

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.

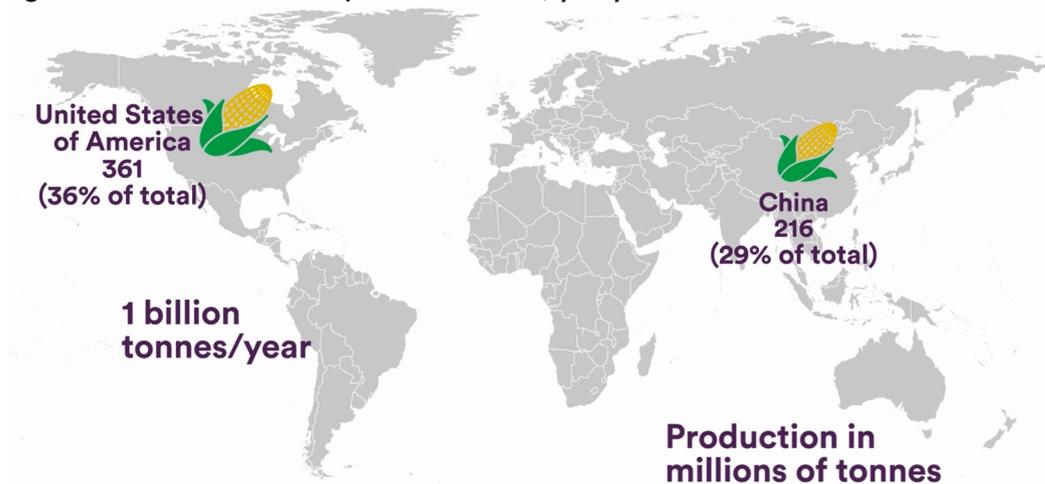
Even though more than half of all rice produced is directly intended for human consumption, rice is not just used as food. For example, rice germ oil is used in cosmetics, and rice straw can be used to thatch homes or as a source of energy.



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.

Rice and corn: Production and use

Rice is the most widely grown cereal in the world.

- True
- False

What proportion of the world population depends on rice for its diet?

- 25%
- 50%
- 75%

Rice is mainly used as animal fodder.

- True
- False

Corn is the most widely grown cereal in the world.

- True
- False

The increase in the quantity of corn produced over recent years is due...

- solely to the increase in yields
- solely to the increase in cultivated areas
- to the combined increase in cultivated areas and yields

Corn is mainly used for human consumption.

- True
- False

Answers

Rice is the most widely grown cereal in the world.

- True**
Wrong! Although 700 million tonnes of rice are produced each year, it is not the most widely grown cereal.
- False**
Well done! Rice comes in second place, with over 700 million tonnes produced each year. A chain of lorries filled with all this rice would wrap around the Earth almost 9 times!

What proportion of the world population depends on rice for its diet?

- 25%**
Wrong! Remember that some Asian countries, such as China and India, have a sizeable population.
- 50%**
Well done! Rice is a staple foodstuff in Asia and in some African countries, two heavily populated regions of the world.
- 75%**
Wrong! It is lower than that.

Rice is mainly used as animal fodder.

- True**
Wrong! Try again.
- False**
Well done! On the contrary, most rice is for human consumption. It is generally consumed near to where it is produced and rice exports remain relatively low.

Corn is the most widely grown cereal in the world.

- True**
Well done! With over 1000 million tonnes produced each year, corn is in fact the top cereal crop. Just imagine... that is the equivalent to a chain of lorries, filled with corn, circling the Earth 12 times!
- False**
Wrong! That is not the correct answer.

The increase in the quantity of corn produced over recent years is due...

- solely to the increase in yields**
Wrong! Although the use of new techniques, fertilisers and improved varieties increased the yield by 50% between 1990 and 2014, the production of corn actually doubled.
- solely to the increase in cultivated areas**
Wrong! Although cultivated areas increased by 40% between 1990 and 2014, production actually doubled.
- to the combined increase in cultivated areas and yields**
Well done! Between 1990 and 2014, there was a 40% increase in cultivated areas and a 50% increase in yields. The combination of these two factors resulted in the doubling of global production in 25 years.

Corn is mainly used for human consumption.

- True**
Wrong! Corn is used in many different ways, whether as animal fodder, to produce biofuels or in the pharmaceutical and chemical industries.
- False**
Well done! Unlike rice, only 10% of corn is directly consumed by human beings. This is an average of 18 kg of corn per person per year. The rest is mainly used as animal fodder, to make biofuels or other industrial products.

What's the use?

[8-10 years old and 11-13 years old and 14-16 years old]

Fill in the table below by placing the products derived from rice and corn in the correct columns. You can use some words twice.

human food – animal fodder – semolina – parboiled rice – pasta – biofuel – bakery products – cakes – flour – cosmetics – straw for thatched roofs – glucose syrup – plastic packaging – natural glue

Main uses of rice	Main uses of corn

Answers

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Main uses of rice	Main uses of corn
human food	human food
parboiled rice	animal fodder
pasta	semolina
bakery products	biofuel
cakes	cakes
cosmetics	glucose syrup
straw for thatched roofs	flour
natural glue	plastic packaging

Where do they come from?

[11-13 years old and 14-16 years old]

Mark on the map the main areas where rice and corn are produced.



Answers

Where do they come from?

[11-13 years old and 14-16 years old]

Mark on the map the main areas where rice and corn are produced.



Answer:

Rice: 90% in Asia – notably 30% in China

Corn: North America (40%), Asia (30%), Europe (12%) and South America (12%)