

Sri Lanka Needs a Return to “Good Agricultural Practices”

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Introduction

Supporting agricultural development and achieving self-sufficiency in rice have been the prime objective of successive Sri Lankan governments since gaining independence in 1948. As a consequence of the efforts of the scientists, academics, the farming community, and policy decisions taken, the paddy production of Sri Lanka has shown a stable and increasing trend where the country could produce more rice than what we can consume since 2006 (Davis *et al.* 2016; USDA and GAIN 2020), except perhaps during extreme climatic events such as the drought experienced in 2016 and 2017. The long-term progress made by the agriculture sector helped Sri Lanka to cushion the economic impact during the world food-price crisis in 2008 (CBSL 2008). Furthermore, Sri Lanka was also at the top among the South Asian countries on the Global Food Security Index (GFSI) from 2010 to 2019 (GFSI 2021), and dropped to the third position in 2021. In very many years, the rice imports were in quantities less than 1% of the total required, and such imports mainly focused on the tourism industry and those in the society with purchasing power that would opt for specialty rice, such as Basmati.

In 2016 and 2017 the climate change affected our agriculture sector badly, and the country faced a drought that was probably the worst since 1948. Three cultivating and harvesting seasons failed continuously. The government was compelled to import around 748,000 mt of rice to feed our nation to the value of US\$ 301 million in 2017 compared to US\$ 13 million

recorded in 2016 (CBSL, 2017). At that time, the total requirement of rice per year was around 2.4 million mt. The imports in 2017 reached approximately 29% of the requirement (i.e. to feed our nation for about 3.5 months). Sri Lanka bounced back from 2018, producing rice in quantities more than what we required. The trend continued until the end of the *Yala* season in 2021 (Figure 1).

As for paddy farming, 2021 was exceptional, and the country did well to have a good crop harvest. The paddy harvest in 2021 is the sum of the yield in *Maha* season 2020/2021 (3,061,394 mt) and *Yala* season 2021 (2,088,486 mt), a total of 5,149,880 mt. Many factors have contributed to increased paddy production in 2021 (Agriculture Statistics 2022). Despite the lockdown in 2020, the Sri Lankan Government allowed the farming community to work freely in their fields, which is a good move (Marambe and Silva 2021) to support the economy and livelihood of the farming community. This decision, coupled with the timely availability of agricultural inputs such as synthetic fertiliser, pesticides, contributions by the scientists, academia, and more importantly, the farming community who understood the ground realities, as well as the policy decisions made before 27 April 2021, have contributed to reap richer harvests from many food crops in 2021.

By early 2021, the Department of Agriculture had all plans to strengthen the Good Agricultural Practices (GAP) certification programme and popularise precision agricultural technologies in the national crop productivity enhancement efforts (Roshan and Arunapriya 2021).

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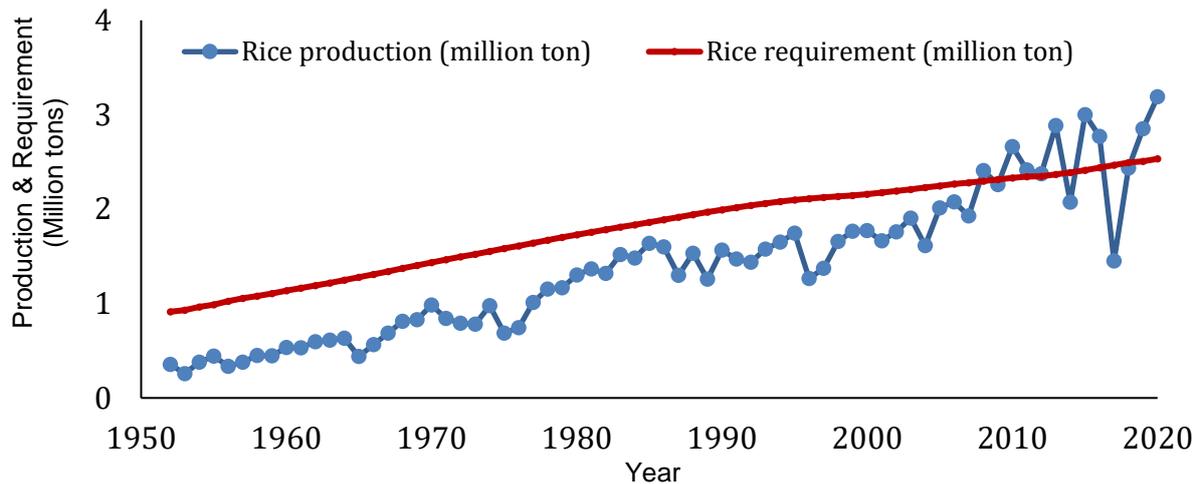


Figure 1. Paddy production in Sri Lanka over a period of seven decades
(Source: Rice Research and Development Institute, Department of Agriculture)

Until the year 2021, the country's agriculture sector was moving in the correct direction with a vision, with experience from over seven decades of scientific research and development.

On 27 April 2021 (Cabinet Decisions, 2021 - unpublished), the government decided to ban the importation of two critical categories of agricultural inputs, i.e. synthetic fertiliser and pesticides. This decision had some legal teeth for its implementation with the issue of an extraordinary gazette notification (No. 2226/48) on 6 May 2021. The import ban was made effective when the previous *Yala* season (March to September) in 2021 had just commenced, and some synthetic pesticides and fertilisers were already imported. Any remains of agrochemicals from the *Maha* season (October to February) of 2020/2021, and some imported later due to the efforts of the Ministry of Plantation and others, would have supported farming in the previous *Yala* season (2021).

The decision to ban the import of synthetic fertiliser and pesticides was finally revoked on 30 November 2021 by the Extraordinary Gazette No 2256/23. However, by the time the decision was revoked, the country had missed the opportunity for timely importation of the agricultural inputs before the dramatic price increase observed in the world market since October 2021. China, with a urea export share of 10% of the global trade, announced the suspension of fertiliser exports until June

2022. This is mainly to ensure availability of fertiliser in China amidst food security concerns (Baffes and Koh, 2021). The fertiliser supply concerns were further aggravated as Russia also announced restrictions on nitrogen and phosphate fertilizer exports for six months (Baffes and Koh, 2021), from 1st December 2021, resulting in soaring fertiliser prices in the world market. The Russian-Ukraine conflict has further aggravated this issue as at present.

The Current Situation

The unpublished databases in Sri Lanka have made it more than evident that the national level paddy yield in Sri Lanka in the *Maha* season 2021/2022 will show a 40-45% drop compared to the average of the previous *Maha* season yields. The paddy harvest continues at the time of preparation of this article, and the losses are even expected to be more. The author attributes this yield drop to the efforts made to have a total shift from synthetic fertilisers to organic fertilisers rather abruptly, as envisaged by the politicians through policy directives. Knowing how organic fertiliser (solid or liquid) works on crops, the fate of organic matter in a tropical environment, and the fact that organic fertiliser alone will not be in a position to provide the required quantity of nutrients at the correct stage of growth of a crop (Meemken and Qaim, 2018), led to an obvious negative outcome. Most of the academia and scientists in Sri Lanka had no difficulty making reasonably accurate

predictions of yield losses beforehand owing to such reasons. Such efforts and scientific facts presented, unfortunately were not considered by the policymakers and their close associates.

The maize farming was doing quite well, producing more than 415,000 mt of maize from the 2020/2021 *Maha* season and more than 50,000 mt from the 2021 *Yala* season (CBSL 2022). However, the absence of synthetic fertilisers and pesticides during the *Maha* season 2021/2022 has resulted in maize production ending in a disaster. The scientists and practitioners now predict that the country will be producing a mere 60,000 kg of maize during the season, which is a massive drop compared to what the country achieved in the previous *Maha* season in 2020/2021.

At face value, the tea sector has performed well. The total made tea production in 2021 was 299 million kg (Forbes and Walker Tea Brokers, 2022), thanks to the excellent weather that prevailed and efforts made by the Ministry of Plantation to import some quantities of synthetic fertiliser. However, this 21 million kg increase experienced compared to 2020 was mainly coming from the tea production during the first five months (Table 1), before any impact of the unfortunate decision imposed. Sri Lanka should have produced around 320 million kg of made tea if not for the drawbacks experienced towards the latter parts of the year. In that scenario, Sri Lanka fell short of expectations; the made tea production during the last three months of 2021 was 12+ million kg lower than that of 2020 (Table 1). Had we sold tea even at a lower price of US\$ 2 (not to undermine the quality of Ceylon Tea), the additional foreign exchange earnings should have been around US\$ 25 million from the last three months of 2021 alone. The tea production in February 2022 has fallen by 20% of that of February 2020 to 18.16 million kg, the lowest monthly production ever recorded since 2009 (12.8 million kg; Forbes and Walker Tea Brokers, 2022).

The decision to continue with organic or “green agriculture” (President’s Office 2021) does not make any scientific sense. Had the policy makers allowed agriculture to continue

in the usual manner in the previous *Maha* season (2021/2022) without disrupting it, in the present economic crisis, the country would have been in a better position in terms of food security. The agriculture sector of Sri Lanka would have faced the *Yala* season of 2022 confidently under the changing global political scenario. At least, the country would have avoided the food import expenditure and the import cost of 'organic' fertilisers that did not comply with the standards set by the Sri Lanka Standards Institution. Entry of such sub-standard material could have done more harm to the Sri Lankan environment compared to synthetic fertilisers imported following the set standards.

This situation would make Sri Lanka a predominantly rice-importing country for the foreseeable future. Early this year (2022), the government decided to import 300,000 mt of rice from Myanmar (Cabinet Decision 2022), repeating the situation in the 1940s where we imported 60% of our rice requirement mainly from Myanmar to feed a mere 6 million population and was to receive one million mt of rice from China (Ref: Post-cabinet Press Conference held on 19 January 2022). These two requests alone account for more than 54% of the annual rice requirement of the country. The government has also opened up the trade for anyone to import rice. The Indian rice products were freely available now, even before the Indian credit line was approved recently.

The Way Forward

If the objective is to minimise misuse (overuse, under-use, indiscriminate use) of synthetic fertiliser and pesticides, ensure food and environmental safety, reduce the cost of production, and enhance productivity, the near-perfect solution would be to adopt SLGAP-certification with full government patronage. The SLGAP-certification is free of charge and done by the Department of Agriculture (DOA) and the Department of Export Agriculture (DEA), unlike the costly third-party certification generally carried out for organic agriculture and organic farming. The country requires more trained staff to get this

Table 1. The monthly made-tea production in Sri Lanka during 2020 and 2021

Description	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	2020 (million kg)											
High	5,000,699	4,366,890	3,295,665	3,964,026	6,660,337	7,157,374	5,794,315	4,047,227	4,123,627	4,451,673	5,391,251	6,420,313
Medium	3,447,598	3,314,138	2,563,918	2,942,039	5,892,923	4,199,221	4,164,602	3,333,906	3,326,869	3,387,392	4,016,229	4,575,468
Low	13,326,003	10,100,662	7,306,497	13,284,895	15,670,300	15,323,235	16,144,669	14,869,963	14,260,280	15,400,615	15,178,342	17,322,787
Green Tea	164,633	166,708	114,632	74,008	134,572	167,801	175,826	176,107	199,752	217,718	221,205	185,884
TOTAL	21,938,933	17,948,398	13,280,712	20,264,968	28,358,132	26,847,631	26,279,412	21,910,528	21,910,528	23,457,398	24,807,027	28,504,452
2021 (million kg)												
High	4,716,756	4,484,149	6,349,619	6,765,985	7,069,398	5,774,279	5,669,713	4,857,931	3,980,906	4,653,703	4,063,313	4,415,105
Medium	3,250,149	3,529,846	4,884,624	5,392,857	5,801,776	4,352,372	4,675,307	3,734,310	3,560,430	3,902,276	3,137,608	3,102,325
Low	14,911,473	14,200,275	16,930,375	17,234,904	17,282,615	15,556,888	15,565,360	14,864,098	14,782,095	15,205,413	12,647,820	12,705,183
Green Tea	166,819	165,127	246,372	193,762	222,031	254,153	254,586	243,754	240,592	235,539	154,759	194,882
TOTAL	23,045,197	22,379,397	28,410,990	29,587,508	30,375,820	25,937,692	26,164,966	23,700,093	22,564,023	23,996,931	20,003,500	20,417,495

Source: Forbes and Walker Tea Brokers (2022)

process on the ground more progressively and ensure the market mechanisms are in place to support the SLGAP-certified agricultural products.

The SLGAP focuses on adopting the recommendations by farmers judiciously to ensure higher crop productivity and safety, including integrated plant nutrient management systems (IPNS) and integrated pest management systems (IPM, including weed management), embedded with climate-smart agricultural practices. The DOA formally introduced the process in 2016. The Sri Lanka Standards Institution (SLSI) through SLS 1523 has provided required standards for different commodities to support SLGAP farmers and the certification process. Sri Lanka has also prepared the National Guidelines for Climate Smart Agricultural Technologies and Practices in 2019 (MAIRD, 2019), complementing the SLGAP-certification program.

It is now quite obvious that a course-correction of policies is required urgently to come out of the abyss of food shortages brought about by injudicious policies that have been implemented in the recent past.

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