

Infestation of Aphid on Wheat *Triticum aestivum* L. (Poaceae) and Its Possible Management with Naturally Existing Beneficial Fauna

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Abstract : Bread wheat *Triticum aestivum* L. (Poaceae) is the major source of the staple food for a number of countries of the world including Pakistan. Since it is the staple food of the country, it has been desired, and efforts have been made, that it does not undergo application of pesticides to ensure the food safety. Luckily, wheat does not face a serious threat of insect pests, in ecological conditions of Pakistan, except aphids and armyworm which infest the wheat prior to maturity. It has been observed that almost 5 species of aphid have been reported to attack wheat ie. *Ropalosiphum maidi*, *R. Padi*, *Schizaphis graminum*, *Diuraphis noxia*, and *Sitibion miscanthi* but due to natural rise in temperature in terminal season of wheat, the population of aphid gradually decreases and wheat has a safe escape from its infestation. In case, mild temperatures 15°C to 30°C prolong, the infestation of aphids also prolongs and it can severely damage wheat in patches, and it has potential to substantially reduce the yield of wheat in infested patch. In years 2013, 2014, and 2015 the studies were undertaken to determine the potential of damage caused by aphid complex in 10 fields in infested patches. The damage caused by aphid complex was calculated on the basis of 1000 grain weight of wheat grains taken from the infested patch and were compared with 1000 grain weight of the healthy plants of the same fields. It was observed that there was 26 to 42% decrease in the weight of grain in infested patches. This patch also escaped from general harvesting by combine harvester and enhanced the loss 13 to 46%. The quality of the wheat straw was also reduced and its acceptance to the animals was also affected up to 50 to 100%. Moreover, the population of naturally existing beneficial fauna was recorded and factors promoting establishment and manipulation of beneficial fauna were studied and analysed.

Keywords : *Triticum aestivum*, wheat, Pakistan, beneficial fauna, aphid complex

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