

# Date Palm Cultivation in Western Rajasthan



**Category :- Horticulture**

## **Introduction-**

Tissue Culture Date palm plants were made available to farmers of selected 12 district of western Rajasthan (Jaisalmer, Badmer, Bikaner, Jodhpur, Nagore, Churu, Shri Ganganagar, Hanumangarh, Pali, Jalore, Sirohi and Jhunjhunu) on subsidy under Rashtriya Krishi Vikas Yojana. Date palm is suitable in Western Rajasthan as it can grow well under adverse climatic conditions. This plant is very hardy and can also tolerate saline water available in Western Rajasthan where no other crop can be grown. Jaisalmer and Badmer area is having sufficient heat units and fortunate enough as this is the only area in India where Medjool variety of date palm can be grown successfully and Pind matures on trees. In Western Rajasthan fruits of date palm matures one month early in comparison to Gulf countries having its own advantage in international markets. Date palm is very good source of nutrition having 70% carbohydrates. 1 kg date fruits give 3000 kg calory. It is also good source of vitamin A, B-2, B-7, potassion, calcium, copper, mangnes, clorine, phosphorous, sulphur and iron etc.

## **Challenge :-**

India is largest country in import of Date palm importing about 38% of world market. Consumption of Date palm was high but fruits were not produced in India. Traditionally local varieties of Date palm were grown form seeds in Kutch-Bhuj area of Gujarat but multiplication from seeds of such plants was not feasible due to dioceous nature of plants. Yield of such fruits was very low and fruits were of inferior quality. In other words, high quality planting material was not available. It was thought that Date palm can be grown only in deserts of gulf countries. It was a challenge to convince the farmers for cultivation of date palm.

## **Initiative:-**

To meet out the challenge of availability of plants, 132912 Date palm plants of variety Barahi, Khuneizi, Khalas and Medjool raised from tissue culture technique were imported and distributed to farmers of Western Rajasthan due to suitable climatic conditions under subsidy scheme of RKVY. Technical know how was provided by officers of Horticulture department. In addition to subsidy on date palms plants, financial help was also provided for cultivation and maintenance of plants for 2 years. For maximum survival of plants and looking to scarcity of

water in Western Rajasthan, provision of drip irrigation system was mandatory. There was provision of subsidy on drip irrigation system also as per departmental guidelines. To promote the cultivation of date palm in Western Rajasthan, Department of Horticulture, Rajasthan also established Govt. date palm farm and Centre Of Excellence for date palm in area of 98 ha. at Sagra- Bhojaka, Jaisalmer and Govt. Mechanized date palm farm, khara, Bikaner in area of 38 ha.

### **Key result:-**

Area under date Palm cultivation is increasing every year and has reached up to 906 ha. in Western Rajasthan yielding about 2500-2800 MT dates fruits. However, yield is also increasing every year and will reach at peak after about 10 years of plantations. Such production of date fruits has increased the income of farmers many folds (8-10 times) as the farmers were getting very less income from traditional rainfed crops.

### **Impact :-**

In fact, increased income has up lifted the socio-economic status of farmers significantly. Moreover, cultivation of date palm has also helped in removing the deficiency of nutrients of farmers as date fruits are very rich source of nutrition. In addition to it, dependency on import of date fruits has also reduced as date fruits are easily available in local market. It has also saved foreign currency. Date palm cultivation has changed the cropping pattern and helped in reducing desertification. Dependency on growing of Moong , Moth, Bajra has also reduced as farmers are having option of planting date palm plants. It is very hardy plant, can with stand adverse condition and can grow well in saline water. Technical know how of farmers has also increased.



## Success Story - 1



Shri Nishant Kumar, s/o Shri Kanaram Choudhary lives in village Rajmathai, Panchayat Samiti Sankada, Jaisalmer and has 74.5 bigha of Agriculture land in Khasra No. 1164. For the last 25 years he grew traditional crops like Guar, Bajra, Sarson and Cumin. For irrigating the fields through sprinklers, an electric connection has also been provided on the farm to grow crops but the farmer has not been able to reap higher dividends. In year 2009, the department of Horticulture implemented scheme for Date Palm plantation.

In this scheme, the farmers have been provided the date palm plants through tissue culture technique on 90% subsidy. He grown barahi variety of date palm in 1 ha., khuneizi variety in 5 ha. and Medjool variety in 0.5 ha. After 4 years, the process of fruit bearing started and each tree produced 15 kg of fruit. In the succeeding year each tree bore 40 kg fruit of date palm thus the farmer was able to gain a return of Rs. 3.50 lakh. With this proven tissue culture technique, each tree of khuneizi, Barahi and Medjool varieties produced 80, 200 and 40 kg of good quality date palm respectively in the year 2016. The farmer sold barahi and khuneizi variety of date palm (Fresh) at Rs. 70 to 100/- per kg.



To prevent the crop from the heavy rains, the farmers are advised to take the guidance from the Centre of Excellence Bhojka, Jaisalmer. After taking the guidance, the farmer installed soar dryer silpolin 200 Micron sheet (55x12 Feet) on the farm at the cost of Rs/- 1.70 lakh. The farmer put the date palm

in solar dryer to dry them. This way, the farmer was able to fetch a higher return. The solar dryer machine was also inspected by the specialists from Israel they advised farmer to install automatic exhaust fan and thermal sensor, which the farmers installed. Fruits of date palm hold a good position in local market and big towns & cities.



**Khuneizi Date palm**



**Medjool Date palm (Pind Stage)**



**Date palm Nursery**



**Solar dryer**



**Israeli Date palm specialist in solar dryer**



**Date palm pind dries in solar dryer**

## Success Story - 2



Farmer Shri Abdul Rehman Khan S/o Sultan Khan is having 28 bigha land in Panchayat Chawadiwala Chak No. 75 CWBb Tehsil Pokran, Jaisalmer. Shri Abdul Rehman was advised by Officers of Horticulture department to plant date palms plants produced by tissue culture techniques inspite of growing traditional crops. Mr. Rehman received 453 female plants of T.C. date palm variety Khuneizi and 15 male plants in 90% subsidy under scheme of RKVY from Govt. Rajhans Nursery Chopasni, Jodhpur and planted in 3 ha. area.



The farmers has also established solar water pump system on the roof top of water tank and irrigate the plants by drip irrigation system. The Officers of COE (date palm) Sagra, Bhojka, Govt. date palm farm, Jaisalmer visit the farm and provide technical advice to farmer from time to time.

Fruiting started after 4 years of plantation of the Date palm plants. The farmer obtained 30 qt fresh fruits from 3 ha. orchard and earned net profit of rupees 1.4 lakh. In the year 2017, farmer obtained 140 qt of date palm fresh fruits and sold them @ Rs. 80 to 100/- kg. The farmer earned net profit of rupees 4.5 lakh. The farmer has also plant 400 offshoots plants. The farmer is selling the fresh fruits from farm gate, in local markets and other places.