EDITORIAL

The first thing that will strike you about this issue is its rather large size, which has been the result of three times larger number of Science abstracts compared to the immediately preceding issue IJTS 6(2). We could not carry over some of these abstracts because the next special issue will be quite bulky as it will contain all the abstracts of research papers presented at OCHA 2007 held in November 2007. Presented below is a summary of the three papers published here, with editorial comments.

Botanicals for control of red spider mite

This issue starts with a research report on biological control of red spider, which affects vast areas of tea in the plains of North India. Tocklai scientists' team has done immense service to those concerned with pesticide residues by this intensive study of 3 botanicals for their ovicidal, larval and adult miticide properties and their mode of action. Response of direct exposure of different life stages of the mite to the botanical extracts was studied in laboratory conditions in terms of reduction in red spider egg hatchability, larval mortality, the mortality of adults, and their mode of action. It varied from one to the other biocide and between the methods of extraction as well as their concentration on different stages of development of red spider mite. Some were quite effective in their ovicidal effect and on early larval mortality while others were deadly for adult mites. None of the botanicals had any effect on non-target organisms. However, further studies are needed before these results can be applied in the field. A word of caution must, however, be added. Biologial Control agents are required to be registered before use on tea. But none except neem products have been registered. The manufacturers are not forthcoming particularly because they are produced by small manufacturers. The Government has to decide on a policy for registration of biocontrol agents as well as for quality control of the products from small manufacturers who lack finances and facility for the same.

Weed flora as influenced by introduction of tea plantations

Every paper that is published here does not necessarily conform to the views of the editors. One such example in this issue is the change in weed flora with introduction of tea in Uttaranchal, which raises the specter of the destruction of biodiversity in humid tropics when tea is introduced. The conclusion of the authors that alien invasive weed species in tea gardens are likely to destroy biodiversity in non-tea area is at best misplaced. The editors do not agree with this interpretation and have a strong reason to believe otherwise. Perhaps the authors have overlooked the fact thatdifferent micro climate and cultivation practices in tea crop favor some weeds to flourish while inhibit others, a fact confirmed by 100 common weed species. By the same token, the seeds that might have been lying dormant un-germinated because of the change of former microclimate with destruction of forests, (seeds are known to lie dormant for hundreds of years in unfavorable conditions) germinated with availability of favorable microclimate in tea plantations, contributing to additional weed species reported from tea plantations. This simple reasoning explains the difference in weed flora in and outside tea fields. I remember that in 50 year old experimental plots in Tocklai, the unfertilized plots were populated with saccharum weed while the fertilized plotswere full of bagrakote without a single plant of saccharum, although the adjoining vacant plots has both weeds in abundance. The authors have not reported a single alien invasive weed species in tea like congress grass brought from imported wheat in India. Similarly the quoted example of the population build up of tree frog in Annamalais can also be explained by favorable microclimate of tea plantations. Another reason of the abundance of this species might have

been its suppression due to predators in the original habitat of forests (rat population build up after destruction of their original habitat in forests, is a well documented case). It is also possible that tree frogs became visible in open tea fields, while earlier, they were hidden in the forests like the case of pygmy hog which was noticed for the first time in tea plantations of Assam. This paper brings to fore the need of the of looking beyond the immediate figures on the table. I have often done this kind of interpreting difficult-to-understand data by studying the attenuating factors not provided in the experimental design -- for example looking at 7 cycles of pruning in interpreting mortality of tea variety TV-2, whose plants were unable to regenerate after every prune and were slowly dying in about 20 years without phosphate and potash application.

Manuring of Nursery plants with organics and inorganic NPK in Nigeria

In a pot experiment nursery soil from two locations growing young tea received their nutrient supplies either alone from 5 sources of organic waste or in combination with 5:1:1 fertilizer applied with mineral fertilizer in the ratio of 3:1 or 1:1 on equal nitrogen basis. Often the response to organics was synergistic with fertilizers, which may be attributed to their providing Ca and Mg in addition to NPK. However, the value of organic sources seems to differ between the two locations. The results show the avenues for utilizing farm/factory wastes to save on scarce supply of costly mineral fertilizers in tea industry in Nigeria.

Early next month we plan to obtain the abstracts of all the research papers presented at OCHA 2007 for inclusion in the special issue of IJTS 6(4). It will be an instructive issue to gauge the trends of global research on tea.

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