

# Facts and figures about the potato



**CIP**  
INTERNATIONAL  
POTATO CENTER  
A CGIAR RESEARCH CENTER

## International Potato Center

The International Potato Center (known by its Spanish acronym CIP) is a research-for-development organization with a focus on potato, sweetpotato, and Andean roots and tubers. CIP is dedicated to delivering sustainable science-based solutions to the pressing world issues of hunger, poverty, gender equity, climate change and the preservation of our Earth's fragile biodiversity and natural resources.

[www.cipotato.org](http://www.cipotato.org)

CIP is a member of CGIAR. CGIAR is a global agriculture research partnership for a food secure future. Its science is carried out by the 15 research centers who are members of the CGIAR Consortium in collaboration with hundreds of partner organizations.

[www.cgiar.org](http://www.cgiar.org)

**The potato (*Solanum tuberosum*)** belongs to the Nightshade family of flowering plants. The tuber originated in the Andes Mountains of South America and it was here that traditional farmers first domesticated the potato approximately 8000 years ago.

Spanish explorers brought the plant to Europe in the late 16th century as a botanical curiosity. By the 19th century the potato had spread throughout Europe and elsewhere, providing a **cheap and abundant source of food**.

There are **2500 landraces of potato native to Peru, and 4500 landraces in total**. A landrace is a local variety of a domesticated plant species, which has developed largely by natural processes, by adaptation to the natural and cultural environment in which it lives.

The potato is the **third most important crop in the world** after rice and wheat in terms of human consumption. More than a billion people worldwide eat potato on a regular basis, and total global crop production exceeds **374 million metric tons**.

China is the world's biggest producer of potatoes, growing more than **88 million tons a year**. Worldwide, farmers harvest potato crops in a total area **exceeding 19 million hectares** (a combined area larger than North Dakota). **156 countries** around the world now grow potatoes, including all the states in the USA.

There are between **100-180 wild potato species**. While they are too bitter to eat, their important biodiversity offers natural resistances to pests, diseases, and climatic conditions.

The potato reproduces via means of **vegetative propagation**, meaning that a new plant grows from a potato or piece of potato. The new plant can produce five to 20 new tubers, which will be genetic clones of the mother plant. Potato plants also produce flowers and berries that contain 100-400 botanical seeds. These seeds can produce new tubers, which will be genetically different from the mother plant.

Potatoes can grow from sea level up to **4600 meters above sea level** and at a wide range of latitudes from southern Chile to Greenland.

**One hectare of potato** can yield more than four times the food quantity of grain crops. Potatoes produce more food per unit of water than any other major crop and are up to seven times more efficient in using water than cereals.

Since the early 1960s, the growth in the potato production area has rapidly overtaken that of all other food crops in developing countries. It is fundamental to providing **food security for millions of people** across South America, Africa, and Asia, including Central Asia.

At present, more than half of the **global potato production** takes place in developing countries. The International Potato Center has played an important role in providing resource-poor farmers in developing countries with a range of new technologies and potato breeding material, specifically designed to suit local conditions.

Potatoes are an excellent, low-fat source of carbohydrates, with **one-fourth the calories** of bread. Boiled, they have more protein than maize and nearly twice the calcium. An average serving of potatoes with the skin on provides about **10 percent of the recommended daily intake of fiber**.

When boiled, a single medium sized potato contains about **half the daily adult requirement of vitamin C**, as well as significant amounts of iron, potassium and zinc. Potato also contains substantial amounts of vitamin B and valuable supplies of essential manganese, chromium, selenium and molybdenum trace elements. The high vitamin C content enhances iron absorption.

Potatoes can have **white, yellow, pink, red, purple, or even a blue** color of flesh. Yellow is primarily due to the presence of carotenoids concentrations, and anthocyanin is responsible for the red, purple, and blue colors. Both are antioxidants and believed to play an important role in preventing cancer and diseases related to ageing.

Potatoes have toxic components known as **glycoalkaloids** in leaves, sprouts, and stems, which protect the plant against fungi and insects. Peeling and cutting away the green areas can remove them.

The **sweetpotato** (*ipomoea batatas*) belongs to the family Convolvulaceae and is not related to the potato.

Pests and diseases create major stresses for high yield production in potatoes. A disease called **late blight** is one of the most destructive diseases in potatoes.

**The International Potato Center** maintains the largest collection of potato in the world, including more than **7000 samples of native, wild, and improved varieties**. CIP's genebank ensures that these samples are securely conserved for the future, and makes sure that they are also available for use by farmers, breeders, and researchers.

