

Editorial

Plant pathological problems of principal crops in Western India: Current status

The western tract of the country is endowed with not only field crops, but also with horticultural crops, in a bountiful manner. The term 'rainbow revolution' perhaps has its aptness in the western tract of the country. Several plant diseases of economic importance are prevalent in this region. Among the cash crops, cotton is worst affected by wilt caused by *Fusarium oxysporum* f. sp. *vasinfectum* followed by the menace of leaf curl viral disease. Sugarcane diseases cause a yield loss of 19.0% approximately and rust along with eyespot are prevalent in this region. Groundnut, besides the 'Tikka' disease caused by *Cercospora arachidicola* / *personata* is also infected by collar rot disease which causes a heavy economic loss. No chemical fungicide are found effective against the collar rot disease, but seed treatment with Carboxin 37.5% + Thiram 37.5% has yielded some results. Wilt of chickpea and pigeon pea continue to be the major bottlenecks in sustainable pulse production and leads to a yield loss of 20-25% and 10-15% respectively. Phytophthora and Alternaria blight of pigeon pea, also are constraints in the western tract of the country. Moong bean yellow mosaic virus (MYMV) is the sole viral disease which has jeopardized the cultivation of pulse in this area. Sterility mosaic of pigeon pea is gradually coming to the fore to further accentuate the disease problem.

Damping off of tomato caused by a complex of *Pythium* sp., *Rhizoctonia* sp. and *Macrophomina* sp. is a woe in vegetable nursery and soil drenching with Fosetyl-Al or Captan or Trichoderma formulations did provide control to some extent. Seed treatment of tomato with Trichoderma formulation also is beneficial to manage the disease. Bacterial spot caused by *Xanthomonas campestris* pv. *vesicatoria* may be observed in some of the drier tracts of Maharashtra. However, early blight caused by *Alternaria solani* is most widespread in the region. The disease infects both at the vegetative and reproductive phase of the crop. Dithiocarbamates, Strobilurins and carboxylic acid amide fungicides are used for its control. Tomato spotted wilt and tomato leaf curl are the two viral menaces that need a mention as they also affect the crop yield considerably.

Fruit crops especially grapes, which forms a formidable export market, is severely infected by powdery and downy mildew caused by *Erysiphe necator* and *Plasmopara viticola* respectively. Several new generation fungicides like Proquinazid, Amisulbrom, Benalaxyl, Metrafenone etc. have been successfully used to control the diseases. However, being an export crop, the pre harvest intervals (PHIs) of the fungicide application needs to be monitored stringently. Sigatoka of banana is also a common problem and along with Fusarium wilt, it is responsible for lowering the yield of farmers. Anthracnose of mango caused by *Colletotrichum gloeosporioides* have been successfully managed by the application of triazoles, but, powdery mildew in some pockets of Maharashtra is still a major bottleneck. Citrus dieback and citrus greening also have brought down the economic potential of the fruit industry. Perhaps the worst disease which has hit the economic paradigm is the bacterial spot of pomegranate caused by *Xanthomonas campestris* pv. *punicae*. No chemicals are reported to control this dreadful disease and growers resort to amendment of cultural practices to save the crop.

With the onward march of the dial hour and with the changing times, diseases in western region of the country, have undergone several changes. The arsenal of fungicides are limited to control the onslaught of the pathogenic invaders, and a comprehensive management approach from the beginning to the end of the crop season should be adopted. The management strategies adapted should be ably supported by disease/ weather forecast system for their successful implementation, execution and obtaining the desired results.

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