5 | | | 46.3 | | 11.7 | 7.5 | | | 18.2 |
| Fe | 28.7 | 21.7 | | | 50.2 | | 39.0 | 31.7 | | | 46.1 | | 37.2 | 28.1 | | | 68.4 |
| Zn | 22.8 | 16.6 | | | 28.4 | | 39.1 | 26.5 | | | 51.2 | | 22.8 | 18.5 | | | 29.0 |
| B | 17.3 | 14.0 | | | 20.2 | | 32.7 | 27.3 | | | 39.4 | | 26.5 | 21.3 | | | 33.9 |
| Na | 110 | 72 | | | 150 | | 227 | 166 | | | 291 | | 95 | 68 | | | 132 |

\*N and K were applied broadcast and incorporated pre-plant. \*\*See Table 1 for actual NPK applied in the bands and broadcast at each of the trial sites.