



# SRI LANKA INSTITUTE OF AGRICULTURE (SLIAG)

Formerly Sri Lanka Organization of Agriculture Professionals (SLOAP) Established in 2005  
A Member of the Organization of Professional Associations (OPASL) since 2006

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Our Ref: SLIAG/Sec/11-1

05<sup>th</sup> June 2021

His Excellency Gotabaya Rajapaksa  
The President of the Democratic Socialist Republic of Sri Lanka  
Presidential Secretariat  
Colombo 1

Your Excellency,

## **Cabinet Decision to Import Organic Fertilizer to Sri Lanka**

The Sri Lanka Institute of Agriculture (SLIAG) learned that on 31<sup>st</sup> May 2021, the Cabinet of Ministers have granted permission to import Organic Fertilizer to support cultivation of 500,000 ha of paddy and 600,000 ha of other crops during the Maha season 2021/2022. This is based on the decision taken by the Cabinet of ministers on 27<sup>th</sup> April 2021 to stop importation of the Inorganic Fertilizers and pesticides including herbicides with immediate effect. This also indicates that the remaining 300,000 ha of paddy fields are supported by the locally produced organic fertilizer.

The SLIAG, which is the only institute in Sri Lanka that represents all professionals in the field of agriculture, has already made a submission expressing concerns and views on that decision made to this effect. We would like to inform Your Excellency that the SLIAG is not in favour of the decision made on to import organic fertilizer in any form (solid, liquid and bio-fertilizers). As we have clearly stated in the previous communication addressed to Your Excellency on 2<sup>nd</sup> May 2021, the achievement of the objective should be through a phase out plan, to avoid addition of alien materials to our soils. The SLIAG strongly recommends adoption of the Good Agricultural Practices (GAP) programme island-wide as an important stepping stone to achieve the objectives of greener Sri Lanka.

We make this submission requesting you to stop importation of organic fertilizers on a strong scientific basis, and due to the following Technical and Regulatory reasons as explained below.

### **1 Technical Reasons**

#### **1.1 Quality and Quantity Issues Related to Imported Organic Fertilizer**

- **Potential Heavy Metal Loading to Sri Lankan Soils:**

Import of organic fertilizer pose a serious threat to the heavy metal loading in Sri Lankan soils. We would like to illustrate the threat pose by addition of imported organic fertilizer considering only the Nitrogen requirement of the paddy crop. Most of the solid organic fertilizer will have Nitrogen (N) in the range of 5-10%. Based on these facts, our estimations on the maximum addition of heavy metals resulting from import of solid organic fertilizers is presented in Table 1.



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**Table 1. Comparison of amounts of fertilizer required and associated heavy metal incorporation predicted in fulfilling nitrogen (N) requirement of paddy crop for the Maha Season**

N removal from paddy with a harvest of 5 t/ha	N requirement for 500,000 ha	Type of fertilizer	Estimated N content in fertilizer (%)	Fertilizer requirement in the Maha season*	Max. Heavy Metal Load to Sri Lankan Soils during the Maha season <sup>†,‡</sup>			
					Cd (mt)	As (mt)	Pb (mt)	Hg (mt)
105 kg	52,500 mt	Organic	10	0.5 million mt	0.75	1.5	15	0.5
			5	1 million mt	1.5	3.0	30	1.0
		Chemical (Urea)	46	115,000 mt	0.0115	0.0115	0.0115	0.0115

\* Assuming the total N requirement for 3-3.5 month varieties of paddy is provided by the organic fertilizer in the Maha season 2021/2022

† According to SLS 1704:2021 the maximum amounts of heavy metals allowed in organic fertilizers is 1.5 mg/kg of Cadmium (Cd) and 3 mg/kg of Arsenic (As), 30 mg/kg of Lead (Pb) and 0.5 mg/kg of Mercury (Hg), and

‡ According to the maximum amounts of Heavy Metals present in Urea as stipulated by SLS: Cd 0.1 mg/kg, As 0.1 mg/kg, Pb 0.1 mg/kg and Hg 0.1 mg/kg

Even if we doubled the amount of Urea imported considering one full year, then the heavy metal loading to Sri Lankan paddy soils by importing solid organic fertilizer in Maha season would be a minimum of 32 years of urea application for loading of the said heavy metals.

The solid organic fertilizer usually releases N at a rate of approx. 70% during a period of approximately 6 months. This is the main reason reduce the N losses to the systems. Assuming this condition, to support a 3.5 months old crop, the amount of organic fertilizer required to provide the N requirement only, would even be higher. Hence, a further increase in the heavy metal load is possible to Sri Lankan soils only within the next Maha season.

The rough calculation done above shows the gravity of the decision to import organic solid fertilizers, despite there are regulations not allowing such material to be imported to Sri Lanka. Further the above calculation was done ignoring other heavy metals and any radioactive materials that could land in Sri Lankan soils with such importation.

Please note that the above calculation is only done considering N requirement for the paddy crop. The SLIAG did not present the calculations done the requirements of other nutrients and also did not consider the 600,000 ha of other food crops where private sector has been granted permission to import organic fertilizer. The negative impact in such a scenario will be doubled and deepen the crisis. If the imported quantities of organic fertilizer quantities is to be adjusted to provide phosphorous and potassium requirement, the situation would worsen further. It is important to note that the imported quantities of Triple Super Phosphate and Muriate of Potash is much lower when compared to Urea imports for paddy cultivation.

This situation would totally be in contrast to the very reason taken to stop importation of inorganic fertilizers to the country. Further, all the reasons presented by medical professional during the past years on non-communicable diseases including CKDu, linking them to heavy metal contamination in



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inorganic fertilizer (especially phosphate fertilizer) and pesticides, will be made untruthful and a mythical fact by allowing such importation of organic fertilizer to the country even only for one season.

- *Analysis of Test Samples and Bulk Consignments for Compliance:*

#### Sampling strategies and numbers:

The analysis of samples of organic fertilizer intended to be imported in bulk, and the testing organic fertilizer imported in bulk for compliance to Sri Lankan standards and other regulatory aspects are two entirely different operational mechanisms. Even the testing of uniformity of the organic fertilizers in different packs at least for the main nutrient is a challenging and a daunting task, as there is always a highly likely change for both intra-batch and inter-batch variability.

#### Adequacy of laboratory facilities

This is further aggravated owing to inadequate number of laboratories, and insufficient facilities for rapid testing of such materials brought in bulk in the country. Only seven laboratories are functioning under various technical institutes including Universities. Furthermore, well equipped laboratories are not available at embarkation points such as Colombo, Hambantota and other local harbours, severely affecting the effectiveness of assessing compliance of materials to the SLS standards and other regulatory control.

#### Compliance with standards

Although the SLSI 1704:2021 insists sterilization of solid organic fertilizers that to be used in Sri Lanka is a must to avoid any active or dormant microorganisms and weed seeds and propagules, there is no such standard being established for liquid organic fertilizers, and composts. This is reasonable as the SLS standards are set for local consumption of materials and would have considered local production. It is also important to note that the SLSI 1704:2021 is subject to other regulatory control imposed in Sri Lanka (see Foreword of the SLSI 17004:2021). More importantly, there is no clear mechanism established in the country to detect whether the imported solid organic fertilizers have been sterilized, and are free from any harmful microorganisms. Furthermore, any harmful organism which is not active in the exporting country may become active in our soils owing to favourable climatic conditions.

The SLSI 1704:2021 also has taken adequate precautions to avoid deliberate or inadvertent contamination of substances to artificially increase the content and composition of main nutrients. This is a good practice indeed, however, how far our laboratories and analytical system is geared towards assessing these contamination remains a mystery and thus threaten our ecosystems further and even can mislead the whole society by importing hybrid fertilizers under the banner of organic fertilizers.

#### 1.2 Potential Soil and Soil Health Issues

- Heavy metal loading of Sri Lanka Soils

This matter was elaborated in detail under the Section 1.1. The SLIAG further reiterates the potential but grave danger to Sri Lankan environment through heavy metal contamination facilitated through



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import of organic fertilizers. Such accumulation of heavy metals in Sri Lankan soils at a rapid rate owing to organic fertilizer import would result in irreversible impacts.

#### • Soil EC

There is a highly likely chance to increase the EC of Sri Lankan soils by application of organic fertilizer if such materials are close to the maximum specified under SLSI standard (4 dSm<sup>-1</sup>). Higher EC would enhance toxicity of many elements in soil.

#### 1.3 Potential Handling and Application issues

#### • Bulk Material Transportation

Transport of imported organic fertilizers, especially solid organic fertilizers, will no doubt increase the cost of production, owing to payment by farmer, which is not yet been calculated or publicized. According to the national level recommendations, a minimum of about 400 kg of green manure and 2500 kg of compost must be added to maintain P and N levels in the soil where the organic rice farming is practiced. This indicates the massive operation required for transportation of material in-country and especially to the farming fields.

Adopting crop-based application method is a must for organic matter application, which has not been recommended yet, except for few crops such as paddy. The normal practice is the incorporation of Organic Fertilizer to the soil, which may not yield effective results considering the differential growth behavior of food crops. Furthermore, increasing labour days would no doubt further aggravate the problems imposing an additional cost to the farming community. The sector is already plagued with low labour involvement and high cost of available labour, and hence, novel methodologies to reduce cost of application is an essential need.

We do understand that the Cabinet of Ministers have re-considered the requirements of the non-food crop production sector and soilless culture favourably, and has decided to grant permission to import speciality fertilizers. The SLIAG welcome this move as these plant production systems, as in the case of food production systems cannot totally rely on organic fertilizers in order to provide higher yields and higher productivity.

## 2 Regulatory Environment

Please note that with a view to reduce the length of this letter, the SLIAG only focuses on the salient features of the Plant Protection Act No. 35 of 1999 and the Animal Disease Act No 59 of 1992 for the moment.

### 2.1. Plant Protection Act 35 of 1999 and Regulations published in the Gazette on 2<sup>nd</sup> November 1981

Plant Protection Act No. 35 of 1999 controls entering of any harmful or dangerous or injurious organism to the country and the Section 15 of part vii of the act clearly describes the nature of organisms. It further states that any type of media cannot be imported along with plants and strictly prohibits soil or any component of soil imported with plants or part of a plant (Regulation No 5).

Though the SLSI allows the use of Solid Organic Fertilizer that contains max of 5% sand, such standards have been adopted such provisions granted under many acts, including the Plant protection Act No



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35 of 1999 and regulations stipulated therein (Ref: Foreword of the SLS 1704:2021). The importation of Organic Fertilizer contaminated with sand is highly likely, but will not be permitted through the regulations made under the Plant Protection Act. Hence, importation of such materials is a violation of the Plant Protection Act No 35 of 1999.

New alien insect pests, disease and weeds have been reported in Sri Lanka in recent past (e.g. Fall Army Worm; Creeping Guinea Grass). The importation of Organic Fertilizer, especially in the solid form will facilitate the entry of such organisms to the country seriously affecting our agro-ecosystems. It is a well-known fact that organic fertilizers are a key mode of transportation of insect pests, diseases and especially weeds for long distances. Hence, these highly likely chance need to be blocked at all costs, however, the capacity to carry out such tests under Sri Lanka conditions to a bulk import of organic fertilizers with no uniformity would be a major issue to address.

## 2.2. Animal Disease Act No. 59 of 1992

The SLIAG hereby express strong concern on the highly likely chance of entry of certain microbes and vectors that could lead to the introduction and spread of alien pathogenic and vector borne animal diseases in the country with the introduction of organic fertilizer that are not properly sanitized or proven to be negative for such pathogens.

**Your Excellency, we conclude this letter by kindly requesting your vigilant attention on the scientific facts presented here for the betterment of the agriculture sector and the total ecosystem of our mother nation, and refrain from the importation of organic fertilizer to Sri Lanka even for the *Maha* season 2021/2022.**

Thanking you.

Yours faithfully

WAG Sisira Kumara  
President

Dr Lionel Nugaliyadde  
General Secretary

### Copy to:

1. Hon. Mahinda Rajapaksa, Prime Minister
2. Hon. Mahindananda Aluthgamage, Minister of Agriculture
3. Hon. Shasheendra Rajapaksa, State Minister
4. Hon. Mohan De Silva, State Minister
5. Hon. DB Herath, State Minister
6. Chairman, Presidential Task Force on Creating a Green Sri Lanka with Sustainable Solutions to Climate Change
7. Secretary, Office of His Excellency the President
8. Secretary, Ministry of Agriculture
9. Director Generals, Department of Agriculture/ Department of Export Agriculture/ Department of Animal Production and Health