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ROLE OF CULTURAL PRACTICES IN MANAGEMENT OF FUSARIUM HEAD BLIGHT

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ABSTRACT

Fusarium spp. are common fungal pathogen that affects a variety of crops mainly wheat and barley. It destroy the seeds and affects the yield of the crop. Management practices are adopted to decrease the effect of the *Fusarium graminearum* which is main fungal pathogen causing Fusarium head blight. This paper provides an overview of the role of cultural practices which helps to manage the fungal spores.

Keywords: *Fusarium graminearum,* cultural practices, pathogen, Fusarium head blight.

INTRODUCTION

Fusarium head blight is considered to be one of the most devastating diseases of wheat and barley. FHB is caused by fungus Fusarium graminearum. This fungus can infect heads of wheat and barley resulting in yield loss. Cultural practices are effective method to manage this disease. FHB can be managed by the use of resistant cultivar, effective crop rotation, crop residue, fungicides, seed treatment, and tillage practices.

REVIEW OF LITERATURE

According to Ruth Dill-MACKY, FHB incidence and severity were lower in plough treatments than in no -till treatments. He also explains crop residue management to reduce the risk of Fusarium head blight. According to David A. Marburgur at all, FHB can be managed by effective crop rotation done in that specific area in a particular seasons.

Management practices for Fusarium head blight

- Symptoms-The symptoms appears on the heads of the wheat and barley crops with reduced grain size and grains appears yellow or pinkish in colour.

- The heads of the wheat appears discoloured or brown

Picture showing the symptoms of Fusarium Head blight

Cultural Practices which are mainly used to manage Fusarium head blight

- **Crop rotation:** To manage FHB, rotate the crop with non- host crop mainly soya bean sunflower etc .Some evidence show that this fungus does not grow well on residues of some crops like soya bean.
- **Crop residue management:** Fusarium graminearum grows well on crop residue

especially of wheat so manage it properly by effective tillage practices and destroy the infected residue. Studies shown that the wheat residue is perfect for growth of this fungus

Picture showing the growth of fungus (pink colour) on wheat residue

- **Resistant cultivar:** The use of resistant cultivar which is probably resistant to the FHB
- **Seed Treatment:** Apply seed treatment before using it for the next growing season with Suitable fungicides which is effective like several triangle
- **Tillage:** Tillage practices are done in a pattern that the inoculants present on crop residue be fully destroyed so that it couldn't effect the next season crop .This fungus have a capacity to be in dormant stage in crop residues and it becomes active when favourable conditions occurs
- **Clean seed:** The seed should be clean before using it and if possible treat it with Suitable fungicides
- **Increasing seed rate:** To overcome the risk, a proper or excessive seed rate should be used so that it may not affect financially.

CONCLUSION

Fusarium head blight is a devastating disease spread worldwide. Several methods to overcome this disease and reduce the risk losses. Cultural practices are effective method and should be performed at ground level. Crop residue management and crop rotation is the main cultural practices which are performed judiciously to reduce risk losses. FHB requires a specific set of environment conditions for spread of the disease .So ,the main focus of cultural practices is to not provide the favourable temperature for growth of the fungus .The role of cultural practices is significant.

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