Journal of Agricultural Technology 2011 Vol. 7(6): 1459-1474
Available online http://www.ijat-aatsea.com
ISSN 1686-9141

A review of the occurrence, biology and management of common bacterial blight

C. Karavina[1*], R. Mandumbu[1], C. Parwada[1] and H. Tibugari[2]

[1]Bindura University of Science Education, Department of Agricultural Science, Private Bag 1020, Bindura, Zimbabwe
[2]Women's University in Africa, Department of Horticulture, P.O. Box MP 1222, Mount Pleasant, Harare, Zimbabwe

C. Karavina, R. Mandumbu, C. Parwada and H. Tibugari (2011) A review of the occurrence, biology and management of common bacterial blight. Journal of Agricultural Technology 7(6): 1459-1474.

Common bacterial blight caused by *Xanthomonas axonopodis* pv. *phaseoli* (*Xap*) has been reported in many countries of the world. The disease is prevalent in areas that experience warm weather conditions, causing up to 40% yield reduction. *Xap* grows on a number of different media producing colonies that are yellow, mucoid and convex. The bacterium is single celled and motile by means of a polar flagellum. Besides infecting *Phaseolus vulgaris*, *Xap* also attacks other legumes like *Glycine max* and *Dolichos lablab*. It is capable of epiphytic survival on both leguminous and non-leguminous plants like *Chenopodium album*, *Solanum nigrum*, *Zea mays* and *Amaranthus retroflexus*. The disease causes symptoms to appear on leaves, stems, flowers and seeds. The pathogen can survive in seeds for up to fifteen years, and is also known to overwinter in crop debris. Seed infection is the primary means by which the pathogen spreads. Therefore, the production and use of certified seeds is one control measure that is effective in dealing with the disease. Besides, there are chemical and cultural control options available in the management of common bacterial blight.

Key words: common bacterial blight, *Xanthomonas axonopodis* pv. *phaseoli*, *Phaseolus vulgaris*, epidemiology, symptoms, seedborne, disease management.

Occurence of common bacterial blight

Common bacterial blight (CBB) caused by *Xanthomonas axonopodis* pv. *phaseoli* (Smith) Vauterin *et al*. (*Xap*) has been reported in many countries. Weller and Saettler (1980b) reported the disease in Michigan, USA. In other parts of the USA, the disease has been reported in Nebraska, Colorado, Wyoming (CIAT, 1981), Nebraska, New York and Texas (CABI and EPPO, undated). The disease has also been reported in Colombia, Chile (Schuster and Coyne, 1975), Brazil, Mexico (Crispin and Campos, 1976), and the Dominican

* Corresponding author: C. Karavina; e-mail: ckaravina@hotmail.com