

Management of Cyclone affected oil palm trees

Lifting of fallen palms: The main problem is the lifting of the palms to erect in pits for replanting. Pits with exact size may be dug out. To save the time, initially locally available equipments like manually operated lever cranes may be used for lifting, although it is time-consuming process and less efficient. Tractors with iron ropes may also be used for replanting. In this method even though there is considerable decrease in time required to replant a tree, it may be costlier than earlier method as it involves both *i.e.* tractor for lifting the palms and manual labour for digging the pits. Also with this method chances of accidents like falling of tree in middle or tilting of trees suddenly towards one side etc may happen and hence may be ineffective.

JCB may be used to replant the palms, which became the most convenient method as both digging the pits as well as lifting the palms is possible and comfortable without extra labour cost. In spite of its high operational costs, the method is considered efficient in replanting of the uprooted palms as it saves lot of time, more re-plantings may be possible in relatively less time and pit digging is much faster saving a lot of labour cost.

Pit digging and replanting: A pit of one cubic meter to be dug close to the bole without disturbing the root system adhering to the soil. 25gm phorate is to be applied to avoid termite and weevil infestation. Leaving 6 leaves on the crown the remaining leaves are to be cut off. Fallen palms are to be lifted with JCB or crane. The pit is to be filled with soil around the bole and pressed hard to avoid air holes. After replanting each palm is to be applied with one-kg rock phosphate for accelerating root growth. The crown is to be sprayed with 0.2% Bavistin as precautionary measure to avoid fungal infection. The irrigation is to be maintained regularly and fertilizer dose has to be increased by 20% to facilitate more nutrient inflow for rapid recovery from the shock.

B. Management of Slanted palm: The palms which are tilted more than 25 degrees should be made straight. The soil to be piled near bole region to give support. The fronds of inner whorl to be removed to induce vertical growth with support of surrounding leaves. The fronds towards other side of the slanted angle are to be pruned to reduce the weight in slanted side which will facilitate the increase in weight in other side of palm, thus, reducing the chances of uprooting or further damage.

C. Management of Crown twisted/top damaged palms: Surgery may be performed in such palms. The young leaves may be pruned around crown region

retaining some old leaves for giving support to the developing crown. Need based pruning may be done to reduce the weight of the crown portion.

CULTURAL PRACTICES FOLLOWED IN MANAGEMENT OF REHABILITATION OF THREE CATEGORIES OF PALMS:

Fertilizers application: Recommended quantities of fertilizers like Urea, S.S.P, M.O.P, Borax and MgSo₄ @ 2.610kg, 3.750g, 2kg, 100gm, 500g, respectively may be applied. The additional quantity (20%) may be applied to all the affected adult palms in two split doses. While applying, care was taken to properly mixing with the soil and then was immediately irrigated to have higher rates of fertilizer use efficiency.

Plant protection Measures –Topical application of carbedazim paste may be applied to each palm crown after cutting the leaves or may be drenched with the solution of Carbedazim 1g + Malathion/Ekalox 2ml/L of water to avoid any fungal infection.

Harvesting: Harvesting may be done regularly.

Management of shock effects in palms: As replanted palms may expose to severe shock of uprooting, palms establish gradually and produce normal size bunches.

Important care to be taken:

- Pits shouldn't be too much deep. It may cause delay in root development and sometimes death of the palm.
- While replanting the fallen palms, palm should be erect; even there shouldn't be slightest bend which causes slanting in growth.
- For crown damaged palms, only those leaves that are damaged should be cut and applied with fungicide spray, care should be taken to retain maximum number of leaves, for faster recovery of the palms.
- In the cyclone damaged slanted palms, which are tilted more than 25 degrees are advised to put maximum effort to make them straight rather than leaving them to grow naturally.