

Bertha Armyworm in Western Canada in 1995. - O. Olfert, L. Harris, J. Jones and L. Manaique


A co-ordinated program for monitoring bertha armyworm (*Mamestra configurata*) was developed at the Western Forum for Pest Management because of the potential threat to canola production in 1995. Pheromone traps were installed by the respective provincial agriculture departments from each of the prairie provinces to determine the density and distribution of moths. Agriculture and Agri-Food Canada co-ordinated the monitoring program and developed a forecast of regional damage potential. The network of traps indicated that moth counts were high in specific regions throughout the prairies. An area of approximately six million hectares that straddled the Saskatchewan - Manitoba border and extended north from the U.S. for about 200 km recorded the highest number of moths. However, armyworm damage to canola crops in this area and in other smaller areas with similar populations was less than anticipated. In many canola fields, bertha armyworm was controlled by insecticide applications directed at extensive diamondback infestations which occurred earlier in June and July.

In most years, bertha armyworm populations are kept in check by natural control factors (unfavourable weather, parasites, predators and diseases). However, when these fail bertha armyworm can be one of the most significant insect pests of canola in Canada. The degree of damage depends on the plant's growth stage, the stage of the larvae, the number of larvae present and temperature. Under circumstances favourable to bertha armyworm, crop damage can be expected during a three-week period beginning in late July.

Density of armyworm larvae is typically very sporadic so large differences in infestations can occur in adjacent fields. Weather conditions during the growing season will influence the emergence and development of infestations. All growers are urged to monitor canola fields appropriately during the susceptible period (late July) in all of the infested areas. An insecticide application is recommended when the larvae are abundant enough that the value of the crop they consume is greater than the cost of controlling them. Twenty larvae per square metre can reduce yields by about one bushel per acre.

In 1996, the geographical distribution and density of moth catches together with real-time weather will again form the basis of a regional forecast of damage potential. Potential damage from bertha armyworm may be more or less severe than suggested by the moth count data. As the season progresses weather data will be used to drive a development model to predict the timing of the different life stages. The results will be transferred to industry, provincial extension and government agencies in the form of a forecast map. The objective is to heighten the awareness of canola producers to the damage potential of bertha armyworm during the 1996 growing season.

Bertha Army Worm

 Agriculture and Agri-Food Canada
 Recherche et Agroalimentaire Canada
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Cumulative Moth Counts
1995

