

Ricans for diabetes, Cubans for colitis, fever, and hepatitis, Hondurans as depurative, Peruvians for colic and worms, Venezuelans as a tonic for colds and fever, Jamaicans for colds, constipation, dysmenorrhea, fever, and stomachache, Bahamians for cold, flu, and fever. Yucatan natives regard the root as aphrodisiac, Cubans as litholytic.<sup>42</sup> Congolese use the leaf for colic, the seed for roundworm. Japanese use the plant for constipation, headache, and skin ailments. On the Indian Peninsula, the plant is used for scabies, psoriasis, and other skin diseases. Natives of the Pearl Islands of Panama take the bitter juice as a malaria preventive, while some Colombians regard it as highly as quinine for malaria treatment.<sup>60</sup> Poulitced onto burns, scalds, skin diseases, leaf juice gargled for sprue,<sup>16</sup> cooling, strengthening aqueous extracts of the fruit show lipolytic and anticholesterolemic properties. Used for halitosis, considered a male aphrodisiac.<sup>41</sup> Recently, balsam pear has attained a favor in China as a monoherb medicine (dried fruit, powdered, and made into pills, 18 g/day) for diabetes mellitus, effective with mild and moderately chronic cases, reducing glucose in the blood and urine, and the frequency of urination. The herb does not promote the secretion of insulin, but increases carbohydrate utilization.<sup>41</sup> Clinical trials with 160 diabetics of fresh fruit juice controlled, but did not heal, diabetes.<sup>41</sup>

Per 100 g, the leaves are reported to contain 44 calories, 84.6 g H<sub>2</sub>O, 5.0 g protein, 0.6 g fat, 7.0 g total carbohydrate, 1.6 g fiber, 22 g ash, 288 mg Ca, 54 mg P, 5.0 mg Fe, 19 mg Na, 510 mg K, 5085 µg β-carotene equivalent, 0.13 mg thiamine, 0.46 mg riboflavin, 1.56 mg niacin, and 170 mg ascorbic acid.<sup>21</sup> Per 100 g, the fruit is reported to contain 19 calories, 94 g H<sub>2</sub>O, 0.8 g protein, 0.1 g fat, 4.5 g total carbohydrate, 1.6 g fiber, 22 g ash, 288 mg Ca, 54 mg P, 2.3 mg Fe, 2 mg Na, 270 mg K, 110 µg β-carotene equivalent, 0.06 mg thiamine, 0.07 mg riboflavin, 0.3 mg niacin, and 57 mg ascorbic acid.<sup>21</sup> Fruits contain the hypoglycemic principle charantin.<sup>42</sup> Unripe fruits contain luteolin as the bitter alkaloid momordicin.<sup>42</sup> Seeds yield about 32% oil (purgative),<sup>3</sup> which contains 17% stearic acid, and linoleic and oleic acids. Dried roots contain 12.8% ash, dried fruits 11.7%, the ashes quite naturally containing Ca, Fe, and P.

**Toxicity** — Juice given to an Indian child caused vomiting, diarrhea, and death.<sup>56</sup>

**To the physician** — Hardin and Arena suggest emesis or gastric lavage and symptomatic treatment.<sup>34</sup>