

Invited Paper 2

RESEARCH TOWARDS FUTURE PROSPERITY IN COCONUT INDUSTRY IN SRI LANKA

M. K. Meegahakumbura, S. A. C. N. Perera and L. Perera

Genetics and Plant Breeding Division, Coconut Research Institute, Lunuwila, Sri Lanka

ABSTRACT

Coconut is known as “Tree of life” and is currently grown in 96 countries across the globe. Coconut is among the few crops domesticated in Sri Lanka and the earliest plantation crop systematically planted since 8th century (King Agbo’s era at the Anuradhapura kingdom). Coconut Research Institute of Sri Lanka (CRISL) was established in 1929 to fulfil the research needs of this important crop. Today Sri Lanka produces around 2800 million nuts annually and we are self-sufficient as local consumption requires only around 2200 million nuts/year. However, coconut industry requires additional 1300 million nuts annually and currently supply only around 600 million and the remainder is in short supply. Therefore, there is a great need to increase the coconut production up to 3500-4000 million nuts/year.

Coconut is a highly cross pollinating perennial crop hence, conventional breeding is challenging. Land fragmentation, emergence of new pests, diseases and global climate change further challenge the coconut industry. Research programme at the CRISL continuously changed over the past to address these emerging needs. With the aid of molecular tools, high yielding hybrids and drought tolerant cultivars were developed to increase the crop yields. Coconut clones were developed for the first time in the world in Sri Lanka using ovary culture, although refinements need to be made to commercialize the technique. Land suitability maps were prepared to guide the planting of hybrids and other cultivars to maximize the yields. Molecular Disease Diagnosis was carried out to identify novel diseases and pests, and accordingly disease and pest tolerant cultivar development is in progress. Biological control and green pest management concepts were practiced to reduce the yield loss and prevent the environmental pollution with hazardous chemicals. Prediction of coconut yields, development of technologies for virgin coconut oil production, preservation of tender coconuts, breeding new cultivars for beverage purposes are a few noteworthy developments.

KEYWORDS

Coconut industry, Climate change, Land suitability maps, Coconut yield prediction, Coconut in-vitro culture

Dr. M. K. Meegahakumbura: Email - muditha77@hotmail.com