One HP Pump Can Irrigate 25 Acres Of Coconut

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Water is becoming a scarce commodity in the hard rock areas especially during summer when the wells are nearly dried up. Eighty per cent of the terrain is coming under the category in Tamil Nadu. Even in high rainfall areas like Kerala and some pockets in Tamil Nadu, the availability of water during summer is rather difficult for perennial crops like coconut and other orchard crops. This is still more difficult during drought years and coconut plantations in many areas have been lost in the past 3 or 4 years. The farmers in these regions are concerned very much since it takes years to establish and to get the benefit from these crops. The solution for this problem is going in for drip irrigation in these areas. The drip irrigation is suitable for (*a*) water scarcity areas, (*b*) shallow and sandy soil, and (*c*) for widely spaced high value crops like coconut, banana, and orchard crops.

To overcome these difficulties and for bringing more area under irrigation, enterprising farmers are now interested in installing drip irrigation system. One such farmer in Pattiveeranpatty in Periyakulam Taluk, Madurai district has ventured to provide drip irrigation for his coconut garden. Though he has a bore well which could yield about 6000 gallons/hour, he could not get the electric connection. He is prepared to go for a single phase without waiting for regular 3 phase connections and installed one HP deep-well pump as the water table is more than 40' from the ground surface. This pump gives 600 gallons per hour continuously. He has planted 600 coconut seedlings in a 10 acre block designed and installed the simple drip system with micro tubes. The cost for the pumpset and for the drip system worked out to only Rs. 2,100 acre including the pumpset. This was done 3 years back. The amount of water given for each tree is only about 30 to 35 litres day/plant by operating the pump only for 8 hours. He has divided the entire area into 4 blocks of 2½ acres each and water is allowed to drip for 2 hours in each block. The quantum of water for the crop has to be increased when the crop is aged and the maximum required may be about 50 litres day/plant.

The coconut tree has grown up very well, when compared to any other coconut crop of the same duration, in the same area. The drip irrigated crop has grown up well and uniformly (see photo). Since the pump is working only for 8 hours a day, if more acre of land is available, another 15 acres of land can be brought under coconut cultivation if the existing one HP pumpset is operated for another 12 hours totalling about 20 hours a day. This is possible since the pump

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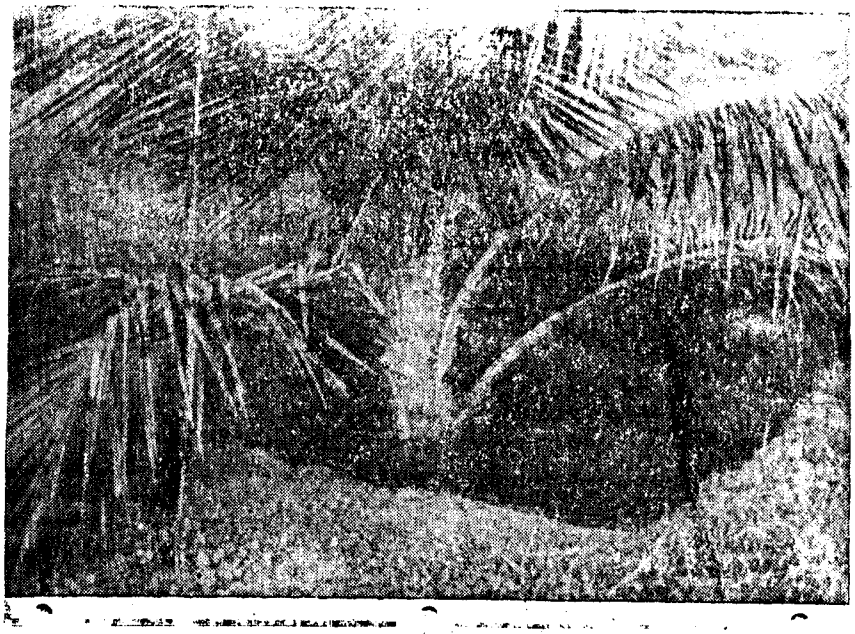

Drip for Coconut

is working only through a single phase. It is also a fact that by giving required quantity of water daily, the plant is not affected by stress and hence the plant grows up quickly and yields more, compared to surface irrigation for which 3 to 4 times more water is required.

This is also true for any orchard crops like, mango, citrus, lime, guava, grape etc., by providing similar one HP motor and pumpsets, more areas can be brought under irrigation, when the discharge of well is very little. If a discharge of 600 g.p.h. can irrigate 25 acres of coconut, it is suggested that the wells rejuvenated are brought under prospective wells by installing drip system along with going in for widely spaced high value crops.