



Unit 2 Topic 5

Chicory and its chemistry

Common chicory (*Cichorium intybus*) is a somewhat woody, perennial herbaceous plant of the family Asteraceae, usually with bright blue flowers, rarely white or pink. Native to the Old World, it has been introduced to the Americas and Australia.

Many varieties are cultivated for salad leaves, chicons (blanched buds), or roots (var. *sativum*), which are baked, ground, and used as a coffee substitute and food additive. In the 21st century, inulin, an extract from chicory root, has been used in food manufacturing as a sweetener and source of dietary fiber. Chicory is also grown as a forage crop for livestock.

Description

When flowering, chicory has a tough, grooved, and more or less hairy stem. It can grow to 1.5 metres (5 feet) tall.^[7] The leaves are stalked, lanceolate and unlobed; they range from 7.5–32 centimetres (3–12+¹/₂ inches) in length (smallest near the top) and 2–8 cm (³/₄–3+¹/₄ in) wide.^[7] The flower heads are 3–5 cm (1+¹/₄–2 in) wide, and usually light blue or lavender; it has also rarely been described as white or pink. Of the two rows of involucre bracts, the inner is longer and erect, the outer is shorter and spreading. It flowers from March until October.^[8] The seed has small scales at the tip

Chemistry

Substances which contribute to the plant's bitterness are primarily the two sesquiterpene lactones, lactucin and lactucopicrin. Other components are aesculetin, aesculin, cichoriin, umbelliferone, scopoletin, 6,7-dihydrocoumarin, and further sesquiterpene lactones and their glycosides. Around 1970, it was discovered that the root contains up to 20% inulin, a polysaccharide similar to starch.