Crotalaria spectabilis Roth was introduced into the United States a number of years ago by the Bureau of Plant Industry, U. S. Dept. of Agriculture. It is a valuable leguminous cover crop for much of the southeastern states area. The question of its toxicity was not considered, because of its lack of promise as a forage crop, although the genus Crotalaria is known to contain species that are toxic, as well as others that are non-toxic.

Chickens brought to E. F. Thomas, formerly assistant veterinarian with the Florida Agricultural Experiment Station, for post-mortem examination in December, 1931, showed lesions that were not typical of any of the ordinary pathological conditions previously encountered. Seeds of C. spectabilis were found in the crop and gizzard. Controlled feeding experiments demonstrated conclusively that as few as 80 seeds would kill a hen. Other experiments showed that chickens confined in a yard where this plant was bearing ripe seeds would eat sufficient seeds to kill them.

In another investigation conducted jointly by the Division of Forage Crops and Plant Diseases, Bureau of Plant Industry, U. S. Dept. of Agriculture, and the Departments of Agronomy and Animal Husbandry of the Florida Agricultural Experiment Station, in which the relative palatabilities of several of the species of Crotalaria were being compared in the form of dry roughage, only three cattle (yearlings) out of 19 head, were observed to eat C. spectabilis hay in any quantity. These three animals died. It has been seen that small amounts may be taken without actually killing an animal. Three mature cows consumed a total of 12 pounds of the hay in one test without the appearance of any symptoms of poisoning. Two cows were observed to eat some leaves of C. spectabilis when the plants were in the early bloom stage without apparent injury.

The most important symptoms of the poisoning were complete loss of appetite, sluggishness, bloody feces, mucous nasal discharge (sometimes bloody), and rapid but weak heart action. The post-mortem lesions include petechial hemorrhages in the subcutaneous and mesenteric fat, lungs, trachea, gall bladder, urinary bladder, and pericardium. Endocarditis, myocarditis, and epicarditis were observed in all three animals. The liver showed fine red mottling. The spleen seemed to be enlarged. The mucous membrane of the abomasum was edematous. The submucosa of the small intestine showed ecchymoses and petechial hemorrhages. Blood and blood clots were present in the lumen of the large intestine.

Final proof of the toxicity of C. spectabilis hay to cattle was obtained in December, 1933. A 300-pound steer was drenched over a 4-day period with a total of 9.5 pounds of artificially dried hay that had been ground and suspended in water. Death occurred on the evening of the fourth day. The symptoms and lesions corresponded with those observed in the yearling cattle during the preceding winter.