

A Research on Fruit Species' Production Grown on Hakkari Province

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ABSTRACT: Hakkari is one of provinces in Turkey's East Anatolia Region. In this province, a number of fruit species can be grown, and pear, walnut, apple, plum and apricot's production is more prominent. According to 2016 statistics, total fruit production was 19.555 tons in Hakkari. Considering the same year total fruit production of Hakkari districts, Center, Yüksekova and Şemdinli rank first, second and third with 7.883, 6504.2 and 4.953 tons of fruit productions respectively as Çukurca is the last with a production of 1.242 tons. Again, regarding the fruit production by species, 7.093 tons of apple, 6.979 tons of walnut, 1.949 tons of plum and 1.482 tons of pear were produced in Hakkari in the same year. In this study, through presenting the existing status of the fruit production potential of the Hakkari province, we aimed to increase the awareness and set light to decision makers in future plans for making use of the existing fruit potential of our country.

Keywords: Development opportunities, Hakkari, Fruit Production

Hakkari İlinde Yetiştirilen Meyve Türlerinin Üretimi Konusunda Bir Araştırma

ÖZET: Hakkari, Türkiye'nin Doğu Anadolu Bölgesi'ndeki illerinden biridir. Bu ilde, bir çok meyve türü yetiştirilebilir ve armut, ceviz, elma, erik ve kayısı'nın üretimi daha fazla göze çarpmaktadır. 2016 istatistiklerine göre Hakkari'de toplam meyve üretimi 19.555 ton olarak gerçekleşmiştir. Aynı yılda Hakkari ilçelerinin toplam meyve üretimleri göz önüne alındığında, Merkez, Yüksekova ve Şemdinli sırasıyla 7.883, 6504.2 ve 4.953 ton meyve üretimi ile birinci, ikinci ve üçüncü sırada yer alırken Çukurca 1.242 ton ile son sırada yer almaktadır. Yine aynı yıl Hakkari'de meyve türleri gözönünde bulundurulduğunda 7.093 ton elma, 6.979 ton ceviz, 1.949 ton erik ve 1.482 ton armut üretilmiştir. Bu çalışmada, Hakkari ilinin meyve üretim potansiyelinin mevcut durumunu ortaya koyarak, ülkemizin mevcut meyve potansiyelinden faydalanmak için gelecek planlarda karar vericilerin bilinç düzeyini arttırmayı ve ışık tutmayı amaçladık.

Anahtar Kelimeler: Geliştirme olanakları, Hakkari, meyve üretimi

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INTRODUCTION

In the world, fruits and as well some other plants' production are of great importance because of human nutrition, raw material supply for industry and foreign trade (Şimşek and Gülsoy, 2017; Şimşek and Kızmaz, 2017). Anatolia has a quite large potential regarding fruit species and production in the world (Dizdaroğlu, 1985; Simsek and Kara, 2016) and has favorable ecological (climate and soil) conditions for growing many fruit species and cultivars (Simsek and Kara, 2016). It is a gene center for many fruit species such as pistachios, figs, hazelnuts, almonds, apricots, walnuts, pomegranates and apples.

It has been known that many fruit species were grown in Turkey from a few thousand years ago according to archaeological research (Gerçekcioglu et al., 2014; Şimşek, 2017) In this context, Hakkari province has 17 fruit species grown generally in Turkey.

Hakkari, one of Turkey's Serhat provinces, is located at the southeast end of the Eastern Turkey. This province lies between 44-50 eastern longitude and between 36-57 and 37-48 north latitudes (ÇŞB, 2013) In addition, the province is neighbor with the Iranian state in the east and the Iraqi state in the south.

Very harsh land climate prevails in Hakkari region. Winter is very hars and cold. Winter comes early and takes a long time. It is snowing constantly from November to March. There are many places under snow for 7 months. There are regions with a snow thickness of 217 cm. It rains in the spring and autumn.

The summers are hot and dry. There is a large temperature difference between summer and winter, reaching up to 63° C. Hakkari is under the influence of black weather in the "Tropical" regions in summer as the mass of black air formed in Siberia in winter as in Eastern Anatolia (HİBO, 2017).

Hakkari is one of provinces in Turkey's East Anatolia Region. According to 2016 year statistics, Hakkari has a share of 0.13% in Turkey's total

fruit production which indicates that it is not a considerable fruit producer (TSI, 2016). In this province, a number of fruit species can be grown and pear, walnut, apple, plum and apricot is more prominent.

Considering the fruit production of Hakkari districts, Center, Yüksekova and Şemdinli rank first, second and third with respect to fruit productions respectively as Çukurca is the last (TSI, 2016).

In this study, through presenting the existing status of the fruit production potential of the Hakkari province, it was aimed to increase the awareness and set light to decision makers in future plans for making use of the existing fruit potential of our country.

Hakkari Province's Fruit Production Potential

Hakkari province of Turkey map and the district's map of Hakkari were given Figure 1 (HM, 2017a) and Figure 2 (HM, 2017a) respectively. Our country has 237.625.723 hectares of area of agricultural land and 33.292.166 decares of the area for fruits and the beverage-spice (TSI, 2016). According to the year of 2016, Hakkari province has 19.555 tons of fruit potential production, 613.659 of number of fruitful trees, 112.330 of number of unfruitful trees and 725.989 of total number of trees (TSI, 2016). (Table 1).

Considering the total fruit production of Hakkari districts, Center, Yüksekova and Şemdinli rank first, second and third with 7.883, 6.504,2 and 4.953 tons of fruit productions respectively as Çukurca is the last with a production of 1.242 tons. Again, regarding the fruit production by species, 7.093 tons of apple, 6.979 tons of walnut, 1.949 tons of plum and 1.482 tons of pear were produced in Hakkari in the same year (TSI, 2016).

In addition, quince, raspberry, mulberry, almond, pistachio, fig, apricot, wild apricot, cherry, pomegranate, nectarine, peach and cherry are grown in Hakkari province (TSI, 2016) (Table 1). According to these statistics the province is suitable for the cultivation of many fruit species and varieties.

Table 1. Hakkari province's fruit production (TSI, 2016).

Fruits's Name	Area covered by bulk fruit (hectar)	Production (t)	Average yield per tree (kg)	Number of fruitful trees	Number of unfruitful trees	Total number of trees
Pear	1.023	1.482	31	48.000	32.500	80.500
Quince	127	269	20	13.210	5.570	18.780
Raspberry	0.2	0.002	1	2	0	2
Berry	0	74	27	2.700	1.500	4.200
Almond	35	10	6	1.675	1.435	3.110
Walnut	9.741	6.979	36	193.400	16.000	209.400
Pistachio	80	28	7	4.250	600	4.850
Apple	9.858	7.093	35	202.027	19.535	221.562
Figs	21	70	20	3.455	930	4.385
Plum	1.266	1.949	22	86.750	6.000	92.750
Apricot	1.885	731	33	22.350	11.710	34.060
Cherry	530	254	21	12.050	8.430	20.480
Pomegranate	11	53	20	2.675	485	3.160
Nectarine	175	291	35	8.350	1.200	9.550
Peach	82	39	17	2.240	3.210	5.450
Wild apricot	130	75	30	2.500	205	2.705
Cherry	147	156	19	8.025	3.020	11.045
HAKKARİ	25.113	19.553.2		613.659	112.330	725.989

**Figure 1.** Hakkari province in Turkey map (HM, 2017a)

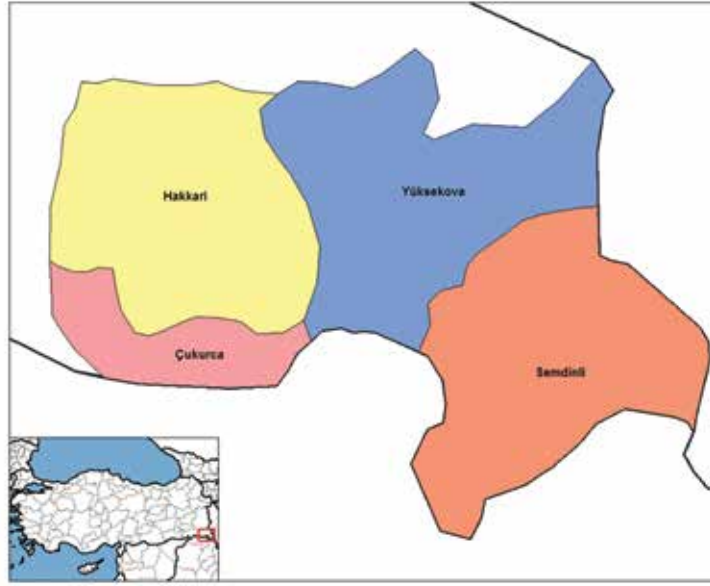


Figure 2. The Districts' Map of Hakkari province (HM, 2017b)

1. Central district's fruit production potential

Central district has the most fruit production with 7.883 tons of fruit potential production, 207.140 of number of fruitful trees, 87.675 of number of unfruitful trees and 294.815 of total number of trees. Almond, walnut, apple, mulberry, pear, quince, apricot, wild apricot, cherry, plum, peach, nectarine and sour cherry are grown in Central district (TSI, 2016). The highest and lowest fruit production were obtained from apple with 2.997 tons and from almond with 5 tons, respectively (TSI, 2016). According to these information Central district of Hakkari is suitable for the cultivation of many fruit species and varieties.

2. Çukurca district's fruit production potential

According to the year of (TSI, 2016), the district where the least fruit production is done in the districts of Hakkari is Çukurca with 1.242 tons. Besni district has 65.800 of number of fruitful trees, 13.540 of number of unfruitful trees and 79.340 of total number of trees.

Pear, quince, mulberry, walnut, pistachio, apple, fig, plum, apricot, cherry, pomegranate and nectarine are grown in Çukurca district. The highest and lowest fruit productions were obtained from plum with 692 tons and cherry with 3 tons, respectively. In this context, this district is suitable for the cultivation of some fruit species and varieties.

3. Şemdinli district's fruit production potential

According to the year of (TSI, 2016), the district where the least fruit species is grown in the districts of Hakkari is Şemdinli with 10. Şemdinli district has 4.953 tons of fruit potential production, 136.995 of number of fruitful trees, 27.195 of number of unfruitful trees and 164.190 of total number of trees. Pear, quince, almond, walnut, apple, fig, plum, apricot, cherry and pomegranate are grown in Şemdinli district. The highest and lowest fruit production were obtained from apple with 2419 tons and almond with 3 tons, respectively (TSI, 2016). In this context, this district is suitable for the cultivation of some fruit species and varieties.

4. Yüksekova district's fruit production potential

Yüksekova district has 6504.2 tons of fruit potential production, 232.734 of number of fruitful trees, 18.790 of number of unfruitful trees and 251.524 of total number of trees. Pear, quince, raspberry, almond, walnut, pistachio, apple, fig, plum, apricot, cherry, nectarine and peach are grown in Yüksekova district. The highest and lowest fruit productions were obtained from apple with 2.609 tons and raspberry with 0.002 ton (TSI, 2016). According to the statistics, this district is suitable for the cultivation of many fruit species and varieties.

CONCLUSION

Apple, walnut, plum, pear, quince, raspberry, mulberry, almond, pistachio, fig, apricot, wild apricot, cherry, pomegranate, nectarine, peach and cherry are grown in Hakkari province. In this context, this province is suitable for the cultivation of many fruit species and varieties. Fruit producers in Hakkari need to make regular cultural processes to reduce profit inefficiency and need to increase fruit yield and quality in order to reduce production costs, more contribution of the technical and scientific research. It is necessary to accelerate the

development of new fruit species and varieties suitable for Hakkari climate and soil conditions and planting systems. In order to achieve good quality production, fruit producers of Hakkari need to cultivation fruit orchards with certified seedlings. Fruit producers have to make agricultural insurance for the loss of natural disasters. Fruit producers should act in cooperation with other institutions and organizations, in facilitating this; provincial governor may provide coordination of relevant institutions such as faculties of agriculture, vocational schools and the institutes of universities.

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