Facts and Figures about the Sweetpotato

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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.
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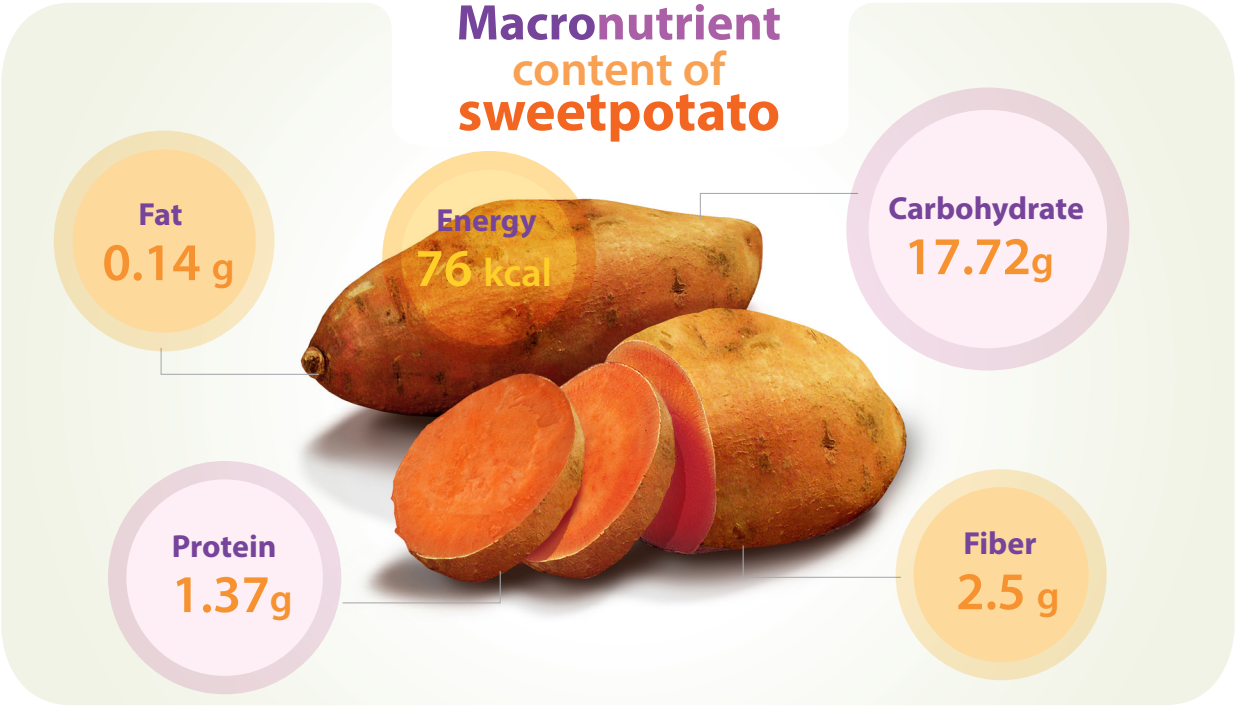
Sweetpotato is one of the world's most important food crops in terms of human consumption, particularly in Sub-Saharan Africa, parts of Asia, and the Pacific Islands. First domesticated more than 5,000 years ago in Latin America, it is grown in more developing countries than any other root crop. Despite its name, sweetpotato is not related to the potato. It is a root, not a tuber, and belongs to the Convolvulaceae family. Many parts of the plant are edible, including leaves, roots, and vines, and varieties exist with a wide range of skin and flesh color, from white to yellow-orange and deep purple.

Facts and Figures

- Sweetpotato (*Ipomoea batatas*) belongs to the Convolvulaceae family. In spite of its name, it is not related to the potato. Unlike the potato – which is a tuber, or thickened stem – the sweetpotato is a storage root. Despite a physical similarity, yams are not related either.
- Sweetpotato can grow at altitudes ranging from sea level to 2,500 meters. It requires fewer inputs and less labor than other crops such as maize, and tolerates marginal growing conditions (e.g., dry spells, poor soil).
- Sweetpotato comes in varieties with skin and flesh color that range from white to yellow, orange, and deep purple. Orange-fleshed sweetpotato is an important source of beta-carotene, the precursor to Vitamin A. Just 125g of fresh sweetpotato roots from most orange-fleshed varieties contain enough beta-carotene to provide the daily pro-vitamin A needs of a preschooler.
- Sweetpotato is also a valuable source of vitamins B, C, and E, and it contains moderate levels of iron and zinc.
- Though its origins lie in Latin America, Asia is now the largest sweetpotato-producing region in the world, with figures showing over 90 million tons produced annually. China is the world's biggest producer and consumer of sweetpotato, where it is used for food, animal feed, and processing (as food, starch, and other products).
- The importance of sweetpotato as a food crop is growing rapidly in some parts of the world. In Sub-Saharan Africa, it is outpacing the growth rate of other staples.
- Sweetpotato is used for both human consumption and as a healthy, cheap source of animal feed. Recent studies suggest that animals fed on high protein sweetpotato vines produce less methane gas than with other feed, potentially contributing an important reduction in harmful global emissions.
- Sweetpotato has a long history as a life saver. The Japanese used it when typhoons demolished their rice fields. It kept millions from starvation in famine-plagued China in the early 1960's and came to the rescue in Uganda in the 1990's, when a virus ravaged cassava crops.

Sweetpotato and nutrition

Sweetpotatoes produce more edible energy per hectare per day than wheat, rice or cassava. They are good sources of carbohydrates, fiber, and micronutrients. The leaves and shoots, which are also edible, are good sources of vitamins A, C, and B (Riboflavin).



Orange-fleshed sweetpotato is an important source of beta-carotene (the precursor to Vitamin A). Just 125 g of fresh roots from most orange-fleshed varieties contain enough beta-carotene to provide the daily pro-vitamin A needs of a preschooler. This is particularly important in Sub Saharan Africa and Asia where vitamin A deficiency is a leading cause of blindness, disease and premature death among children under five and pregnant women. Nutritionists identify different levels of beta-carotene according to varying pigmentation in orange-fleshed varieties by means of a color chart.

Sweetpotatoes also contain phenolic compounds that provide the root with antioxidant properties that have health promoting and disease preventive benefits. Purple fleshed sweet potatoes contain a significant content of anthocyanins comparable to that of other high anthocyanin containing fruits and vegetables such as grapes, plums, sweet cherries, raspberries and eggplant al., 2010). Anthocyanins from purple fleshed sweetpotato have been shown to exhibit stronger radical scavenging activity than anthocyanin pigments from red cabbage, elderberry, grape skin and purple corn.

A recent study to evaluate the biotransformation of anthocyanins from two purple-fleshed sweet potato accessions in a dynamic gastrointestinal system shows that unabsorbed anthocyanins and their metabolites protect intestinal cells against reactive oxygen species (ROS) generated within the gut and attenuate ROS-mediated gut inflammatory conditions.

Average Micronutrient Content of Orange-Fleshed Sweetpotato

Minerals	
Iron (mg)	0.5
Zinc (mg)	0.2
Calcium (mg)	34
Potassium (mg)	298
Phosophorous (mg)	29
Antioxidants	
Total carotenoids (mg)	15.5
Beta-carotene (mg)	13.1

Per 100 grams of fresh-weight, raw, unpeeled sweetpotato
Source: Quality and Nutrition Lab, CIP