SUGGESTIONS

There is a need for putting concerted efforts in investigating insecticide resistance problem systematically. Though the Integrated Pest Management technology to control *H. armigera* pest has been developed by using cultural practices, trap crops, neem based formulation and Nuclear Polyhedrosis Viruses (NPV), it is observed that most of the reports on recommended control schedules and sometimes laboratory confirmation of resistance are failure for pesticide resistance in the field, hence it is need to find out reasons for it. Everyone has something to contribute. Efforts are probably needed in order to get wide spread co-operation which is crucial because individual resistance management programme may not work effectively if tactics are not coordinated within the wide geographical range of the pest.

The information on mechanisms of resistance and cross-resistance patterns has to be generated on priority atleast for major problem cases. In absence of this information it is not possible to plan suitable sequential use pattern for available group of pesticides. This will help in formulating practical pest management strategy for large area application which is the only ultimate answer for preventive Insecticide Resistance Management (IRM).

Several mechanisms of insecticides resistance have been identified in *H. armigera* populations in various parts of the world, including reduced penetration, decreased nerve sensitivity and enhanced metabolism. In Indian populations, mechanisms have not been studied exhaustively. Therefore it is vital to have knowledge on molecular level regarding all the detoxifying enzymes like carboxylesterase, glutathione S-transferase, Cyto P 450, Cyto b 5, Cyto C 3, acetylcholinesterase which are responsible for insecticide resistance in *H. armigera*. The molecular studies should be carried out to know the genetic basis of insecticide resistance in *H. armigera*. 

145
A major thrust of the research on development of a applicable monitoring system to all groups of insecticides and their mechanisms with the use of improved biochemical and molecular techniques are the prerequisite for the Insecticide Resistance Management strategies.