EFFECT OF SUBLABEL RATES OF METAM SODIUM WITH TRICHODERMA ON *RHIZOCTONIA SOLANI*

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This work was undertaken to determine the effects of *Trichoderma* spp. combined with label and sublabel rates of metam sodium on survival of *Rhizoctonia solani* in soil. Soils were infested with wheat bran preparations of *Trichoderma hamatum* Tri-4, *T. harzianum* Th-58, *T. virens* Gl-3, and *T. viride* Ts-1-R3. Soil was also infested with sterile beet seeds that were colonized with *R. solani*. Beet seeds were later recovered, plated onto water agar plus antibiotics and the growth of *R. solani* recorded. Preliminary experiments showed that *T. hamatum* and *T. virens* reduced survival and saprophytic activity of *R. solani* when the biocontrol fungi were incorporated into soil at 1.5% (w:w) or greater. Based on these data, biocontrol fungi in subsequent experiments were incorporated into soil at 2%. Metam sodium at label rate killed all biocontrol fungi and *R. solani*. At 1:2 and 1:5 dilutions, metam sodium reduced survival of *R. solani* and all *Trichoderma* spp. When biocontrol fungi plus the label rate of metam sodium and 1:5, 1:10, 1:50 or 1:100 dilutions of the label rate were tested together, there were no interactions between any biocontrol agent and the fumigant with respect to colony diameter, reflecting that all Trichoderma isolates tested reacted similarly to increasing concentrations of metam sodium. At the label rate of metam sodium, all *Trichoderma* spp. significantly reduced colony diameter, but not growth rate, of *R. solani* from beet seed. For the levels of metam sodium tested in combination with Trichoderma, it does not appear feasible to use a reduced rate of metam sodium to control *R. solani*. However, the combination of Trichoderma with metam sodium does reduce growth of *R. solani* in comparison to that provided by metam sodium at the label rate.