Mulberry silkworms are delicate and sensitive not only to the environmental conditions but also to the pesticidal toxicity. Normally the mulberry fields are get polluted by pesticides through spraying or sometimes by air born molecules. Therefore research on the effects of insecticides on silkworm larvae is directed in different cocoons, in order to have knowledge about the toxification of various insecticides and their mode of action on silkworm metabolism and growth (Basha Mohideen and Ameen, 1999). The organophosphate insecticide Dichlorovos are used on different plantations adjacent to mulberry gardens. This insecticide makes their way into the mulberry plantations and may affect the silkworm *Bombyx mori* L., which they depend on for their food material. Temperature is one of the most important abiotic factors with a tremendous influence on silkworm larvae. An increase in the temperature causes a decrease in the larval duration. (Bursell, 1964, Laudien, 1973). Silkworms which originally belong to temperate climate like Japan and China are acclimatized to the tropical climate many years ago. (Rangaswami *et al.*, 1978). However fluctuations in the ambient temperature causes several problems to sericulture industry. Therefore an attempt is made in this investigation on silkworm, *Bombyx mori* L., to study the influence of both lethal and sub-lethal doses of an organophosphate - Dichlorovos on the physiological responses in terms of oxygen consumption, the rate of hart beat, growth and quality of cocoons at different ambient temperatures during IV instar of silkworm, *Bombyx mori* L.

Further studies involving residue analysis and detoxification mechanisms and energetics during the exposure of organophosphate pesticide Dichlorovos on the silkworm *Bombyx mori* L., in relation to ambient temperatures are planned for my doctoral research.