

157. *GLYCYRRHIZA GLABRA* L. (FABACEAE) — Common Licorice, Licorice Root, Spanish Licorice Root



Licorice, grown primarily for its dried rhizome and roots, is a condiment and used to flavor candies and tobaccos. Roots contain glycyrrhizin, 50 times sweeter than sugar. Glycyrrhizin potentiates the flavor of cocoa, replacing 25% cocoa in manufactured products.<sup>17</sup> In India, it is chewed with betel. Spent licorice serves in fire-extinguishing agents, to insulate fiberboards, and as a compost for growing mushrooms; also, in feed for cattle, horses, and chickens. Most licorice production is used by the tobacco industry and for the preparation of licorice paste, licorice extract, powdered root, and mafeo syrup.<sup>40</sup> Most "licorice" candy contains little or no licorice, but is flavored with anise oil.<sup>37</sup> According to Rose,<sup>47</sup> quantities of licorice were stored in King Tut's tomb. Singers chew the root to strengthen the throat.

It is considered demulcent, expectorant, estrogenic, and laxative. Used in treating Addison's disease, as a tonic and blood purifier, for internal inflammations, topical dressings, thirst, colds, and sore throats. Also, said to be used for alexeritic, alterative, appendicitis, asthma, bladder ailments, bronchitis, cough, deodorant (lf), depurative, diabetes, diuretic, dropsy, emollient, eyes, febrifuge, pectoral, refrigerant, scalds (lf), stomach ulcer, sudorific, and tuberculosis. With a long history of use for indigestion and inflamed stomach, licorice provides two derivatives which reduce or cure ulcers.<sup>40</sup>

*Glycyrrhiza* contains saponin and tannic acids; the seeds contain typsin inhibitors and chymotrypsin inhibitors. *G. glabra* contains 2-beta-glucuronosyl glucuronic acid, glycyrrhizin, and isoliquiritigenin-4-glucoside. One analysis showed 20% moisture, 12 to 16% glycyrrhizin, 8% reducing sugars, 8% nonreducing sugars, 30% starch and gums, 5% ash, and 12 to 17% undetermined. Rose<sup>47</sup> reports that licorice contains estrogenic materials. Glycyrrhizine is used in Egypt as a cortisone substitute, without the withdrawal syndrome of cortisone. Dry seeds contain 21 to 30% protein, 1 to 11% fat.<sup>21</sup> Excessive licorice ingestion can lead to cardiac dysfunction and severe hypertension.<sup>11</sup> According to Mitscher et al.,<sup>168</sup>