

Efficacy of new fungicides and bioagents against grain mold fungi

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Received : 10.01.2018

Accepted : 05.03.2018

Published : 30.04.2018

Sorghum [*Sorghum bicolor* (L.) Moench] is a vital life-sustaining food crop for human being as well as for livestock in many parts of world. It is one of the major staple foods for the world's poorest and insecured people. There are several factors responsible for low yield of *Kharif* Sorghum in Maharashtra. Among these factors, diseases are major constraint for low yield. The five major disease problem in order of importance are grain mold, charcoal rot, downy mildew, anthracnose and sorghum viral disease. Among these diseases grain mold fungi occurs at maturity stage on sorghum hybrids of Maharashtra state is important. Initial mold symptoms appear as white or grey mycelial growth on rachis, glumes and anthers. The grain become discolored and various discolorations such as black (*Curvularia* spp), pink (*Fusarium* spp.), grey (*Alternaria* spp.) are observed. The major fungal pathogens viz. *F. moniliforme*, *C. lunata* are responsible for grain quality deterioration in Grain mold therefore management of these pathogens by the new fungicides is the need of research and not much work was done earlier on chemical and biological management. Considering these aspects seven fungicides evaluated *in vitro* against *F. moniliforme*, *C. lunata*. However, of the fungicides tested, Carbendazim 12% + Mancozeb 63%, Difconazole, Hexaconazole, Propiconazole were found antifungal or fungistatic with significant inhibition of mycelial growth of the test pathogen. Five fungal antagonists and two bacterial antagonists evaluated *in vitro* were found fungistatic effective against *F. moniliforme*, *C. lunata*. However, out of the bioagents viz., *T. viride*, *T. harzianum* and *T. koningii* were found effective with significant inhibition of mycelial growth of the test fungus

Key words: Fungicides, bioagents, grain mold fungi, management, sorghum
