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COMMITTEE ON COMMODITY PROBLEMS

INTERGOVERNMENTAL GROUP ON TEA

TWENTY-FIFTH SESSION

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REPORT OF THE WORKING GROUP ON ORGANIC TEA

Report on FAO - IGG Working group on Organic Tea- 29/01/2024

A. Actions arising out of Intersessional meeting:

In the FAO-Intersessional meeting of the Inter-Governmental Group on Tea (IGG-TEA) held on 22nd June, 2019 at Sochi, Russia proposed to collate information on organic tea operations from all tea growing countries and to prepare a manual on organic tea cultivation. In this regard, Tea Board of India and Tea Research Association took the prime lead in preparing this manual on organic tea cultivation, processing and marketing taking information from all the participating countries. Henceforth, the manual has been prepared. The features of the manual are discussed below:

- Practices of organic tea cultivation, comprising aspects such as site selection, planting, production, processing/ manufacturing and marketing.
- Comparative economics of organic and conventional tea production.
- Even if there is no significant increase in the number of organic tea producers or area of cultivation, it is important to increase the quality and quantity of production in order to meet the global demand for organic tea.

Country specific results and activities of the working group include:

- Sri Lanka (Tea Research Institute) and India (Tea Research Institute) carried out research on the quality of organic manures and nitrogen use efficiency. China has initiated a research project to monitor soil change in organic tea gardens.
- China has set up a standard for Ecological Low Carbon Tea Production, while Japan has launched a strategy for sustainable food systems: Measures for achievement of Decarbonization and Resilience with Innovation (MeaDRI). In the Republic of Korea, a series of initiatives have been undertaken for organic tea production, including variety development, digital technology, laws and an education programme.

In the future, the working group plans to concentrate its work on the harmonisation of the organic tea certification process and the expansion of the network for the marketing of organic tea. Members may establish model plots in order to validate and upgrade good agricultural practices (GAPs) in organic tea cultivation (available in the aforementioned manual), which can boost organic tea production.

B. Work Done on Organic Tea during the last year Country wise:

I. India:

In Northeast India, the Organic Tea working group highlights a stagnant growth in organic tea cultivation over the past five years due to challenges such as high input costs, reduced yield, labour-intensive processes, and pest and disease load. Experimental conditions reveal a decline in tea yield under organic cultivation, while certification complexities from European and

US agencies add hurdles for growers. Tocklai Tea Research Institute (TTRI), with the assistance of the Tea Board of India and the Commerce Ministry of the Govt. of Assam actively addresses challenges through research and knowledge dissemination, conducting training programs, and exploring innovative solutions like nutrient-enriched vermicompost using earthworm species viz. *Eudrilus euginiae* and *Eisenia fetida* and biochar production through pyrolysis method from tea waste. The study introduces alternative potassium sources viz., K-salt(50%WSK) and K-ash(21%WSK), the by-products of sugarcane industry found to be superior to MOP in releasing soil water soluble and available potassium as well as upgraded integrated pest management, demonstrating cost-effectiveness and ecological benefits. Collaborative efforts lead to efficient tea harvesting hand shears benefitting both the small tea growers as well as the mainstream ones, encouraging diversification through intercropping and integrating small cattle farms for improved financial viability.

In South India, organic tea cultivation began in the 1980s, expanding to cover 1738.79 ha by 2022. Despite being a significant industry contributor, productivity declined from 1287 kg/ha in 2010 to 868 kg/ha in 2022, attributed to factors like increased soil pH and weed competition. Export volume remained steady, targeting the European Union, while domestic consumption rose. Certification is mainly obtained from IMO Control Pvt Limited and OneCert International (P) Ltd. Challenges include pest and disease management, nutrition limitations, weed control, complex certification processes and difficulties in market access and premium pricing.

II. Japan:

Organic green tea production in Japan has been on the rise due to increasing demand from regions such as the EU, driven by its adherence to Maximum Residue Limits (MRLs) for destination countries. Export volumes of certified Organic JAS (Japan Agricultural Standards) tea, recognized by international partners like Canada, the EU, Great Britain, Switzerland, Taiwan, and the United States, have been steadily growing, with a significant focus on the EU market. Japan's Ministry of Agriculture, Forestry, and Fisheries (MAFF) introduced the Sustainable Food System Strategy, known as "MIDORI," in May 2021, with a goal to expand organic farming to 1 million hectares (25% of domestic farmland) by 2050. As an example, MAFF approved a project implementation plan, which had been developed by a manufacturing company to establish a foundation for a compost spreader for tea farm (improving the efficiency of compost transportation and spraying work in tea farms). This enables tea farmers to enjoy tax benefits when introducing the machinery identified in the approved plan. In order to establish the sustainable food system, a strategy supported by the enactment of the "MIDORI System Law" in April 2022, which facilitates initiatives to reduce environmental impact. Challenges in Japanese organic tea cultivation includes the development of cost-effective pests and weed control methods, managing rising organic fertilizer expenses, and ensuring stable yields. To bolster organic farming, MAFF is implementing various measures, including research and development for smart organic farming systems, creating stable supply chains for organic products, and assisting farmers in transitioning to organic farming practices.

III. Kenya:

In Kenya, the perspective on growing organic tea highlights the increasing global demand for organic teas driven by consumer concerns about safety compared to conventionally produced

teas. While organic tea cultivation is relatively limited in Kenya, with James Finlay (K) Ltd being one of the few companies dedicated to it, research has shown that organic manures while not necessarily leading to higher yields, can improve soil pH and potassium(K) levels thus maintaining the acidity levels of the soils and further solving the often controversial land sustainability problem arising from application of external inputs in tea agro- ecosystems. Moreover, application of organic manure resulted in enhanced levels of Theaflavins and Thearubigins in tea. Commercially organic fertilisers being expensive are rarely available yet one available in Kenya is PHYMYX, compost produced from mushroom waste. Studies showed that the compost is as good as mineral fertilizers in terms of yield performance. However, the availability and cost of commercial organic products remain challenging. To enhance organic tea production, Integrated Soil Fertility Management (ISFM) strategies like agroforestry and leaving tea crop residues in place are being promoted. Challenges facing organic tea farming in Kenya include the expense and availability of high-nitrogen compost manures, reduced production during the transition to organic methods, increased weeding costs, certification and audit expenses. Despite these challenges, increasing consumer awareness and demand for organic tea may lead to transition of farms to organic cultivation, potentially contributing to climate change mitigation through carbon credits for certified growers.

IV. Korea:

The organic concept of tea in Korea is characterized by a 'step-by-step diffusion' of organic farming, extending beyond tea leaf production to encompass the rural convergence and organic marine food industries. The strategic progression involves the production of beverages and food ingredients using organic tea leaves, the development of the 6th agricultural industry, establishment of rural convergence industries exemplified by the Korean-style premium rural garden tea house model (Cheong-ok-heon), and exploration of spatial, ecological, and technical aspects for youth entrepreneurship. Additionally, the concept integrates into international peace initiatives, such as the Korean Peninsula Peace Tea and plans for Ukraine-Russia Peace Tea. The application extends to International Baccalaureate (IB) education, contributing to environmental preservation, cultural expression, and personal development through the curriculum of "Teaism Art." Legal foundations for organic farming in Korea, governed by the "Act on the Promotion of Eco-Friendly Agriculture and Fisheries and the Management and Support of Organic Food, etc.," undergo regular amendments to address evolving challenges and define organic products precisely. Recent revisions focus on unintentional contamination and pesticide residue standards. The multifaceted approach to organic tea production in South Korea involves legal aspects, industry applications, tourism, international peace initiatives, and educational integration, outlining a promising way forward for the organic tea industry in the country.

V. Sri Lanka:

Sri Lanka has emerged as a pioneering force in the production and export of certified organic and biodynamic tea, showcasing environmentally friendly, socially just, and financially viable options for growers, processors and exporters of all sizes. The Tea Research Institute of Sri

Lanka (TRISL) plays a pivotal role in supporting the island's tea industry through extensive research and development efforts, particularly in the realm of organic tea cultivation. Long-term trials, including TRIORCON and BIDORCON, investigate various aspects of organic and biodynamic agriculture, with a focus on agronomy, growth, yield, quality, soil management, and socio-economic factors. Key areas of focus include addressing challenges in nitrogen use efficiency, biomass enhancement through the introduction of CO₃ grass, and the evaluation of locally available nitrogen-rich sources for organic tea fertilization. Collaborative research projects, such as the N Tea project, have yielded valuable insights into nitrogen assimilation, nutrient management, and crop responses in both organic and conventional tea systems. Efforts to address climate change impacts on tea cultivation involve polytunnel studies, showcasing better tolerance to elevated temperatures in organically managed tea. The industry's commitment to carbon neutrality involves sustainable practices and data-driven decision-making through satellite mapping, drone mapping, and Automated Weather Stations. Despite the challenges, the expansion of the organic tea industry holds great potential, provided there is continued support for farmers, research, and marketing initiatives. The collaboration of government bodies, research institutions, and international organizations underscores the comprehensive approach taken to promote sustainable and responsible tea production in Sri Lanka.