



PRODUCT SHEET

Purple Corn (*Zea mays* L.)

FAMILY : Poaceae = Gramineae (Grass Family)

COMMON NAMES: "Peruvian purple corn", "purple corn", "purple maize", "corn", "maize", "mealie", "Indian corn". **CASTILIAN/SPANISH:** *Peru* "maíz morado". **QUECHUA:** "kculli sara". **GUARANÍ:** "abati".

DESCRIPTION: Habit: Annual, vigorous herb with an erect, many-noded, solid stem, between 60 cm and more than 6 m tall. Root fibrous and fascicled. **Leaves:** alternate, linear to linear-lanceolate, long. **Flowers:** monoecious (individual flowers are either male or female, but both sexes can be found on the same plant). Male flowers are arranged on an inflorescence (panicle) about 30 cm long (at the top of the stem) that is composed by racemes which are constituted by many small flowers called spikelets, disposed in pairs, 8 to 12 mm long. The pistillate (female) inflorescence is a unique axillary structure variable in size and shape, known as ear, borne on a short branch with several modified leaves (bracts) forming the husk and enclosing the thick central axis (cob) on which the spikelets are arranged in rows; the spikelets are in pairs. **Fruit:** caryopsis (grain) variable as to size, shape, color and sugar-starch content; they are commonly arranged in 8 rows on a large cylindrical receptacle or rachis (cob). The ear is between 7.5 and 50 cm long. The color of grains can be white, yellow, red, purple, brown, green, blue or purple.

ORIGIN AND DISTRIBUTION: A domesticated plant species native to America. The exact center of origin for this plant species remains a mystery; no wild individuals of this species have been found anywhere. Today, *Zea mays* is grown in most countries throughout the world. It is known to grow from 58° N to 40° S latitude and from altitudes below sea level to 4 000 m in the Andes. *Zea mays* subsp *mays* 'Culli' (purple corn) is known to be native to Peru.

PARTS USED: The whole plant: grain, stigmata (corn silk), leaves, stem, pollen, cob, and roots.

PROPERTIES: alcoholic beverage, alexeritic, alterative, analgesic, anodyne, anticancer, anti-inflammatory, anti-mutagenic, antioxidant, antiseptic, astringent, blood flow promotor, cardiac, cholagogue, choleric, connective tissue regenerator, cyanogenetic, demulcent, diuretic, food, hypocholesterolemic, hypoglycemic, hypotensive, improves microcirculation, litholytic, lithotropic, natural colorant, stimulant, stomachic, vasodilator. Against: amenorrhea, atherosclerosis, Bright's disease, cancer (certain types), cardiovascular diseases, catarrh of the bladder, corns, cystitis, diabetes, dropsy, dysentery, dysmenorrhea, gingivitis, gonorrhoea, gout, gravel, hepatitis, high levels of cholesterol, hypertension, hyperglycemia, hyperinsulinemia, hyperleptinemia, inflammations, influenza, menorrhagia, metritis, nephritis, obesity, oliguria, pneumonia, prostatitis, renitis, rheumatism, stones, strangury, tumors, urogenital ailments, warts.

PHYTOCHEMICALS: Plant chemicals in *Zea mays* subsp. *mays* 'purple corn': anthocyanins [3-O- β -D-glycoside, pelargonidin 3-O- β -D-glycoside, peonidin 3-O- β -D-glycoside, cyanidin 3-O- β -D-(6-malonyl-glucoside), pelargonidin 3-O- β -D-(6-malonyl-glucoside), peonidin 3-O- β -D-(6-malonyl-glucoside), cyanidin 3-glucoside, cyanidin galactoside, pelargonidin glycoside], oils, phenols, protein, starch, tannins.