



Tamil Nadu Agricultural University
Coimbatore – 641 003

Dr. E. Somasundaram, Ph.D.,
Public Relations Officer
Mobile: 94890 56730

Phone: 0422 - 6611302
Fax: 0422 – 2431821
E-mail: pro@tnau.ac.in

To
The Editor,

Date: 5-4-2017

Sir,

I request that the following matter may kindly be published in your esteemed daily:

Marigold Plants Keep Nematodes Away

Marigold (*Tagetes* spp.), African (*T. erecta*) and French marigolds (*T. patula*) belonging to the family Compositae, are known to control nematodes especially the root-knot nematodes, *Meloidogyne* spp. and lesion nematodes, *Pratylenchus* spp. infesting crop plants. Marigolds can be used as a cover crop or in a crop rotation as they produce a substance called alpha-terthienyl, which can aid in the reduction of root-knot nematodes, lesion nematodes, *Pratylenchus* spp and other disease promoting organisms, such as fungi, bacteria, insects, and some viruses. This compound is nematicidal, insecticidal, antiviral, and cytotoxic. The presence of alpha-terthienyl inhibits the hatching of nematode eggs.

The nematicidal compound (alpha-tertheinyl) is only released by active, living marigold roots, because exposure to near-UV light inactivates alpha-tertheinyl when taken out of the soil. Thus there is no benefit in amending a planting site with marigold extracts of homogenized plant parts. Marigold can be grown ahead of time as a cover crop to suppress nematodes before planting a susceptible crop such as a vegetable crop. In order to be an effective cover crop in nematode management, marigold should be planted at least two months before the desired vegetable crop. Furthermore, it must be planted at the same site in which the vegetable crop will be planted otherwise no benefits can be gained from marigold root exudates. Planting should be dense to ensure the best nematode control.

Marigolds cannot eradicate nematodes. In order for marigold to have a continuous effect on nematode populations it must be grown every season before the actual crop is planted, because nematode populations will increase over time in the presence of susceptible crops like most vegetable crops. Intercropping marigold with other crops to reduce plant-parasitic nematodes does not appear to be as effective as under monoculture in high density. Further, not all marigold varieties control all types of nematodes.

Dr. S. Subramanian and K. Poornima
Department of Nematology, TNAU, Coimbatore

Public Relations Officer