

Lifestyle & Culture

Beyond chocolate: unearthing cocoa's versatility



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Cocoa, scientifically known as *Theobroma cacao*, is a small evergreen tree native to the tropical regions of South and Central America. The name "Theobroma" is derived from Greek, meaning "food of the gods", a fitting tribute to the bean's divine taste and versatility. The cocoa bean, harvested from the tree's fruit, holds immense importance due to its use in creating one of the world's most cherished delights – chocolate. However, cocoa offers far more than just a delightful treat; its historical significance, health benefits and industrial applications have contributed to its widespread popularity and continuous demand.

Cocoa has a long and intriguing history that traces back to ancient civilizations. The origins of cocoa cultivation can be traced to Mesoamerica, where the Olmecs and Mayans were among the first to cultivate cocoa trees around 1900 BCE. These ancient cultures revered cocoa and considered it a divine gift. The Mayans even used cocoa beans as a form of currency and incorporated them into religious rituals and ceremonies.

Cocoa eventually made its way to Europe during the Age of Exploration. Spanish explorers, like Christopher Columbus and Hernán Cortés, encountered cocoa during their voyages to the New World. Cocoa beans were brought back to Europe, where their value and popularity began to spread rapidly. The Spanish court adapted the cocoa beverage, combining it with sweeteners like sugar and spices, which eventually laid the foundation for modern-day chocolate.

The cocoa tree

The cocoa tree typically reaches a height of 4 to 7½ metres. Its leaves are broad and glossy and it produces small, inconspicuous flowers directly on the trunk or branches. These flowers, known as cocoa blossoms, play a crucial role in cocoa bean development. Once pollinated, they give rise to large, football-shaped pods, each containing 20 to 50 cocoa beans surrounded by sweet-tasting pulp.

Cocoa trees thrive in tropical regions. Ideal growing conditions include well-distributed rainfall, high humidity and temperatures ranging between 20°C to 30°C. The main cocoa-producing countries include the Ivory Coast, Ghana, Indonesia and Nigeria.



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The phytochemicals and health benefits of cocoa

Cocoa is rich in phytochemicals, which are naturally occurring compounds with potential health benefits. One of the most well-known compounds in cocoa is theobromine, a stimulant that contributes to the "feel-good" effects often associated with chocolate consumption. Additionally, cocoa contains flavonoids, such as epicatechin and catechin, which have antioxidant properties.

One of the most well-known health benefits of cocoa is its potential positive impact on cardiovascular health. Cocoa is rich in flavonoids, particularly epicatechin and catechin, which have been linked to improved blood flow and reduced blood pressure. Flavonoids help to relax blood vessels, enhancing their elasticity and reducing the risk of cardiovascular diseases. Additionally, the presence of theobromine, a vasodilator, further supports the cardiovascular system.

Additionally, cocoa contains a significant amount of antioxidants, including flavonoids and polyphenols. These antioxidants play a crucial role in neutralizing harmful free radicals in the body, which are implicated in oxidative stress and cellular damage. By reducing oxidative stress, cocoa's

antioxidants may help protect cells and tissues from premature aging and certain chronic diseases.

Another fascinating aspect of cocoa consumption is its potential mood-enhancing effects. Cocoa contains phenylethylamine, a neurotransmitter that is associated with positive emotions and feelings of pleasure. Phenylethylamine is often referred to as the "love chemical" because it is naturally produced by the brain when people experience happiness or excitement. While the amount of phenylethylamine in cocoa is relatively small, it is believed to contribute to the sense of well-being experienced after consuming chocolate.

Furthermore, emerging research suggests that cocoa consumption may have positive effects on cognitive function. The flavonoids in cocoa have been associated with improved blood flow to the brain, potentially enhancing cognitive performance and reducing the risk of neurodegenerative diseases, such as Alzheimer's and Parkinson's.

It is important to note that while cocoa's potential health benefits are promising, these effects are best observed when consuming pure cocoa or dark chocolate with high cocoa content and minimal added sugars

and fats. Indulging in excessive amounts of chocolate or sugary treats may negate some of these benefits and could lead to adverse health effects, such as weight gain and increased risk of dental problems.

Cocoa in industries

The most popular use of cocoa lies in the production of chocolate and other confectionery products. Cocoa beans undergo a series of processes, including fermentation, drying, roasting and grinding, to produce cocoa liquor, cocoa butter and cocoa powder. These components are then blended in various proportions to create different types of chocolate, such as milk, dark, and white chocolate.

In the culinary world, cocoa powder plays a crucial role in a variety of dishes. It is a key ingredient in baking, adding depth and richness to cakes, cookies, brownies, and other baked goods. Cocoa powder is used in savoury dishes as well, especially in mole sauces, where it contributes to the complex flavour profiles of these traditional Mexican dishes.

Beyond its culinary uses in chocolate and desserts, cocoa and its derivatives have diverse applications across various industries. Cocoa butter, extracted from cocoa beans, is a widely

used ingredient in skincare products, cosmetics and personal care items. Its emollient properties make it an excellent moisturizer that helps soften and hydrate the skin. Cocoa butter is often found in lip balms, body lotions, creams and soaps, providing nourishment and protection to the skin.

Similarly, cocoa extracts, such as cocoa polyphenols, are utilised in the pharmaceutical industry for their potential health benefits. These extracts have shown promise in supporting cardiovascular health, reducing inflammation and acting as antioxidants, making them valuable ingredients in certain medications and supplements.

Cocoa powder is not limited to its use in chocolate production; it is also widely employed in the creation of beverages. Hot cocoa drinks are a popular choice during cold weather, offering a comforting and rich flavour experience. Cocoa powder is also used to enhance the taste of coffee, providing variations like mochas and other cocoa-infused coffee drinks. Additionally, cocoa can be incorporated into smoothies and milkshakes for a chocolaty twist.

Cocoa extracts are also used in the production of nutraceuticals, which are dietary supplements that provide health benefits beyond basic nutrition. These supplements often contain concentrated forms of cocoa's bioactive compounds, such as flavonoids and polyphenols, to offer potential health-enhancing effects.

Conclusion

Cocoa, with its diverse applications and potential health benefits, remains a beloved and versatile bean with a rich history. From its ancient origins in Mesoamerica to its widespread consumption worldwide, cocoa continues to captivate hearts and palates alike. While its association with chocolate is well-known, cocoa's contributions to other industries, such as cosmetics, pharmaceuticals and nutraceuticals, further demonstrate its significance in modern life. As research on cocoa's phytochemicals and health benefits continues to evolve, it is essential to appreciate this remarkable bean and its many facets, ensuring its continued presence in our lives and cultures for generations to come.

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