

## Topic Page: [rice](#)

Definition: **rice** from *Philip's Encyclopedia*

Plant native to SE Asia and Indonesia, cultivated in many warm humid regions, and the main grain food for Middle and Far East countries. Rice is a staple diet for half the world's population. It is an annual grass; the seed and husk is the edible portion. It usually grows in flooded, terraced paddies with hard subsoil to prevent seepage. Species *Oryza sativa*.



Image from: [This Japanese farmer is transplanting young rice... in Green Food: An A-to-Z Guide](#)

Summary Article: **rice**

From *The Columbia Encyclopedia*

cereal grain (*Oryza sativa*) of the grass family (Graminae), probably native to the deltas of the great Asian rivers—the Ganges, the Chang (Yangtze), and the Tigris and Euphrates. The plant is an annual, from 2 to 6 ft (61–183 cm) tall, with a round, jointed stem; long, pointed leaves; and edible seeds borne in a dense head on separate stalks. Wild rice is obtained from a different grass plant.

### **Cultivation and Harvesting**

Methods of growing differ greatly in different localities, but in most Asian countries the traditional hand methods of cultivating and harvesting rice are still practiced. The fields are prepared by plowing (typically with simple plows drawn by water buffalo, but also with motorized tillers), fertilizing (usually with dung or sewage), and smoothing (by dragging a log over them). The seedlings are started in seedling beds and, after 30 to 50 days, are transplanted by hand to the fields, which have been flooded by rain or river water. During the growing season, irrigation is maintained by dike-controlled canals or by hand watering. The fields are allowed to drain before cutting.

Rice when it is still covered by the brown hull is known as paddy; rice fields are also called paddy fields or rice paddies. Before marketing, the rice is threshed to loosen the hulls—mainly by flailing, treading, or working in a mortar—and winnowed free of chaff by tossing it in the air above a sheet or mat.

In the United States and in many parts of Europe, rice cultivation has undergone the same mechanization at all stages of cultivation and harvesting as have other grain crops. Rice was introduced to the American colonies in the mid-17th cent. and soon became an important crop. Although U.S. production is less than that of wheat and corn, rice is grown in excess of domestic consumption and has been exported, mainly to Europe and South America. Chief growing areas of the United States are in California, Mississippi, Texas, Arkansas, and Louisiana. The world's leading rice-producing countries are China, India, Indonesia, Bangladesh, and Thailand. Total annual world production is more than half a billion metric tons.

### **Importance of Rice as a Food**

It has been estimated that half the world's population subsists wholly or partially on rice. Ninety percent of the world crop is grown and consumed in Asia. American consumption, although increasing, is still only about 25 lb (11 kg) per person annually, as compared with 200 to 400 lb (90–181 kg) per person in parts of Asia. Rice is the only major cereal crop that is primarily consumed by humans directly as harvested, and only wheat and corn are produced in comparable quantity. Plant breeders at the International Rice

Research Institute in the Philippines, attempting to keep pace with demand from a burgeoning world population, have repeatedly developed improved varieties of “miracle rice” that allow farmers to increase crop yields substantially. Other varieties with specialized characteristics, such as one that tolerates prolonged flooding, also have been developed. Studies have shown that rice yields are adversely affected by warmer nighttime temperatures, leading to concerns about the effects that global warming may have on rice crops.

Brown rice has a greater food value than white, since the outer brown coatings contain the proteins and minerals; the white endosperm is chiefly carbohydrate. As a food rice is low in fat and (compared with other cereal grains) in protein. The miracle rices have grains richer in protein than the old varieties. In the East, rice is eaten with foods and sauces made from the soybean, which supply lacking elements and prevent deficiency diseases. Elsewhere, especially in the United States, rice processing techniques have produced breakfast and snack foods for retail markets. Deficient in gluten, rice cannot be used to make bread unless its flour is mixed with flour made from other grains.

### **Other Uses**

For feeding domestic animals, the bran, meal, and chopped straw are useful, especially when mixed with the polishings or given with skim milk. The polishings are also an important source of furfural and other chemurgic products. The straw, which is soft and fine, is plaited in East Asia for hats and shoes, and the hulls supply mattress filling and packing material. Laundry starch is manufactured from the broken grain, which is also used by distillers. A distilled liquor called arrack is sometimes prepared from a rice infusion, and in Japan the beverage sake is brewed from rice. Rice paper is made from a plant of the ginseng family.

### **History of Rice Cultivation**

Rice has been cultivated in China since ancient times and was introduced to India before the time of the Greeks. Chinese records of rice cultivation go back 4,000 years. In classical Chinese the words for agriculture and for rice culture are synonymous, indicating that rice was already the staple crop at the time the language was taking form. In several Asian languages the words for rice and food are identical. Many ceremonies have arisen in connection with planting and harvesting rice, and the grain and the plant are traditional motifs in Oriental art. Thousands of rice strains are now known, both cultivated and escaped, and the original form is unknown.

Rice cultivation has been carried into all regions having the necessary warmth and abundant moisture favorable to its growth, mainly subtropical rather than hot or cold. The crop was common in West Africa by the end of the 17th cent. It is thought that slaves from that area who were transported to the Carolinas in the mid-18th cent. introduced the complex agricultural technology, thus playing a key part in the establishment of American rice cultivation. Their labor then insured a flourishing rice industry. Modern culture makes use of irrigation, and a few varieties of rice may be grown with only a moderate supply of water.

### **Classification**

Rice is classified in the division Magnoliophyta, class Liliopsida, order Cyperales, family Poaceae.

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