Committee on Commodity Problems

INTERGOVERNMENTAL GROUP ON TEA

Twenty-second Session

Naivasha, Kenya, 25-27 May 2016

REPORT OF THE WORKING GROUP ON ORGANIC TEA

**BACKGROUND**

The IGG on Tea, during its 20th Session held on Jan 30 – 1 Feb, 2012 in Colombo, Sri Lanka, constituted a Working Group for the harmonious development of Organic tea sector with the following countries as members. India, China, Bangladesh, Japan, Sri Lanka

The following were the Issues to be dealt with by the Working Group.

During the first inter-sessional meeting in September, 2012 in Washington Dc USA, the Working Group on organic Tea deliberated the on the following issues.

* Generate market info & Develop market strategies
* Technical requirements
* Certification processes for tea production
* Collect and share info on production, package of practice, R &D
* Consider organic tea as low energy input for financial gain through carbon trading
* Join the organic movement for sustainability

During the Inter-Governmental Group (IGG) on Tea at its 21st session in Bandung, Indonesia, from 5-7 November 2014, the Working Group on Organic Tea deliberated and the following decisions were taken on the following issues.

* Given the limitations observed with regard to conversion of non-organic tea plantations to organic gardens – ***crop reduction and high cost of cultivation owing to increase man days requirement*** –
* the working group felt that to begin with it may be worthwhile to encourage the non organic gardens to adopt **green farming methods**
* gradual reduction of chemical fertilizers and supplementing with organic manures and
* Reduction of pesticide load by adopting IPM (Integrated Pest Management) practices so that the usage of pesticides could be phased out gradually.
* It was also felt that the marketing issues could be dealt with by the Working group on Trade and Quality with the assistance from IGG-Tea Secretariat and the Task force on Statistics may monitor the organic tea demand world over.

**During the Intersessional Meeting held in Milan, Italy, 15-16 October 2015**

The following decisions were agreed:

The group agreed that the way forward is green farming methods and gradual

Reduction of Pesticide and Chemical fertilizers;

Research and development has to be made to steadily improve for the organic Production

Joint research and development, and information sharing among organic tea/sustainable Tea producing countries to be co-ordinated by the IGG/Tea secretariat;

Market promotion internationally;

Marketing issues to be dealt with WG on Trade and quality. With IGG/Tea secretariat and task force to monitor the world organic Tea demand;

Proper identification of niche market that are ready to compensate the farmer for the reduced yield and Higher Cost of Production;

Positive publicity of organic tea in the media certification; and

Organic tea standard and certification / sustainable Tea certification should be recognized internationally.

**INDIA**

**Present Status:**

India is the largest organic tea producer in the world.

There are 52 organic gardens in Darjeeling, of which 20 are on certified bio-dynamic farming.

All these gardens are engaged in in-house activities to produce farm inputs such as composts, vermi compost, herbal brew to work as pesticide and weedicide.

**MOVING TOWARDS GREEN FARMING – FOLLOW UP**

**Present Status of Research in India.** The Tea Research Association of India (Tocklai Tea Research Institute) in collaboration with CABI has taken up a project on non-chemical approach to pest management three different geographical locations.

**1) Project Name:** Ecological Pest Management and Monitoring Stations- A Non Chemical Approach to Pest Management

**Objective:** To develop a toolbox of approaches that will provide a grower a clear direction towards minimising pesticide use on their crop.

**Overall Objective**

The overall objective is to develop a toolbox of approaches that will provide a grower a clear direction towards minimising pesticide use on their crop. The tool box will include components that can be fitted together to tailor made approach to fulfil the growers interests and overcome challenges.

To study various methods of pest management on tea for narrowing down on eco-friendly cost effective scalable pest management methods

To strengthen the capacity of field staff for efficient monitoring, spotting and spraying for pest management

To initiate the integrated approach for the gradual shift from absolute chemical approach to integrated approach of pest management

To initiate the ecological approach of pest management though habitat management and conservation of natural enemies of major pests in tea.

**Key component of the project**

Component 1: To improve crop monitoring for more informed pest management decision making and improve pesticide efficacy through the adoption of improved spray techniques (Conventional Approach).

Component 2: To rationalise the use of pesticides through integration of non-chemical interventions (ICM Approach).

Component 3: To evaluate preventive measures to minimise pest impact facilitate the transition towards an ecological pest management system (Ecological Approach)

**Three approaches for the experiments under this project are:**

(i) Conventional approach- here the regular practice of the garden is followed with revised monitoring skills for identification of signs and symptoms

(ii) ICM- integrated crop management approach- here the cultural to chemical approach is defined and adopted in a systematic manner. ICM appears to be a very good transition for the planters who do not want to risk their entire plantation for ecological method suddenly. This methods is a slow trust building for cultural to physical to biological to botanical to eventually need based use of chemicals

(iii) Ecological pest management- This comprise of systems approach where focus on reinstating ecosystem health through soil health management, ecosystem health by following systems approach, push pull strategies, managing pests through natural enemies, attractant and repellent trap crops , habitat modification , etc. is being used. The key idea is to develop bush and soil health so that the natural resistance and environmental management can be achieved. Here absolutely no use of chemicals is there. Not even chemical fertilizer is used. For soil nutrition, vermicompost and vermiwash are used frequently.

**RESULTS:**

In the experiments, yield so far has not been much different in all the three experimental plots indicating a very positive response for ecological pest management. It is expected that quality of tea leaves will be improved in ecological plot due to higher organic content in the soil.

This is a continuing project and the way forward is

To have a sustainable tool kit, the project should continue for at least three to four years to evaluate the results and finalise the best practice;

Continuous support from the partner gardens;

Trials of low cost tech transfer like Nucleo-polyhedrosis virus for pest management

Screening and trials for Bt for disease management in tea; and

Standardized and sustainable ecological havens for encouragement of natural enemies.

2) **Evaluation of different farming systems in tea**

The experiment was initiated during April 2002.in South India. The treatments are imposed as per the standard protocol. Results indicated that yield reduction was recorded both in biodynamic and organic farming to the tune of 17 and 34 .0 per cent respectively, when compared to conventional farming system. This experiment is in progress.

**Other Initiatives**

The Tea Gardens are using more of organic manure and vermi composts.

Detailed guidelines have been issued with regard to safe handling of the pesticides and disposal of pesticide containers;

A manual on “Package of Practices for Organic Tea” has been prepared;

Bio-organic farming has been increasing; and

Trustea initiative –A sustainable tea program in India which has verified tea of 244 million kgs.

**SRI LANKA**

**Background to Organic Tea Cultivation and Exports in Sri Lanka**

The organic tea production and exports pioneered in Sri Lanka continues as a production system for niche markets and value added segment.

The entire cultivation, processing and marketing processes in the production of organic and biodynamic tea are assured as environmentally friendly, socially just and economically feasible as inspected and certified by International agencies. Both large and small growers are engaged in organic and biodynamic production who fetch premium prices in many international niche markets. The local demand for organic teas is now getting increased.

**Organic Tea Cultivation and Exports**

The first organic tea estate in the world was established in Haldummulla, Sri Lanka in 1983 which made the first organic tea exports in 1987. Presently, organic and biodynamic tea production are expanded in cooperate and small holder sector and organized farmer groups in different agro-ecological regions. Majority of tea lands converted to organic however, are seedlings, marginal and low yielding tea fields. A very little extent is available as initiated in rehabilitated lands with new cultivars.

Sri Lanka is the second highest certified organic tea producer in the world next to India. Sri Lankan organic tea industry caters black, green and silver tip teas in bulk and processed teas, value-added teas with flavors and environmentally friendly packages which fetch minimum of 2-3 fold premium prices in the International markets. As per FibL statistics in the year 2012, the total extent of certified and in conversion to organic and biodynamic teas in Sri Lanka covers around 10,000 ha. The percent total organic and biodynamic tea extent has increased from 0.78 % in 2000 to over 5 % in 2015. A 30-50% drop in yield is experienced with organic tea in the first 3-4 years after conversion than that of conventional tea. The production is in the range of 400-800 made tea kg/ha/year. The organic and biodynamic production in Sri Lanka has recorded 268, 422 kg as at February 2016 and approximately 10,000 MT made tea/ year is expected.

Cooperate sector and organized small holder tea grower organizations do engage in organic tea cultivation in up, mid and low elevations. NASSA, IMO, JAS, Control Union, Biosuisse, Naturland, OF&OG, USDA Organic, NOP and Demeter are the major organic certifiers for Sri Lankan. Main destinations of the Sri Lankan organic teas include the UK, Germany, Italy, France, the US, Canada, Australia, Singapore, Japan and Spain.

Despite many initial success stories in organic tea production in the country, there are several failures at present owing to improper selection of appropriate lands for organic cultivation, inferior in conversion plans, unavailability of ample inputs, unbearable costs incurred on initial investments and certification etc. and poor awareness on organic concept among practitioners and workers and absence of government support.

However, with declaration of a special program on ‘Toxin Free Nation’ by the government of Sri Lanka, non-chemical and organic cultivation are promoted. In parallel, the Department of Agriculture has initiated a program on GAP certification ensuring to meet all good agricultural practices in agriculture. The Sri Lanka Standard Institution (SLSI) is in the verge of completing the national standards for organic cultivation and production. The Biodynamic Association of Sri Lanka formed in 2016 is expected to further support the organic tea segment in Sri Lanka.

**Research and Development on Organic Tea**

With the pioneering production of organic tea in the country, the Tea Research Institute (TRISL) having recognized the importance and the foreseeing demand for organic teas in the International market, commenced R&D on organic tea related aspects. Under a separate R&D Thrust, Organic Tea research is allocated in the TRISL Cooperate Plan. New production approaches, solutions for constraints and limitations and scientific validation to organic and biodynamic agricultural concepts are studied in the different agro ecological regions. Further, for close monitoring of all agronomic aspects, growth, physiology and development, yield, quality, soil and nutrient management, pest and disease incidences, processing, worker health, technology adoption, socio economics, environmental cost benefits and system sustainability etc., a comparative long term field trials have been established. TRIORCON (TRI Organic and Conventional) and BIDORCON (Biodynamic, Organic and Conventional) are among them in addition to several experiments laid to address regional and specific field aspects in corporate and small holdings.

Commendable collection of research findings on growth, pest and disease severity, climate change mitigation potentials and environmental impact assessments is available at the TRISL. A Monograph on organic tea cultivation and processing is underway for the benefit of the organic tea growers and practitioners.

**Marketing of Organic Tea**

Processing, packing and marketing of organic produce are done in par with the demands by respective destination countries with required certifications. With the establishment of the National Organic Control Agency (NOCA) by the Export Development Board of Sri Lanka (EDB), Sri Lanka Organic Standards and Regulations were established by making importing or exporting countries pertaining to the cultivation, manufacture, production, processing, operation, sales, export and import of organic products. Having recognized the opportunities and challenges in organic tea industry with the supply chain in Sri Lanka, organic tea exports are included in the Strategic Plan of the EDB for the period 2015 – 2020.

**Scope and Future Prospects of Organic Tea in Sri Lanka**

Undoubtedly, organic and biodynamic teas shall deliver a creditable product range with comparatively greater consumer preferences in the conventional and other teas. The existing lands with TRISL guided GAPs on crop, soil, nutrient and pest management practices and GMPs for product assurance, technical expertise of the growers and workers on biological, non-chemical and traditional agricultural practices etc. are notable assets to the growing organic tea Industry in Sri Lanka.

However, training, resource development, financial support for initial investments during conversion and certification, policy directives in maintaining organic tea holdings, marketing and business promotions will help aid in sustaining the lavish raw and processed products of organic teas. Nutritional and health benefits of organic teas shall also be used as a marketing and promotion tool.

Replanting old organic tea lands too will cushion the production requirement by stabilizing the lowered production levels.