

**COMPARISON OF INTEGRATED PEST
MANAGEMENT STRATEGIES IN DIFFERENT TEA
GROWING COUNTRIES WITH SPECIAL
REFERENCE TO PESTICIDE RESIDUE
MONITORING**

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ABSTRACT

All parts of the tea plant are fed upon by at least one pest species. Conventionally, organosynthetic pesticides are used for control the pests that cause economic crop loss to the tea plantations. The pesticide residues in the end product are major concerns by the importer and consumer which have become a major issue for tea industry. In this study, information on pests, pesticides, different IPM strategies were gathered through questionnaires from major tea growing countries such as Sri Lanka, India, Bangladesh, Kenya, Japan, Iran, Malawi, Zimbabwe and Argentina and data were summarized, analyzed and presented using descriptive statistics. Results showed that the highest number of pests and highest pesticide usage are reported from Japan; India and Bangladesh were ranked as second and third. In contrast, Argentina did show only a single pest incidence. Interestingly, African tea growing countries were identified as pesticide consuming region with significant pest and disease incidences though less compared to rest of the tea growing regions. The data also revealed that Sri Lanka is the leading country in adopting in IPM strategies for tea pest management with least and rational use of pesticides despite occurrences of many key pests. Other methods included use of tolerant cultivars, biological and cultural methods. This would have lead to the accolade behind the Sri Lankan tea as the cleanest tea in the world with respect to pesticide residues. An example of pesticide residue monitoring mechanism adhering to FAO guided protocol on declining and regional field trials was closely studied. It envisaged how Sri Lanka adopts stringent IPM strategies and TRISL recommendations on GAPs in view assuring product quality aimed at international standards which was not evident much in other tea growing countries. Overall, immerging pest and disease incidences in countries with shorter cultivation experiences were evident which is an alarming situation requiring harmonizing pesticide usage and MRLs for the benefit of the consumers.

Key words: Tea, Pests, Tea growing countries, Pesticides, IPM strategies, Maximum Residue Level.