

## 5. Ecology and food economy

### 5.2 Cycle of common agricultural products (rice, corn)

5.2.3

## Rice and corn: Production and use

Now that we know a little more about rice and corn, let's see where these cereals are grown and what they are used for.

### RICE PRODUCTION IN THE WORLD

Rice is the second most cultivated cereal in the world. Over 700 million tonnes of rice are produced each year.



This corresponds to an uninterrupted chain of lorries of more than 30 times the distance between Paris and Beijing! Nearly 90% of this rice is produced in Asia, including 30% in China, which is also the main consumer.

Europe produces a little less than 5 million tonnes a year, mainly in Italy, France and Spain. This would be the equivalent to a chain of lorries barely covering the distance from Paris to Moscow.

Half of the population of the world depends on rice for its diet. In most Asian countries and some African countries, rice consumption is over 100 kg per person per year. In Swiss kitchens, rice is the third most consumed food, following pasta and potatoes.

Compared to other cereals, rice is rarely traded internationally. It is mostly consumed in the producing countries. Only 5 to 6% of total rice production is exported.

In 2016, although favourable climatic conditions for agricultural activities in Asia increased the production of paddy rice, soil degradation is slowing the growth in yield.

## HOW RICE IS USED

Rice feeds two thirds of the world's population. It can be eaten in a variety of forms, whether as pre-cooked rice, pasta, rice cakes or baked goods.



In 2015, world consumption of rice was approximately 50 kg per person.

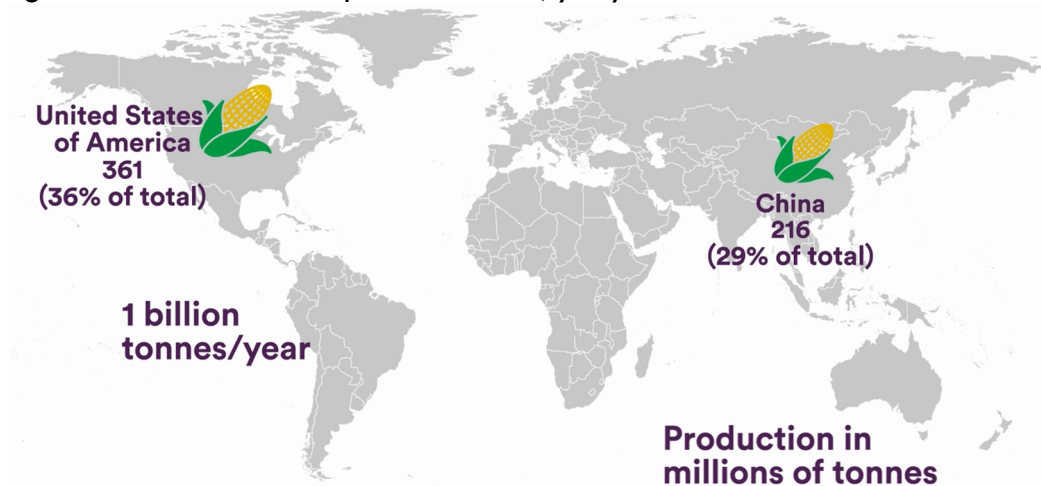
Even though more than half of all rice produced is directly intended for human consumption, rice is not just used as food. For example, rice germ oil is used in cosmetics, and rice straw can be used to thatch homes or as a source of energy.

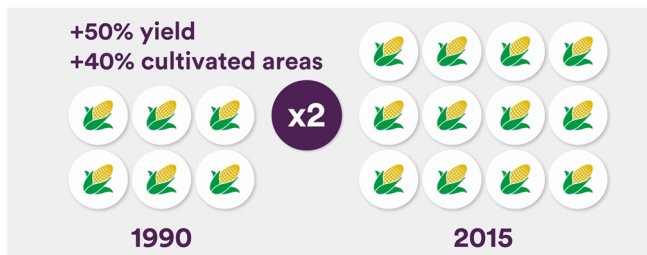


## CORN PRODUCTION IN THE WORLD

Corn is an important foodstuff for many developing populations, while in North America and Europe, it is mainly used for animal feed and in industry.

Corn is produced in even greater amounts than rice. With more than one billion tonnes per year, it is by far the world's most cultivated cereal. North America constitutes the largest production area. Developing countries devote more acreage to corn than developed countries, yet yields are close to four times lower.





Global corn production is rising. This increase is due to new seeding on new areas, genetic improvement, better growing techniques and the use of fertilisers. As a result, since 1990, a 50% increase in yield and a 40% increase in cultivated areas has more than doubled corn production.

## HOW CORN IS USED

Corn can also be used in a variety of ways, mainly as food for humans and animals, and as a raw material in industry.

In terms of human food, corn can be used whole grain or processed. This makes it possible to obtain a large number of semi-finished products, such as cornmeal, semolina, flour or flakes, or glucose syrup.



In 2013, the consumption of corn and its derived products worldwide was 18 kg per person.

However, unlike rice, only one-tenth of the corn is used for human consumption.

Corn, plant residues and cornmeal are widely used in animal feed, especially because of their low cost.

In the industrial field, corn is used to make biodegradable plastic packaging.



In recent years, corn has also been widely used to produce biofuels. More than 30% of corn production in the United States is now used to make bioethanol.

It is worth noting that corn is used mostly after processing, while rice is most often consumed directly, without being transformed at all.