

Research Paper :

Integrated management of betel vine wilt in Vidarbha

S.B. BRAHMANKAR, N.R. DANGE AND DEEPALI G. TATHOD



International Journal of Plant Protection, Vol. 4 No. 1 (April, 2011) : 146-147

See end of the article for authors' affiliations

Correspondence to :
S.B. BRAHMANKAR
Department of Plant
Pathology, Dr.
Panjabrao Deshmukh
Krishi Vidyapeeth,
AKOLA (M.S.) INDIA
Email : bramhash@
gmail.com

SUMMARY

Wilt or root rot is a major constraint to betel cultivation in Vidarbha. In present investigation, integrated disease management module (M-III) (soil solarization, *Trichoderma*@ 10 kg/ha (set and soil application), Neem cake@ 2000 kg/ha, NPK @ 100:50:50 kg/ha and drip system of irrigation) was found significantly superior not only in controlling the wilt causing fungus and nematode but also had a favourable effect on growth parameters.

Brahmankar, S.B., Dange, N.R. and Tathod , Deepali G. (2011). Integrated management of betel vine wilt in Vidarbha. *Internat. J. Pl. Protec.*, **4**(1): 146-147.

Key words :

Betel vine, Root rot/wilt, Integrated management

Betel vine is victim of several fungal diseases caused by various organisms. But the most important enemy is wilt. The disease finds favourable with special condition under which betel is cultivated. Due to heavy incidence of wilt in Vidarbha, its cultivation has been abandoned by many of betel growers and the area under cultivation is diminishing steadily. Different workers reported varied losses at different locations, which ranged from 4 to 100 per cent due to wilt disease (Saksena, 1977). Since wilt is more destructive and serious threat to betel vine crop, no individual control measure would serve the purpose. Hence, in the present investigation, efforts were made to evolve the effective plant protection module (set of treatments) for management of wilt disease.

MATERIALS AND METHODS

The fungus, *R. bataticola* was isolated from diseased samples of Kapoori cultivar betel vine and its pathogenicity was proved. Five integrated disease management modules were prepared and set of treatments in each module was randomized in field with randomized block design. The trial was conducted at Betel Vine Research Station,

Diwthana, Dist. Akola (MS). The observations were recorded for 25 months at five months interval. The details of components in each module are given in Table 1.

RESULTS AND DISCUSSION

Integration of different desirable treatments in different sets/IDM modules has found to have a great effect on the incidence of betel vine wilt under natural conditions in field. The data recorded at various intervals upto 25 MAP is presented in Table 1. It was observed that the differences in wilting per cent were not significant up to five months after planting. However, the effect of treatments in arresting the wilting percentage was found increasing continuously up to the period of 25 months of observation.

The IDM module M-III containing *Trichoderma* @ 10 kg/ha + Neem cake @ 2000 kg/ha + NPK @ 100:50:50 kg/ha with drip system of irrigation and soil solarization was found to be the most effective. It resulted in 41.93 per cent decrease in wilting followed by M-II (28.76%) and M-I (24.30%) Over control. The effectiveness of *Trichoderma*, neem cake, solarization in controlling wilt

Received :
October, 2010
Accepted :
January, 2011