

Licorice (*Glycyrrhiza glabra*)

Description: Licorice is one of the most commonly used forms of herbal medicine. The roots of licorice are used medicinally.

Properties: Licorice is used to manage stress levels, and to treat a multitude of ailments.

Uses: Use licorice to treat asthma, Meniere's disease, vitiligo, lupus, Bell's Palsy, Lyme disease, cancer, Celiac disease, Crohn's disease, gastritis, peptic ulcer, cancer sores, diaper rash, psoriasis, eczema, chronic fatigue syndrome (CFS), diabetes, hepatitis, influenza, herpes, measles and HIV/AIDS.

Doses: According to the author of *Prescriptions for Herbal Healing* (2002), "There are two types of licorice commonly available: standardized licorice and deglycyrrhizinated licorice (DGL). Each type is best used for certain conditions. For respiratory infections, chronic fatigue syndrome, or topical use for herpes virus infections, standard licorice containing glycyrrizin should be used... DGL is used for potential safety problems and is used for conditions of the digestive tract, such as ulcers."

Warnings: Do not consume licorice in mass amounts. Some side effects of licorice overdose are vision problems and high blood pressure. Do not take licorice if you have fibrocystic breasts, uterine cancer, breast cancer or erectile dysfunction disorder.

Licorice Root, Powder and Sticks Profile

Also known as

Glycyrrhiza glabra (and several other species, some dangerous) True Licorice, and Sweet Licorice.

Introduction

Licorice root is one of the most widely used medicinal herbs worldwide and is the single most used herb in Chinese medicine today. It was used by the Egyptians as a flavoring for a drink called Mai-sus, and large quantities were found in the tomb of King Tut for his trip into the afterlife. Pliny the Elder recommended it to clear the voice and alleviate thirst and hunger. Dioscides, when traveling with Alexander the Great, recommended that his troops carry and use licorice to help with stamina for long marches, as well as for thirst in areas of drought. In the Middle Ages it was taken to alleviate the negative effects of highly spicy food or overcooked food. It was also used for flavoring tobacco, and as a foaming agent in fire extinguishers and beer. In a recent survey of Western medical herbalists, licorice ranked as the 10th most important herb used in clinical practice. An astonishing number Chinese herbal formulas (over 5,000) use licorice to sweeten teas and to "harmonize" contrasting herbs. Its first documented use dates back the time of the great Chinese herbal master Zhang Zhong Zhing, about 190 AD, but it was certainly used for many centuries prior to this. In 1914 the Chicago Licorice Company began to sell Black Vines, the first in a very long line of licorice based modern candies.

Constituents

Glycyrrhizin, complex immune-stimulant sugars.

Parts Used

The root in dried form

Typical Preparations

Teas, tinctures, and in encapsulations. The whole sticks and slices may be chewed straight and are pleasant tasting.

Summary

The most common use of licorice world-wide is to treat coughs and colds. Licorice is especially useful for treating coughs with sticky phlegm, or for treating colds that accompany stomach upset. There is a German E Commission Monograph for licorice that lists its use as helpful for catarrh of the upper respiratory, and for gastric ulcers. Chinese medicine also uses licorice to treat various forms of chronic fatigue. Gastric and duodenal ulcers and canker sores can be treated with the herb or with its common derivative, deglycyrrhizinated licorice (DGL). If you use DGL, however, you must remember to chew the capsules or they will not work. Saliva activates DGL. For many centuries, Europeans, especially the English, have consumed large amounts of licorice water (tea) as they feel that it helps to purify the blood.

Precautions

Don't use licorice if you have high blood pressure, and don't use licorice if you eat a meat and potatoes diet. Your body needs potassium from fruit and vegetables to compensate for the excretion of potassium stimulated by licorice. If you use steroids or an asthma inhaler, licorice will increase both the effectiveness of the drug and the severity of its side effects. Its long term use is not recommended, and it is not recommended for use by pregnant women. May cause stomach upset if taken in large quantities.

Botanical: Glycyrrhiza glabra (LINN.) and Other Species

Family: N.O. Leguminosae

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---**Synonyms**---Liquiritia officinalis. Lycorys (thirteenth century).

(*Welsh*) Lacris.

(*French*) Reglisse.

(*German*) Lacrisse.

(*Italian*) Regolizia.

---**Part Used**---Root.

---**Habitat**---The Liquorice plants are shrubs, natives of South-east Europe and South-west Asia, as far as Persia, the *G. glabra* ranging more especially to the westward, the *G. glandulifera* more to the eastward and being the source of the Eastern Liquorice root of commerce.

The Liquorice of medicine and commerce is derived from the sweet root of various species of *Glycyrrhiza*, a genus which contains about fourteen species, natives of warmer temperate countries in both the New and Old Worlds, ten of them having roots more or less sweet, but most of them not sufficiently so to be of use.

Hundreds of tons of Liquorice for commercial and medicinal purposes are imported annually from Spain, Russia, Germany, France and the East, most of our supply coming from Spain and Italy.

There are several well-marked species: *G. glabra*, *glandulifera*, *echinata*, etc. The chief source of the drug is *G. glabra*, which is cultivated in England, but is imported chiefly from Spain and Italy. There are several other varieties in commerce - Russian and Persian Liquorice - but these are not recognized by the British Pharmacopoeia as suitable for medicinal purposes.

The use of the Liquorice plant was first learnt by the Greeks from the Scythians. Theophrastus (third century B.C.), in commenting on the taste of different roots (*Hist. Plant. lib. IX. c. 13*), instances the sweet Scythian root which grows in the neighbourhood of the Lake Maeotis (Sea of Azov), and is good for asthma, dry cough and all pectoral diseases.

Dioscorides, who names the plant Glyrrhiza (Greek *glukos*, sweet, and *riza*, a root), from his description of the plant possibly had in view *G. echinata*, as well as *G. glabra*.

The plant is often found under the name *Liquiritia officinalis*. The Latin name *Liquiritia*, whence is derived the English name Liquorice (*Lycorys* in the thirteenth century), is a corruption of *Glycyrrhiza*, as shown in the transitional form *Gliquiricia*. The Italian *Regolizia*, the German *Lacrisse* or *Lakriz*, the Welsh *Lacris* and the French *Reglisse* have the same origin.

The Roman writers, Celsus and Scribonius Largus, mention Liquorice as *Radix dulcis*. Pliny who describes it as a native of Cilicia, and Pontus makes no allusion to its growing in Italy.

Liquorice Extract was known in the times of Dioscorides and appears to have been in common use in Germany during the Middle Ages. In 1264, Liquorice (apparently the extract, not the root) is charged in the Wardrobe Accounts of Henry IV. Saladinus, who wrote about the middle of the fifteenth century, names it among the wares kept by the Italian apothecaries and it is enumerated in a list of drugs of the City of Frankfurt, written about the year 1450.

A writer in the first half of the sixteenth century notices the Liquorice plant as abundant in many parts of Italy, and describes the manner of making the Succus or Extract by crushing and boiling the fresh root.

The plant is described as being cultivated in Italy by Piero de Cresenzi of Bologna, who lived in the thirteenth century. As a medicine, the drug was well known in Germany in the eleventh century, and an extensive cultivation of the plant was carried on in Bavaria in the sixteenth century, but it is not mentioned in mediaeval lists of plants.

Cultivation on a small scale has existed in England for a very long time. It appears from Turner's *Herbal* that it was cultivated in England in 1562, and Stow says 'the planting and growing of licorish began about the first year of Queen Elizabeth (1558).' Gerard, in 1597, tells us that he has plenty in his

garden. It was known to and described by Culpepper who says: 'It is planted in fields and gardens, in divers places of this land and thereof good profit is made.'

John Parkinson grew Liquorice in his Holborn garden and John Josselyn gives the recipe for a beer which he used to brew for the Indians when they had bad colds. It was strongly flavoured with elecampane, liquorice, aniseed, sassafras and fennel.

Culpepper says:

'The English liquorice root shoots up several woody stalks, whereon are set, at several distances, many narrow, long green leaves, set together on both sides of the stalks and an odd one at the end, nearly resembling a young ash tree sprung up from the seed. . . . This, by many years of continuance in a place without removal, and not else, will bring forth numerous flowers, standing together spike fashion, one above another upon the stalks in the form of pea-blossoms, but of a very pale blue colour, which turn into long, somewhat flat and smooth pods, wherein is contained small, round, hard seed. The root runneth down exceeding far into the ground, with divers smaller roots . . . they shoot out suckers in every direction, by which means the product is greatly increased.'

Liquorice is official in all pharmacopoeias, which differ as to the variety or varieties recognized, as to the botanical name employed and as to the drug being peeled or unpeeled, dried Liquorice root being supplied in commerce either with or without the thin brown coat. In the latter state it is known as peeled or decorticated. The British Pharmacopoeia requires that it be peeled, but others require that it be unpeeled.

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---Description---The plants are graceful, with light, spreading, pinnate foliage, presenting an almost feathery appearance from a distance. The leaflets (like those of the False Acacia) hang down during the night on each side of the midrib, though they do not meet beneath it. From the axils of the leaves spring racemes or spikes of papilionaceous small pale-blue, violet, yellowish-white or purplish flowers, followed by small pods somewhat resembling a partly-grown peapod in form. In the type species *glabra*, the pods are smooth, hence the specific name; in others they are hairy or spiny.

The underground system, as in so many Leguminosae, is double, the one part consisting of a vertical or tap root, often with several branches penetrating to a depth of 3 or 4 feet, the other of horizontal rhizomes, or stolons, thrown off from the root below the surface of the ground, which attain a length of many feet. These runners are furnished with leafbuds and throw up stems in their second year. The perennial downward-running roots as well as the long horizontal stolons are equally preserved for use.

Various indications point to the habit of this plant of fixing atmospheric nitrogen, as do many others of the family.

In the species *glandulifera* (W. and K.) the pods are covered with thick, glandular spines, and the whole plant is pubescent or roughly glandular. The underground portion is not so spreading and produces a carrot-shaped root larger than the Spanish root derived from *G. glabra*. This species is indigenous to South-east Europe, Syria and Western Asia, and is both wild and cultivated in Russia. Both the Russian and Persian Liquorice of commerce is derived from *G. glandulifera*, the Russian reaching this country is peeled or unpeeled: its taste although sweet, is accompanied by a more or less perceptible bitterness. It consists chiefly of roots, not runners.

Persian Liquorice root, collected in the valley of the Tigris and Euphrates, from *G. glandulifera*, and

exported in bales from Bussorah, is usually unpeeled, and is in rather large, coarse pieces, closely resembling the Russian root. Both the Russian and Persian varieties are largely consumed in the United States the root of *G. glandulifera* is equally official in the United States Pharmacopoeia with that of *G. glabra*.

G. echinata, a native of Hungary, south Russia and Asia Minor, is the official German species. It has short globular heads of flowers and a small, ovoid pod with long spines. Probably a portion of the root from Italy and Sicily is the product of *G. echinata*, which grows wild in Apulia. The root is also somewhat bitter and there are contradictory statements concerning its quality, due perhaps to its having been confused with *G. glandulifera*.

Asiatic Liquorice is obtained from *G. uralensis* (Fisch.), found in Turkestan, Mongolia and Siberia, and little inferior to the best Russian Liquorice.

G. lepidota (Pursh), American Liquorice, is a species of the north-western United States. The rhizome is said to resemble that of Spanish Liquorice, but is smaller.

It is only grown now to a very limited extent in this country, being cultivated on a small scale near Pontefract in Yorkshire, though formerly it was extensively grown at Mitcham in Surrey, also at Godalming, and at Worksop (Notts).

The English Extract of Liquorice, made from the fresh home-grown root, sold in the lozenge form and known as Pontefract or Pomfrey cakes, is said to have a more delicate flavour than that imported, and it is considered that the cultivation of English Liquorice might well be extended, Essex and Surrey being suitable districts for its growth.

In southern Italy, large quantities of Liquorice root are grown, but it is chiefly converted into Extract, though some of the root is exported.

Spain and the south of France furnish quantities of carefully dried Liquorice root. Up to the year 1890, the cultivation of Spanish Liquorice was small or moderate in comparison with the wild collection. Owing, however, to the depletion of the natural supplies of root of good quality, this cultivation has grown rapidly in South and South-central Europe, where the climate is favourable.

Liquorice grows best on sandy soil near streams, usually not being found in the wild condition more than 50 yards from water.

It will not flourish on clay and prefers the rich, fine soil of bottom lands in river valleys, where there is an abundance of moisture during the growing period, but where the ground bakes hard during the hot, late summer months, when the dry heat is very favourable for the formation of the sweet constituents.

The plant succeeds most in a warm climate; not only can it not endure severe freezing, but cool weather interferes with the formation of its useful juice and renders it woody. It has been found that a climate particularly favourable to the production of the orange is favourable to that of Liquorice.

Owing to the depth to which the root penetrates and its ready propagation from detached pieces, the plant is a most persistent weed in cultivated grounds where it is indigenous and exceedingly difficult of extirpation. It is very healthy and robust and very little subject to disease, at the same time successfully occupying the ground to the exclusion of other plants. For this reason, the continuation of the natural supply may be considered as assured, though it is liable to suffer severe reduction from over-collection.

The supply of natural root has suffered severe fluctuations owing to the exhaustion of supplies in the districts previously worked, alternating with over-production from newly opened districts. This fact, coupled with the operations of speculators, has resulted in equally great fluctuations in quality, the new

districts yielding full-grown root of good quality, the older ones that which has not been allowed to develop properly.

The cultivation of Liquorice is easy, sure and profitable and, if properly conducted, conducive to the betterment of the soil.

On account of the depth to which the root strikes when the plant has room to flourish, the soil should have a good staple of mould 2 or 3 feet in depth and be manured if necessary.

The planting season is either October, or February and March; the latter is preferred. The plants are procured from old plantations, being waste from the harvesting process, consisting of those side roots or runners which have eyes or buds, cut into sections about 6 inches long. They are dibbled in, in rows 3 or 4 feet apart, about 4 inches underneath the surface and about 18 inches apart in the rows. In the autumn, the ground is dressed with farmyard manure, about 40 tons to the acre.

During the first two years the growth is slight, the plants not rising above a foot the first season, and in Calabria the intervening space is generally utilized for the production of potatoes, cabbages and similar crops. The soil being heavily fertilized for the production of Liquorice, these crops are usually very luxuriant. After the second year, the growing Liquorice plants cover the entire soil to the exclusion of other growth.

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---Harvesting and Preparation for Market---

Not until the end of the third season will the roots be ready to take up for use, but harvesting generally occurs only in the autumn of the fourth year. The soil is carefully removed from the space between the rows to a depth of 2 or 3 feet as required, thus exposing the roots and rhizomes at the side, the whole being then removed bodily. The earth from the next space is then removed and thrown into the trench thus formed and these operations are repeated continuously.

Every portion of the subterranean part of the plant is carefully saved, the drug consisting of both runners and roots, the former constituting the major part. The roots proper are washed, trimmed and sorted, and either sold in their entire state or cut into shorter lengths and dried, in the latter case the cortical layer being sometimes removed by scraping. The older or 'hard' runners are sorted out and sold separately; the young, called 'soft,' are reserved for propagation.

The average yield per acre is from 4 to 5 tons. The same ground yields a crop every three or four years, the fourth-year growth being the best. That of the third year and earlier is deficient in sweet substances, but immediately after the fourth year the texture begins to take on a tough, coarse and woody character. It is desirable also to collect the roots of those plants which have never borne fruit since that process exhausts the sweet substance of the sap.

English-grown Liquorice is dug up in late autumn and sold mostly in the fresh state for making extract, only a small amount being dried.

Fresh Liquorice (English) when washed is externally of a bright yellowish brown. It is very flexible, easily cut with a knife, exhibiting a light-yellow, juicy internal substance, which consists of a thick bark surrounding a woody column. Both bark and wood are extremely tough, readily tearing into long, fibrous strings. The root has a peculiar earthy odour and a strong, characteristic, sweet taste.

Most of the dried Liquorice root imported into this country comes from Spain and Russia, supplies of the official drug being drawn chiefly from Spain, the better quality of which comes from Tortosa and Alicante. Both Spanish and Russian Liquorice are usually exported in large bales or bundles, or rarely,

in the case of the Spanish variety derived from Alicante, loose, or in bags. Spanish Licorice root is in long, straight, nearly cylindrical, unpeeled pieces, several feet in length, varying in thickness from 1/4 inch to about 1 inch, longitudinally wrinkled, externally greyish brown to dark brown, warty; internally tawny yellow; pliable, tough; texture coarsely fibrous; bark rather thick; wood porous, but dense, in narrow wedges; taste sweet, very slightly acrid. The underground stem which is often present has a similar appearance, but contains a thin pith. That from Alicante is frequently untrimmed and dirty in appearance, but that from Tortosa is usually clean and bright looking. When peeled, the pieces of root (including runners) are shorter, a pale yellow, slightly fibrous externally, and exhibit no trace of the small dark buds seen on the unpeeled runners here and there. Otherwise it resembles the unpeeled.

Nearly all the Russian Licorice reaching this country has been peeled. It attains a much larger size than the Spanish, and the taste, although sweet, is accompanied by a more or less perceptible but not strong bitterness or acidity. It consists chiefly of roots, not runners, in long often crooked pieces, about 2 inches in thickness, pale yellow externally and internally of a lighter yellow than the Spanish and softer. The size of all cells (when examined microscopically) is seen to be much larger than in the Spanish.

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---Extract---The manufacture of Licorice Juice, or *Extract*, is conducted on a liberal scale in Spain, southern France, Sicily, Calabria, Austria, southern Russia, Greece and Asia Minor, but the Extract with which England is supplied is almost exclusively the produce of Calabria, Sicily and Spain; Calabrian Licorice is generally preferred. By far the larger part of the Italian and Sicilian crop is now manufactured there and exported in the form of Extract.

Spain formerly yielded most of the supply, hence the Extract is still termed 'Spanish Juice,' but that of the first grade has long since depleted to the point of scarcity.

The roots and runners of both wild and cultivated plants are taken up in late autumn and stacked through the winter in the cellars and yards of the factories. When required, they are crushed under millstones to a pulp, then transferred to boilers and boiled in water over a naked fire, the decoctions are run off and then evaporated in copper vessels over direct heat, till a suitable consistency is obtained, being constantly stirred to prevent burning. While warm, the mass is taken out and rolled into sticks, stamped and stacked on boards to dry. Vacuum pans and steam power have in some factories replaced the more simple methods.

The sticks vary in size, but are commonly about 1 inch in diameter and 6 or 7 inches in length and when imported are usually wrapped in bay leaves. At one end they are stamped with the maker's name or mark.

Stick Licorice is very commonly impure, either from carelessness in its preparation, or from the fraudulent addition of other substances, such as starch, sand, carbonaceous matter, etc. Small particles of copper are also sometimes found in it.

Several varieties of Stick Licorice are met with in English commerce, the most famous is the Solazzi Juice, manufactured at Corigliano, a small town of Calabria in the Gulf of Toranto.

The juice is also imported in a black form, having while warm and soft been allowed to run into the wooden cases of about 2 cwts. each, in which it is exported. This juice, known as *Licorice Paste*, is largely imported from Spain and Asia Minor, but on account of a certain bitterness is unsuited for its use as a sweetmeat or in medicine, and is principally employed in the preparation of tobacco for chewing and smoking.

Extract of Liquorice in rolls has a black colour, is somewhat glossy and has a sharp and shining fracture. Some small cavities are found in the interior. The product of the different manufacturers of Stick Liquorice differ from one another not only in size, but often in the odour and taste; while some specimens are almost purely sweet, others are persistently acrid, rendering them unsuitable for medicinal purposes, for which they must be almost devoid of acidity.

Hard Extract of Liquorice, as described, is essentially different in composition and properties to the Extract of Liquorice of the British Pharmacopoeia, which is entirely soluble in cold water, whereas the so-called Spanish Juice, when treated with cold water, leaves a large residue undissolved, retaining the shape of the stick. The amount soluble in cold water varies considerably and reaches in the best brands about 70 or 75 per cent. The United States and nearly all other Pharmacopoeias recognize the commercial Extract of the root of *G. glabra*, but the British Pharmacopoeia does not, and gives a process for making an extract which somewhat resembles the purified Extract of Liquorice of the United States Pharmacopoeia. For the Liquid Extract of Liquorice, the British Pharmacopoeia directs the exhaustion of the Liquorice root with two successive portions of cold water, using each time 50 fluid ounces for 20 OZ. of the drug and allowing the mixture to macerate for 24 hours before expressing. The mixed infusions are heated to boiling point, strained through flannel and evaporated until the liquid has acquired, when cold, a specific gravity of 1.2, one-fourth of its volume of alcohol is added, and the mixture is set aside for 12 hours, after which it is filtered. It has a yellowish-brown colour and a pure sweet taste, free from all acidity.

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---Constituents---The chief constituent of Liquorice root, to which its sweet taste is due, is Glycyrrhizin (6 to 8 per cent), obtainable in the form of a sweet, white crystalline powder, consisting of the calcium and potassium salts of glycyrrhizic acid. The drug also contains sugar, starch (29 per cent), gum, protein, fat (0.8 per cent), resin, asparagin (2 to 4 per cent), a trace of tannin in the outer bark of the root, yellow colouring matter, and 0.03 of volatile oil.

The amount of Glycyrrhizin present in Extract of Liquorice varies from 5 to 24 per cent, and the amount of moisture from 8 to 17 per cent. Upon ignition, the extract yields from 5 to 9 per cent of ash.

The roots of *G. glandulifera* and *echinata* also contain in addition, Glycyrrhizin, a bitter principle occurring mostly in the bark.

Glycyrrhizin, or a similar substance, has been obtained from other plants, viz. from the rhizome of *Polypodium vulgare*, the leaves of *Myrrhis odorata*, and the bark of *Lucuma glycyphloea*.

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---Medicinal Action and Uses---The action of Liquorice is demulcent, moderately pectoral and emollient.

It is a popular and well-known remedy for coughs, consumption and chest complaints generally, notably bronchitis, and is an ingredient in almost all popular cough medicines on account of its valuable soothing properties.

The Extract enters into the composition of cough lozenges and pastilles, with sedatives and expectorants. It is largely used in conjunction with infusion of linseed in the treatment of irritable cough, sore throat and laryngitis, and an infusion made by boiling 1 OZ. of the bruised root deprived of its bark, with 1 pint of water for a few minutes, may be employed in the treatment of sore throat and in catarrhal conditions of the urinary intestinal tracts.

Beach mentions the following recipe as being used by the late Dr. Malone, of London, and speaks most highly of its efficacy:

'Take a large teaspoonful of Linseed, 1 ounce of Liquorice root, and 1/4 lb. of best raisins. Put them into 2 quarts of soft water and simmer down to 1 quart. Then add to it 1/4 lb. of brown sugar candy and a tablespoonful of white wine vinegar or lemon juice. Drink 1/2 pint when going to bed and take a little whenever the cough is troublesome.'

(N.B. - It is best to add the vinegar to that quantity which is required for immediate use.)

Fluid Extract of Liquorice is employed almost exclusively as a vehicle for disguising the taste of nauseous medicines, having a remarkable power of converting the flavour of acrid or bitter drugs, such as Mezereon, Quinine or Cascara.

The powdered root is useful in pill-making on account of its absorbent qualities, being used to impart stiffness to pill masses and to prevent the adhesion of pills.

As a remedial agent, powdered Liquorice root has been almost entirely replaced by the extract, though it is used in the well-known Compound Liquorice Powder, the mild laxative in which Senna and Fennel are the other ingredients. It is added mainly on account of its sweetness and emollient qualities, the action of the powder being mainly due to the Senna contained.

Liquorice was prescribed by early physicians from the time of Hippocrates, in cases of dropsy, to prevent thirst, for which it is an excellent thing, though probably the only sweet substance that has this effect. It is thought, however, that the property does not actually belong to the saccharine juice, but that if a piece of the root be chewed till all the juice is extracted, there remains a bitter, which acts on the salivary glands, and this may contribute to remove thirst.

The sugar of Liquorice may safely be taken by diabetic patients.

On the whole, Liquorice as a domestic medicine is far more largely used on the Continent than in Great Britain. It is much used in China and largely produced (both *L. glabra* and *L. echinata*) in some of the northern provinces, a variety of medicinal preparations being employed, not only as possessing tonic, alterative and expectorant properties, but also for the rejuvenating and highly nutritive qualities attributed to it.

It was recommended by Gervase Markham, a noted authority on husbandry and farriery in the early part of the seventeenth century, for the treatment of certain horses' ailments.

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---Preparations and Dosages--- Powdered root, 1/2 to 1 drachm. Fluid extract, 1 to 4 drachms. Comp. powder, B.P., 1 to 2 drachms. Solid extract, 1 drachm. Comp. lozenges, U.S.P. Solid extract in stick form, known as Liquorice Juice.

Liquorice is also largely used by brewers, being added to porter and stout to give thickness and blackness.

Block Liquorice is employed in the manufacture of tobacco for smoking and chewing.

According to the United States press, a new use for Liquorice Root has lately been discovered, the waste root being now utilized for the manufacture of boards for making boxes. After extraction of the Liquorice, the crushed root was formerly considered a waste product and destroyed by burning, but under a recently discovered process this refuse can now be made into a chemical wood pulp and pressed into a board that is said to have satisfactory resisting qualities and strength.

