



Great food is direct from heaven

Most people simply take rice for granted. **Rob Böck** looks a little more closely at this staple food

Myths and legends abound on the origin of rice. Nearly all have one thing in common: they claim that the first seeds of the rice plant, one way or the other, came directly from heaven.

Since then, rice has spread over the world and has become the staple food of half of the world's population. In Southeast Asia rice is the main food, eaten in various ways for breakfast, lunch and dinner. No other food is eaten in comparable quantities.

Every year more than 500 million tonnes of rice are grown in the world, mostly in Asian countries. Indonesia

ranks third on the list of producers, surpassed only by China and India.

Outside Asia large rice-producing countries include Brazil and the USA. Because nearly all of the rice is eaten in the countries where it is produced, there is little export.

Rice (*Oryza sativa*) is a species of the grass family. There are thousands of different varieties. Most of the scientific studies on rice are done at the International Rice Research Institute (IRRI) in the Philippines.

Cross-breeding of different selected varieties and biotechnological manipulation has already resulted in more hardy, short-stalked varieties that produce more and stronger panicles, loaded with more grains, in less time. The IRRI produced new dwarf varieties that made it possible to dou-

Rice fields; buffaloes work better in water than machines; a statue in Bali of Dewi Sri, goddess of rice



The stalks are beaten to release the rice grains; the fields are regularly cleaned of weeds



ble the world's rice production in the past 25 years.

Indonesia has done even better. In the same period the country increased its rice production from 15 million tonnes to nearly 50 million tonnes—one tenth of world production. That is more than three times the production of 25 years ago!

But when one looks at the rice fields, or paddies, science is not the first thing that comes to mind. The

beauty of the wet rice fields (*sawah*), enhanced by the colourfully dressed, gaily chattering, seemingly carefree people who cultivate the fields, is what pleases the eye.

It is easy to understand why so many people believe that growing rice is a matter between man and god—or rather goddess: Dewi Sri is the beloved, glorified, celebrated, worshipped, beautiful patroness of rice.

In Bali, endless offerings are made at little shrines, or simply on stalks scattered between the fields.

Rice is the very basis of life. In China, the world's number one rice producer, people do not say, "How are you?" when they greet one another. Instead they say, "Have you eaten your rice today?"

Rice has long been a symbol of fertility. Rice is thrown at the bride and groom after their wedding ceremony to wish them luck and many children.

Since the rice plant grows best on flooded soil, the process of growing it has not changed much from ancient times. Machines do not work too well in water, neither are they ideal in narrow *sawah* descending steep hillsides.

The rice fields are prepared by buf-

falo- or ox-pulled ploughs. Young rice plants raised from seed, called *bibit* in Indonesian, are planted manually in the mud by women. Bent over, putting the young plants firmly in the soil, they chat and laugh and share the local gossip.

The water that floods the fields comes from high in the mountains and is distributed through an intricate network of small dams, called *galang*, from one field, or *ladang*, to the other. Holes in the dams control the flow.

The *sawah* are weeded regularly, while the food-providing rice grass grows. This, too, is mostly done by women.

For a few months, the rice fields stand emerald-green, often fringed by waving palm trees, contrasting with the blue tropical skies—a glimpse of heaven. Then the rice ripens and the fields change to a pure gold. The water is cut off. The fields are allowed to dry. Of the 20 to 25 stalks on every plant, at least 15 have produced panicles, each holding up to 100 grains.

A festive mood develops when harvesting is due. Preceded by ceremonies and offerings, men and women once more enter the rice fields.



The stalks are cut a few centimetres from the ground and collected in bundles. These are later beaten to remove the grain.

Even now the show is not over. When the people who harvested the rice have left and the water buffaloes rest in nearby ponds, large groups of flightless ducks are allowed into the *sawah* where they pick up every grain of the precious rice that may have fallen by the wayside.

Each group of ducks is accompanied by a herdsman. "Not so much to keep the ducks together," according to an Indonesian friend of mine, "but

Ducks clean up after the harvest

to pick up the eggs that the ducks lay while walking through the fields.

"They don't bother to stop, let alone build a nest. When the duckman returns home in the evening, he has a basket of eggs as reward for his attention to the ducks."

After the ducks' grand finale, the cycle of rice producing can start once again. The buffaloes return to prepare the fields once more. Life goes on, thanks to rice, thanks to Dewi Sri. □

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