

and powdered nuts used as dentrifice in Europe. Husks used for beri-beri, dropsy, and sunstroke.¹⁶ Once used as an antidote to abrin poisoning. An essential oil from the leaves is antiseptic and has been shown to be effective in bronchitis, diphtheria, laryngitis, and throat inflammations.¹⁶ Mixed with sugar and coriander, the intoxicating nuts are given to induce labor in Iran.⁷⁵ Unripe fruits are cooling, laxative, and carminative.

Nuts contain the alkaloids, arecoline, arecaine, arecaidine, and arecolidine, isoguvacine, guvacine, and guvacoline; tannins (18%), (tannic- and gallic-acid), fats (14 to 18%; with glycerides of palmitic-, stearic-, myristic-, lauric-, oleic-, margaric-, nonadecanoid-, and heneicosanic-acids), choline, catechin, saccharose, mannan, galactan, other carbohydrates and proteins, and some Vitamin A.¹ Gum, mucilage, and resin are also reported. Per 100 g, the shoot is reported to contain 43 calories, 86.4 g H₂O, 3.3 g protein, 0.3 g fat, 9.0 g total carbohydrate, 1.0 g ash, 6 mg Ca, 89 mg P, and 2.0 mg Fe. Per 100 g, the mature seed is reported to contain 394 calories, 12.3 g H₂O, 6.0 g protein, 10.8 g fat, 69.4 g total carbohydrate, 15.9 g fiber, 1.5 g ash, 542 mg Ca, 63 mg P, 5.7 mg Fe, 76 mg Na, 446 mg K, 0.17 mg thiamine, 0.69 mg riboflavin, 0.6 mg niacin, and a trace of ascorbic acid.²¹

Toxicity — Classified by the FDA⁶² as an Herb of Undefined Safety. Listed as a narcotic stimulant.⁵⁴ Excessive use of betel nut causes black teeth, inappetence, salivation, and general degeneration of the body. Arecaine is poisonous and affects respiration, the heart, increases peristalsis of intestines, and causes tetanic convulsions. According to Hager's Handbook, large doses (8 to 10 g seed) can be fatal; due to cardiac or respiratory failure.³³ Atropine is suggested as an antidote. On the other hand, Liu is quoted as saying 30 g is practically nontoxic.¹⁶

To the physician — Hardin and Arena³⁴ suggest 2 mg atropine subcutaneously following gastric lavage or emesis.