



TRI UPDATE

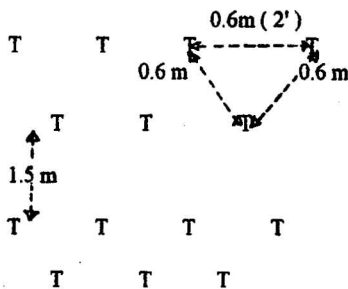
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HEDGE ROWS FOR MACHINES

The possibility of adopting a planting system which could generate higher production than through conventional spacing is a matter of immediate interest to the planting community.

In our view, two modifications are possible - dome and pyramid shaped plucking surface. A dome shaped plucking surface could be achieved by modifying the system of planting. In this system, planting is done in double rows, arranged in a triangular manner, commonly known as "hedge rows". The spacing between double rows and spacing between plants may vary from 45 - 60 cm (18" - 24") between plants and 150 cm (5') between two hedge rows as shown below:

Spatial Arrangement of Hedge Rows



Training of the bush, frame development and subsequent pruning in the system should be modified in order to get the required dome shaped plucking surface. Compared to conventional system, the area of the total plucking surface in the hedge row system is relatively larger. In addition, the space between two hedge rows may be used as a path for the plucker to harvest the shoots on both halves of the dome shaped hedges facing the inter row.

The dome shaped plucking surface facilitates mechanical harvesting either with shears or machines. Unlike in the conventional system, there is comparative ease in the movement of the operator (plucker) carrying the basket, shear or machine. As a result, efficiency of the operator is enhanced.

The total stand per hectare is

higher in the hedge row system compared to the normal system of planting. The increase in the plant population is in the region of 15-20%. As a result, higher yields than in the normal system could be expected from hedge row system.

The competition for moisture during dry periods which causes stress in plants is one of the main limitations in the low-country. There are higher number of causalities in hedge system compared to the normal system during dry periods. Therefore, clones with drought resistance and erect growth habits should be selected for hedge row planting. In addition, there is a higher input requirement, particularly applied fertilizer in view of higher number of plants than the normal system.

The gap between two hedge rows, the lane between hedges, though useful for ease of the operation, is exposed. As a result, there could be higher weed growth and in steep lands it could be subject to erosion, relative to the normal system where the ground is fully covered. To overcome this problem, a suitable cover crop such as *Arachis pintoii* could be established in between two hedges. From these observations, it appears that the hedge row system is more suitable for undulating and gently sloping tea lands. However, the hedge row system may not be feasible in drought prone areas or lands with low soil moisture retention capacity.

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