Green Gazette

Using Cover Crops to Suppress Nematodes

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Nematodes are the most abundant animal, accounting for approximately 80% of all individual animals on Earth. A few nematodes are injurious to plants. Root-knot nematodes are a serious pest for commercial and hobbyist gardeners in Florida. Root-knot nematodes invade the roots of plants and cause galls which interfere with the transportation of water and nutrients in the plant, causing lowered yields and plant death.

Nematodes are very difficult to eradicate, however they may be controlled. An effective means of control is with cover crops. Cover crops are crops which are intended to be tilled under where they were grown. Cover crops reduce nematode populations by chemical or mechanical means or because the crop is not a food source for nematodes.

Some varieties of African and French marigolds produce a toxic compound from their roots which repels or kills nematodes. Before planting marigolds, one should check with the provider of the seeds to ensure that the particular cultivar being planted is effective in nematode control.

The cereal rye cultivar 'Elbon' reduces nematode populations by trapping the nematodes in its roots. When the nematode burrows into the root it becomes lodged in the root tissue and dies there.

Most of the cover crops reduce nematode populations by virtue of the fact that they are not a food source for nematodes. These crops can be divided into warm season and cool season cover crops, although in years without a hard freeze some may be grown all year in southwest Florida. Among these crops are crotalaria, black-eyed peas, crimson clover, and hairy vetch which also add nitrogen to the soil. As with marigolds and rye, one must make sure that the particular cultivar has been evaluated and found to be effective in root-knot nematode control.