

Ambrosial Vanilla



By Ellie Topp

Vanilla is one of the world's most popular flavours. And also one of the most expensive, being second only to saffron in cost. Fortunately, a little goes a long way with just a small amount of an extract made from the bean of the vanilla plant needed to impart a rich, intense flavour.

Natural vanilla comes from the fruit of a climbing orchid native to Central and the northern part of South America. But it was along the eastern coast of Mexico that these orchids were first cultivated by the Totonac Indians probably 1,000 years ago. It can take up to three years after the vines are planted before the first flowers appear. What makes their cultivation so demanding is that these orchids can live for only a few hours before they must be pollinated by a very specific insect.

Mexico, where these insects thrive, had the first monopoly on growing vanilla. Then, in the 19th century, a Belgian botanist figured out how to pollinate the vanilla flowers by hand, thereby making it possible to grow the plant in regions lacking these insects. Currently, islands off the eastern coast of Africa along with Indonesia produce the bulk of the world's crop. Madagascar produces the Bourbon variety of vanilla which is generally considered to be the finest quality, giving the richest, most balanced flavour. Vanilla from Indonesian-grown beans is somewhat lighter and contain less vanillin, the principal compound responsible for the flavour.

The vanilla pods must remain on the vine for nine months in order to develop the potential for their characteristic flavour and aroma. When harvested, the pods have neither flavour nor fragrance, which develop when the pods are dried and cured. The pods are first treated with hot water or heat to stop their growth and then exposed to the sun where the main flavour components of vanilla – vanillin and related phenolic molecules – are freed up and much of the moisture is evaporated, discouraging microbial growth.

The flavour in the vanilla bean is located in both the fibrous pod wall and the sticky, resinous coating in which the tiny seeds are embedded.

The seeds are easily scraped out of the bean to use in a preparation while the pod must be soaked for some time in order to extract its flavour. Since the flavour compounds are more soluble in alcohol than water, vanilla extracts are made by chopping whole vanilla beans and repeatedly passing an alcohol solution over them for several days. The extract is then aged to develop a more complex, full flavour. Therefore, since vanilla is alcohol based, it is best to add it at the end of the cooking period as high temperature causes a loss of flavour.

Pure vanilla is a bit of a misnomer as artificial vanilla flavour also has vanillin as the main flavour component. The difference is how it is produced. Vanillin forms when wood is burned and is responsible for the characteristic flavour of barbecued meats and barrel-aged wine and spirits. This is the process used to make artificial vanilla. However, artificial vanilla lacks the complexity of the extract made from the natural vanilla bean although any flavour difference between natural and artificial vanilla is quite subtle. *Cook's Illustrated* is reported to have run several taste tests pitting natural vanilla against vanillin in baked goods and other applications, and, to the amazement of the magazine editors, the tasters could not differentiate the flavour of vanilla from vanillin except in vanilla ice cream where the natural vanilla won out. The food industry generally uses artificial vanillin since it is much less expensive.

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