

RELATIONSHIP BETWEEN TRUNK CROSS-SECTIONAL AREA, HARVEST INDEX

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Behmi – A Wild Fruit From Himalayan Cold Desert Region

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Behmi (*Prunus* species), is a common plant of the dry temperate region of the Western Himalayas growing at an altitude between 2500 and 3000 m above sea level. This region is characterized by lack of vegetation owing to low annual rainfall (15 to 20 cm.), temperature extremes (-40° to 40°c) and a growing season of less than five months.

The fruit of **Behmi** is unusually juicy. Due to this character, the local people call it **TIRUL**, which literally means "watery fruit." These fruits are relatively smaller and a little more tart than the peach. The fruits are sun-dried after maturity, which usually takes place in October. The dried fruits are later used for the preparation of an alcoholic liquor.

In most of trees, the kernel is sweet and edible. An oil is extracted from the kernel which is used for cooking. It is also used as a hair oil. The local people believe the oil from **Behmi** kernels can cure arthritis and joint pains and a massage of this oil is prescribed against these ailments.

Behmi seedlings are used as a rootstock for peach, almond and plum. Trees make good graft unions with 'Santa Rosa' and 'Satsuma' plums (1). It is resistant to pow-

dery mildew caused by *Podosphaera leucotricha* Ell. and Fr. (2).

Origin

The trees of **Behmi** are found growing in the dry temperate region of the Western Himalayas (Fig. 1). There is no report about its occurrence in any other area. This suggests that **Behmi** might be a native of this region only.

Description

Trees are drooping with a domed top and a height of about 10 m, spreading to about 10 m. They have a trunk cross-sectional area of 90 cm², with grey-brown bark.

Leaves are lanceolate with an aristate apex, round base, finely serrate margin, upright to intermediate position, flat lamina and are yellow-green in emerging leaves to grey-green in mature leaves. The upper surface is glabrous and the lower surface is pubescent along the mid-rib. The length is 10 cm with a length/width ratio of 4:6. The petiole is yellow-green with the upper side red. It has a length of 2.2 cm with 7 yellow-red to brown orbicular and reniform glands.

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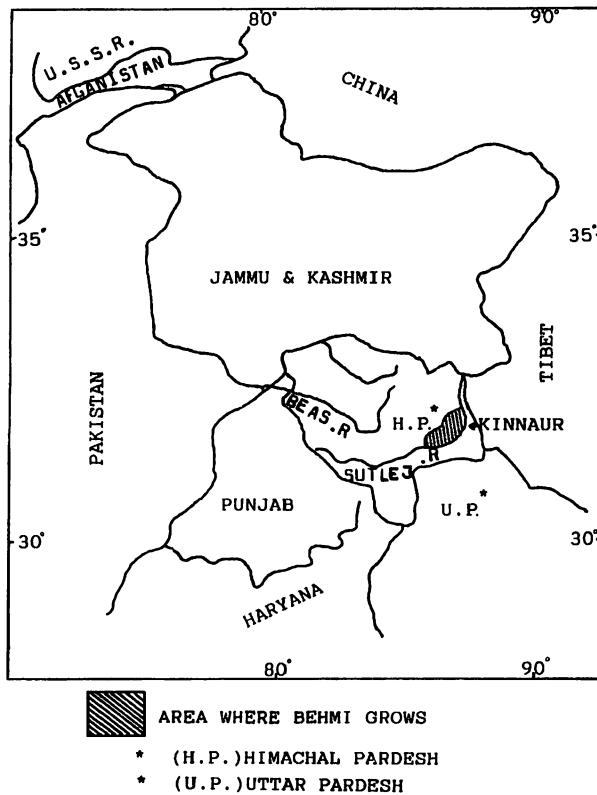


Figure 1.

Flowers are white with a pink tinge at the base having a diameter of 3.5 cm, a petal length of 1.7 cm, a width of 1.3 cm, a length/width ratio of 1.3, with 35 stamens, a length of 1.2 cm, and a twisted style of 1.1 cm length. The flowering takes place during the second half of April.

Fruits are round with a pointed apex, a round base, green-yellow, coarse fuzz on the surface, a length of 3.3 cm, a diameter of 3.1 cm, a weight of 21 g, a pulp/stone ratio of 20.7, a total soluble solids content of 11° Brix, with 2.0% acidity. Total sugars are 4.8%, of which reducing sugars are 2.0 and non-reducing sugars are 2.7% and poor to fair quality.

Stones are oval with a smooth surface, clingstone having a length of 2.1 cm and diameter of 1.4 cm. The kernel is oval with a length of 1.6 cm and width of 0.8 cm.

Suggested Use

Behmi possesses some useful traits. The fruits are juicy. The kernel is sweet in most plants. The stone is quite small and smooth in texture, which is not the case with peach. This plant is resistant to powdery mildew caused by *Podosphaera leucotricha* Ell. and Er. Besides these, **Behmi** is winter hardy; growing in harsh climate, on poor and shallow soils. **Behmi** should be useful in breeding programmes, especially in rootstock breeding or in conveying cold hardiness in scion breeding.

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