

Evaluation of Biological and Botanical Nematicides for the Control of Root-Knot Nematodes of Carrots

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Nematodes are likely the number one pest of carrots grown in California, particularly root knot nematodes. Currently the preferred method of control of nematodes for carrots is with the use of pre-plant soil fumigants. New fumigant regulations have been put in place to restrict the emissions of volatile organic compounds (VOC) from the use of soil fumigants. These regulations include limits on the amount of soil fumigants a grower is allowed to use in a year, caps on the amounts allowed within a township, and new expanded buffer zones meaning large parts of a field may not be treated at all. These new regulations mean that there will be some fields not treated for nematodes because of caps placed on the amount a grower is allowed to use or caps on the amount of fumigants allowed in a township. Alternative methods of nematode control need to be studied in field situations to quickly identify other possible control strategies. Field trials were conducted in 2008 and 2009 to evaluate the effectiveness of commercially available biological and botanical products that claim efficacy for nematode control. Some of these products have shown some potential as a method of nematode control in low to moderate population levels but do not perform as consistently as the standard soil fumigants.