

# Updates on Agricultural Mechanization policies and Sustainable Agricultural Technology

Eng. M. H. M. A. Bandara  
Chief Engineer  
Department of Agriculture  
Sri Lanka

# General Information

- “ Population: 20.8 million
- “ Main Agricultural crops – Paddy, Maize, Onion, Potato, grain legumes, Fruits and vegetable
- “ Plantation crops: tea, Rubber, Coconut and spices

# Performance of main commodities

- “ Paddy: Excess production, looking for export avenue, need quality improvement
- “ Maize; self sufficient, use imported seeds, development of competitive local hybrid seeds is very urgent
- “ Onion: majority of the requirement imported, focused on self reliance in near future
- “ Grain legumes: becoming self sufficient
- “ Vegetable: export
- “ Fruits: Sector needs improvement
- “ Chili: majority imported

# Agricultural Mechanization

- “ Government identified mechanization is very essential component in food production drive
- “ However supply of machinery is not regulated
- “ Inferior quality machinery inflows to the country
- “ Local production also not supported by unfavorable trade policy and small local market

# Farm Mechanization policy

“ Recently a Cabinet memorandum is presented to the parliament to issue ‘import permits’ only for the quality assured machinery by any recognized institute. If any machinery performance is effected by local conditions it has to be tested and certified by Farm Mechanization Research Centre, Sri Lanka. This motive is inline with the objectives in formulating ANTAM.

# Farm Mechanization Policy

“ In order to protect farm machinery suppliers, farm machinery producers, farm machinery service providers, farmers and other stakeholders a farm machinery act is being drafted and will be implemented in the future with necessary regulations.

# New developments

“ New technology has to be introduced in land leveling, bund plastering , electro static spraying and drying & storage

# Paddy Cultivation

- “ Most of the operations are mechanized
- “ Least mechanized areas
  - Bund cleaning and plastering
  - Plant establishment and weed management
  - Small scale seed paddy processing
  - Drying & Storage

# Bund cleaning and plastering



“ Technology is available and has to be introduced in collaboration with the private sector

# Plant Establishment



- “ Manually operated machines are not productive and power operated direct seeding and transplanting machines to be introduced.
- “ Preliminary trials have been conducted and looks promising

# Weed Management



” Design and testing of two models has been completed and can be released after fine tuning. Available machines in other countries are very expensive.



# Small Scale Seed Paddy Processing



“ Already introduced machines designed by FMRC and supplied by FMRC cooperate manufactures are with low capacity. Scaling up the machine to have moderate capacity is being done.



# Introduction of Laser leveling techniques



“ If land leveling is done with the use of laser guided land leveler both in lowland and highland about 20% - 30% water can be saved and also crop growing will be in uniform. The laser guider has to be imported and preliminary trials will be conducted.

# OFC cultivation- Seeding



“ Specially in commercial scale maize cultivation high capacity, reliable maize planter is an urgent need. Imported machinery are not reliable and it was found that the missing hills are very high. Two types of maize planters cum fertilizer applicator is being tested and will be ready for dissemination

# Irrigation



“ Very high capacity (more than 20,000 l/min.) four wheel tractor powered axial flow type water pump has been developed. It has very good demand in the Eastern Province. A number of manufacturers in that province were already trained. It consumed very low fuel per liter of water.

# Mechanical Weed Control Systems



- “ To minimize the use of chemical weedicides series of small scale cultivators have been introduced in up country in collaboration with the private sector.
- “ A weed burning machine (**Hanuman weeder**) is being developed. Preliminary trials shown promising results.

# Primary Processing machines



High Capacity Maize Sheller



Finger Millet Thresher



Groundnut de-coating machine

**Thank You!**