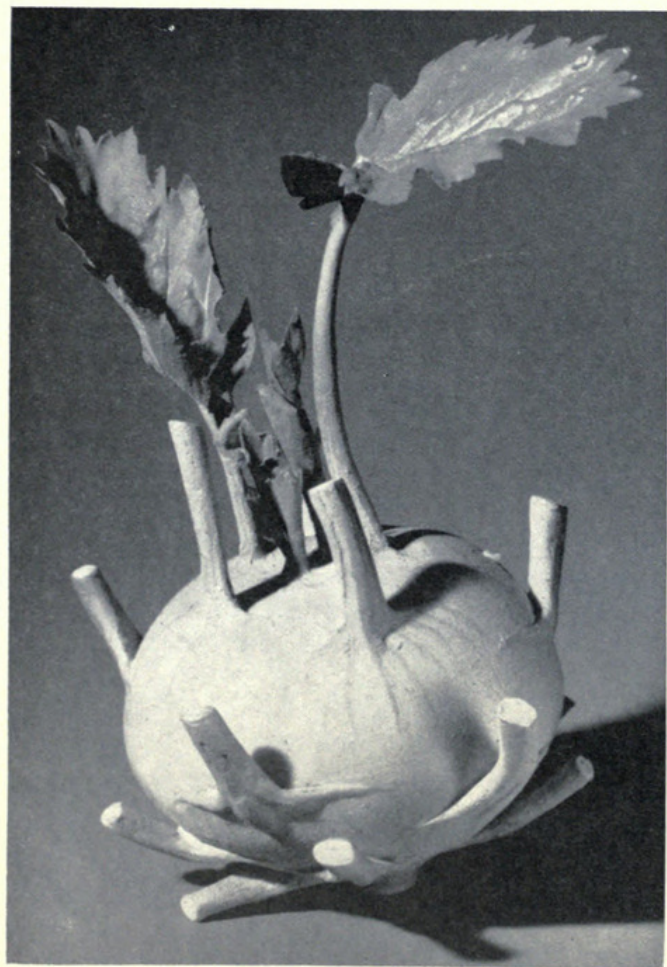


Cabbages and Kin

by Louis O. Williams, Chief Curator, Botany



Spanish half-long radish is a root of the Earth Vegetable category, black in color and tasting like a turnip.



This is the stem of a Kohlrabi plant. The fleshy, edible structure develops just above the ground and has large leaves, cut off in this model, growing out of it.

BOTANISTS and others who work with the systematics of plants sometimes are inclined to overlook the prosaic things that are our food plants, or even to consider them unworthy of serious study. But just consider a few food plants, and you'll see how mistaken this view is.

The mustard family of plants (*Cruciferae*) contributes a number of interesting things to our everyday diet, in addition to the ubiquitous yellow paste commonly spread on hamburgers and hotdogs. For example, Brussels sprouts is an herbage vegetable of the mustard family.

A close relative of the cabbage, Brussels sprouts goes by the botanical name *Brassica oleracea* var. *gemmifera*. *Brassica oleracea* is the common cabbage, the variety *gemmifera* is the kind of cabbage that is "bud or sprout bearing." These miniature "cabbages" of Brussels sprouts develop from axillary buds along the stem of the plant. Another characteristic of the cabbage-type vegetables in the mustard family is the cool climate they require. The Brussels sprouts plant will not develop the edible buds where the temperature average is much above 55 degrees F. In northern Europe, the climate is well suited for growing cabbage-type vegetables. As its name suggests, Brussels sprouts grows well in the climate and soil of Belgium, and it is likely the plant existed there as early as 1200. Brussels sprouts was first described in a record dated 1587, but little was known about it, even by botanists, until the 17th century. Despite its long history, Brussels sprouts is a newcomer to the dinner table. Frozen food processing has made Brussels sprouts conveniently available and greatly increased its production in the regions where it can grow.

No self-respecting food store is without Brussels sprouts in its frozen food section, yet there are many people who do not know what the plant that produces this vegetable looks like. This month's BULLETIN cover will help remedy this. It shows a model of Brussels sprouts recently completed by Mr. Frank Boryca of the Museum's Exhibition Department, placed on exhibition in the Hall of Useful Plants. The next time you come to the Museum, go to Hall 28 to see it and other plants useful to man.

Plants of economic importance, those that supply varied products that are useful to man, are a relatively small group in comparison to all the kinds of plants. There are probably no more than a dozen plants of major importance to man.

The average consumer is likely to associate plants of similar usage; thus, carrots, radishes, beets and parsnips are somehow similar, since we eat their roots. Often, however, the true systematic relationships are quite different. The plant models pictured in this month's BULLETIN, from the Museum's Hall of Useful Plants, are all crucifers, named for the cross-shaped flower common to the family.

Certainly, the plant most useful to man is maize, and rice, wheat, the potato and beans rank high. Corn is found in more food stuffs and industrial products than any other plant.

Man is by nature a classifier, and the types of useful plants have been classified in various ways. Dr. Albert F. Hill's *Economic Botany* (McGraw-Hill, 1952) is a thorough and interesting reference book on economically valuable plants. Dr. Hill provides a simple classification of economic plants, dividing them into four major categories based on the uses they serve: Industrial Plants and Plant Products; Drug Plants and Drugs; Food Plants; and Food Adjuncts. Each one of these categories is subdivided into more specific divisions.

According to Dr. Hill's system of classification, Brussels sprouts falls into the group Food Plants. Dr. Hill subdivides these into the following: Major Cereals; Minor Cereals and Small Grains; Legumes and Nuts; Vegetables; Fruits of Temperate Regions; and Tropical Fruits. Turning to the Vegetables, we find that these are broken down into the following categories: Earth Vegetables, such as the potato, carrot and onion in which the food is stored in underground parts; Fruit Vegetables like tomato, avocado and eggplant which are technically fruits, but are cooked as vegetables or used raw in salad; and Herbage Vegetables like spinach, asparagus and cabbage in which the nutrients are stored above ground. Brussels sprouts and the other cabbage-types are classified among the Herbage Vegetables.



There is no clear-cut distinction between vegetables and fruits, but generally, plants or plant parts that are cooked and seasoned with salt are vegetables, and those flavored with sugar are fruits. The radish fits neither category, since it is eaten raw, but as a root, it is classed an Earth Vegetable.



Cauliflower is a Fruit Vegetable of the mustard family. Like broccoli, the modified, partly developed flower structures and stems are the edible part of the cauliflower.



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