Tea Smallholders in Sri Lanka's Organic Fertiliser Crisis

Kaushini Dammalage

The plantation economy took root in Sri Lanka (then Ceylon) with the onset of British colonialism in the 19th century. The British government in Ceylon took measures to provide the necessary fiscal incentives and initiate changes in the base structure in favour of commercialisation, with a view to promoting a minimal state and capitalist economy (Kurian & Jayawardena 2014). The tea industry that commenced because of these policies was in the early era thriving in large estates and securing lucrative profits. However, "one of the significant features of Sri Lankan rural history over the past half century has been a partial transfer of tea and rubber production from the plantation sector to the smallholder" (Moore 1989: 179).

At present, more than 70% of Sri Lanka's tea produce comes from smallholders. Tea smallholders are defined in Sri Lanka as those with less than 10 acres of land for cultivation, characterised by informal arrangements of labour, with family members most of the time directly working on lands and almost always involved in the supervision of work (ILO 2018). My personal experience, being from a family of tea smallholders, is that the practice of family members doing actual labour work on their lands is largely limited to estates of less than two acres in extent. Those of greater acreages than that, draw on informal labour available in the nearby village.

Tea constitutes a key source of Sri Lanka's agrarian export income. However, the sudden decision by the government to shift to organic fertiliser has dealt a serious blow to this industry. On May 6, 2021, the Sri Lankan government prohibited the import of chemical fertiliser, citing health concerns. It was expected that this move will stop the outflow of about US$400 million annually (*EconomyNext* 2021). In a partial reversal, the Chairman of the Sri Lanka Tea Board now says that chemical fertiliser will soon be made available under a licensing system so the required soil quality is achieved, even while stressing that this is a temporary arrangement, and will be accompanied by a monitoring mechanism to ensure non-organic fertilisers are not used excessively (*Daily Mirror* 2021). Nonetheless, the shift has exposed tea farmers to great vulnerability. Tea, as a chief source of foreign revenue for Sri Lanka, is expected to suffer considerable losses due to falling yields.

While tea is important to the national economy, the smallholder industry is even more so to the rural economy. In this short investigation for *Polity*, my intention is to briefly outline the technical difficulties involved in the implementation of the organic fertiliser directive, and the nature of its impact.

Context

Some context may be helpful to better appreciate the difficulties faced by tea smallholders in the shift to organic fertiliser. On average, a plot of one acre of tea treated by chemical fertiliser yields roughly 550-600 kilos of tea leaves every month. Under such conditions, tea plucking is done every five to seven days, amounting to around four times a month. The plucked tea is then sold typically to the tea factory located closest to the smallholding.

Tea plucking is largely determined by weather conditions and the growth of leaves. Usually, an acre of tea requires an input of about 50 kilos (approximately three bags) of chemical fertiliser every three months. A bag of chemical fertiliser costs about Rs. 1500, which amounts to Rs. 4500 per month for cultivation of an acre of tea (interview with smallholder, Matara, 22 September 2021).

With the organic fertiliser directive, chemical fertiliser prices have started being dictated by the black market. Further, organic fertiliser is issued under a quota system, whereby the amount of fertiliser given to a smallholder is proportionate to the amount of tea leaves produced for sale to the factory. However, smallholders say this is inadequate for their land, and that they cannot afford the black-market rate for chemical fertiliser (ibid).

Consequently, many have opted to mix a considerable amount of chemical fertiliser with compost in application to their fields and crops. Others experiment with combinations of compost and alternative organic fertiliser. An acre of tea requires up to eight bags of compost (weighing 40 kilos per bag), each of which costs around Rs. 900 in the market, which amounts to Rs. 7200 per acre. Farmers complain that organic fertiliser is more expensive than the cost of chemical fertiliser before its ban. An additional problem is that the variants of compost available in the market do not meet the required standard, resulting in a decline of crop yield by about 50%. Consequently, the income generated has also nearly halved (ibid).

The Sri Lanka Tea Factory Association in a recent statement explains the specific requirements of tea cultivation for organic fertiliser: "Types and quantities of fertiliser required to a tea field depends on the age of the plant, geographic area, etc. For example, time tested T65 mixture for nursery plants, T200 mixture for young plants and T750 mixture for immature clearings etc are all designed by years of experimentation by the TRI and overnight changes to hitherto unknown concoctions and methodologies may have serious effects" (DailyFT 2021).

Technical Difficulties

The interviews conducted for this paper revealed that farmers' opposition to organic fertiliser is to do with technical difficulties associated with such a shift, more than anything else. The respondents in fact held that shifting to organic fertiliser is highly desirable, but that it needs to be achieved through a systematic and long-term plan that is implemented gradually and in accordance with certain standards of production. While a tea plant has a lifespan of 10-12 years, they said that neither the plant nor its environment can change as fast as government policy. The government needs to be strategic about it, they opined, and explore options such as compensating for the roughly 50% decline in crops, by increasing the price of a kilo of raw tea, as an incentive for smallholders to opt for organic fertiliser.

> We usually use nitrogen fertiliser for tea, but the variant they are promoting now is simply compost. Tea doesn't respond to compost the way it does to nitrogen fertiliser. The government just asked us to use compost, but didn't say anything about the standards to be observed, and didn't give a variant that is suitable for tea. You can't get the same yield out of a plant that was earlier used to chemical fertiliser, when you suddenly switch to organic fertiliser. The plant won't behave the way we want it to. Also, tea has a longer life span [than paddy], so the fertilisers have to be different and (work) longer term for tea. Then there are issues of termite infestation, lack of absorption by the plant roots, and lack of retention in the soil, particularly if slopes are involved. Chemical fertiliser does not have these complications. For instance, if you grow tea on slopes, it is better to use chemical fertiliser because it's sprayed as a liquid, in the measure required by the plant. But organic comes in soil form, has to be mixed with the soil around the plant, and takes time. The real issue comes when there's rain. If there is rain, organic fertiliser will slide down the slopes with other bits of earth, whereas chemical fertiliser – because it's absorbed by the plant fast – mostly does not. We are now using variants made of cow dung and such, but there's just not enough for land spreading over multiple acres (interview with smallholder, Matara, 12 August 2021).

Given that these technical difficulties considerably inhibit the ability of tea smallholders to shift to organic fertiliser, many have devised alternative means to sustain their landholdings:

> Tea requires four main Nutrients: Nitrogen, Phosphorous, Potassium, and Magnesium. Of these, Potassium and Magnesium are included in organic fertiliser. But we have no way of giving the Nitrogen that the plant wants. What I do as a way around this is growing wild sunflowers in my land, because they channel the Nitrogen in the air to the soil. It's definitely not enough, but it's something. Additionally, I grow various variants of Albizia to give the soil the nutrition it needs to sustain the plants. You have to take care of the soil to get what you need out of the plant. If the soil is not good, the leaves in the plant become yellow, and the plant starts yielding only a single leaf. We are pruning the plants these days, because of the lack of fertiliser. We do this every three months or so, to prevent the trees from growing and requiring more nutrition from the soil. But we can't go on this way. If the situation doesn't change, we'll have to give up our landholdings (interview with smallholder, Matara, 22 September 2021).

The general decline in the quality and quantity of tea is clear from these discussions. Alternative fertilisers have so far proven to be of little use in stemming the damage. Given the economic blow this has dealt, tea smallholders are unlikely to be able to continue in business, and are contemplating the sale of their land.

Economic Impact

Tea is an important commercial crop in the rural economy, as already shown. Therefore, many lives are dependent on it, and all these lives are tied to one another as parts of the tea production process. This supply chain consists of the farmer, workers, tea collectors (intermediaries), and tea factories. Since the yield has suffered a decline of about 50% following the directive to shift to organic fertiliser, it has made it difficult for smallholders to maintain their tea lands.

A hired worker recounted the spill-over effects of this development on them:

> Crops have declined by about 50%. When this happens, our daily work quota suffers. We usually work every five days or so, but now it has become every 10-12 days per month. So what was earlier plucked four times a month has gone down to twice. When the crop production falls, it hurts us as well as the smallholders (interview with worker, Matara, 18 August 2021).

Factories have also been affected because of the decline in crops, which in turn has eaten into the daily wages of the workers employed therein. Cyclically, these effects have impacted the capacity of smallholders, workers, as well as factories, to produce tea.

> The trees have grown yellow for lack of nutrition. They're now producing single leaves. You don't get a proper taste or quality that way. Our entire market is based on the quality factor. But now these things will lead to a change even in the taste of our tea. Tea is our livelihood. Now it's the lack of fertiliser that is affecting us more than Covid. Actually, Covid didn't even economically affect us much (interview with smallholder, Matara, 05 September 2021).

The collapse of the rural economy tied to tea plantations has also resulted in further social and economic vulnerability for many.

Impact on Women

Women's participation in the rural economy is not only common; it may even be considered the standard practice due to men's out-migration to urban centres in search of higher paying employment (Dammalge 2018). Therefore, the impact on tea following the organic fertiliser directive is particularly felt by the women of Sri Lanka's rural interior. This has made them vulnerable to unemployment and collapsing domestic economies, gradually eroding into economic safety nets, among other things.

Additionally, COVID19 has created a new labour surplus in the rural economy, due to many people working in urban areas having moved back to their villages following the loss of their jobs. Many who returned were men, and their return has further constricted income generating opportunities for the women, due to heightened labour market competition. Therefore, the structure of the rural employment landscape may be considered as having fundamentally changed post-COVID19, resulting in women's bargaining capacity declining, and their wages suffering as a result.

> Most tea pluckers are female. Therefore, we suffered the most loss of income. We can't do all the work involved in tea production, especially things like digging trenches and clearing lands. What we could do, we can no longer do to the same level as before, because of the decline in crops. Many have returned to the village because of Corona, so now there's a lot of people available for work. The men are usually able to do heavy work, but we're the ones with the problem. Some women, particularly those who are heads of their households, work somewhere during the day, and work in the factory at night. But because crops have declined, factories don't do processing work every day. That's how much the economy has collapsed. We only have work on a few days of the week (interview with female worker, Matara, 09 August 2021)

The fertiliser crisis has impacted the tea-related rural economy immensely. What will happen to the exodus of workers now returning to villages following COVID19-induced disruptions in the urban economy? What will happen to their families? And what will happen to the communities in which those families live? In this context, workers are even more vulnerable than they were before. Given the economic strain on tea smallholders who may soon be forced to sell their land, the landscape of the rural economy may in the near future be expected to be transformed, with effects that are felt nationally.

Kaushini Dammalage *is a researcher at the Social Scientists' Association.*

References

Daily Mirror. (2021). "Tea industry will soon have access to chemical fertilisers". (12 October). Accessed on 14.10.2021. Available at https://www.dailymirror.lk/print/business-news/Tea-industry-soon-will-have-access-to-chemical-fertilisers/273-222331

Dammalage, Kaushini. (2018). "Reproduction of female gender stereotypes in the plantation economy: A study of gender labour mobilization in the plantations (with special reference to Deegala Estate)" (in Sinhala). *Pravesha*, 1(1), pp. 97-119.

Daily FT. (2021). "Tea factory owners speak up against Govt.'s ban of chemical fertiliser, pesticides". (17 August). Accessed on 20.09.2021. Available at https://www.ft.lk/opinion/Tea-factory-owners-speak-up-against-Govt-s-ban-of-chemical-fertiliser-pesticides/14-721799

EconomyNext. (2021). "Sri Lanka, tea, palm oil farms to be hit by fertilizer ban". (July 25). Accessed on 22.09.2021. Available at https://economynext.com/sri-lanka-tea-palm-oil-farms-to-be-hit-by-fertilizer-ban-fitch-84270/

International Labour Organisation. (2018). *Future of Work for Tea Smallholders in Sri Lanka*. Colombo: ILO.

Kurian, Rachel, and Kumari Jayawardena. (2014). *Persistent Patriarchy: Women Workers on Sri Lankan Plantations.* Colombo: Social Scientists' Association.

Moore, Mick. (1989). "The Ideological History of the Sri Lankan 'Peasantry'". *Modern Asian Studies*, 23(1): 179-207.

Political Science
A Contemporary Introduction
Jayadeva Uyangoda

Jayadeva Uyangoda's Politics and Political Science: A Contemporary Introduction published by SSA is the first of a series of resource books intended for Advanced Level Political Science teachers in Sri Lankan schools. It reflects contemporary advances in the field of political science with a South Asian emphasis. It also introduces the reader to classical, contemporary, and more recent trends as well as advances in political science inquiry. Chapters of the book revolve around two key notions, 'politics' and 'political science', emphasizing the need to return to the basics, in both teaching and learning political science in Sri Lanka. This series also seeks to refresh the interest in politics among practitioners of politics as well as the general public. The publication is available for purchase in Tamil and Sinhala as well.