1.1 INTRODUCTION

The Agronomy Division has four stations, namely: Belle Vue E.S., Richelieu E.S., Curepipe E.S., and Plaisance E.S.
The main activities of the Division were:
(i) Vegetable seed production

the seed production of over 25 species / varieties of vegetable crops, including pumpkin, tomato, onion, peas, cabbage, lettuce, bean, okra, maize, groundnut, chili, Chinese white cabbage,
(ii) Production of ornamental plants

(iii) Research & Development activities:

(a) Organic vegetable production (at Curepipe E.S.)
(b) Soilless culture (at Belle Vue E.S.)

(iv) Tobacco seed production

The total seed requirement of the tobacco industry was produced at Richelieu E.S.

(v) Facilities to other divisions

Facilities were extended to the Horticulture and Entomology Divisions, for research and development programmes,

(vi) Plant Genetic Resources

Multiplication / regeneration of germplasm were carried out for the Plant Genetic Resource Unit.
Activities (i), (ii) and (vi) are carried out for the programme of the Division of Horticulture.
Curepipe E.S. also houses the PGR Unit of the latter Division.

(vii) Maintenance of Yards

The Division was responsible for the maintenance of the yards of Clarisse House and State House.

In the context of encouraging environment-friendly vegetable production, including the use of natural pest control measures, several types of composts had been prepared from poultry litter, cow manure and green wastes and was used in trials with vegetative crops particularly salad crops.
Trials on planting date of pumpkin were also planned using three methods of weed control.
Preliminary work on the rate of decay/drying of mulch was initiated.
1.2 ACTIVITIES ON EXPERIMENT STATIONS

Main activities on the stations were seed production, provision of plant propagation materials and provision of facilities to carry out Research.

1.2.1 BELLE VUE E.S.

The station lies in the west coastal region near Albion, at an altitude of about 27 metres. The soil type is a Low Humic Latosol (strong clay and low permeability with pH 7.2). Total area is 5.0 ha with an effective cultivable area of 2.4 ha. The remaining land is occupied by buildings, roads, orchards, and land leased to private promoters.

1.2.1.1 Seed Production / Plant propagation

Total area under cultivation was 2.18 ha. Eight vegetable crops including pumpkin, maize, peas local, brede de chine frisee, coriander, tomato, snake gourd and onion were grown for seed production. Ripe mangoes of varieties Dauphiné and Maison Rouge were sent to Barkly for production of seedlings.

5.2.1.2 Rainfall

Total rainfall in 2012 was 439.9 mm. Highest daily rainfall was recorded on 29 March 2012 with 41.7 mm.

1.2.2 CUREPIPE E.S.

The station, situated at an altitude of 550 metres in the super humid zone, was created in January 1953. The soil is of the Humic Ferruginous Latosol type. The total area is 28 hectares, including buildings, ponds and paths, 4.1 hectares leased to private promoters and 2.0 hectares to AREU for fodder production. The effective cultivable area was around 6.7 ha. The Station also houses the PGR Unit. Staff of the station also maintained the yards at Clarisse house.

1.2.2.1 Seed production

Total area under cultivation in 2012 was 8.45 ha. Eight vegetable crops namely bean Long Tom, amaranthus kotachee, asparagus bean, Chinese white cabbage, cauliflower, broad bean, peas and celery cabbage were grown for seed production.

1.2.2.2 Rainfall

The total rainfall recorded in 2012 was 2409 mm. The highest rainfall occurred in March with 435 mm and the lowest rainfall was recorded in November with 69 mm.
1.2.2.3 Orchards

Maintenance was carried out in the orchards of Cherry (*Eugenia brassillicus*) and Litchi cvs Huai Zhi, Heiye and Tai So.

1.2.2.4 Anthurium

A shade house of 426m² harbored plants of the following six varieties of anthurium: Nitta, Local, Ozaki, Signal Red, White, DBR and DR. A total of 7458 blooms were sold to the public.

1.2.2.5 Ornamentals and other plants

2936 ornamental plants and 91 cherry plants were produced and sent to Barkly ES.

The station also implemented the Plant Propagation Programme of the CATT collection of ornamental plants.

1.2.3 RICHELIEU E.S.

The station is located in the west at an altitude of 66 metres above sea level. Out of the total area of 28 ha, only 5.0 ha were available as effective cultivable land and the remaining land being occupied by orchards, buildings, rocky lands and land leased to private promoters. The soil type is a Low Humic Latosol. The climate is hot and dry in general.

1.2.3.1 Seed production

A total of 13 crop species / varieties were grown, namely: bitter gourd, ridge gourd, pumpkin, tomato, maize, squash, lettuce, bottle gourd, snake gourd, bean var. tender green, beetroot, coriander and sweet pepper. Tobacco seeds of flue cured variety RG 13 were produced.

1.2.3.2 Rainfall

A total of 474 mm of rain was recorded in 2012. However no precipitation was recorded during the month of September.

1.2.4 PLASANCE E.S

Plaisance E.S. is found in the south east at an altitude of 15 m above sea level. The type of soil is a Latosolic Reddish Prairie. Total area is about 8.0 ha with an effective cultivable area of 2.3 ha after the exclusion of orchard, building and land leased to private promoters.

1.2.4.1 Seed Production

A total area of 1.79 ha was under cultivation with six vegetable crops, namely tomato, hot pepper, bottle gourd, bean var. tender green, okra and onion.
1.2.4.2 Orchard

45 breadfruit trees were being maintained for the provision of root cuttings. A total of 917 root cuttings were sent to Barkly ES for propagation.

1.3 RESEARCH ACTIVITIES

1.3.1 Organic Vegetable Production

Bean Long Tom was grown as a rotational crop while three crops namely squash, beetroot and cucumber were used for investigating the effect of three different composts, that is, poultry litter, cow manure and green waste. In the case of beetroot, the highest yield was obtained from the poultry litter compost followed by cow manure and green waste composts.

Trials on cucumber revealed highest yields with poultry litter and green waste composts followed by cow manure compost.

As expected, lowest yields were obtained from plots where no compost was used.

The trials on squash carried out in early March had to be scrapped due to heavy rainfall.

1.3.2 Soilless Agriculture

Hydroponic structural repair/modification and cessation of hydroponic activities

Repair works were completed in the greenhouses in connection with water pump, water canals and the renewal of electrical installation.

Infrastructural modifications necessary to research on water requirement of crops and on the effect of the degree of slope of culture ducts were not completed after the request of the PAO to stop research work on hydroponic due to the low adoption rate.

1.3.3 Planting Date Trial (Pumpkin)

Planting date trial in pumpkin was planned together with three different methods of weed control namely: Use of plastic mulch, organic mulch and manual weeding. Preliminary work was initiated to determined the rate of decay/drying of organic mulch namely Panicum maximum.

It was observed that the reduction in thickness in metres (y) of the mulch decreases with time, in month (x) as per the equation y = 0.608x + 3.34.

1.3.4 Compost Making

As an ongoing activity, Chinese expert, Mr Y.Wan, continued with his work of compost making on Agronomy stations namely at Belle Vue ES, Curepipe ES, and Richelieu ES and at the State House.