



An Allometric growth estimation study of *Prunus armeniaca* L. collected from Danyore Valley, district Gilgit, Gilgit-Baltistan, Pakistan.

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Abstract: Apricot (Khobani), a deciduous tree and is a member of family *Rosaceae*. Present allometric study revealed that mean leaf width is 7.456 cm, length is 8.508 cm and mean growth rate leaf area is 64.8256 cm². In a period of sixty (n=60) days, mean growth of leaf length per day was recorded as 0.134 cm. Plant average height was estimated as 11 m tall and trunk width is 40 cm wide.

[Salim Khadim, Tika Khan. **An Allometric growth estimation study of *Prunus armeniaca* L. collected from Danyore Valley, district Gilgit, Gilgit-Baltistan, Pakistan.** *Nat Sci* 2021;19(3):41-43]. ISSN 1545-0740 (print); ISSN 2375-7167 (online). <http://www.sciencepub.net/nature>. 7. doi: [10.7537/marsnsj190321.07](https://doi.org/10.7537/marsnsj190321.07).

Key Words: Apricot, Karakoram, ethnobotany, leaf area index, apricot varieties, Danyore

Introduction:

Prunus armeniaca, apricot, is a member of family Rosaceae bears. It is deciduous tree (Wiki, 2016a). Still its origin is unclear among the researchers. In olden times it was known in America, then started to cultivate (Wiki, 2016b). It is assumed that it may have originated in Northeastern China close to the Russian border. According to Morikian (1983) it was known to Armenians which is supported by the discovery of its ancient seeds (6,000-year-old). Now it is grown in the republic (Morikian, 1983).

It is obtainable and consumed in both fresh as well as dried form. Both have contained equal nutrients (Kevat, 2016).

The apricot (Habi) leaves are ovate, 5–9 cm long and 4–8 cm wide, with a rounded base, a pointed tip and a finely serrated margin. Its flowers are 2–4.5 cm in diameter.

The fruit is 1.5–2.5 cm diameter (larger in some modern cultivars), from yellow to orange, then it turns to red mostly sun exposed side. Its surface is glabrous or soft with very short hairs. Its taste can range from sweet to tart. Traditionally apricot has been used for medicinal purposes over the last 2,000 years in India, China and Pakistan. The Greeks wrongly assumed that the apricot started off in Armenia; hence its botanical name *P. armeniaca*. The name apricot evolved from Precocious, referring to the fruit's early ripening (Chevalier, nm).

Apricots are used as a rich food source of vitamins and minerals. Apricot kernel is used for cancer treatment however, there is no clinical proof or evidence to cure. Hypersensitivity has been reported. Adverse reactions that are similar to cyanide poisoning

have been reported (Drugs, 2016). Moreover, medicinally apricot is used for asthma, cough, constipation, bleeding, infertility, eye inflammation, spasm, and infections. Furthermore in manufacturing, apricot oil is used in cosmetics (WebMD, 2016).

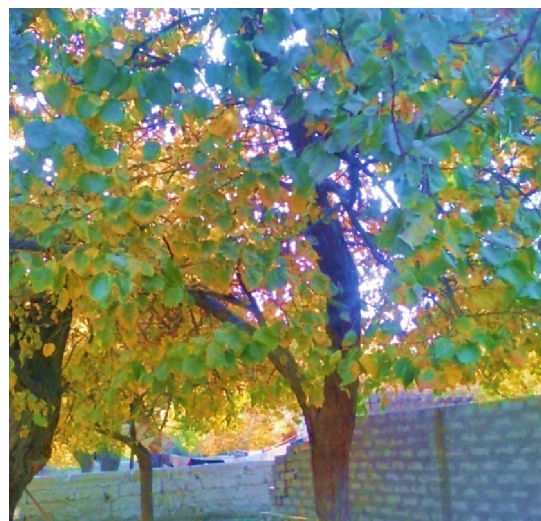


Figure: Habi variety of apricot grown in Danyore Valley, Gilgit.

Apricots are well-to-do in antioxidants which protect and keep secure our bodies from free radicals and damage to cells and tissues (Style craze, 2016).

Material and Method

Prunus armeniaca, (Common name: HABI) 10 plants were selected from Danyore Valley; district

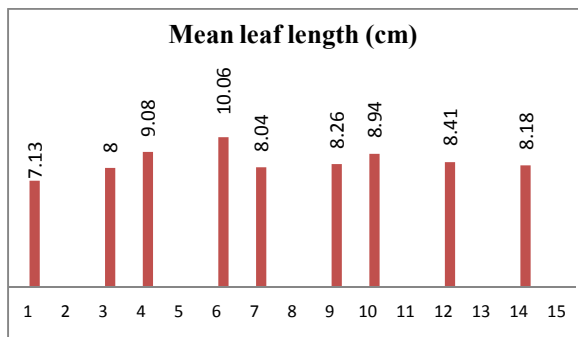
Gilgit, Gilgit-Baltistan, Pakistan. Height and width of trunk of plant is measured by measuring tape. From those plants, 100 leaves (10 leaves from each plant) has been collected for its measurement (the length and width). The leaves are placed in different shopper to bring them to the destination safely. After couple of days when the leaves are dried they are mounted on the white sheets for the measurement of length and width, with the help of ruler.

Results and Discussions:

Prunus armeniaca, plant data is collected from Danyore Valley; district Gilgit, Gilgit-Baltistan, Pakistan. The allometric growth estimation of shoot is measured. Area, length and width are estimated and through statistics data is arranged. A fruit full result is come out through this research paper.

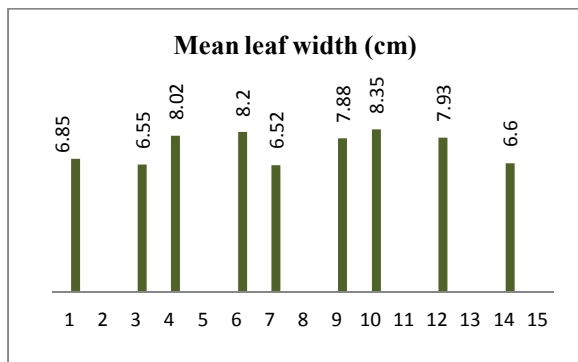
Leaf length:

The graph shows that the average growth length of Leaves. Maximum average growth length rate of Leaves in 60 days is 10.06 cm and minimum length is 7.13 cm. Total average length of leaves is 8.508 cm.



Leaf width

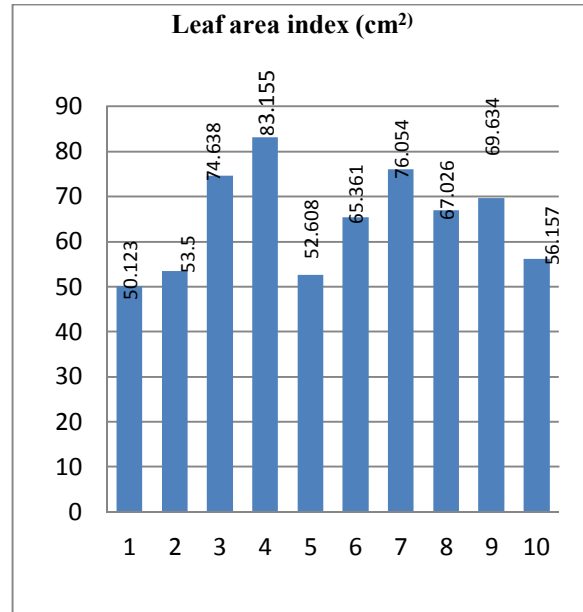
Maximum average growth of Leaves width in 60 days is 8.35 cm and minimum width is 6.6 cm. Total average widths of leaves 7.456 cm.



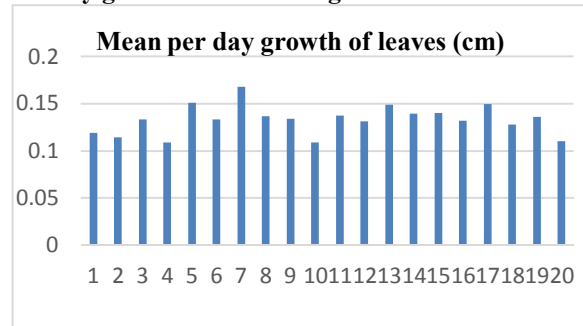
Leaf area:

The total growth of leaf area in proximately 60 days the maximum average growth rate is 83.155 cm²,

minimum average growth rate is 50.123 cm² and total average growth rate of leaf area is 64.8256 cm².



Per day growth of leaves length and width:



Acknowledgments/Author biography:



The first author is student of BS (Hon.) at the department of Biological Sciences, Karakoram International University, Gilgit, Gilgit-Baltistan, Pakistan. This study is part of semester research being conducted during 2016 under the supervision of faculty of plant anatomy, Mr. Tika Khan, PhD Sch.

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