

IMPACT OF VARIOUS FUNGICIDES AGAINST THE ERGOT DISEASE OF SORGHUM CAUSED BY *CLAVICEPS* SP. UNDER SOUTH GUJARAT CONDITION OF GUJARAT

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Abstract: Sorghum (*Sorghum bicolor* L.) is one of the main staples for the world's poorest and most food-insecure people commonly known as Jowar. It grows well in both summer and winter, and is thus both a *rabi* and *kharif* crop. The disease reduces yield through poor seed set and causes harvesting difficulties due to sticky honeydew on seed heads and also grain quality distress heavily due to the presence of the fungal bodies. An experiment was conducted at Sorghum Research Station, NAU, Surat (Gujarat) to find out the most effective fungicide for the control of ergot disease in sorghum. From the result analysis, the ergot incidence was found significantly lower in the treatment of Hexaconazole 5% SC @ 0.005% (18.30 % & 16.85 %) respectively in both the years.

Keywords: Sorghum, Ergot, *Claviceps* sp., *Sorghum bicolor*, Fungicides, Treatment

REFERENCES

Anahosur, K.H., and Patil, S.H. (1982). Effect of date of sowing on the incidence of ergot of sorghum. *Indian Phytopathology* 35:507-509.

Bandyopadhyay, R., and Mughogho, L.K. (1988). Evaluation of field screening techniques for resistance to sorghum grain molds. *Plant Disease* 72:500–503.

Bandyopadhyay, R., Mughogho, L.K., and Rao, K.E.P. (1988). Sources of resistance to sorghum grain molds. *Plant Disease* 72:504–508.

Bandyopadhyay R, Frederickson DE, McLaren NW, Odvody GN, Ryley MJ (1998) Ergot: a new disease threat to sorghum in the Americas and Australia. *Plant Disease* 82, 356–367.

Forbes, G.A. (1986). Characterization of grain mold resistance in sorghum (*Sorghum bicolor* L. Moench). Ph.D. dissertation, Texas A&M University, College Station, Texas, USA. 75 pp.

Frederickson, D.E., (1993). Effect of fungicides on infectivity of ergot conidia and on disease severity. In ICRISAT Southern and Eastern Africa Regional Program annual report 1993. Bulawayo, Zimbabwe: SADC (Southern African Development Community)/ICRISAT (International Crops Research Institute for the SemiArid Tropics) Sorghum and Millet Improvement Program.

Kulkarni, B.G.P., Seshadri, V.S., and Hegde, R.K. (1976). The perfect stage of *Sphacelia sorghi*

McRae. *Mysore Journal of Agricultural Science* 10:286-289.

McLaren (2003). Efficacy of fungicides in the control of ergot (*Claviceps africana*) in sorghum (*Sorghum bicolor*) hybrid seed production. *South African Journal of Plant and Soil* 20 (3): 154-156.

McLaren, N.W. and Wehner, F.C. (1990). Relationship between climatic variables during early flowering of sorghum and the incidence of sugary disease caused by *Sphacelia sorghi*. *Phytopathology* 130: 82-88.

Molefe, T.L. (1975). Occurrence of ergot on sorghum in Botswana. *Plant Disease Reporter* 59:751-753.

Navi, S. S., Bandyopadhyay R., Nageswara Rao, T. G., Tooley, P.W. (2002a). An outbreak of sorghum ergot in parts of Andhra Pradesh, India. *International Sorghum and Millets Newsletter* 43: 68–70.

Navi, S. S., Bandyopadhyay, R., Tonapi, V. A., Nageswar, Rao T. G., Tooley, P. W., Reddy, R. K., Indira S, Pande, S. (2002b). Prevalence of ergot of sorghum in India. *International Sorghum and Millets Newsletter* 43: 70–71.

Tsukiboshi, T, Shimanuki, T, Uematsu, T. (1999). *Claviceps sorhicola* sp. nov., a destructive ergot pathogen of sorghum in Japan. *Mycol Res.* 103: 1403-1408.

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