

# Tea Research Institute of Sri Lanka and Research Developments

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Dr L S K Hettiarachchi  
Director

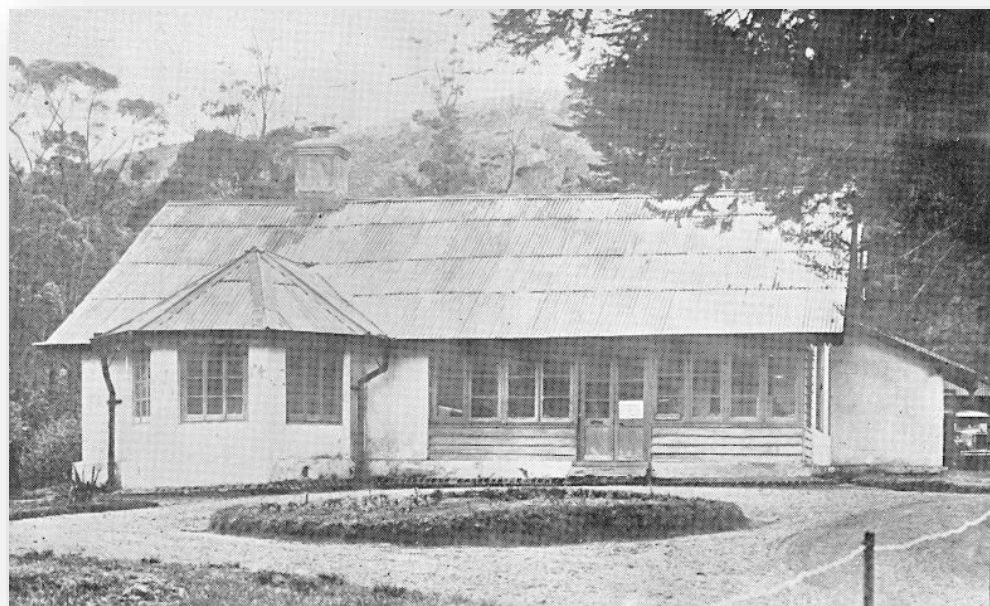
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Tea Research Institute of Sri Lanka

# Establishment of TRI

In 1925, Lindfield, Nuwara Eliya

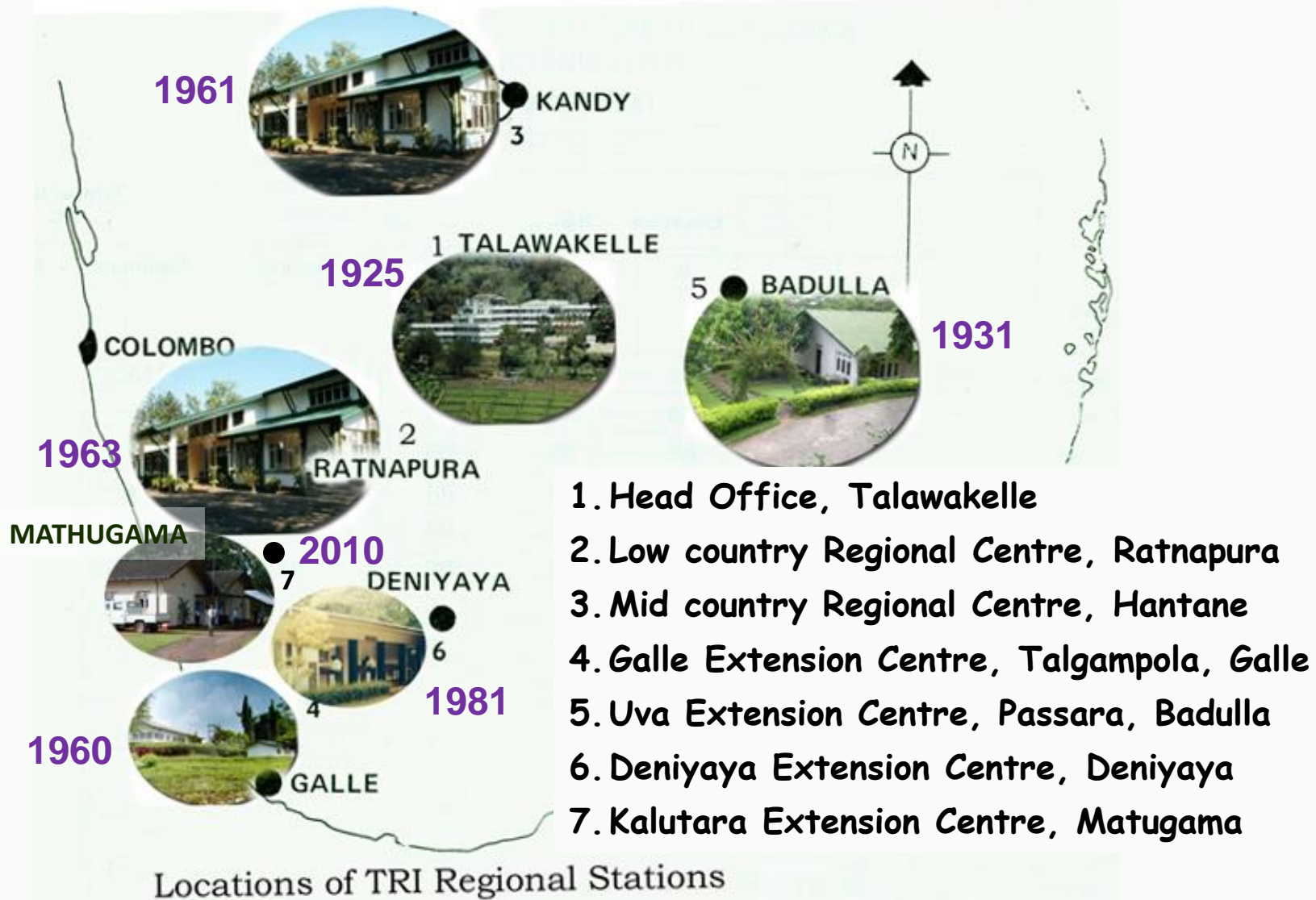


(Second oldest Tea Research Institute in the world)

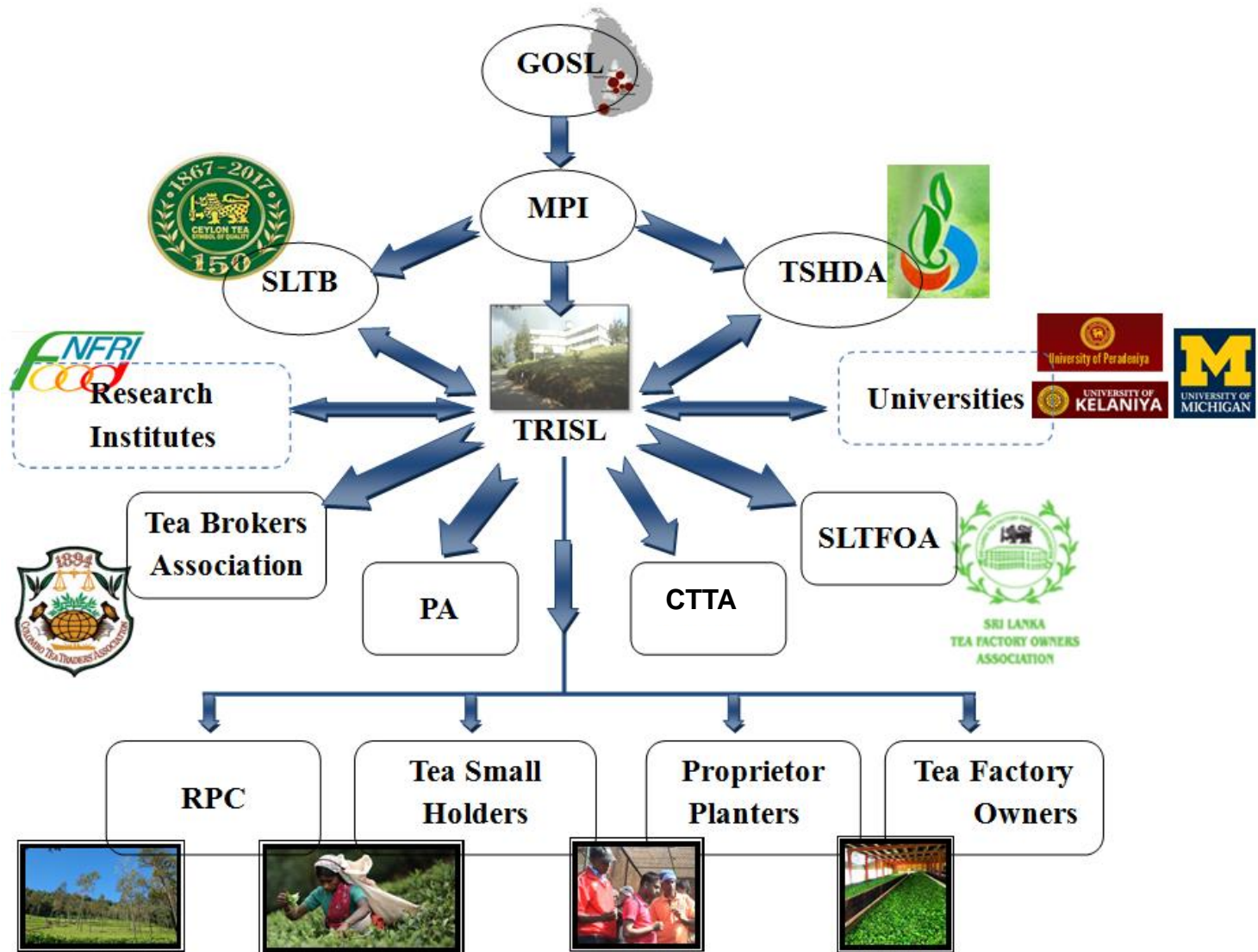
## Regional/ Extension Centres

Centre	Year
Uva	1931
Galle	1960
Mid country	1961
Low country	1963
Deniyaya	1981
Kaluthara	2010

# Head Office & Regional/ Extension Centres



1. Head Office, Talawakelle
2. Low country Regional Centre, Ratnapura
3. Mid country Regional Centre, Hantane
4. Galle Extension Centre, Talgampola, Galle
5. Uva Extension Centre, Passara, Badulla
6. Deniyaya Extension Centre, Deniyaya
7. Kalutara Extension Centre, Matugama



# Organizational **Vision**

“To achieve excellence in tea research and to provide technological guidance to the tea industry for the upliftment of socio-economic status of Sri Lanka and to make Sri Lankan tea the most preferred tea in the world.”



# Mission of the Organization

“To generate and transfer scientific knowledge and technologies appropriate for the stakeholders to improve productivity and quality of Sri Lankan tea in a most profitable manner.”



# Goals of the Organization

- To develop appropriate technologies and effectively disseminate them to the stakeholders for improving land and worker productivity, quality of the final product and profitability of the stakeholders for uplifting their socio-economics status.
- To improve the required infrastructure and human resources for achieving goals in tea research.
- To develop and maintain a better working environment in the Institute, by improving the standard of laboratories and through appropriate changes in research and extension centers, to retain staff for effective undertaking of Research and Development activities and technology transfers.



# Objectives of the Organization

1. To develop improved planting materials to face emerging challenges
2. To improve land productivity through development of integrated methods on soil fertility improvement and by refining agronomic practices
3. To develop adaptation and mitigation strategies to minimize impact of climate change
4. To develop appropriate mechanical devices for mechanization of field practices
5. To refine nursery management techniques
6. To develop integrated crop protection methods to minimize economical damage and to address environmental and consumer requirements



# Objectives of the Organization contd;

7. To improve factory operation to improve quality and to conserve energy
8. To develop economically viable energy plantation
9. To develop methods to enhance made tea quality and value addition
10. To find health benefits of different types of Sri Lankan tea
11. To foster worker wellness and dignity for reducing worker shortage and improving productivity
12. To develop GIS maps to facilitate policy decisions for scientists
13. To assess the adaptation of TRI recommendations
14. To disseminate technologies effectively
15. To provide analytical and other services in an efficient manner



# Role of TRI - technology generation & dissemination

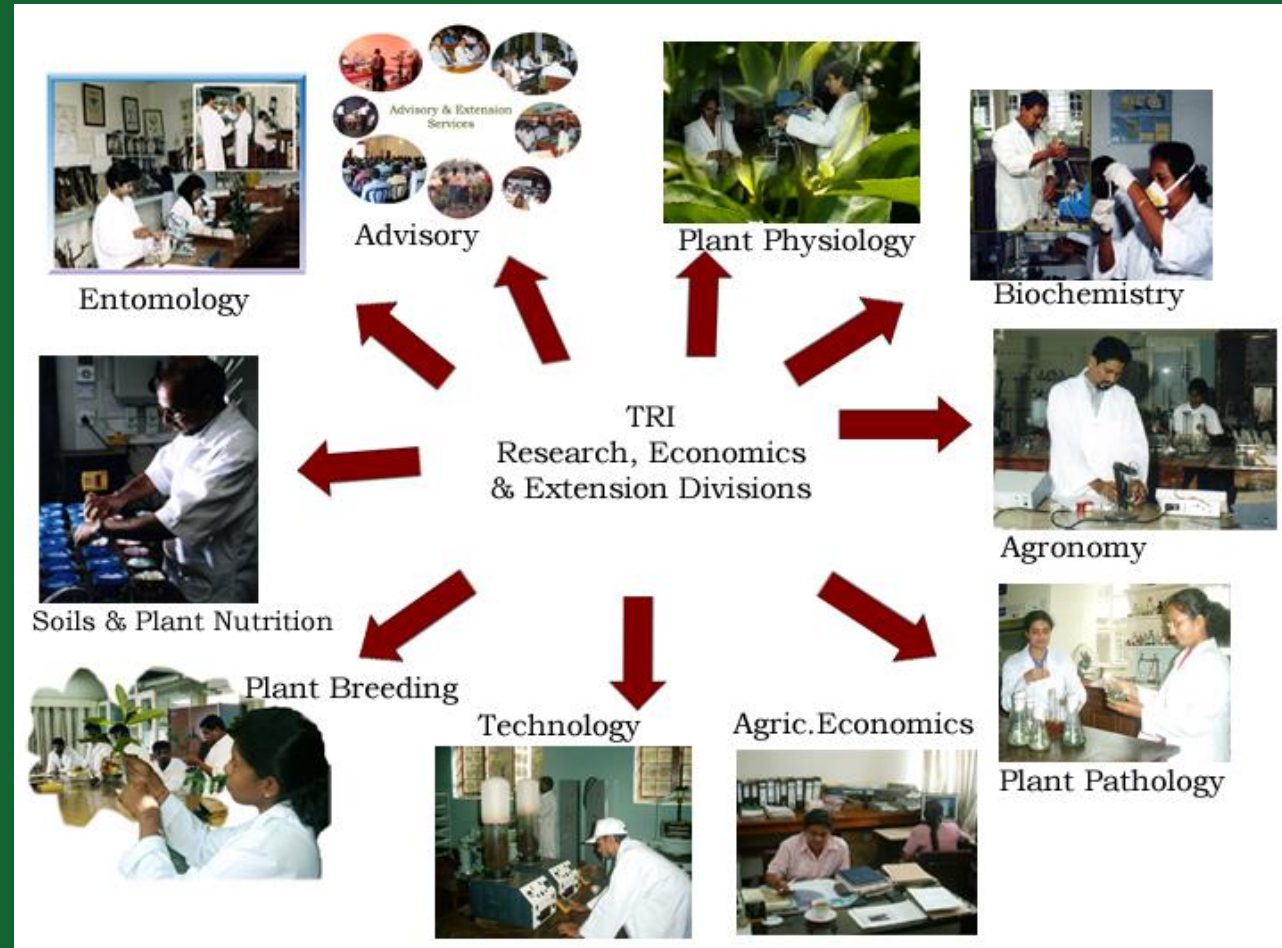
## Nine Research Divisions

(creating new technologies)

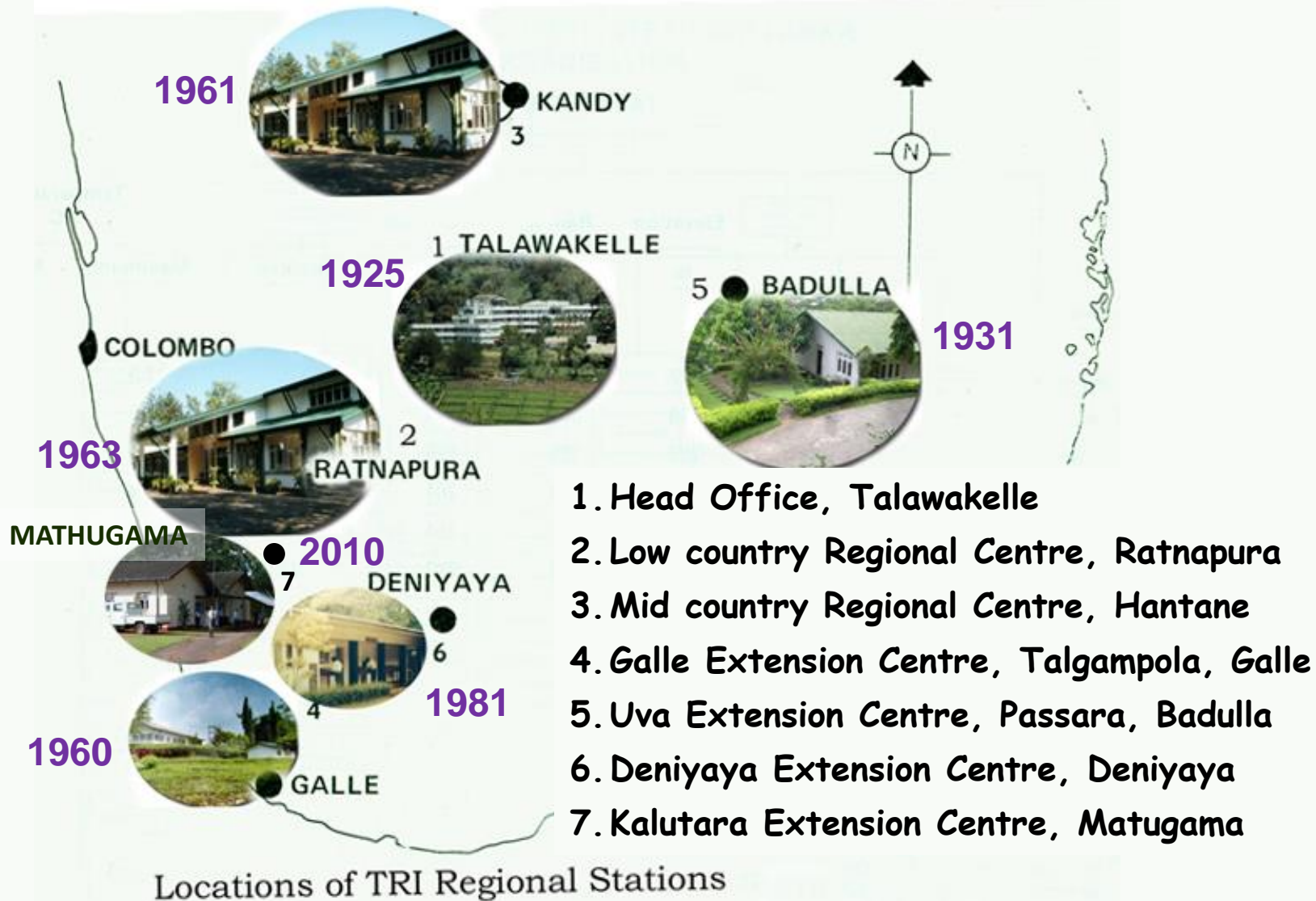
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## Advisory and Extension Division

(dissemination of technology)



# TRISL Head Office & Regional/ Extension Centres



# Research Developments

# The fluidized Bed Drier

- Endless Chain Pressure (ECP) drier had been used for drying tea *dhools* (fermenting tea leaves) for many years. In this system, the *dhool* is remains still; thus, complete contact with hot air in the drier is not possible and drying becomes uneven.
- TRI introduced the Fluidised Bed drier (FBD) in 1973, in collaboration with the Colombo Commercial Company. The system 'fluidizes' the *dhool* and moves it around in the air stream.
- The FBD is more cost effective than the ECP drier, and is superior to other FBDs, both in terms of ease of operation and economy.



# TRI Selective Shear Harvester

- In 1998, the TRI developed and patented together with a local fabricating company, a lightweight, hand held, all terrain harvester which selectively harvests only the best flush.
- It provides a 50-100% increase in plucker output, reduces plucking costs, and maintains made tea quality.



# Tea plucking basket

- Traditionally tea leaves are harvested to bamboo baskets or nylon sacks.
- Bamboo baskets are heavy and difficult to carry in terrains. Damages to tea leaves are high in nylon sacks and damaged leaves leads to poor quality teas.
- As an alternative, an ergonomically sound, light weight, foldable 'tea plucking basket' was introduced.



# Value added products - Tea wine

- The TRI has since been successful in the production of new forms of value added teas including tea wine.
- Tea wine is prepared with unique taste and aroma arising from Dimbulla teas of Sri Lanka and stable in storage, by fermenting tea infusion enriched with sucrose.
- These value added products have the potential of popularizing Ceylon teas among new generation of tea consumers while expanding market horizon.
- The technology has been selected for commercialization under WIPO remote mentoring programme 2019





# An automated control system for withering

- An automated control system for electrical energy saving during withering stage
- With the automated control system 43% electrical energy can be saved during withering and thereby cost of production can be saved by Rs.2 per kg of made tea
- Prototype has been scaled up for commercialization



# Other developments ...

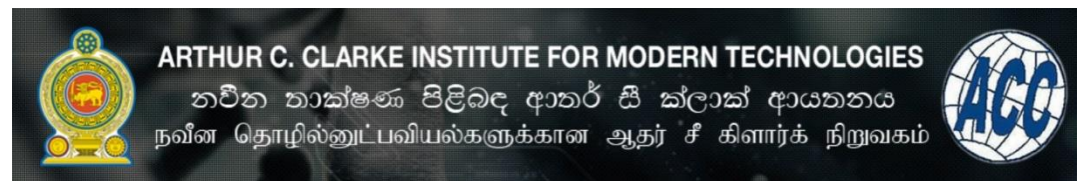
- The stabilized Catechin mixture
- Plant growth promoting rhizobacteria based microbial inoculants for tea under nursery and field conditions
- Deep Fertilizer Applicator
- Carbonated tea



# Technologies in pipeline

1. Process control system for drying Orthodox-Rotorvane teas in Fluid Bed Dryer
2. Self cleaning Michie Sifter
3. A tea-based sauce
4. Protein extraction from spent tea leaf

# International & National Research Collaborations





*Thank you*

