

SEED TREATMENT WITH NEMATICIDES AND FUNGICIDES FOR THE CONTROL OF WILT COMPLEX INVOLVING *ROTYLENCHULUS RENIFORMIS* AND *RHIZOCTONIA SOLANI* IN OKRA : S. Kumar and C. V. Sivakumar, Tamilnadu Agricultural University, Coimbatore-641 003.

The following seed treatments were evaluated for the control of wilt involving *Rotylenchulus reniformis* and *Rhizoctonia solani*, in glasshouse experiments.

1. Carbofuran 5% (w/w) + Talc 8% as sticker
2. Aldoxycarb 5% (w/w) + starch 2% as sticker
3. Carbendazim 0.2% (w/w)
4. Captafol 0.2% (w/w)
5. Control (untreated seeds sown in soil infested with both the pathogens)
6. Absolute control (untreated seeds sown in autoclaved soil).

The experiment was conducted in clay pots inoculated with the nematode and the fungus and compared with an absolute (autoclaved soil).

In control (without seed treatment) the pre-emergence damping off was 97.97% but in all the four chemical treatments the wilt incidence was significantly low, ranging from 9.50 to 27.03%. There was no pre or post-emergence wilting in absolute control, whereas total wilting was observed in control. Among the chemical treatments the post-emergence wilt varied from 3.73 to 8.33% and captafol gave the best results while the other three chemicals were on par.

Infection by the reniform nematode was suppressed by both nematicides and fungicides studied but the nematicides aldoxycarb and carbofuran were superior to the two fungicides.

OCCURRENCE OF ROOT-KNOT ON TURMERIC (*CURCUMA LONGA* L.) AND ITS CHEMICAL CONTROL : D. J. Patel, B. M. Makadia and H. M. Shah, Tobacco Projects, Gujarat Agricultural University, Anand Campus, Anand.

Turmeric (*Curcuma longa*, L.) Crop grown in the residential area of the Gujarat Agricultural University, Anand Campus, Anand during 1978-79 showed stunting and withering. Such plants died prematurely. Examination of the roots of such plants revealed heavy galling. The rhizomes were much reduced in size. Microscopic examination revealed the presence of large number of mature females

with egg masses identified as *Meloidogyne incognita*. Application of DBCP (Nemagon 60 EC) at 15 l a.i./ha and phenamiphos (Nemacur 5G) at 2.5 kg. a.i./ha. checked the disease and resulted in increased rhizome yield to the tune of 360 and 208% respectively. The reduction in the disease was to the extent of 44 and 15% respectively.

EFFECT OF REMOVAL OF KNOTTED ROOT PORTION ON THE ESTABLISHMENT AND YIELD OF BIDI TOBACCO : G. J. Patel, H. M. Shah, D. J. Patel and G. B. Valand. Tobacco Projects, Gujarat Agricultural University, Anand Campus, Anand.

During the period of seedling famine, the farmers go for planting even heavily knotted tobacco seedlings. Such seedlings later on remain stunted and the farmers suffer heavy loss. To explore the possibility of planting such seedlings after the removal of knotted root portions on the development and the yield of bidi tobacco in general as well as in DBCP treated plots, an experiment was conducted for two years. Heavily as well as moderately knotted seedlings were selected for the purpose and unclipped as well as seedlings after removal of knotted root portions were planted. Apparently healthy seedlings served as check. These five types of seedlings were relegated to sub plots while nematicidal treatment was allocated to main plots. The results indicated that the use of nematicide improved the growth of the seedlings and reduced the disease significantly, however, clipping of the knotted roots did not make any substantial impact either on seedlings establishment or crop yield. The planting of heavily knotted seedlings results in 44% loss in yield.

ASSESSMENT OF LOSS DUE TO ROOT-KNOT DISEASE IN BIDI TOBACCO NURSERY : H.M. Shah, D.J. Patel and G. B. Valand, Tobacco Projects, Gujarat Agricultural University, Anand Campus, Anand.

The reduction in number of transplants as well as total seedlings is observed due to root-knot disease in bidi tobacco nursery. To estimate this loss, an experiment was conducted from 1978-79 to 1980-81 at the Bidi Tobacco Research Station, Gujarat Agricultural University, Anand Campus, Anand. The nematodes were controlled by rabbing the nursery area during first fortnight of June every year followed by immediate application of DBCP (Nemagon 60 EC) at 15 l a.i./ha given alongwith irrigation water in 30 cm deep furrows 15 days prior to seeding.