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## HYBRID SEED PRODUCTION TECHNOLOGY TRANSFERRED TO COCONUT GROWERS: A SUBSTITUTE APPROACH TO SEED GARDENS FOR MEETING THE INCREASING DEMAND FOR HYBRID COCONUT SEEDLINGS

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The experimental and field observations on dwarf x tall coconut hybrids clearly demonstrated the superiority of CRIC65 hybrid in terms of yield, productivity and precocity over all tall coconut cultivars in Sri Lanka. The potential of this hybrid is over 20,000 nuts per ha per year under optimal growing conditions.

Although CRIC65 hybrid could be grown in any different soils and climatic conditions based on observations made on field experiments, the highest potential of hybrids can only be achieved when they grow in highly favorable environment with better agronomic follow up. Therefore CRIC65 is highly suitable for growing in home

gardens. Increased production of coconut through home garden cultivation of hybrids could significantly contribute to the demand for consumption which is estimated to be 2000 million nuts in Sri Lanka, thereby sparing the coconut from the estate sector for the coconut industry.

Currently Coconut Research Institute of Sri Lanka produce less than 100,000 seed nuts of CRIC65 in its Isolated Coconut Seed Garden at Ambakelle which more than 50% less than the demand. Considering the long time and cost requirement for establishment of new seed gardens, an alternative approach of hybrid seed production in farmers' field is proposed until total demand for hybrid seeds is met from seed gardens with highest quality in future.

In this approach the interested farmers are supplied with one or two yellow dwarf seedlings for them to plant in their home gardens surrounded by "good" tall coconut palms. When the yellow dwarf palm come into flower in about 2 to 2 1/2 years after planting the growers are educated to do the emasculation immediately after inflorescences naturally open. The remaining female flowers (buttons) will then only be pollinated by the pollen from the surrounding tall coconut palms and thus the seeds harvesting from the yellow dwarf palms are of hybrids between the yellow dwarf x tall, which is the CRIC65. In case dwarf female



Figure 1: Three to four years old CRIC65 palm

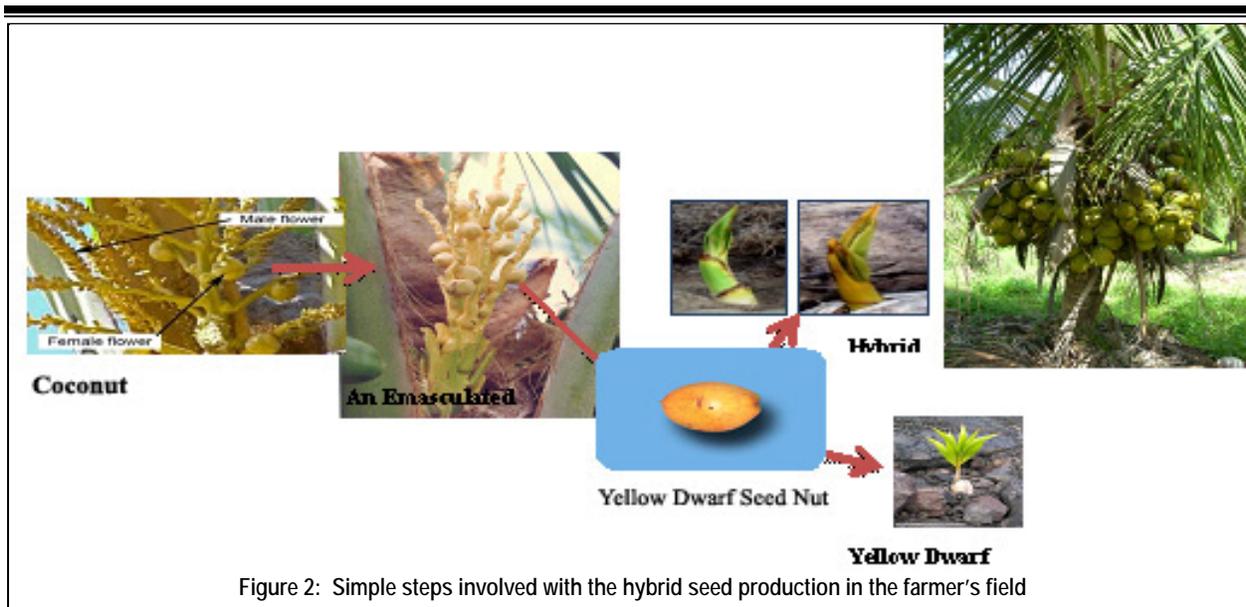


Figure 2: Simple steps involved with the hybrid seed production in the farmer's field

flowers get self-pollinated (female flower pollinate from pollen from the same yellow dwarf palm) before the emasculating is done which will result in pure yellow dwarf seeds instead of hybrids, the growers will be educated to cull the illegitimate seedlings by the yellow colour sprout in the germinating nuts as if the harvested seed is of dwarf x tall hybrids origin, the resulting sprout of germinating nuts turn into green or brown or colours ranging from green to brown.

The growers were convince that this way, they could produce

their own hybrid seed nut with minimum cost and less technical knowledge in their own home gardens without being in the waiting lists although the quality of the seed nuts coming from this approach may have to be compromised with the likely superiority of hybrid seeds coming from an isolated seed gardens, until their total hybrid seed nut requirement is met from seed gardens. The coconut growers were educated with this practical approach during training sessions of the Coconut Research Institute with the support of the Technology

Transfer Division. Majority of the farmers were shown to accept the procedure. Each interested farmer was supplied with one or two yellow dwarf seedlings after each training sessions during 2012, with demonstration on how to do the emasculating and seedling selection based on petiole colour. A diagram above shows the simple steps involved in this seed production approach.

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Training on Efficient Management of Coconut Land