



Vertex or Head cutting in Areca Palm for raining productivity

Consolation

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Background

Shri Akhil Mandal (37), a farmer, has found that cutting head or vertex can be a new way of increasing productivity in areca palms.

He is a bachelor living with his parents, his widowed elder sister and her three children. His family migrated from Bangladesh in 1947 and settled in Nagaon village. Major source of income are paddy, jute and areca nut.

His family owns about three acres of land but the produce is not enough to sustain the family for the whole year round. He could not study beyond higher secondary because of financial constraints. Being very good in mathematics, he now takes private tuitions to earn extra money to supplement his family income. His elder nephew has also joined him in farming.

As a child, Mandal spent most of his time in studies and doing small experiments. His parents often reprimanded him for they wanted him to devote time to agriculture and other household chores.

Once he asked his father for money to buy a dictionary, but his father refused. Angrily, Mandal left home for three months. He started selling jute, pan, areca nut, *etc.* to earn money. It was only after earning sufficient money to buy books for his studies that he returned to his home. He later cleared his matriculation examination with good marks.

Genesis

If physical exercise (or yoga) can keep a person healthy and free of diseases, then the same logic would apply to plants as well, believes Mandal. With this in mind, he started experimenting on plants by doing things, like bending a tree or its branches in all directions, which he considered equivalent to physical exercises.

Once while bending some of the small areca (betel) nut trees, the apical leaves of three saplings got snapped leaving behind the lower leaves only. He got upset and thought that the saplings would die within a few days. After that incident, he stopped exercising (bending) areca nut trees. But to his surprise, the saplings survived and he developed a



fondness for the injured plants.

After six-seven years when the palms started fruiting, Mandal was pleasantly surprised to find a larger number of fruit bearing branches in the 'exercised' trees than the others. It also turned out that the broken trees bore more nuts than others.

After seeing this, it occurred to him to snapping off the areca palm vertex could be a method to increase the yield. He started applying the same pro-

cedure in germinating seeds of areca nut.
Innovation

On average, a betel nut tree produces three clusters or a maximum of four clusters of fruits. On cutting its vertex, the same arecanut tree produces six to seven branches, each with the same number of fruits. Besides this, it also reduces the length of juvenile period and the height of tree, thereby increasing the fruit production by fifty to seventy percent. Although this procedure is used in some other plants, it is new for the areca nut plant.

There are three ways for carrying out this process: a) by cutting the vertex of three years old plant leaving aside 2-3 branches at the extreme lowest region b) by removing upper portion of the sprout keeping aside 2-3 sprout leaves and c) by carrying out both procedures in the same plant.

With the first two procedures, the palm yields about six clusters of fruits and if the third procedure is followed then the plant yields seven clusters of fruits.

Mandal now is known as a 'Scientist' in his native village. Earlier no one knew about his innovative



technique but today many people do and two families are using his technique with good results. Many others are also planning to follow suit.

Mandal hopes to develop an areca nut nursery using his innovative technique to augment his income. At the same time, he would like to continue to experiment with his techniques and develop some more innovations. About his commitment and dedication, this is what his nephew has to say, "*If he has to do some thing he does not care about rain, heat or anything. He will just do his work. We saw him reading and writing using kerosene lamp even in hot nights*".

