

BREADFRUIT NUTRITIONAL VALUE AND VERSATILITY

Breadfruit is high in complex carbohydrates, low in fat, and cholesterol and gluten free. It has a moderate glycemic index (blood sugar shock) compared to white potato, white rice, white bread, and taro.

The nutrient compositions of breadfruit (average of the Hawaiian 'Ulu, Ma'afala, and Meinpadahk), white rice, and white potato with the skin, are shown in Table 1. Just 100 g of breadfruit (approximately ½ cup) provides 25% of the RDA for fiber, and 5–10% of the RDA for protein, magnesium, potassium, phosphorus, thiamine (B₁), and niacin (B₃). Breadfruit also provides some carotenoids, such as β-carotene and lutein, which are not present in white rice or white potato.



Mature fruit of three varieties. Left to right: Ma'afala, Hawaiian 'Ulu, and Meinpadahk.

Table 1. Nutritional comparison (per 100 g serving)

	Breadfruit*	White potato†	White rice†
Protein (g)	4.0	1.7	2.4
Carbohydrate (g)	31.9	15.7	28.6
Fiber (g)	5.4	2.4	0.3
Phosphorus (mg)	43.1	62.0	37.0
Potassium (mg)	376.7	407.0	29.0
Calcium (mg)	16.8	9.0	3.0
Magnesium (mg)	34.3	21.0	13.0
Sodium (mg)	19.4	16.0	0.0
Iron (mg)	0.5	0.5	0.20
Zinc (mg)	0.1	0.29	0.42
Vitamin C (mg)	2.4	9.1	0.0
Thiamin (mg)	0.1	0.07	0.02
Riboflavin (mg)	0.0	0.03	0.016
Niacin (mg)	0.9	1.06	0.40
Vitamin A (µg)	1.4	0.0	0.0
Lutein (µg)	96.3	0	0
β-Carotene (µg)	15.1	0	0

* Average of three varieties Ma'afala, Hawaiian 'Ulu, and Meinpadahk.

† Data for white potato with skin, medium-grain, cooked, unenriched white rice from: U.S. Department of Agriculture, Agricultural Research Service. 2013. USDA National Nutrient Database for Standard Reference, Release 26. Nutrient Data Laboratory Home Page. www.ars.usda.gov/ba/bhnrc/ndl

Table 2. Relative nutritional value of breadfruit, white potato, and white rice.

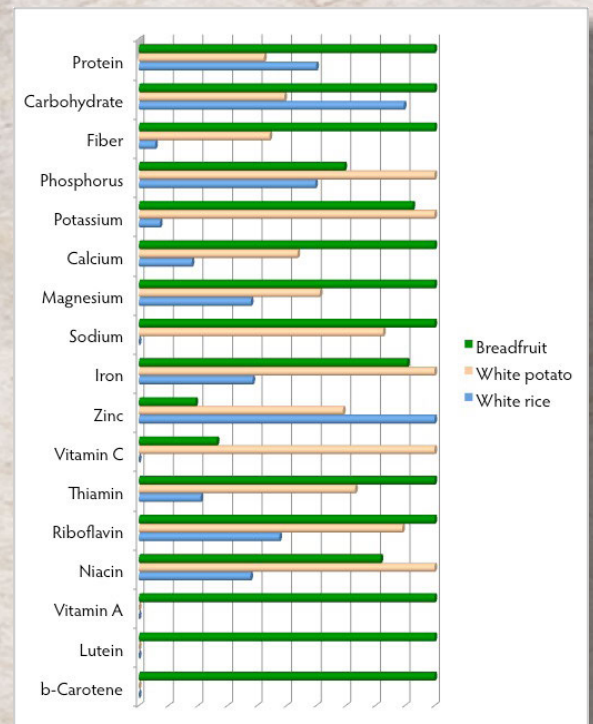


Table 3. Average fruit weight and edible portion for three varieties of breadfruit.

	Whole Fruit Weight	Edible Portion (no peel & core)
Hawaiian 'Ulu	1973 g (4.4 lb)	1734 g (3.8 lb)
Ma'afala	789 g (1.7 lb)	650 g (1.4 lb)
Meinpadahk	1079 g (2.4 lb)	907 g (2.0 lb)

Breadfruit is an extremely versatile fruit that can be prepared and eaten at all stages of development and maturity. Mature fruit is the most desirable to use for most dishes, due to its potato-like texture. There are many ways to prepare mature breadfruit: steamed, boiled, fried, baked, or cooked in traditional ways in a fire. Then it can be used in a variety of dishes such as casseroles, fritters, croquettes, pancakes, breads, curries, stews, chowders, salads and many other dishes. It can also be mashed and made into dips, like hummus, or vegetarian burgers or pâté.

Popular breadfruit dishes in Hawai'i include: salad (like potato salad), curry, cooked in coconut cream, chips, chowder, nachos, and with corned beef.

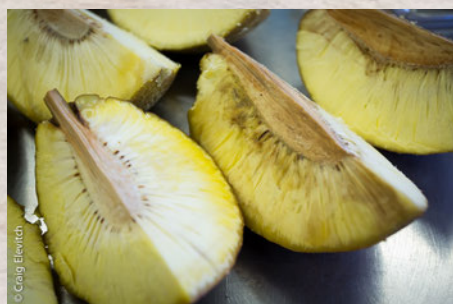
When breadfruit ripens it becomes soft and creamy and

sweet. At this stage it can be eaten raw or used to make beverages, baked goods, desserts like flan, and other sweet dishes.

Immature green fruit, from golf ball size to almost full size, can be cooked entire, or cut into thin slices or chunks and boiled until tender. Once cooked, they can be eaten with dips, used in salads, and marinated, or pickled. The flavor and texture resembles artichoke heart.

Traditional methods of cooking 'ulu were roasting directly on a fire until the skin blackened and the flesh was tender, baking in the imu (underground oven), and pounding into a doughy consistency (for poi or other uses). A modern twist involves putting cooked 'ulu from the imu or boiled/steamed, through a food grinder (e.g. Champion brand), adding a little bit of coconut oil to give it a nice texture. This type of preparation can be used like dough, rolled out for pasta, pizza, or tamales.

Another way to use breadfruit is to peel and core the raw fruit, shred or slice it into thin pieces, then dry and grind into a meal or flour. The coarse meal can substitute for panko or breadcrumbs. Since the flour is gluten free, it will not rise or have the elasticity of wheat flour, but can be used like other gluten-free flours.



Clockwise from top left: Ready-to-eat steamed quarters; Removing blackened skin from fire-roasted breadfruit; Breadfruit pasta and flour; Pono Pies panini breadfruit pie; Breadfruit and chicken yellow curry; Breadfruit salad with local vegetables.

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