CORN

Dark-colored varieties of corn are essentially the same species of corn as the common white and yellow sweet corn varieties. Pigments with antioxidant activity called anthocyanins give the deep shades of color to blue corn, which is also referred to as purple corn. Anthocyanins are not found in significant amounts in common sweet corn and may have health benefits. The protein, mineral and starch composition of blue corn varieties may confer additional nutritional benefits, too.

Blue Corn Anthocyanins

Anthocyanins are a type of flavonoid compound contributing the deep red, blue and purple colors of many fruits, vegetables, legumes and cereal grains. White and yellow corn varieties contain only about 3 percent of the amount of anthocyanins found in blue corn. Anthocyanins can function as antioxidants, which may help to reduce free radical damage to cells and tissues. Studies conducted in experimental animals suggest that corn anthocyanins may have anti-inflammatory activity and cancer preventative properties and may also help to control body weight. For example, dietary anthocyanin-rich purple corn extract lowered body weight gain in mice fed a high-fat diet, according to a study published in the July 2003 issue of "The Journal of Nutrition."

Protein and Mineral Content

The major protein found in white and yellow corn, called zein, is relatively deficient in the essential amino acids lysine and tryptophan. Blue corn varieties contain less zein and more of these essential amino acids, which make blue corn a more complete protein source for human nutrition, according to the New Mexico Agricultural Cooperative Extension Service. The total protein content of blue corn is about 30 percent higher than the total protein content of white and yellow corn. Blue corn also contains more zinc and iron than commercial white and yellow corn varieties.

Starch Digestibility

Blue corn products may be healthier than white or yellow corn products for blood glucose control in people with diabetes, according to a study published in the October 2007 issue of the “Journal of the Science of Food and Agriculture.” Scientists in Mexico found that the starch in blue corn tortillas was less digestible than the starch in white corn tortillas in studies conducted in test tubes. The slower rate of starch digestion to glucose in blue corn samples resulted in a lower

predicted glycemic index, or predicted blood glucose-elevating effect, for the blue corn product.

Blue Corn Uses and Processing

Blue corn varieties are native to the American Southwest and Central and South America. They have recently gained popularity in the United States as an ingredient in tortillas, corn chips, pancake mixes, cereals and cornbread. Similar to white and yellow corn, blue corn can be eaten raw, baked, broiled, fried and simmered for use in soups and stews. Processing blue corn flour for the production of tortillas can result in significant losses of anthocyanins and antioxidant capacity. The lime-cooking extrusion process has been found to minimize loss of these valuable phytonutrients.

Main Benefits

Corn contains abundant minerals which positively benefit the bodies in a number of ways. phosphorous, along with magnesium, manganese, zinc, iron and copper are found in all varieties of corn. It also contains trace minerals like selenium, which are difficult to find in most normal diets. Phosphorous is essential for regulating normal growth, bone health and optimal kidney functioning. Magnesium is necessary for maintaining a normal heart rate and for increasing bone strength.

Antioxidant properties, Fights Breast Cancer

According to studies carried out at Cornell University, corn is a rich source of antioxidants which fight cancer-causing free radicals Corn is a rich source of a phenolic compound called ferulic acid, an anti-carcinogenic agent that has been shown to be effective in fighting the tumors which lead to breast cancer as well as liver cancer. Anthocyanins, found in purple corn, also act as scavengers and eliminators of cancer-causing free radicals. Antioxidants have been shown to reduce many of the most dangerous forms of cancer because of their ability to induce apoptosis in cancerous cells, while leaving healthy cells unaffected. This is particularly relevant when phytochemicals are the source of the antioxidants, which is another type of chemical found in high volumes in corn.

Vitamin- A Content

Skin Health, Vision Health and Boosting Immune System

Yellow corn is a rich source of beta-carotene, which forms vitamin A in the body and is essential for the maintenance of good vision and skin. Beta-carotene is a great source of vitamin-A because it is converted within the body, but only in the amounts that the body requires. Vitamin-A can be toxic if too much is consumed, so deriving vitamin-A through

beta-carotene transformation is ideal. Vitamin-A will also benefit the health of skin and mucus membranes, as well as boosting the immune system.

The amount of beta-carotene in the body that is not converted into vitamin-A acts as a very strong antioxidant, like all carotenoids, and can combat terrible diseases like cancer and heart disease.

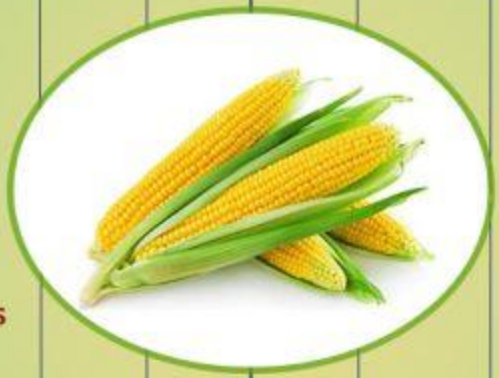
Cosmetic benefits

Skin rashes and irritation healing

HEALTH BENEFITS OF CORN

Organic Facts
www.organicfacts.net

- Lowers risk of colon cancer
- Improves bone strength
- Reduces risk of hemmorhoids
- Rich source of vitamins & minerals
- Helps maintain good vision & skin



- Controls diabetes & hypertension
- Boosts immune system
- Prevents anemia
- Reduces cholesterol absorption in body
- Reduces risk of various cardiovascular diseases

Nutrients*	Minerals*	Vitamins*
Dietary Fiber 11%	Magnesium 9%	Thiamin 13%
Protein 6%	Phosphorous 9%	Vitamin C 11%
Carbohydrate 6%	Potassium 8%	Folate 11%
Calories 4%	Manganese 8%	Niacin 9%

Caution: Do not use high fructose corn syrup as it has negative impact on the sugar levels.

*% Daily Value per 100g. For e.g. 100g of Corn provides 11% of daily requirement of Dietary Fiber