

# Truffles — *Tuber* spp.<sup>1</sup>

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Commercially grown truffles are ascomycete fungi that form subterranean fruiting bodies. They are hypogaeous discomycetes of the order Tuberales, more specifically *Tuber melanosporum* (the Perigord truffle) and *T. magnatum* (the white truffle of the Piedmont), and a number of other species.

## DESCRIPTION

The common British truffle species are *T. rufum*, *T. puberulum*, and *T. excavatum*. The fruiting bodies are globe shaped, up to 1 inch in diameter. In cross section they consist of an outer covering of thick-walled cells, and a central fertile part, traversed by dark veins that represent the spore-bearing surface (hymenium). Unlike many common mushrooms that have external hymenia, the truffle's hymenium is not open to the outside and the spores are not discharged violently. Spores are thought to be disseminated through the action of small animals feeding on the fruit bodies.

## CULTURE

The Perigord truffle is associated with the roots of oak trees in France, both in the wild and in cultivation. The tiny truffles, 1 inch or less in diameter, are not easily found. They are often collected with the aid of trained dogs and pigs who detect them by smell.

Truffle experts are sometimes able to spot the fungi by the characteristic heaving of the soil beneath the oak trees, by

the droppings of rodents such as rabbits and squirrels who feed on the truffles, and by the presence of truffle flies.

For cultivation, wild oak trees are moved to the production area, and soil from beneath the trees where truffles were found is placed near the transplanted tree roots. Crops of truffles develop after about 7 years and are gathered by raking the soil under the trees.

Hart's truffle (*Elaphomyces*) is reported to be the most common British hypogaeous fungus and can be collected year-round beneath the litter layers of various trees, particularly beech. These range in size from ½ to 2 inches when open.

## USE

In U.S. gourmet food establishments, truffles are a very expensive food item, primarily because of their restricted locale and the unique method of production. Truffles are used in such gourmet foods as pates (gooseliver spreads) and sauces. Little information is available on the success or failure of attempts to cultivate the truffle in the United States.

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