

COCONUT CULTIVATION IN THE MUTHURAJAWELA MARSH

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Muthurajawela, once a fertile paddy growing area of about 12,000 ac in extent on the West Coast between Wattala and Seeduwa was famous for the production of "Muthusamba", a high quality rice. This area is said to have been so fertile for paddy cultivation that it is thought to have supplied the entire requirement of rice for the Western Province of Sri Lanka for decades.

Due to inadequate measures taken to control the entry of sea water through the Negombo lagoon, Muthurajawela area had been subjected to frequent inundation with sea water, particularly during dry months. As a result, the salinity level of Muthurajawela soils has built up to a level intolerable for paddy cultivation. Rapid development projects in the catchment areas lowered the supply of fresh water to Muthurajawela, thus making it impossible to flush out sea water. These factors are attributed to the prevailing unsuitable conditions of Muthurajawela soils.

Due to difficulties experienced and repeated crop failure, the farmers were compelled to give up paddy cultivation in Muthurajawela and the fields were left abandoned and neglected. This resulted in the entire Muthurajawela area getting converted into an unproductive marshy land. Probably no crop, short- or long-term,

other than coconut could tolerate the saline soils in Muthurajawela. But coconuts cannot be successfully grown in marshy land as coconuts require well-drained soils. If coconuts are to be grown in this land water level will have to be lowered by at least 0.5 m (1 1/2'), which is impossible at Muthurajawela. So it appears that the only method available for planting coconut is by raising the soil level using excavated earth transported from other areas. This is a laborious and a massive operation requiring heavy inputs such as skilled labour and heavy equipment.

In spite of all such practical difficulties, a considerable number of hard-working farmers has cultivated coconut successfully in this area. They have built up broad soil platforms and planted coconut on them. It is astonishing to see the efforts made by farmers in converting these marshy lands into highly productive coconut holdings.

This article attempts to explain the methods adopted by these farmers on this rewarding venture. The first step in this task is the preparation of earth blocks or platforms of 4 m × 4 m × 0.5 m (12' × 12' × 1 1/2') above the water level. Each square is surrounded by a 3 m (10')-wide drain. The soil from these drains, which is rich in plant

nutrients and organic matter, is excavated and piled up to form the platform. The soil is heaped until the platform is about 0.5 m (1 1/2') above the water level. One skilled labourer can build one such block a day.

Coconut seedlings are shallow-planted in the centre of each block covering only the seed. The Young Palm Mixture and some organic manures are applied at planting. Seedlings are manured with inorganic fertilizer once in six months. Subsequent earth filling is done gradually with soil excavated from drains. Grass is allowed to grow on the platforms to reduce erosion. As seedlings grow, drains between blocks in a row are gradually filled with excavated soil from either sides, thus forming straight bunds.

Once this is done rows of seedlings on straight bunds appear even at a distance. Each such bund is separated by a straight drain.

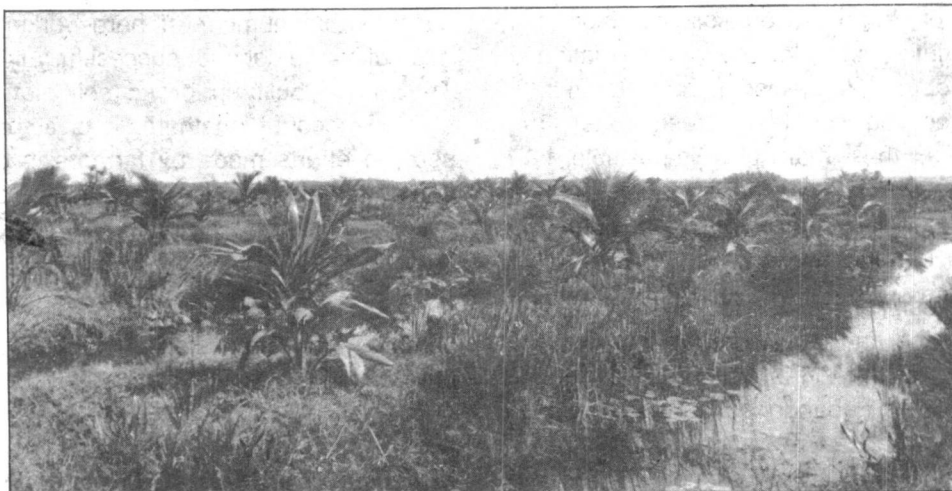
The next step of this task is the filling of drains with soil transported from adjoining areas. Small boats are employed as conveyance. The top layers of the excavated soil are placed around the seedlings to maintain the height of the soil block. Soil slabs cut with spades are transported to fill the drains. First, drains are filled alternately. The final filling is normally done when seedlings reach 2-3 years. Once filling of drains is complete, the once marshy area is remarkably converted into a coconut plantation of spacing 22' x 22' on the square system. The area

where soil had been excavated remains a permanent pond similar in size to the planted area.

The high-yielding dwarf x tall variety (CRIC 65) has been successfully grown in this area. Because of the abundant availability of water, this variety has given outstanding yields under the conditions prevailing at Muthurajawela. The performance of plantations 20-25 years old bears ample testimony to the success gained in converting a marshy land into a healthy coconut plantation, and its prospects for future expansion, by adopting the procedures described above.

Some farmers have developed their holdings adopting integrated farming systems which include poultry, piggery and aquaculture. Poultry sheds have been constructed above the drains running between two rows of coconut so as to allow poultry droppings to fall into the water. Ducks and fish are cultured successfully in these drains.

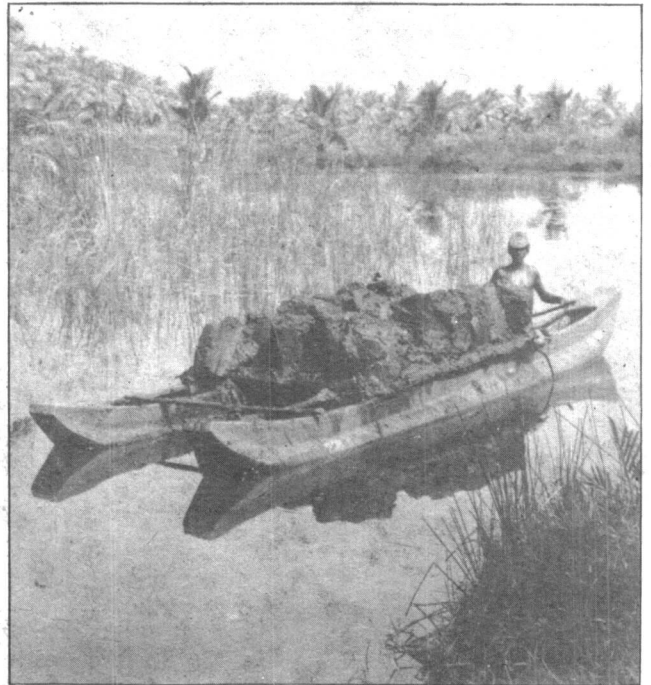
The courage and perseverance of the farmers in bringing about the change from an abandoned marshy land into a highly productive coconut-based farm are indeed very praiseworthy. These ventures are also good examples of the use of appropriate technology in development. Considering the levels of yields achieved in the Muthurajawela area, every encouragement should be given to the farmers to expand the area under coconut.



Seedlings planted on raised soil blocks.



Filling of drains using soil excavated from the main drain.



Transport of soil (above)

Rows of seedlings on bunds



Filling the main drains with transported soil



Gradual filling of the main drain