

CHICORY – SUSTAINABLE AND NUTRIENT-RICH COFFEE SUBSTITUTE

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Annotation: *The potential of chicory as a sustainable alternative to coffee, highlighting its unique flavor profile and numerous health benefits. It examines chicory's historical use, recent resurgence, and its emerging role in the food and beverage industry. The article also discusses the environmental advantages of cultivating chicory and its suitability for diverse climates. It promotes chicory as a coffee substitute.*

Keywords: *Chicory, sustainable alternative, health benefits, antioxidants, chicory-based products, taste preferences, pharmaceuticals*

The ancient Egyptians considered chicory a magical plant, capable of removing all obstacles as well as opening locks, boxes, and doors. They anointed their bodies with chicory juice from the root of the plant in order to gain the powers of invisibility and special favors from important people. They believed chicory magic was much more potent if the plant was cut with a solid-gold knife, in total silence, at midnight. And if none of that worked, they ground and roasted the root and blended it with their favorite coffee to taste.¹

Chicory (*Cichorium intybus* L.) is a versatile plant known for its culinary and medicinal uses. Among its many health benefits, chicory is rich in bioactive compounds that possess antioxidant, anti-inflammatory, and antimicrobial properties. In particular, as global concerns over the sustainability and potential health risks of coffee continue to grow, a new contender has emerged – chicory. Exploring its potential as an eco-friendly and health-conscious alternative plays a crucial role. Discover the signature taste and aroma of chicory, as well as the myriad of health benefits that it offers.

Chicory root is a rich source of vitamin C, vitamin K, choline, and beta-carotene. Additionally, it is one of the major natural sources of inulin. This water-soluble storage polysaccharide belongs to a group of non-digestible carbohydrates called fructans. It is a fructose polymer with 8-(2-1)-glycosidic-linkage which is a long-chain carbohydrate, consisting of 2-60 fructose molecules with a terminal glucose molecule. Inulin can play a role of fat and sugar replacer, texture modifier and as compound in functional food development due to its prebiotic properties. Many studies investigated

inulin provided health benefits including: regulation of blood lipids (LDL-cholesterol and triacylglycerol) concentration, positive effect on constipation, bifidogenic effect with bacteria in the colon, decreasing the risk of many gastrointestinal diseases (ulcerative colitis, Crohn's disease, colon cancer), enhancing mineral absorption (especially Ca, Mg and Fe), regulates appetite by affecting gastrointestinal hormones, immune-modulating effects and others (Shoaib et al., 2016)²

How to make chicory coffee: Chicory root tea is a traditional drink which is made with the roots of the chicory plant. Any variety of chicory will do. I grew some wild chicory specifically for harvesting the roots for tea. These roots can be dug at the end of the first growing season, however are best if you leave them in the ground for another year. I dug up some smaller roots, just to have a taste of the chicory tea, however will dig up a larger batch next season. The fresh chicory roots are dug up, chopped, and then roasted. The roasting process gives the chicory root tea a dark, slightly bitter, and nutty flavor, similar to coffee. The best time to dig the roots is in winter or in very early spring, when the leaves of chicory plants are not on the plant. At these times of year, the energy of the plant has returned to the roots. Prepare the roots by first giving them a good rinse, to remove the dirt from the root surfaces. Chop the roots into small pieces. Spread the chopped pieces of raw chicory root out onto a baking sheet, spreading the pieces out evenly. Place into the oven. Bake initially at 150°C for 2 hours, which will help to dry and dehydrate the chicory pieces. Then bake at 350°C for another 25 to 40 minutes, until the roasted chicory roots are brown and crispy. Check on the pieces after 25 minutes of baking, and then every 5 minutes thereafter, until the chicory is ready to be removed from the oven. Remove the roasted pieces from the oven, and allow them to cool down. Chicory root pieces fresh from the oven roasted chicory roots are dry and crispy and easy to grind. Once the roasted chicory root pieces have cooled, they can then be ground down into finer pieces. They can even be ground into a fine powder. To grind you can use a blender, or coffee grinder, or even a mortar and pestle. The cleaned root is then chopped into smaller rings and undergoes final cleaning. The resulting pieces are spread out on a cookie sheet and dehydrated in the oven at a low temperature. After dehydration, the root is roasted at a higher temperature, resulting in a rich aroma and flavor. A couple of spoons of the chopped and roasted chicory root are blended or ground into a powder. This powder is added to boiling water, simmered for a few minutes, and then strained. Sugar can be added to taste, and milk can be included for added richness. The resulting

beverage is refreshing and can be enjoyed as a hot or cold drink, reminiscent of dandelion tea but with its unique bitterness and flavor.

Chicory coffee offers several health advantages compared to other coffees. For instance, lower caffeine content: Chicory coffee is naturally caffeine-free or contains very low levels of caffeine. This makes it a suitable alternative for individuals who are sensitive to caffeine or want to reduce their caffeine intake. In addition, Antioxidant- chicory root contains antioxidants, such as polyphenols and flavonoids, which can help fight against oxidative stress and reduce the risk of chronic diseases like heart disease and certain types of cancers. Furthermore, inulin, found in chicory root, may help regulate blood sugar levels by slowing down the digestion and absorption of carbohydrates. This may be beneficial for individuals with diabetes or those at risk of developing the condition. Moreover, liver health- chicory root has been traditionally used for its potential liver-protective properties. It may support liver health by promoting detoxification and reducing inflammation in the liver.

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