

Identification of Pearl Millet Blast and Their Management

Deshmukh S. K.¹, Patil L. P.¹, and Ghante P. H.²

¹M.Sc., Department of Plant Pathology, College of Agriculture, Badnapur., (M.S.)

²Senior Scientist, Plant Pathology, Agriculture Research Station, Badnapur., (M.S.)

SUMMARY

Pearl Millet is one of the assured *Kharif* crop under environment domesticated in the annual rainfall of 150 mm to 1000 mm in India. Pearl millet is a richer source of protein, carbohydrates, fat, calcium, phosphorus and iron etc. It also contain fairly higher amount of carotene, riboflavin, niacin, tryptophan and lysine. Among the reported diseases, downy mildew, blast, ergot, smut and rust are the major diseases of the crop. Blast has emerged as serious disease affecting both grain and fodder production. This disease observed in severe form at both seedling and later stage of plants which results in premature drying of leaves and great reduction in yield. Management of disease through cultivation of resistant variety is the most economical and relevant way mainly by resource poor and marginal farmers, this disease is also effectively manage by using different fungicide, fungal antagonistics, bacterial antagonistics and plant extracts.

INTRODUCTION

Pearl millet blast is caused by *Pyricularia grisea* fungus. This is the common and serious disease of pearl millet occurred at early stages of crop growth causing greater reduction in grain yield and fodder production. This disease is regularly occurred in major pearl millet growing areas of Maharashtra such as Aurangabad and Jalna. Blast incited by *Pyricularia grisea* was first reported in India from Kanpur in 1953 (Mehta *et al.*, 1953) and remain as minor disease till the end of 20th century but from last one decade the disease has occupied a key position among the pearl millet diseases particularly in north central region of the country specially Rajasthan, Uttar Pradesh, Madhya Pradesh, Haryana, Punjab and Delhi. The disease appears as grayish, water-soaked foliar lesions that enlarge and become necrotic, resulting in extensive chlorosis and pre mature drying of young leaves (Wilson and Hanna 1992). Different fungicides, fungal bio-agent, bacterial bio-agent and plant extracts are useful for the effective management of pearl millet blast.

Symptoms:

Blast infected pearl millet plants shown the chlorosis of leaves. Green leaves turned into yellow in colour. Infected plants loss their vigourness, turgidity and finally drying and death of plant occurs. Initial symptoms of infection are white to gray-green lesions or spots with darker borders produced on all parts of the shoot, while older lesions are elliptical or spindle-shaped and whitish to gray with necrotic borders. Later lesions become enlarge and coalesce to kill the entire leaf. Symptoms are observed on all above-ground parts of the plant. When infection is severe the lesions can also be seen on the leaf collar, culm, culm nodes, and panicle neck node. Nodal infection causes the culm to break at the infected node (rotten neck).

Blast Infected Leaves Sample





Management

- Cultivation of resistance variety.
- Collection and destruction of infected plant parts.
- Deep ploughing in summer.
- When the infection is low spray Tricyclazole 75 WP or Carbendazim 50 WP or Isoprothiolane 40 EC.
- If the infection is higher spray crop with fungicides like Difenconazole 25 EC or Tebuconazole 25.9 EC or Azoxystrobin 25 EC or Hexaconazole 5 EC.

CONCLUSION

Pearl millet blast caused by *Pyricularia grisea* is one of the important disease of Pearl millet causing greater loss in yield. Cultivation of resistance variety and integrated disease management including use fungicides is best way to manage the Pearl millet blast.

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