

STUDIES ON AERIAL BLIGHT OF SOYBEAN CAUSED BY *RHIZOCTONIA SOLANI* KÜHN

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Abstract: Soybean aerial blight caused by *Rhizoctonia solani* is a most important oilseed disease. This disease is destructive and causes heavy losses in the yield particularly in warm and humid parts of the countries. The use of resistant varieties is the cheapest, easiest, safest and most effective method to manage the aerial blight disease. Forty-two entries screened for resistant to aerial blight of soybean, 2 entries (SL 752 and RKS 48) were found absolutely resistant and 6 entries were highly resistant. Soybean crop sown at 29th July showed least disease severity (11.04%) in comparison to 21st June, 9th July and 19th July sowing. Losses assessment study revealed that maximum percent reduction in seed weight, plant height, pods and branches were recorded in 9 score plants (more than 50% leaf area infected) i.e., 55.55%, 40.90%, 71.42%, and 72% respectively. Maximum aerial blight intensity was recorded in the crop sown in flooded field.

Keywords: Aerial blight of soybean, *Rhizoctonia solani*, Screening of soybean varieties, Web blight

REFERENCES

- Anonymous** (2006). Handbook of Agriculture, ICAR, New Delhi.
- Anonymous** (2007). All India Coordinated Research Project on Soybean. Indian Council of Agriculture Research. pp:278.
- Anwar, S. A., Apas, S. F., Gill, M. M., Raut, C. A., Mahmood, S. and Bhutt, A. R.** (1995). *Pakistan J. Phytopath.* 7: 184-190.
- Hepperly, F.R.; Mignucci, J.S., Sinclair, J.B. and Smith. R.S.** (1982). *Rhizoctonia* web blight of soybean in Puerto Rico. *Plant Disease*, 66: 256-257.
- Kucharek, T.** (1981). Some common soybean leaf and stem diseases. *Pl. Patho. Dept. IFAS. Uni. Florida*.
- Mukhopadhyay, A.N., and Singh, R.A.** (1984). Phaslon Ke Rog. Anuvad and Prakashan Nideshalya, Pantnagar, Nanital. 244-245.
- Palat, R.; Narain, U. and Singh, P.N.** (2004). Screening of soybean varieties against web blight. *Annals of Plant Protection Sciences*, 12(2): 456-457.
- Patel, B. L. and Bhargava, P. K.** (1998). *Indian J. Agric. Sci.*, 68: 277-278.
- Prasad, R.** (2005). In Text book of Field Crop Production. ICAR, New Delhi. pp: 391
- Ram, H., and Trikha, R.N.** (1997). Soybean Ki Kheti. ICAR, New Delhi Publication. pp: 95.
- Sinclair, J.B.** (1982). Compendium of soybean diseases. *American Phytopathol. Society*, pp: 27-28
- Stetina, K.C.; Stetina, S.R. and Russin, J.S.** (2006). Comparison of severity assessment methods for predicting yield loss to *Rhizoctonia* foliar blight in soybean. *Plant Disease*, 90(1): 39-43.
- Teo, B.K.; Yitbarek, S.M.; Verma, P.R. and Morrall, R.A.A.** (1988). Influence of soil moisture, seeding date, and *R. solani* isolates (AG 2-1 and AG 4) on diseased incidence and yield in canola. *Can. J. Pl. Path.*, 10:2 151-158.
- Thapliyal, P.N. and Dubey, K.S.** (1987). In Soybean Research at Pantnagar, Dept Tech. Bulletin 114, Directorate of Exp station, GBPUAT, Pantnagar. Plant Pathology, pp: 19-30.
- Thind, T.S.** (2005). Diseases of field crops and their management. Daya Publication House, Delhi. pp: 262-263.
- Williamson, M.R.; Rothrock, C.S. and Mueller, J.D.** (2006). First report of *Rhizoctonia* foliar blight of soybean in South Carolina. *Plant Health Progress*, (October): 1-2. Yang, X.B., Berggren, G.T., and Snow, J.P. 1990b. Seedling infection of soybean by isolates of *Rhizoctonia solani* AG-1, causal agent of aerial blight and web blight of soybean. *Plant Disease*, 74(7): 485-488.

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