



Elderberry Overview

The Versatile Elderberry: Research, Production, and Utilization

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Elderberry, this legendary and valuable species, once called the “medicine chest of the country people” has been known, valued, and used for centuries...Based on its botanical traits, until recently the genus *Sambucus* was ranked to the Honeysuckle family (Caprifoliaceae) and it is only on the basis of new genetic evidence that it has been reclassified to the family Adoxaceae. Similarly, the taxonomic rank of American elder (*S. canadensis*) has been recently revised and ranked as subspecies (*S. nigra* L. Ssp. *Canadensis* (L.) R. Bolli) to *S. nigra* L. (European elder). The genus numbers some 5 to 30 or more species, all utilized to a different degree...

Ethnobotanically, nearly all organs of the plant have been known to cure certain health conditions. Current traditional uses of elderberry fruit and flowers include flu, colds, fevers, constipation, and sinus infections. As unripe berries are toxic and cause nausea, vomiting, or diarrhea, only the ripe blue/black berries are edible. In traditional medicine, the leaves, inflorescences, and even the bark of green shoots (*Sambuci cortex*) have been used (e.g. to cure rheumatism, or as a diaphoretic).

The known uses of elderberry are rather versatile: they include cordials, wines, and teas produced from both fruits and flowers. Other uses in food products include elderberry jam, elderflower fritters, and other baked goods. Due to their favorable ingredients the fruits have become important constituents in the so-called reform-food for diabetics. The berries are also traditionally a rich source of natural colorants (dyes) used to improve both food and red wine. Recently, elderberry’s antioxidants, its ability to fight heart disease, cancer, and aging, complemented by its reported antibacterial properties, have all increased the species’ popularity among the public...

The demand for elder flowers and fruits is apparently huge. Natural supplies are still abundant due to the weedy character of elder. Safety, efficacy, and quality requirements are becoming increasingly important not only for medicinal products, but also for other forms of utilization. The traceability of collection and production processes is expected to play an increasingly important role with this crop. Best Collection, Production, and Manufacturing Practices (GCP, GMP) are used as tools to certify quality. Quality requirements for medicinal uses are becoming increasingly strict...Current scientific evidence is still not strong enough to support several forms of the reputed uses of elderberry, among them to relieve flu...

The final comments in this presentation relate to the scientific research community's definition of "proof". Different cultures and nations approach this issue in varying ways. Since elderberry has been used in traditional healing therapies, Europeans tend to support the continuation of elderberry's traditional healing uses even as they research the specifics of why and how elderberry flowers and fruits are so effective. Furthermore, scientists disagree over what scale of sample is required to prove a healing therapy. Several studies do demonstrate reduction of flu symptoms and length of disease, but most researchers want more studies. Partly, this comes about as a result of success: the more we learn, the more we want to learn.