

Physical Characteristics Of Date (*Phoenix dactylifera* L.) Fruits from District Panjgur, Balochistan

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ABSTRACT

Thirteen date palm (*Phoenix dactylifera* L.) varieties i.e. Mozathi, Rabbai, Zard, Hasni Zard, Koroch, Barni, Sabzo etc grown in district Panjgur, Balochistan were studied for their physical characteristics during the year 2020. Physical observations were made at maturity stage of fruit. The physical characteristics of fruit varied among the cultivars studied. The result revealed that the maximum fresh fruit weight (28.19g) and maximum dry fruit weight (18.72g) were found in Rabbai. Highest fruit length (4.67cm) and highest fruit diameter (8.79cm) were also recorded in Rabbai while lowest fruit length (2.91cm) was recorded in Kahrba and lowest fruit diameter (5.11cm) was also recorded in Kahrba. Maximum seed length (2.12cm) and maximum seed weight (1.97g) were recorded in Barni while minimum (0.92cm) in Koroch and minimum in (0.67g) in Jathi Zard.

Keywords: Panjgur, Date Palm, Fruits Morphological Characteristics.

INTRODUCTION

Date palm is known as the ancient plant species of family Arecaceae. (Lee, 1963). There are about 3000 to 5000 date varieties found in the world. (Al-Jabouri & Zaid, 2006). In the world date palm has a very high importance of fruit cropping value and also in Pakistan. Pakistan is known as the fourth largest country of the world for its date production. Sindh and Balochistan are two provinces of Pakistan which are well known for its date fruit production and cultivation. In Sindh Khairpur Mirs and in Balochistan Turbat and Panjgur districts are well known for date cultivation and production (Ashraf.E., et al 2018). Date fruit stated 70.6% carbohydrates, 1.9% protein, 1.2% minerals, 2.5% fat and 10% fiber. (Desai et al., 2019). Most famous cultivars of date fruits in Pakistan are Begum Jangi, Aseel and Khudravi and nearly more than 150 date fruit varieties are found in Pakistan (Nazri, 1995). The date palm is greatly cultivated in district Panjgur. Nearly 150 different kind of date fruits are cultivated in Panjgur and the well-known varieties are Sabzo, Koroch, Rabbai, Zard, Mozathi, Kahrba, Jansohr, Dandari, Halini, Rabbo and Jathizard.

OBJECTIVES

To give people information about the date fruits commonly grown in district Panjgur.

To give people information about the morphological characteristics of date fruits of district Panjgur by which in future they can apply this work in their studies.

MATERIAL AND METHOD

The study site was Gramkan Panjgur which is located in Balochistan, Pakistan, Asia. Its geological coordinate is 26° 58' 0" North, 64° 6' 0" East.

Data Collection

The date fruit samples were collected from the district Panjgur, Makran, Balochistan on 13th September 2020. The studied date fruits were thirteen different varieties. 20 date fruit models of separate varieties were taken randomly for the physical observations at the picking stage.

The flowering, ripening and picking date of per date palm were noted. The flowering stage of date palm was taking place at the first week of March while ripening was at the second week of June and harvesting of date fruit was taking place at the first week of July depending on different varieties.

Lab Work

After gathering the fruit samples, lab work began on 17th September 2020. From the help of digital balance apparatus, the resulting information were noted: fresh mass, dry mass, seed mass and moisture content of date fruits were recorded. Date fruits diameter, length and seeds length were also noted.

The means of date fruit length, diameter and weight, seed length and seed weight were determined agreeing to Hunter (1977).

RESULTS

The extreme dry mass, fresh mass, diameter and length was noted in Rabbai while the lowest fresh mass, dry mass, and diameter of fruit was noted in kahrba. Extreme seed mass was noted in Barni while the lowest in Jathizard. The extreme seed length was noted in Barni and lowest in Koroch.

Maximum fruit fresh weight	Maximum fruit dry weight	Maximum fruit length	Maximum fruit diameter	Maximum seed length	Maximum seed weight
28.19g (Rabbai)	18.72g (Rabbai)	4.67cm (Rabbai)	8.79cm (Rabbai)	2.12cm (Barni)	1.97g (Barni)
Minimum fruit fresh weight	Minimum fruit dry weight	Minimum fruit length	Minimum fruit diameter	Minimum seed length	Minimum seed weight
4.55g (kahrba)	2.97g (kahrba)	2.91cm (kahrba)	5.11cm (kahrba)	0.92cm (koroch)	0.75g (JathiZard)

DISCUSSION

Many scientists in the world studied physical features of date fruit varieties. The outcomes of this learning falls inside the categories as said in some last studies of date palm varieties.

The consequences of date fruit fresh mass indicated that the maximum fresh mass was noted in Rabbai(28.19g mean) and minimum fresh mass was noted in kahrba (4.55g mean). The consequences of date fruit diameter showed that the maximum diameter was noted in Rabbai (8.79cm mean) and minimum diameter in kahrba (5.11cm mean). The consequences were matched with (Al-Shahib & Marshal 2003)

The consequences of date fruit dry mass indicated that the maximum dry mass was noted in Rabbai (18.72g mean) and minimum dry mass in kahrba (2.97g mean). The results of date fruit length showed that the maximum fruit length was found in Rabbai (4.67cm mean) and minimum in kahrba (2.91cm mean). The outcomes were matched with (Ismail et al 2006).

The outcomes of date fruit seed mass indicated that the maximum seed mass was noted in Barni(1.97g mean) and minimum in Jathi zard (0.75g mean).

The outcomes of date fruit seed length indicated that the maximum seed length was noted in Barni (2.12cm mean) and the minimum in koroch (0.92cm mean). The outcomes were matched with (Ramadan 1995).

CONCLUSION

This study determines that Jathizard, Rabbaibarni, koroch and kahrba have worthy morphological features for example higher fruit mass, flesh mass and large fruit extent while other date fruits such as jansohr, rabbo and halini have slighter fruit mass, flesh mass and fruit extent.

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