



## Rice Production in the United States and USDA Research

USDA, Economic Research Service (ERS)

“USDA ERS - Rice.” Accessed July 22, 2020.

<https://www.ers.usda.gov/topics/crops/rice/>.

“Rice, the primary staple for more than half the world's population, is produced worldwide, with about 90 percent grown in Asia. The United States is a major exporter, with the global market accounting for nearly half the annual sales volume of U.S.-produced rice. Four U.S. regions produce virtually all of the country's rice crop—three in the South and one in California—with the South growing mostly long-grain rice and California producing almost exclusively medium- and short-grain rice.”

“USDA ERS - U.S. Rice Production Changed Significantly in the New Millennium, but Remained Profitable.” Accessed July 22, 2020. <https://www.ers.usda.gov/amber-waves/2020/may/us-rice-production-changed-significantly-in-the-new-millennium-but-remained-profitable/>.

“The first commercial hybrid rice seed was released in 2000; by 2013 they accounted for 29 percent of U.S. rice acreage. Hybrid rice gained favor primarily because it is typically higher yielding than conventional rice... Hybrid rice is only planted in the South and is mostly long grain. Long-grain accounts for almost 90 percent of the rice planted acreage in the South, with medium-grain accounting for most of the remainder. California produces almost exclusively medium- and short-grain rice, with medium-grain the dominant variety in the State.”

”USDA ERS – Rice Sector at a Glance.” Accessed July 22, 2020.

<https://www.ers.usda.gov/topics/crops/rice/rice-sector-at-a-glance/>.

*Four regions produce almost the entire U.S. rice crop:*

- Arkansas Grand Prairie
- Mississippi Delta (parts of Arkansas, Mississippi, Missouri, and Louisiana)
- Gulf Coast (Texas and Southwest Louisiana)
- Sacramento Valley of California

“Each of these regions generally specializes in a specific type of rice, which, in the United States, is referred to by length of grain—long, medium, and short. U.S. long-grain varieties typically cook dry and separate, while U.S. medium- and short-grain varieties are typically moist and clingy. In general, long-grain production makes accounts for more than 70

percent of U.S. rice production, medium-grain production makes up about 26 percent, and short-grain the remainder. In 2017, the United States produced 178.2 million cwt of rough rice, down 20 percent from 2016 and well below the record 243.1 million cwt harvested in 2010.”

### ***Marketing and Use of Rice***

“Five different products can be produced from rough rice: hulls, bran, brown rice, whole kernel milled rice, and broken. Broken are separated into two categories: second heads, which are used for flour, and brewers, which have been historically used for beer and in pet food.

The first stage of milling removes the hull, producing brown rice that can be cooked and consumed. The next stage of milling removes the bran layer, leaving whole-kernel milled white rice, but creating some broken kernels as well. Most of the bran is used in animal feed.

Prior to milling, rough rice may be parboiled, a process of soaking the rice in water and steaming it under intense pressure. Parboiling makes the rice less likely to break during milling and pushes nutrients from the bran layer into the kernel. Parboiled rice typically sells at a premium to regular milled rice.

The United States has six different grades and grade requirements for rough rice, brown rice, milled rice, second head milled rice, screenings milled rice, and brewers milled rice.

Long-term growth in rice use in the United States is partly a result of the Nation’s changing ethnic composition, with high per capita rice-consuming groups increasing their shares of the U.S. population. Rising demand for gluten-free foods, convenience, a growing population, and continued introduction of new rice-based products have also contributed to growth in domestic use. Domestic uses of rice include food for human consumption (both direct food use and processed foods), beer, and pet food.”

Source: USDA, Economic Research Service *Rice Yearbooks*

#### **U.S. rice exports include:**

- Rough (unmilled rice)
- Parboiled rice
- Brown rice
- Fully milled (white) rice.

## USDA, Agricultural Research Service (ARS)

More than half of the rice grown in the United States comes from ARS-developed varieties. The high quality of this rice helps to explain why 1 out of every 5 bushels at the world market is grown by U.S. farmers.

Rice is the second most consumed cereal grain.

We are most familiar with the domesticated rice comprising:

- Asian rice, *Oryza sativa* is native to tropical and subtropical southern Asia
- African rice, *Oryza glaberrima*, is native to West Africa.

The term **wild rice** is commonly used for the genus *Zizania*, wild and domesticated

## USDA, ARS, Dale Bumpers National Rice Research Center: Stuttgart, AR

The USDA-ARS World Rice Collection consists of over 19,000 accessions and 12 species of the genus *Oryza* are represented. The majority of rice that is grown for human consumption comes from just one of these species, *Oryza sativa*.

<https://www.ars.usda.gov/southeast-area/stuttgart-ar/dale-bumpers-national-rice-research-center/docs/world-rice-collection/>

**“USDA ARS Online Magazine. Rice Compounds Show Antidiabetic Potential.”**

Accessed July 23, 2020. <https://agresearchmag.ars.usda.gov/2017/jul/rice/>.

By [Sandra Avant](#), ARS Office of Communications

“One food that contains many bioactive compounds is rice bran. Scientists with the [Agricultural Research Service](#) (ARS) recently examined the potential of colored rice bran to help with diabetes management. Diabetes is a metabolic disease in which the body’s inability to produce any or enough insulin causes elevated blood glucose (sugar) levels.

Finding ways to enhance the health benefits of rice and other agricultural commodities is one of the goals of chemist [Stephen Boue](#) and his colleagues at the ARS [Southern Regional Research Center](#) in New Orleans, Louisiana. Joined by chemist [Ming-Hsuan Chen](#) at the ARS [Dale Bumpers National Rice Research Center](#) in Stuttgart, Arkansas, they examined the ability of colored rice bran extracts to stimulate glucose uptake in the fat cells of mice.

“Our research showed that mouse fat cells exposed to red and purple rice bran extracts had significantly increased glucose uptake,” says Boue.”