CHAPTER - 2

OBJECTIVES OF THE STUDY

In the present study sublethal toxicities of the pesticides that are applied for pest management in the mulberry garden and adjacent fields are evaluated. As pesticides are potential toxicants to interfere with the physiological process including enzymatic activity, reproductive activity and silk secretion activity, some of the pesticides leave residues and give biomagnification. Knowingly or unknowingly farmers apply pesticides to protect mulberry crop in an indiscriminate way. The entry of these pesticide molecules through mulberry leaves into the various instars of Bombyx mori hampers the enzyme secretion responsible for silk thread formation during cocooning in the fifth instar stage. Unless the toxicity of these pesticides are thoroughly studied with reference to energeties, economic characteristics, reproduction and development etc the success of sericulture farming will be in vain. So the present study is designed to help the farmers to minimise economic loss and maximise their yield. The objectives of the present study are the following.

1. Evaluation of Sublethal toxicity of the commonly used pesticides in the mulberry gorden – Dichlorovos and Vijay neem.
2. Effect of sublethal doses of Dichlorovos and Vijay neem on mulberry leaves utilization and growth of Bombyx mori.
5. Analysis of the effect of sublethal doses of Dichlorovos and Vijay neem on the economic characteristics of silkworm namely cocoon weight, shell weight,
shell ratio, sericin and fibroin content silk filament length, reelability and filament denier.

6. Finding out the effect of sublethal doses of Dichlorovos and Vijay neem on the histology of selected organs of Bombyx mori.

1. Evaluation of sublethal dose.

2. Toxicity of sublethal dose after chronic treatment on the following parameters.
   1. Food utilization of *Bombyx mori*.
   2. Reproduction and Development in *Bombyx mori*.
   3. Commercial characteristics of *Bombyx mori*.
   4. Histopathological changes on selected organs of *Bombyx mori*. 