

CONTOUR BUNDS

HUSK BUNDS FOR PALMS IN UNDULATING LANDS

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Deterioration by Slow Erosion

THE necessity for soil and moisture conservation on steep hilly lands is appreciated by most coconut planters, but it is not sufficiently realised that such practices are also of importance on the gently undulating or almost flat lands on which a large proportion of our coconuts are growing. It is true that the effects of erosion on such lands may not be immediately noticeable, but if the productivity of these lands is to be maintained, steps need to be taken to prevent their slow but steady deterioration.

About half a century ago, these coconuts were planted on virgin clearings, and, during the early years, they gave good crops, but with the passage of time the rich top soils were imperceptibly carried away by erosion and the hard gravel and raw cabook sub-soils have now come to the surface. As a result the roots of the palms are exposed and there is little or no retention of soil moisture; crops have declined and the palms are today in poor condition. There are quite a number of coconut estates which are today showing the long-term effects of such neglect. Had preventive measures been taken against erosion in the early days, these estates would not only be still giving good crops today, but the soils would have been maintained in good condition for posterity.

Method of Bunding

Various methods for soil and moisture conservation have been described in previous issues of this journal. This article suggests a method of husk bunding which has been found to be particularly successful for maintaining or re-conditioning gently undulating lands with hard gravelly and cabooky soils.

Trenches 6 feet wide and $1\frac{1}{2}$ feet deep are cut along the contour. They are filled with two layers of husks and covered with a layer of soil. The bunds are then built up with husks and soil in alternate layers up to $1\frac{1}{2}$ feet above the ground level.

The cost of labour for cutting and filling the trenches works out to about Rs. 6/- per chain, and the husk requirement is of the order of about 2,000 per chain.

In view of the very large number of husks required, the process of bunding may have to be spread out over a period of months, according to the availability of husks. It would therefore be advisable to begin by cutting a limited number of trenches, all of which could be given an initial layering of husks and soil with the husks from one-pick. This is helpful in diverting the coconut roots downwards towards the husks which will be a source of both moisture and food. When more husks are made available from the subsequent picks, the bunds must be built up and completed.

In constructing husk bunds, the following points must be kept in mind :—

- (1) It is essential that the bunding should begin at the top of the slopes. If bunding is commenced on the lower regions first, it will be found that during heavy rains the unbroken rush of water from the top of the slope will cause severe damage to the bunds.
- (2) The bunds should be built close to each other (45 to 50 feet apart), so that the downward flow of water after a heavy shower will never be really forceful.
- (3) The importance of constructing the bunds strictly on the contour cannot be over-emphasised, for unless this is done, there is every possibility of the bund being breached at low points by accumulations of storm waters.

Husk bunds constructed in this manner have been found to be effective even after seven or eight years.

Husk bunds, apart from protecting the land from sheet erosion as a result of the downward rush of storm waters, are also helpful in retaining moisture. Partially decomposed husks dug out from bunds built eight years ago have been found to be yet spongy and capable of retaining moisture. The supply of humic matter and potash are other beneficial effects of husk bunding.

An important function of husk bunds in hard gravelly soils is that they help to prevent surface rooting. It is found that in areas where these bunds are built, there is diversion of roots towards the husk lower down in the trenches which remain more moist.

The very beneficial effects of this type of bunding may be seen at Letchemi Estate, Nattandiya. We are grateful to the Superintendent, Mr. D. C. Jayasooriya, for details of the procedure adopted.