

stalks several inches long are nearly globular, 2 to 3 inches in diameter and dark green, later brown, in color. Each fruit contains three to seven large, hard, rough-coated seeds with white flesh. (Fig. 2.)

Habitat and Distribution.—The tung-oil-tree, native of China, has been planted extensively in northern and western Florida as a source of oil. Stray seeds have produced trees along fencerows, on roadsides, and in other locations near tung orchards.

Toxicity.—The foliage, sap and fruit, as well as commercial tung meal, contain a toxic principle, a saponin, which characteristically induces gastro-enteritis in animals to which they are fed. Commercial tung meal does not contain as much saponin as the unprocessed fruit; however, it also contains a second toxic substance as yet unidentified.

Cases of tung poisoning have been reported in cattle, horses and chickens. One and three-quarters pounds of foliage will kill a 500-pound steer. Under the common practice of grazing cattle in tung orchards, cases of poisoning have never been reported. All known instances of poisonings from foliage have resulted from animals having access to discarded broken branches or prunings.

Symptoms.—Symptoms of tung poisoning in cattle are not observed until three to seven days after the foliage has been consumed. Acute poisoning results in death in three to four days, while chronic cases may linger for 18 to 21 days before death ensues. Hemorrhagic diarrhea which becomes watery and profuse is a prominent symptom. Lack of appetite, cessation of rumination, listlessness, depression and unthriftiness are common symptoms. Chronic cases may develop labored breathing, mucous discharge from the nose, salivation, cracking of the skin of the muzzle and progressive emaciation.

Cases of tung poisoning may occur in the human, particularly from eating the nuts. A severe gastro-enteritis develops with resultant mild to violent purging. Such cases should be treated symptomatically under the direction of a physician.

Prevention.—Animals should not be allowed access to discarded branches of the tung tree. Commercial tung meal, unless detoxified, cannot be used as a livestock food.

Treatment.—Attempts to treat acute forms of tung poisoning in cattle are useless. Chronic cases can be treated by the administration of emollients and drugs to relieve the inflammation