

2. Grumberger, I. P Year *Ciruelas*. In: El Monte Frutal Casero. 2ed. Buenos Aires, El Ateneo, s.d. pp. 216-251.
3. Hopping, M. E. and E. M. Jerran. 1979. Pollination of Japanese plums. *The Orchardist of New Zealand*, 52(4):104-106.
4. Horticultural Education Association Fruit Committee. 1961. The pollination of fruits crops. *Scientific Horticulture*, 15:126-150.
5. Hurter, N. 1978. Another mid-season plum cultivar Reubennel. *Agroplantae*, 10(3): 63-64.
6. Hurter, N. and M. J. Van Tonder. 1975. Plum breeding in South Africa. *The Deciduous Fruit Grower*, 25(2):37-46.
7. Hurter, N., M. J. Van Tonder and C. W. J. Bester. 1979. Cross-pollination requirements of the plum cultivar Redgold. *The Deciduous Fruit Grower*, 29(5):152-154.
8. Hurter, N. and H. J. Vanzyl. 1979. The pollination requirements of Songold. *The Deciduous Fruit Grower*, 29(7):240-242.
9. Keulemans, J. 1984. The effect of temperature on pollen tube growth and fruit set on plum trees, *Acta Horticulturae Flowering and Fruit set in fruit trees*:95-101.
10. Kloppers, F. and J. V Hadlow. 1976. Cross-pollination for Songold plum. *The Deciduous Fruit Grower*, 26(8):328-330.
11. MacDaniels, L. and A. J. Heinicke. 1929. Pollination and other factors affecting the set of fruit special reference to the apple. Cornell Exp. Sta. Bull. 497.
12. Perez, S. and J. N. Moore. 1985. Prezygotic endogenous barriers to interspecific hybridization in *Prunus*. *J. Amer. Sci.* 110(2):267-73.
13. Simão, S. 1971. *Ameixeira*. In: Manual de fruticultura. São Paulo, Ceres. pp. 445-459.
14. Sud, G., T. R. Chada and R. P. Dhar. 1976. Studies on pollination requirements of 'Santa Rosa' plum. *Fruit Research Station Kandaght. (Solan)*. Sep. 7474.
15. Tabuenca, M. C. 1965. Influencia del clima en plantaciones frutales. Estacion Experimental de Aula Dei, Saragoz. España. 297 pp.
16. Weinberger, J. H. 1975. Plums, pp. 336-347. In: Janick, J. and Moore, J. N. (eds.). *Advances in Fruit Breeding*. Purdue University Press, W. Lafayette, Indiana.
17. Wilson, J. A. and S. D. Brown. 1957. Differential staining of pollen tubes in grass pistils. *Agron. J.* 49:220-222.



Fruit Varieties Journal 46(1):35-36 1992

## 'Chulli'—A Wild Apricot From Himalayan Cold Desert Region

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### Abstract

'Chulli' is a wild apricot found growing in cold desert regions of the Himalayas, adjoining Tibet. This wild fruit possesses some unique traits not found in the cultivated types. The fruits are borne in clusters and not sparsely arranged like the cultivated types. This fruit grows under very harsh climate and on poor soils. The fruits are late ripening, maturing after about three weeks than the commercial cultivars in the same region.

### Origin and Utilization

The trees of 'Chulli' are found growing wild in large numbers, in dry temperate regions of Kinnaur, Chamba and Lahaul and Spiti districts of the Indian state of Himachal Pradesh. There is no report about the existence

of this fruit elsewhere. The existence of wild plants in such a large numbers in this area indicates that 'Chulli' might have been originated in this region.

The fruits of 'Chulli' are eaten fresh and also sun-dried. The dried fruits are used mostly for the preparation of a hard alcoholic liquor, which is very popular with the tribal people of that region. The kernel is mostly devoid of the bitter alkaloid and thus edible. It is used as a substitute for almond in food preparations. The kernel contains 48.6 per cent oil (2), which is used for cooking, in lamps and as a hair oil. It is also reported to cure arthritis and joint pains and is, therefore, used for massage (1).

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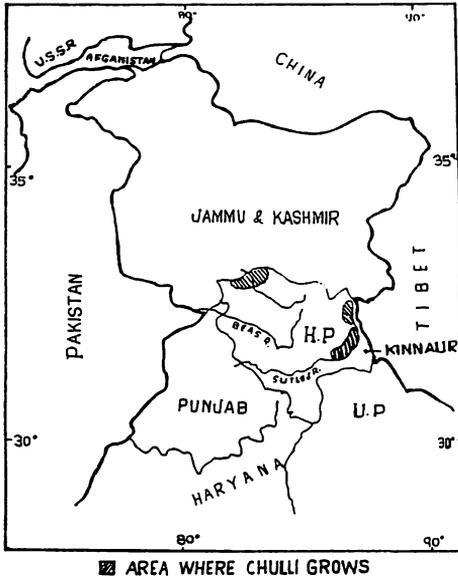


Figure 1. Area of India where 'Chulli' grows.

The wood is hard and utilized for timber and also as fuel. The seedlings of 'Chulli' are used as a rootstock for apricot and plum.

### Description

A medium sized spreading, round topped, deciduous, woody tree, height 5 to 6.5 m, spread 5.5 to 6 m, trunk girth 55 to 60 cm, bark reddish brown.

Leaves, broadly ovate, apex cuspidate, base cordate, emerging leaves dark red, surface pubescent, length 6.81 cm, breadth 5.73 cm; petiole, pubescent, red, length 2.80 cm; glands orbicular, dark tan, 3 in number.

Flower, solitary, sessile pentamerous, perigynous, actinomorphic, hermaphrodite, white with pink tinge, 2.90 cm across; calyx, gamosepalous, campan-

ulate, with five sepals; corolla, poly-petalous, with five petals, length 1.2 cm, breadth 1.13 cm; androecium, polyandrous, numerous (36-39), length 1.03 cm, gynoecium, monocarpellary, perigynous; style, straight, yellowish-white, length 1.17 cm.

Fruit, a drupe, round, deep yellow with red blush, length 1.24 cm, breadth 2.59 cm, weight 12 gm, T.S.S. 13.53, acidity 2.24, total sugars, 5.54, reducing sugars, 3.55, non-reducing sugars 1.89 percent; stone, ovate, length 1.86 cm, breadth 1.55 cm; kernel, ovate, length 1.49 cm, breadth 1.05 cm; overall eating quality, good to very good.

Yield, 52.5 kg per tree.

### Suggested Use

This apricot may be used as a genetic stock in hybridization for evolving varieties with profuse bearing habits and late ripening. 'Chulli' is a very hardy plant. It grows wild under drought and cold conditions and also on very poor and shallow soils. These traits of 'Chulli' may also be useful. This plant may also be used in agro-forestry programme as a multipurpose tree species.

### Availability

A small quantity of the seed of this wild fruit for trial purposes may be obtained from the authors.

### Literature Cited

1. Kirtikar, K. R., and B. D. Basu. 1935. Indian Medicinal Plants. Bishan Singh, Mehendra Pal Singh, Dehradun.
2. Sharma, T. R. 1988. Bromatological studies on some improved varieties of apricot (*Prunus armeniaca* L.) grown in North India. Ph.D. Thesis, Panjab Agricultural University, Ludhiana, India.

## Hedrick Judges

The American Pomology Society expresses appreciation to the following members for serving as judges of the U. P. Hedrick awards in 1991: Dr. Richard A. Hayden, Purdue University, W. Lafayette, IN 47907; Dr. Wesley R. Autio, Department of Plant & Soils, Univ. of MA, Amherst 01003; and Dr. R. A. Nitschke, 2363 Tilbury Pl., Birmingham, MI 48009.