

# RICE – From Field to Plate

Rice has been produced commercially in America for more than 300 years. Today, rice farming in the United States has become a precise science, a world of specialized equipment, lasers and computers.

Although rice is produced over vast areas of the world, the physical requirements for growing rice are limited to certain areas. Production typically requires high average temperatures during the growing season, a plentiful supply of water applied in a timely fashion, a smooth land surface for uniform flooding and drainage, and a subsoil hardpan that prevents water loss.

Land planes are used to level the land enabling uniform flooding and controlled draining. Laser guidance systems determine where water control levees will be placed.



Producers in the U.S. can apply seed aerially in dry or flooded fields, or drill or broadcast seed into dry fields. Planting typically begins in early March in Texas.



All U.S. rice is produced in irrigated fields, achieving some of the highest yields in the world. Gravity guides fresh water, pumped from deep wells, nearby rivers, canals or reservoirs to provide constant water depth on the field of 2 to 3 inches during the growing season.

As the seedlings mature, they draw nutrients from the water. The same water keeps the weed population under control. Rice is a unique grass species where its leaves and stems have internal air spaces through which air is collected and passed down to the root cells. Eventually, small green flowers take shape and pollinate, soon rice grains begin to form in their husks. The paddies of rice change from green to golden yellow to the pale color of straw.



When the rice plant matures, the levees are opened, the water is drained and the soil is given time to dry. Harvest begins in early or mid-July using a combine to cut the rough rice from the straw. After rice has been harvested, it is threshed to loosen the hulls. Some producers are able to reseed their fields after harvest and achieve a partial second crop, called a "ratoon", from the stubble of the first.

Except for rough (unmilled) rice exports and domestic seed sales, virtually all U.S. rice is marketed as a whole-kernel milled product. Once sold, the rice is screened to remove stones, loose chaff and stalks. The rice is then slowly dried by warm air to reduce any moisture, and then screened to remove dust particles.



Five different products can be produced from rough rice: hulls, bran, brown rice, whole-kernel milled rice or white rice, and broken (broken-kernel milled rice).

The first stage of milling removes the hull, leaving the bran intact, producing brown rice that can be cooked and consumed. The next stage of milling, an abrasive action, removes the bran layer leaving milled white rice. Broken grains are sorted out as the rice is sifted through a series of screens.