

SEEDS

The seeds are soft and can be consumed, crushed together with the pulp. They are rich in phenolic acid and oils that are good for the health, such as those of the omega 6 series ($\omega 6$), important for the formation of cellular membranes and to balance cholesterol levels (Figure 3).



	Linoleic % ($\omega 6$)	Oleic % ($\omega 6$)	Palmitic %
BRS Pearl of Cerrado	64,7	19,7	10,2
Olive oil	11,4	63,6	18,5

Linoleic - it combines with phospholipids to become part of the mitochondria and microsomes of cells. It decreases bad cholesterol levels.

Oleic - it regulates and even improves the functioning of the nervous system. It produces a feeling of satiety and reduces bad cholesterol levels.

Figure 3. Aspect and composition of oil from the seed of the BRS PC (pearl passion fruit), and of olive oil.

BIBLIOGRAPHY

IDR. Daily reference index. Publication of the Ministry of Health nº 33, of January 13, 1998.

TECHNICAL INFORMATION

Embrapa Cerrados - cpac.sac@embrapa.br'
Passitec Network - Technological Development of Wild Passifloras

Properties and uses of the *Passiflora setacea*

(B R S P C)

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INTRODUCTION

Brazil has one of the richest biodiversities in the world, with more than 150 different species of passion fruit. Many are known in rural areas for the beauty of their flowers, the quality of the fruits and their beneficial properties to human health. Among such varieties is the *Passiflora setacea* BRS Pearl of the Cerrado (BRS PC), known as the pearl passion fruit. It is a vigorous plant when adult, with potential for use in landscaping and for the consumption of its fruits (Figure 1). Embrapa developed this variety, which is the first variety of the *Passiflora setacea* species through traditional plant breeding techniques.

THE FRUIT

The fruit of the BRS PC is smaller than that of the sour passion. It is 5 to 6 cm in length and 4 to 5 cm in width and its mass weighs between 50 to 120 grams. The skin is green and yellow even when it is ripe, with dark green stripes (Figure 1). The pulp (without seeds) of the fruit is equivalent to about 30 to 38% of the fruit's total mass.

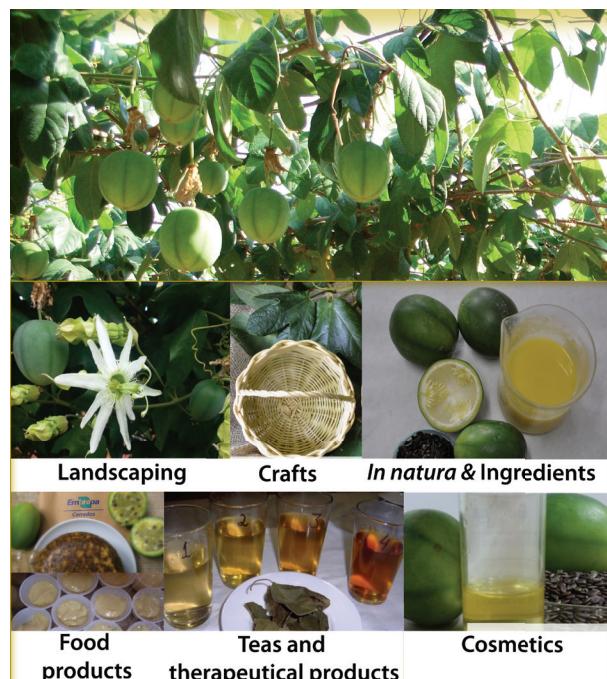


Figure 1 Uses of *Passiflora setacea* BRS PC (pearl passion fruit)..

THE PULP

The pulp has a yellow-pearl colour with a milky appearance. The taste is sweet, and low in acidity. The fruit has a pleasant aroma, which is different to that of the sour passion fruit. It can be consumed in its natural state and used in the preparation of juices, mousses, sweet and salty dishes (Figure 2).

The pulp of the BRS PC has good nutritional quality and can be considered a source of soluble fibers, proteins, and important minerals for human health (Table 1)

The dehydrated pulp, which can be used as an ingredient, is rich in Magnesium, Iron, Phosphorous and Zinc and the fresh pulp is rich in Copper. Each 100 grams of dehydrated pulp provides 34 to 39% of the daily necessities of Iron, 21 to 27% of Magnesium, 22 to 32% of Phosphorous and 23 to 37% of Zinc. The fresh pulp is a source of Copper.



Figure 2. Pulp, peal and seeds of *Passiflora setacea* BRS PC (pearl passion fruit).

The pulp is also rich in Vitamin C, has a good composition in phenolic acids, flavonoids and bioactive amines. These substances help to prevent degenerative diseases, to strengthen the immunological system and in some cases, strengthen cellular regeneration, contributing to maintaining people's health. The concentration of the

phenolic composition that is present in 100 grams of the pulp of the BRS PC varies from 50 to 77 mg, which is more than double that which is found in the pulp of commercial passion fruit, cupuaçu and pineapple. It has flavonoids in an equivalent quantity to those of peppermint, varying from 11 to 15 mg/100 g of pulp. The bioactive amines are equivalent to 14mg/100g of pulp, corresponding to double the amount found in the commercial passion fruit and forty times that which is found in an apple.

Table 1: Physical-chemical characteristics and nutritional information of the BRS PC (pearl passion fruit)

Physical-Chemical Parameters	Dehydrated Pulp (Db)*	Fresh Pulp
Total Soluble Solids (° Brix)	-	13,57
Crushed Acidity into Citric Acid	-	2,92%
pH	-	3,43
Ratio	-	4,65
Humidity	20%	80%
Ashes	0,68%	0,14%
Sodium	4,35 mg/100g	0,87 mg/100g
Phosphorous	220,6 mg/100g	44,13 mg/100g
Potassium	1493,5 mg/100g	298,7 mg/100g
Calcium	40,50 mg/100g	8,10 mg/100g
Magnesium	73,10 mg/100g	14,64 mg/100g
Sulphur	249,67 mg/100g	49,93 mg/100g
Borium	0,36 mg/100g	0,07 mg/100g
Copper	1,06 mg/100g	0,21 mg/100g
Iron	5,18 mg/100g	1,04 mg/100g
Manganese	1,37 mg/100g	0,27 mg/100g
Zinc	1,65 mg/100g	0,33 mg/100g
Proteins	0,95 g/100g	0,19 g/100g
Dietetic Fibers	1,5 g/100g	0,30 g/100g
Total fat	0,48 g/100g	0,10 g/100g
Vitamin C	-	41,48 mg/100g
Calories	86,8 Kcal/100g	17,32 Kcal/100g
Carbohydrates	16,39 %	3,28 %

*Values are expressed as dry base (Db).