PART B

MANAGEMENT OF THE DISEASE
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INTRODUCTION

Many control measures have been tried for the management of wilt disease of tobacco. Some of the methods adopted in the field condition are chemical fungicides, field sanitation, soil amendments, solarization and crop rotation (Pandey and Choubey, 2003). In addition to these, raising resistant varieties, removing infected plant tissue to prevent overwintering of the disease are also practiced. Many fungicides like Metalaxyl, Carbendazim, Thiophanate methyl, Mancozeb, Copper hydroxide, Tridemorph, Triadimefon, Difenconazole and Propiconazole are experimented and used in the field successfully for the control of wilt and root-knot complex. However, on the long run, this method was not found to be sustainable (Ramanathan et al., 2002). This is because the pathogen became resistant over the period of constant use of fungicides. To overcome these problems, the crop disease management should include more of ecofriendly practices like botanicals and biocontrol formulations (Krishnamurthy and Gnanamickam, 1997). Many plants which are growing around the tobacco field may be exploited for antifungal activity. These extracts are known to exhibit antifungal activity. Recently, farmers have been practising the management of some plant diseases though the application of leaf decoctions and also decoctions from other parts of some plants.
Meanwhile, researchers are targeting specific plant extracts either aqueous or solvent for controlling plant diseases. Besides these, many antagonistic microbes have been investigated and some of them are even commercialized (Elad et al., 1982). The control of Fusarium wilt of tobacco is presently done only by using fungicides and nematicides by the farmers. Thus efforts are very much needed to investigate potential chemicals, botanicals, and biocontrol agents to overcome this devastating soil-borne plant pathogen. Hence the present investigation is taken up to evaluate some commercially available fungicides, easily accessible plant extracts and biocontrol agents. The promising biocontrol agents are also tried in the field for recommending to the farmers.

Management of the disease is presented in 4 chapters (Chapter 7-10).