SCREENING OF 110-R ROOT STOCK BASED TABLE VAREITIES OF GRAPE VINE (VITIS VINIFERA L.) AGAINST ANTHRACNOSE DISEASE CAUSED BY ELSINOE AMPELINA (DE BARY) SHER IN MANDSAUR DISTRICT OF MADHYA PRADESH

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Abstract: Grape is most important refreshing, commercial fruit crop and planted in temperate, subtropical and tropical agroclimatic condition. It is rich in sugar, vitamin, tannin and mineral like calcium, phosphorus and iron. 30 table varieties of grape viz Sharad Seedless, Krishna Seedless, Flame Seedless, A 18-3, Fantasy Seedless, Kishmish Moldowsky, Black Seedless, Kishmish Rozavis Red, Crimson Seedless, Ruby Seedless, Kishmish Chorni, Thompson Seedless, 2-A Clone, Superior Seedless, Manjri Naveen, Seedless Merbein, H-5, Sonaka, New Perlette, New Perlette, Sultanin-2, Pusa Seedless, Pusa Urvashi, Kishmish Rozavis White, Red Globe, Christmas Rose, Rizamat, Italia, Dilkhush, Muscat of Alexandria, Anabe-Shahi planted for table purpose in Horticulture research farm located at Krishi Nagar under RVSKVV, KNK College of Horticulture, Mandsaur M.P., India. Intensity of anthracnose disease caused by Elsonoe ampelina on grape was recorded by 0-4 scale of visual rating in natural epiphytotic condition. The disease appeared during the first week of July 2018 (SMW-27) with disease intensity of 10.10% with the maximum temperature (32.27 °C), minimum temperature (22.58 $^{\circ}$ C), humidity (75.42%), and rainfall (26.25mm). It reached its peak at the second week of September (MSW-37) with maximum disease intensity of 60.26% with the maximum temperature (29.07 °C), minimum temperature (23.68 °C), humidity(89.71%), and rainfall (2.5mm). The higher disease severity during warm and wet weather was found. The disease intensity ranged between 10.10 to 60.26 per cent and cumulative disease intensity increased from July to September (SMW-27 to SMW -37). After categorization for disease intensity Fantasy Seedless (15.77%), Sultanin-2 (20.45%), Kishmish Rozavis White (25.80%) and Anabe-Shahi (24.66%) were recorded as moderately susceptible varieties. Sharad Seedless (42.00%), Krishna Seedless (40.50%), A 18-3 (34.34%), Flame Seedless (28.62%) and eleven varieties were treated as Susceptible. Further, Superior Seedless (60.00%), 2-A Clone (52.54%) and Manjri Naveen (51.76%) were considered as highly susceptible.

Keywords : Vitis vinifera, Elsonoe ampelina, Anthracnose

REFERENCES

Anonymous (2006). Proceedings of International Symposium on Grape Production and Processing, at Baramati, Maharashtra (India) held on Feb 6-11, 2006.

Brook, P.J. (1973). Epidemiology of grapevine anthracnose caused by *Elsinoe ampelina*. New *Zealand Journal of Agricultural Research* 16 : 333-342.

Chandermohan, Singh, J. and Thind, T.S. (2002). Prevalence of grape anthracnose and carbendazim resistance in *Gloeosporium ampelophagum* in Punjab. Plant Disease Research 17 : 176-177.

Chatta, S.K. (1992). Biology, perpetuation and control of grape vine anthracnose caused by Sphaceloma ampelinum Shear *Elsinoe ampelina* Shear). M.Sc. Thesis submitted to Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu and Kashmir, Shalimar, Srinagar, p. 33.

Jamadar, M.M. (2007). Etiology, Epidemiology and Management of Anthracnose of Grapevine. Ph.D. Thesis submitted to University of Agricultural Sciences, Dharwad, Karnatka.

Mukherji, K.G. and Bhasin, J. (1986). Vitis: Plant Disease of India. *A Source Book*, pp. 258-259.

Pathak, V. N. (1980). Grape (*Vitis vinifera* L.). In: Diseases of Fruit Crops, *Oxford and IBH Publishing Company*. New Delhi, p.390.

Radha, T. and Mathew, L. (2007). Fruit Crops. Third Edition. *New Delhi publishing Agency*, p. 419.

Shahzad Ahmad, Nisar Ahmad and Ashraf, S. (2006). Occurrence of Downy mildew of grapes (*Plasmopara viticola*)-a new report from J and K. *Applied Biological Research* 8 : 44-46.

Suhag, L.S. and Grover, R.K. (1973). Anthracnose of grapevine can be controlled. Indian *Farming* 23 : 22-24.

Suhag, L. S. and Kaushik, J. C. (1982). Studies on four pathogenic fungi on grapevine in North India. Indian *Phytopathology* 35: 344-346.

Thind, S.K. and Nirmalijit, K. (2005). Status of grape anthracnose in Punjab. *Journal of Mycology and Plant Pathology* 35(1):18-20.

Thind, S.K., Monga, P.K., Kaur, N. and Arora, J.K. (1998). Effect of anthacnose disease on fruit quality of grapes. *Journal of Mycology and Plant Pathology* 31: 253-254.

Thind, S.K., Monga, P.K., Nirmalijit Kaur, P.K. and Kumar, H. (1997). Evaluation of grape varieties against anthracnose and its fungicidal control. *Plant Disease Research* 12: 99-100.

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