INTERACTION OF APPLICATION TIMING AND IRRIGATION ON MANAGING NEMATODES ON CARROTS WITH NIMITZ

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Three RCB field trials with 5 replicates per treatment were conducted to evaluate the effectiveness, compared to an untreated control (UC), of Nimitz 15G or Nimitiz Nematicide (fluensulfone, MCW-2, ADAMA, NC) for management of root-knot nematode (RKN), *Meloidogyne javanica*, on carrot. Treatments in the first trial, were UC, 1,3-Dicholorpropene (Telone II, 1,3-D, Dow AgroSciences, Indianapolis, IN), Nimitz 15G at 13.1, 18.7, and 26.2 kg/ha applied 20 days pre-plant followed by mechanical incorporation and a single irrigation; and the same three Nimitz 15G treatments followed by irrigation at 0, 5, 10, and 15 days following mechanical incorporation. Treatments in the second trial were UC, 1,3-D, and the same three rates of Nimitz 15G as in the first trial, applied 20, 30, or 45 days pre-plant followed by incorporation and a single irrigation. Treatments in the third trial were UC, 1,3-D, and pre-plant applications (0, 7, 14, or 21 days) of Nimitz Nematicide (a liquid formulation) with and without multiple irrigations. In the first trial, all multiple irrigation treatments had a greater total number of marketable carrots than UC ($P = 0.05$). The multiple irrigation treatments at 13.1 and 18.7 kg/ha also had a greater total weight of marketable carrots than UC ($P = 0.05$). The 18.7 and 26.2 kg/ha single irrigation treatments had fewer RKN at harvest than UC ($P = 0.05$). In the second trial, 1,3-D had a greater total number and weight of marketable carrots than untreated ($P = 0.05$). There was a trend for longer pre-plant intervals and higher rates of Nimitz 15G to have a greater total weight and total number of marketable carrots than UC. At harvest, the 18.7 kg/ha treatment at 45 days pre-plant, and 1,3-D had fewer RKN in soil than UC ($P = 0.05$). There was a trend for the 45-day pre-plant treatments to have fewer RKN than did the 30 and 20-day treatments. In the third trial, there appeared to be an advantage to longer pre-plant intervals (14 and 21 days), both with and without additional irrigations.