natural resources has added new responsibilities on the shoulders of researchers and scientists who are now confronted by very serious dilemma: the necessity of producing more food in order to satisfy the needs of explusively growing population of mankind, on one hand, and the urgent need for protecting our environment from the world-wide pollution which reached, in certain cases, unprecedented levels, on the other. Increasing crop production, in view of some people, dictates the use of all weapons available in our arsenals to combat insect pests and weeds, our main competitors for food. But the major weapons in the arsenals so far are synthetic chemical pesticides which are unfortunately heading the black list of environmental pollutants. Environmental protection, on the other side, cannot be accomplished without substantially decreasing the tremendous amount of chemical toxicants released into the fields and, at the same time, increasing dependency on much safer methods and tools for pest control within the framework of the holistic approach of Integrated Pest Management. In the heart of IPM lies Biological Control. Yet, our enthusiasm for biological control should not, by any mean, conceal the necessity of posing the question of : are all biological controls ecologically safe ? can biological control be applied in all cases ?.

Simply, this was the background when the plan of this work was sketched. In fact, the present work constitutes a portion of a wider multidisciplinary research programme aiming at investigating the inter-relationships that might occur between the naturally existing and the artificially added-components in the agroecosystem of rice fields. Hence, the area of the present study is assumed to deal with certain tasks as follows :

1. A variety of synthetic chemical herbicides are used in weed control in rice culture. Do these herbicides have any insecticidal activity against the different stages of mosquitoes that might exist in the rice field aquatic habitat ?.

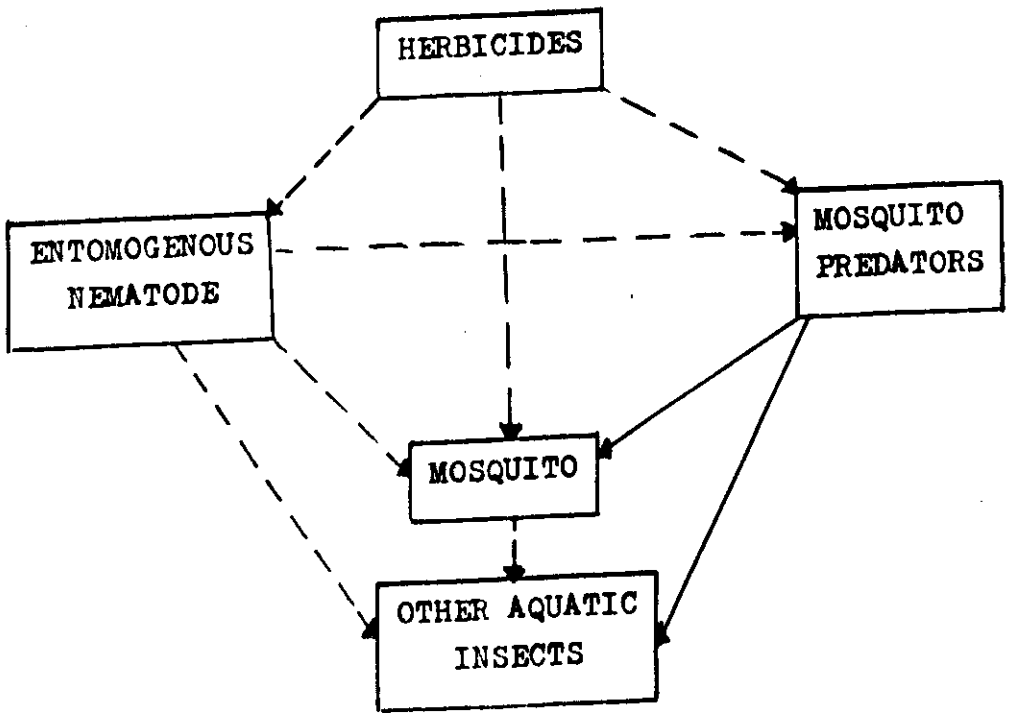
2. Since rice fields usually harbour several aquatic insect species other than mosquitoes, do these herbicides affect the populations of the mosquito-associated insects, particularly predaceous species which are known to play a biological regulatory role of mosquito populations in such habitats ?.

3. Among the emerging biological control tactics is the use of the entomogenous nematode Neoaplectana carpocapsae against some economically important insect pests mainly in terrestrial habitats. Can this insect-parasitic nematode be effectively used as biological control of mosquito larvae in the aquatic habitats ?.

4. What can be the effect of N. carpocapsae on mosquito-associated insects, especially aquatic predators ?.

5. What can be the effects of the tested herbicides on the infective stages of the entomogenous nematode N. carpocapsae if both of them are simultaneously applied in the mosquito breeding water ?.

The following chart may hopefully help in demonstrating the various elements involved in the study and the questioned interactions that should be investigated.



Finally, there is one point that should be taken into account, separating these elements in the laboratory does

not imply by any mean that they act independently in the nature, and what was done herein is only the first step on the road of one thousand miles.