



# 'Hanhong' Pear

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## Introduction

'Hanhong' (*Pyrus ussuriensis* Maxim × *P. bretschneideri* Rehd.) is a new high quality asian pear with excellent firmness, crispness and long shelf life. Fruit of 'Hanhong' are very attractive and the tree is very winter hardy. The fruit and leaves are resistant to pear scab (*Venturia pirina* Aderh) and black spot (*Alternaria kikuchiana* Tannka) disease.



## Origin

'Hanhong', tested as 86-1-32, is a progeny resulting from a cross between 'Nanguoli' (*Pyrus ussuriensis* Maxim.) × 'Jinsu' (*Pyrus bretschneideri* Rehd.) made in 1986 at the Pomology Institute Academy of Agriculture Science of Jilin Province (Fig. 1) and was released in 2003 by the author (MZ).

The name 'Hanhong' makes reference to two characteristics - "very hardy and red skin colour on the surface exposed to the sun". 'Nanguoli' is a chance seedling cultivated in Liaoning province; it's a very popular variety in northeastern China. 'Jinsu' was selected from a cross between Yali (*P. bretschneideri* Rehd.) X Jinli (*P. bretschneideri* Rehd.) and was released in 1972 by the Pomology Institute Academy of Agriculture Science of Shanxi Province. Compared to its parents, 'Hanhong' has better eating qualities and retains its fresh quality longer in storage. 'Hanhong' is also resistant to pear scab (*Venturia pirina* Aderh) and black spot (*Alternaria kikuchiana* Tannka) disease.

## Origin (cont'd)

'Hanhong' tested in Jilin province, which is located in the central part of northeastern China (longitude 121°38' - 131°19' E; latitude 40°52' - 46°19' N), the northern most section of the temperate zone of China, nearing the sub-frigid zone, and has a temperate continental monsoon climate with four distinct seasons.

The absolute mini-mum winter temperatures that normally occur in January are between -30°C to -35°C but it can drop to as low as -45°C in extreme years with little snow cover.

Precipitation occurs regularly over the course of the summer and the test plots received little to no irrigation during the evaluation period.

## Description

'Hanhong' trees are vigorous with an upright-spreading habit and they are very winter hardy. One-year-old shoots grow rapidly and can reach an average length that ranges from 0.7 m to 1.5 m; they are yellowish-brown but turn to dark brown in the 2nd year. The vegetative buds are medium in size and oblique.

The fruit-buds are borne on spurs and twings (shoots) that are generally 1 to 3 years of age, and the fruiting zone tends to move away from the trunk to the outside of the tree. The trees start producing fruit 4 to 5 years after grafting on 'Shanli' rootstock (a wild species of *Pyrus ussuriensis* Maxim.) and require cross pollination.

Fruit ripen in late September and need about 135 to 140 frost free days to reach maturity in Jilin Province. Fruit are round (Fig. 1) and the skin has a bright red blush over a clear yellow ground colour at maturity. There is little russetting around the eye basin and stem cavity (Fig. 1), lenticels are conspicuous, medium in size and evenly distributed; stem is medium length to long, small to medium in diameter and is green although a brownish colour can be seen on some fruit.

## Description (cont'd)

The stem cavity is fairly shallow, width is narrow to medium; basin is slightly ribbed, medium depth and width.

The average fruit weight is 230 g and the flesh is white, fine, crisp, and juicy, sub-acid, sweet, very flavourful and there are few grit cells. In a normal year (when seasonal temperatures are normal), brix values are 14 to 16%, total sugar 7.863%, titratable acidity content 0.897% and vitamin C content 119.7 µg/g. Fruit firmness is 7.9 kg/cm<sup>2</sup> at maturity and remain firm 6.8 kg/cm<sup>2</sup> after 3 months of storage in a common cellar (4°C) and crisp after 5 months of storage. Compared to its parents, this new cultivar has better eating qualities and retains its fresh eating quality longer in storage.

The leaves, flower and fruit are resistant to pear scab and black spot.

Fig. 1. Pedigree of 'Hanhong' pear

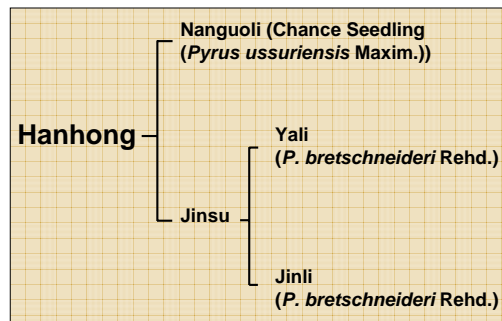


Fig. 2. Fruit of 'Hanhong' pear

