

Almond Farming and Varieties

Vishal Vijayvargiya

Ph.D Research Scholar, Horticulture (Fruit Science), LPU, Phagwara, Punjab

Corresponding author: drp@lpu.co.in

ARTICLE ID: 016

Introduction:

Classification

| | |
|-------------------------|--------------------------------|
| Common name | Almond |
| Botanical Name | <i>Prunus amygdalus</i> |
| Family | Rosaceae |
| Origin | Afghanistan |
| Basic Chromosome no. | X=8 |
| Somatic Chromosome no. | 2n=16 |
| Type of fruit | Drupe |
| Edible portion | Kernel or cotyledon |
| Type of incompatibility | Gametophytic incompatibility |
| Training system | Central modified leader system |
| Bitterness | Amylaedin |
| Growth curve | Double sigmoid growth curve |

Almond, one of the most popular dry fruits, having the energy boosting properties. Almond is very closely related to peach. The fruit of peach is delectable esculent and almond inedible. Almond is one of the major and oldest tree nut crops in the world. There are two types of almond available (a) Sweet almond (b) Bitter almond. Almonds are used for various purposes like in sweets, milk, nuts used in the food and used in producing oils. Almond cultivation in India is restricted to selected hilly areas of are Kashmir region, Himachal Pradesh and Uttar Pradesh.



Composition

- ✓ Protein -- 20.88%
- ✓ Fat -- 58.9%
- ✓ Almond is rich source of Ca, P and Nicotinic acid
- ✓ Almond contain 49% oil, 62% Oleic acid, 24% Linoleic acid, 6% Palmitic acid
- ✓ Rich source of vitamin E
- ✓ Almond butter is free from starch which has good demand for diabetic patient.

Production Technology

Climate - Temperate and climacteric fruit. Almond can withstand temperature -2.2 to -3c. Damage the blossom due to early spring frost is the major constraint in almond cultivation. Among temperate fruit, Almond require very specific climate.

Soil - Deep, loamy, well drained soils are ideal for almond growing, but can be grown in average soils supplemented with FYM and assured irrigation. Trees do not thrive well in heavy or poorly drained soils.

Planting -

* Spacing -- 6 m × 6 m

* 3 rows of main variety and 1 row of the pollinizer variety.

Flowering and fruiting

- Pollination : Entomophilous
- Flowering : On current season growth
- Flowering take place in very early season: January to April.
- Almond is the first tree to blossom in spring.
- Flowers are hermaphrodite with white or pink petals.
- The almond fruit is borne largely on short spurs
- Chilling requirement : 800 hr below 7c

Propagation

T- budding and Tongue grafting

Training and Pruning

- The pruning consists most of thinning of branches rather than heading them back.
- Reinvigorating pruning is carried out only when trees are old and unproductive but healthy.

Harvesting and Yield

- Yield: 3 to 6 Kg nut / tree or 1-2 tonnes / ha. but in Kashmir 10 to 20 Kg nut / tree.
- Almond nuts are harvested from July to September
- Normally the harvesting should be started when the hulls split and before the nuts begins to fall
- Maturity indices: Change colour green to yellow with cracks.

Varieties

- Non pareli : Leading cultivar, paper shell
- Ne plus ultra : Pollinizer for non pareli and free from damage and diseases.
- I X L : Most prone to gummosis.
- Self fruitful varieties : Drake, Dhebar and Katha.
- J K 55 : Earliest ripening variety
- Pearless : Important cultivar
- H-15 : Thin shelled × Sloh

- AH 258 : Petrick's wonder × Sloh
- Primorskiji
- Prabhat
- Waris
- Shalimar
- Mukhdoom
- California paper shell
- Mission
- Thompson
- Supernova : Mutant variety
- Sloh : (Peach × Almond)
- Merced
- Jordonalo
- Eureka

Rootstock

- Bitter almond
- Almond seedling
- Mariana 2624
- Nemaguard (*P.persia* × *P.davidiana*)
- The wild peach rootstock was most vigorous and produced the maximum yield of green almonds.
- Kabul green gauge is also a good dwarfing rootstock for almonds.