

Beet Root Profile

Also known as

Beta vulgaris

Introduction

In ancient times, beets had elongated roots like carrots and the globular red beet we now eat was only hybridized about 300 years ago. Beets have the highest sugar content of all the vegetables and are becoming popularly used as a sweetening substitute. Beet juice and beet powder are used to flavor carrot, celery, and other vegetable juices, and also to color a variety of foods. Beets, or at least the leaves of the beet, have been used since before recorded history. Charred beet roots were found among Neolithic remains at an excavation site in the Netherlands. The Sea beet, the ancestor of the modern cultivated beet, was probably domesticated somewhere along the Mediterranean. Both the roots and leaves have been used in folk medicine to treat a wide variety of ailments since the time of the Romans, who used them for fever and constipation. Hippocrates used the leaves as a binding for wounds. In the Talmud, the rabbis recommended "eating beet root, drinking mead, and bathing in the Euphrates" as part of a prescription for a long and healthy life. During the middle ages, Platina in his *De Honesta* (1460) noted that beet root was good for bad breath, especially "garlic breath". Many cultures have used beet roots for their quality as an aphrodisiac, and there were even paintings in brothels in Pompeii that had depictions of beets on them. There is some validity to this claim as beets are a rich source of the mineral boron, which plays a role in the production of the human sex hormones. Although the leaves were consumed for many centuries, the root itself was not widely consumed until French chefs recognized its culinary potential in the early 19th century.

Constituents

Betaine (the same as the nutritional supplement trimethylglycine, not the same as betaine hydrochloride), and also alanine, allantoin, arginine, beta-carotene, calcium, fiber (about 10% by weight), GABA, glycine, histidine, magnesium, pantothenic acid (vitamin B5), phosphorous, potassium, selenium, thiamine (vitamin B1), tryptophan, tyrosine, vitamin C, zinc, and, interestingly, although not in nutritionally significant amounts, zirconium.

Parts Used

The dried root, powdered. May be administered directly, whipped into a smoothie or drink, or sprinkled on food

Typical Preparations

One or two teaspoons added to water or juice, 2-4 times daily. One teaspoon of powder provides the nutrition in one beet.

Summary

Beet powder provides a wide range of nutrients, but its most significant phytochemical is betaine. This plant chemical helps the liver and kidneys recycle the amino acid methionine to maintain the body's stores of s-adenosyl-methionine, more commonly known as SAM-e. Betaine also helps the liver process fat. This prevents the accumulation of fatty tissues in the liver (steatosis), especially in heavy drinkers, and it also prevents excessive triglycerides and LDL cholesterol in the blood. Other antioxidants in beet root prevent the oxidation of LDL into forms that can become plaques. Beet root powder may also be helpful as a food choice for people with the rare disease cystathionine beta-synthase deficiency. Either beet root powder or supplemental trimethylglycine will lower homocysteine levels in this disease, but beet root powder provides a greater range of nutrients. According to the American Heart Association, beet juice can help lower blood pressure and it is also noted that due to the high content of iron in beets, they are good for anemia.

Precautions

None. Maximum safe dosages for young children, pregnant or nursing mothers, or those with severe liver or kidney disease have not been established, but there are no reports of any side effects from the use of the product.