Kerala has recently become the paradise of mosquitoes, due to the characteristic eco-geographical landscape of the region rich in such plantations where plastic cups or coconut shells are inevitable. During monsoon they collect rain water affording site for the proliferation of mosquitoes. Most common among the different types of mosquitoes in the southern peninsula are Culex, Anopheles and Aedes, all well known as vectors inflicting diseases like Chikungunya, Malaria, Yellow fever, Dengue, Filariasis, Encephalitis etc. The recent outrage of Chikungunya is sufficient enough to establish that mosquitoes cause more sufferings to the humans than any other organisms.

As cereals are the staple food in India, attempts made to evaluate the hazards caused by the mosquitoes to human health with those caused by pesticides against stored grains revealed, that one is no way inferior to the other. When the problem of food damage due to weevils, and the hazards due to mosquito borne diseases occur together, the impact on the life and wealth of the area becomes a serious issue.

Pesticides are unloaded in mammoth amounts into the market, aiming at the elimination of insects, fungi and weeds that are imperilling the agricultural practices, ignoring the catastrophic ecological disasters. Although the insecticides are designed to affect various systems of insects and other arthropods, it is proved that they pose acute toxicity to the human. It is a well-accepted fact that many of the synthetic chemicals employed for protecting the cultivated crops and the surroundings, certainly bring some uninvited hazards along with them, on the non target organisms and the entire environment. The intensity of hazards, caused by the popular pesticides like
organochlorines and organo phosphates has aroused attention even from the common man. The recent discussions on the Endosulphan in the media have given testimony to the public awareness on its impact on human life.

Long before the advent of synthetic pesticides and insecticides, plants as a whole or their decoctions were traditionally used to repel the pests pertaining to farming and storage. The phytochemicals seemed to be a promising tool against the threats of mosquitoes and weevils. Based on the above, the theme was taken as a research project for isolating a phytochemical having toxic activity against mosquitoes and weevils, and no ill effect on humans, from *Gliricidia sepium*. The entire endeavour is presented in this thesis in seven chapters. Chapter I gives a brief introduction, chapter II is intended for review of literature, the methodological approach is given in chapter III and the results and discussion in chapter IV, V and VI.