

From the Editorial Office...

Tea industry in general and that in India in particular, seem to be star-crossed during the current fiscal year what with indifferent weather conditions, low yields and depressed prices. As if this is not enough, the publication of a note by an NGO castigating Tea in India as containing banned pesticides and the others over the prescribed Maximum Residue Limits (MRLs) confounded the scenario further to the detriment of the industry; the report was based on 'packet teas' collected from the market shelves. Tea Board of India responded, nay, reacted, rather severely by drastically curtailing the list of pesticides approved for use on tea with stringent MRLs (prescribed by FSSAI) far lower than that of European Union, Japan and even Codex.

It is common knowledge that tropical crops are invaded by a wide array of pests and diseases unlike the temperate ones, to combat which a wider arsenal of pesticides is essential so that they are rotated to avoid accumulation of residue(s) in the crop as also, build up of resistance. In certain instances, as in the case of the leaf disease 'blister blight' (*Exobasidium vexans*) that invades tea in epidemic proportions during a greater part of the year in south India, necessitating spraying at regular intervals as short as five days, the approved list offers a single fungicide, hexaconazole! Similar is the situation with regard to 'gray blight' (*Pestalotiopsis theae*) being left with the choice of controlling by a lone combination spray of 'carbendazim 12%' and 'mancozeb 63%' WP. Such stringent imposition defies all logic ignoring the welfare of producers in a large agricultural industry.

Another haunting irritant in tea industry in India is the presence of iron filings in made black tea, frequently subjected to needless controversy on its acceptable limit. Iron filings enter black tea, particularly CTC teas during processing due to wear and tear of the machinery. Some developed countries fixed the limit of iron filings at 120 ppm while there are no prescribed limits for iron filings in certain tea producing countries such as Kenya; Sri Lanka has fixed it at 200 ppm while yet others prescribed 500 ppm. Food Safety & Security Authority Of India (FSSAI) reduced the limit of iron filings in tea from 250 ppm (BIS, specification IS 3633,2002) and temporarily fixed it at 150 ppm up to May 2014, referring the matter to the National Institute of Nutrition, Hyderabad, for scientific investigation and suggestion of the upper limit. The date is now extended to May 23, 2015; till then, the upper limit for iron filings in tea in India will continue to be 150 ppm.

In the mean time, the National Institute Of Nutrition (NIN) submitted its report at a meeting convened by the Tea Board on Nov. 14, 2014 . The findings of NIN rule out any adverse effects of toxicity of iron filings in tea up to 1500 ppm (the upper limit that was investigated) on human health. Hence, it naturally follows that FSSAI will be justified in fixing a limit ranging between 250 and 500 ppm of iron filings in made black tea to fall in line with the other major tea producing countries.

There are eight articles in this issue: they cover subjects as diverse as physiological responses of grafted plants to varying levels of drought stress ; two articles on levels of foliar nutrients and yield, respectively, in response to interaction between nitrogen levels, location and plucking intervals; two on identification and isolation of bio-control agents; one on the importance of the choice of parents in inheritance of caffeine, EGC and ECGC; various kinetic models for thermal inactivation of PPO in 'green

tea' manufacture; and finally, a study on the novel method of 'vacuum drying' of orthodox and CTC teas to determine the values for independent parameters such as vacuum level, plate temperature and loading value.

Stop Press

It is highly distressing and depressing to learn of abrupt and sudden demise of Dr.P. Sivepalan on the morning of 6th January, 2015 while inspecting a Tea field. This is indeed a poetic justice that a committed and dedicated Tea Scientist like him breathed his last in a tea field. I had several occasions to meet Dr. P. Sivepalan, a distinguished Tea scientist from Sri Lanka, when I was heading the Tocklai Experimental Station, Jorhat, Assam, India. Even after our retirement, we used to run into each other at different conferences in different places and we used to attend conferences held by each other!

With a tenure of thirteen years, Dr. P. Sivepalan was the longest serving Director of TRI, Sri Lanka. His organizational capabilities reflected in well directed research programs at widely dispersed empire of the sub-stations of TRI, Sri Lanka. I remember attending an International Tea Conference in Colombo which resembled OCHA (in Japan) in magnitude, with 700 delegates, taking three years to organize with a budget of \$7 million. The conference was followed by my visit to the tea industry in different regions of Sri Lanka and almost all the sub-stations for over a week. At the end of this long visit, I had half an hour discussion with Dr. Sivepalan; it was more like answering searching questions on subjects ranging from plant physiology to tea biochemistry and tea processing, with an expert grasp. At the end of the 'interview' he handed over the recording to me which resulted in 60 closely typed pages of the 'proceedings'!

Dr. Sivepalan always thought big, in international terms on policy issues concerning the tea industry. He was always up to date with the trends of production and consumption all around the globe.

He is survived by Dr. Nalini Sivepalan, another renowned Tea scientist of Sri Lanka. May the Almighty grant strength and courage to Dr. (Ms.) Nalini Sivepalan to face the void in her life.

May the departed soul rest in peace.

**N. K. Jain,
Adviser,
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Let us now bid good bye to the most trying and sad year, that was and welcome the New Year that should bring all prosperity to the tea industry, world-wide.

The editorial board extends its warm good wishes to all the members of the International Society of Tea Science and the readers of its journal, the International Journal Of Tea Science .

**V. S. Sharma
Editor-in-Chief**