Arizona Vanilla Company

www.arizonavanilla.com

How do we get Vanilla?

There are many species of vanilla thriving around the world; about 110 species have been catalogued since the discovery of vanilla. The plant that produces the vanilla bean is an orchid. The family to which the species belongs is Orchidaceae, one of the largest families of flowering plants in the world. There are 700 genera in the family Orchidaceae and approximately 20,000 species. Orchids are best known for their beautiful flowers, which are economically valuable to the horticultural industry. However, vanilla is the only genus that has economic importance as a food source.

Vanilla is a fleshy, herbaceous vine that is perennial and climbing. It grows to a height of 33 to 50 feet, supporting itself on the host plant with aerial roots. Roots are produced all along the stem, opposite to the leaves. For cultivation, vanilla is trained and pruned to a height that will allow hand pollination of the flowers and subsequent harvest of the beans.

Vanilla flowers are fragrant, waxy and large. They are pale greenish - yellow in color with a short broad labellum and the upper petals are slightly smaller than the sepals. Flowers are held on long, thick rachis in groups of 20-30. Each inflorescence measures approximately 4 inches and usually displays three or four open flowers at a time. If flowers remain un-pollinated, they last only a day. From the state of the flowers, cultivators can judge the number of fruits that have set and control the number of beans to a plant.

The fruit is a capsule, but in the trade of vanilla it is referred to as a "bean" or "pod". On the plant, before harvesting, the bean is pendulous, and cylindrical but three-angled in shape. It reaches 3 inches in length and about $\frac{3}{4}$ inch in diameter, at harvest size. After the beans are harvested and cured they develop their aromatic fragrance.

In Mexico and Central America bees and hummingbirds pollinate Vanilla flowers in the wild. Self-pollination is impossible in other parts of the tropical world. Due to the structure and position of the stamen and the stigma and a lack of natural pollinators, hand pollination is necessary in most places where vanilla is farmed.

The most effect method used to hand pollinate vanilla flowers was discovered in 1841 and is still in use today. Individual flowers are pollinated in the early morning, directly after opening. A small stick of bamboo about the size of a toothpick is used to pollinate. The rostellum is pushed aside and pollen is spread from stamen to stigma by causing contact between the two.