

## **LATE BLIGHT – AN INCREASING THREAT TO SEED POTATO PRODUCTION IN NORTH- WESTERN PLAINS OF INDIA**

**Author:** R.K.Arora

Central Potato Research Station, P.B. No.1, Model Town P.O., Jalandhar – 144 003

**Keywords:** North western plains of India, late blight an increasing threat, shift in pathogen population

**Abstract:**

North-western plains of India due to their low aphid population in autumn season have emerged as prime seed producing areas in India and cater to a large demand of quality seed all over the country. Data recorded on appearance and build up of late blight for the past 27 years (1980 -2006) revealed that the disease which used to occur in mild to moderate form and epiphytotic only once in 4 to 5 years is steadily assuming epiphytotic proportions almost every alternate year in the recent past. It appeared in epiphytotic form in 3 out of 4 years from 2003 to 2006. A comprehensive survey on loss in yield by late blight carried out during 2006-07 crop season revealed an average loss of 22% in potato productivity resulting in a net loss of about 0.16 million tons of potato in the state of Punjab alone. An increase in disease severity in recent years could be due to a change in pathogen population. An analysis of 91 isolates of *Phytophthora infestans* collected from different areas in the region during 2006 revealed presence of 11 gene complex races in 58.5% of the isolates and tolerance to metalaxyl beyond 200ppm in 22.0% of the isolates as compared to comparatively simpler races and zero tolerance to metalaxyl recorded in the earlier years. Moreover, the disease now appears comparatively earlier in a higher temperature range of 14.0– 27.5°C then its usual appearance after third week of November in a normal temperature range of 10 - 25 °C. During 2006 it appeared on November 8 which was the earliest recorded in past 27 years. An increasing severity of late blight, a shift in pathogen population and an increasing tolerance to metalaxyl suggests for an appropriate change in the disease management strategy.