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TIMING OF POST TREATMENT IRRIGATION IMPACTS THE NEMATICIDAL VALUE OF SPIROTETRAMAT.

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Ruby Seedless grapes, *Vitis vinifera*, were grown in open-bottom microplots 60 cm in diameter by 120 cm deep. After five years population levels of *Meloidogyne incognita* averaged 1100 J2 per 250 cm³ soil sample. Vines were irrigated by drip and during the first two weeks after Movento spray they would normally receive 11.4 L of water/vine every three days. On April 28, 2009 150 vines received either a single foliar spray of Movento at 291 ml/ha, 457 ml/ha or were untreated. Penetrator, an adjuvant from Helena Chemical Company, was added to the spray at 237 ml/378 L water. Fruit from ten reps of each treatment were used for yield data collection while soil samples were collected monthly from each of five vines per replicate. Except for being one week later with the sprays, this experiment was repeated in 2010. Yield and nematode population reductions were quite similar for each of the two years except that 2010 yield improvement due to Movento was greater than that achieved in 2009. Irrigation timing was unaltered or made 3, 6, 9 and 12 days after the Movento spray. Soil samples following each treatment were collected from 0 to 45 cm depth at 30 day intervals for 6 months. Samples were extracted using a 45 micron sieve followed by three days of mist extraction. Grapevines were harvested each year in September. Yields for 2009 were significantly improved by waiting 9 days before resumption of irrigation regardless of application rate. The only other timing that provided significant yield benefit was a 6-day wait when sprayed at the 291 ml/ha treatment rate. Yields for 2010 were significantly improved only after the 291 ml/ha treatment rate whether irrigation was resumed at 3, 6 or 9 days with greatest yield improvement occurring at 9 days. Nematode control data correlated with increased grape yield. Inattentiveness to irrigation timing resulted in lack of significant nematode control. Avoidance of irrigation for 9 days provided four months of significant nematode reduction in 2009 and 2010 while irrigation resumption at 0, 3, 6, and 12 days provided less consistent and generally less effective nematode reductions. Reduction of *Meloidogyne* spp populations by 50% for five to six months is possible with attentiveness to post treatment irrigation timing. In larger field trials it has been notable that greatest nematode reductions occur between drip emitter sites rather than at drip emitter sites.