



Research Article

Evaluation of Irrigation Methods, Potato Cultivars and Vermicompost for Integrated Management of the *Meloidogyne incognita* and *Ralstonia* solanacearum Disease Complex

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Supplementary Table 1: Mean squares from analysis of variance for development of Meloidogyne incognita on potato cultivars as influenced by irrigation methods, cultivars, vermicompost, and their interactions.

| Source of variation | Mean squares | | | | | | | |
|-------------------------|--------------|----------|--------|---------|--------|---------|--------|--|
| | DF | Pf | Rf | G/R | RGI | EM/R | EMI | |
| Block | 2 | 995.9 | 19.8 | 318.0 | 0.33 | 245.0 | 0.77 | |
| Irrigation methods (IM) | 2 | 1885.2** | 31.5** | 746.3** | 1.7** | 585.1** | 1.6** | |
| Cultivars | 12 | 1357.0** | 31.3** | 462.9** | 1.3** | 393.5** | 1.2** | |
| Vermicompost (VC) | 2 | 1885** | 31.5** | 746.3** | 1.7** | 585** | 1.67** | |
| IM × Cultivars | 36 | 464** | 12.0** | 155.8** | 0.51** | 133** | 0.48** | |
| $IM \times VC$ | 2 | 1885** | 31.5** | 746** | 1.7** | 585.1** | 1.67** | |
| Cultivars × VC | 38 | 538** | 13.0** | 187** | 0.58** | 157** | 0.54** | |
| IM×Cultivars×VC | 38 | 538** | 13.0** | 187** | 0.58** | 157** | 0.54** | |
| Error | 78 | 56.4 | 5.17 | 12.7 | 0.085 | 11.9 | 0.10 | |
| CV (%) | | 11.2 | 11.7 | 11.10 | 8.20 | 12.1 | 9.3 | |

^{**}Significant at 5% level of probability, ns=non-significant, DF=degree of freedom and CV= coefficient of variation in percent, Pf=final nematode population, Rf= reproduction factor, G/R=number of galls per root system and tuber, RGI= root and tuber gall index, EM/R= egg masses per root system and tuber, EMI= egg mass index.





Supplementary Table 2: Mean squares from analysis of variance for development of Ralstonia solanacearum on potato cultivars as influenced by irrigation methods, cultivars, vermicompost, and their interactions.

| Source of variation | DF | Mean squares | |
|---|----|--------------|-------------|
| | | RSF | BWI |
| Block | 2 | 7.6 | 0.049 |
| Irrigation methods | 2 | 17.5** | 1.03** |
| Cultivars | 12 | 11.7** | 0.34** |
| Vermicompost (VC) | 2 | 17.5** | 1.03** |
| Irrigation methods × Cultivars | 36 | 3.9** | 0.12** |
| Irrigation methods × VC | 2 | 17.5** | 1.03** |
| Cultivars × VC | 38 | 4.6** | 0.17^{**} |
| Irrigation methods \times Cultivars \times VC | 38 | 4.6** | 0.17^{**} |
| Error | 78 | 0.43 | 0.012 |
| CV (%) | | 10.3 | 23.5 |

^{**}Significant at 5% level of probability, ns=non-significant, CV= coefficient of variation in percent, DF=degree of freedom, RSF= Ralstonia solanacearum final colonies, BWI= bacterial wilt index.

Supplementary Table 3: Mean squares from analysis of variance for yield on potato cultivars as influenced by irrigation methods, cultivars, vermicompost, and their interactions.

| Source of variation | | Mean square | | |
|---------------------------------|----|-------------|---------|---------|
| | | MY | UMY | TTY |
| Block | 2 | 14.0 | 40.8 | 16.6 |
| Irrigation methods | 2 | 344.9** | 34.8** | 254.4** |
| Cultivars | 12 | 471.9** | 44.48** | 647.2** |
| Vermicompost (VC) | 2 | 344.9** | 34.8** | 254.5** |
| Irrigation methods × Cultivars | 36 | 159.5** | 15.6** | 219.3** |
| Irrigation methods × VC | 2 | 344.9** | 34.8** | 254.4** |
| Cultivars × VC | 38 | 169** | 16.6** | 221** |
| Irrigation methods×Cultivars×VC | 38 | 169** | 16.6** | 221** |
| Error | 78 | 1.83 | 2.9 | 3.7 |
| CV (%) | | 6.5 | 21.4 | 7.3 |

^{**}Significant at 5% level of probability, ns = non-significant, DF= degree of freedom, CV= coefficient of variation in percent, MY= marketable yield, UMY= unmarketable yield, TTY= total tuber yield.