

Studies on the yield variability of different genotypes of date palm in Kachchh region

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ABSTRACT

An experiment was conducted to identify the best genotype of date palm in respect to yield attributes and yield of date palm at Date palm Research Station, Gujarat Agricultural University, Mundra-Kachchh and Farmer's field of surrounding areas of Anjar, Mundra and Mandvi talukas of Kachchh district, during the year 1997 and 1999. A field experiment was carried out with 45 genotypes of date palm selected from farmers field of different villages of Kachchh. The results revealed that the simple correlation of different biometrical characters have positive and significant relationship with the yield of date palm. The results indicated that the average maximum number of bunches per palm were recorded (11.5) in genotype BD-3 and minimum (5.5) recorded in genotype CBH-1 and CBH-5. Where as, significantly the maximum number of strands per bunch and length of strands were observed in genotypes BZ-5 and BZ-1, respectively in pooled result. While significantly the highest fruit weight was recorded in genotype BD-1. The average maximum bunch weight 32.73 kg was recorded in genotype BD-4 from Dhrub village of Mundra taluka. The result also indicated that the highest average fruit yield of 350.1 kg per palm was obtained from genotype BZ-1 followed by genotype BD-4 (321.85 kg), BD-2 (302.30 kg) and BD-3 (288.25 kg) from village Zarpara and Dhrub of Mundra taluka. Relatively wide variability was observed in different biometrical characters of different genotypes. This might be due to variation in genotypes and different agroclimatic conditions.

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Date palm is the oldest plant amongst the cultivated fruit trees. Date palm plantation on the North Western border of India have developed from seeds thrown by army campus. The date palm growing in kachchh might be about 200 years old (Pareek and Sodagar, 1986). Presently in kachchh about 1.5 million date palms in the form of date grow as well as plantation spread over the coastal belt from Anjar to Mandvi and other areas. There are no regular orchards of the well-known cultivars of date palm in kachchh. Most of the datepalms have developed by seeds. As a result about 50 per cent of the seedlings are male and remaining 50 per cent are female of unpredictable qualities, hence there is a great variability in fruit size, colour, shape and taste. Efforts are being made to survey elite date palm from date groves of kachchh for high production potential for commercial cultivation in the region. With the above views, the present investigation has been planned to identify promising genotypes of date palm based on biometrical characters.

MATERIALS AND METHODS

The present investigation "Studies on the yield variability of different genotypes of date palm in Kachchh

region", was conducted at the Date palm Research station, Gujarat Agricultural University, Mundra- Kachchh and different farmers field of Kachchh district, during the year 1997 and 1999.

Area was selected purposively as under.

- District : Kachchh.
- Taluka : Three major date growing taluka *i.e.*, Anjar, Mundra and Mandvi.
- Village : Three village from each taluka.
Anjar : Mathada, Nani khedoi, Moti khedoi.
- Mundra : Dhrub, Zarpara, Bhujpur.
- Mandvi : Zakhaniya, Gundiali, Bhadia.
- Tree (Palm): Five plants selected from each village

For the study of different genotypes of date palm, the extensive survey was carried out and 45 different genotypes were identified from the area selected for the investigation. The yield attributing biometrical characters like number of bunch / palm, number of strands/bunch, length of strand, fruit weight, bunch weight and yield/palm were recorded at the fruit harvested at the end of khalal stage of fruit ripening. The simple correlation coefficient (r) were worked out between yield and various biometrical