

Preliminary Report on Toxicity of Avocado Leaves

Dear Dr. Coit:

Professor Hodgson asked me several months ago to report to you on the subject of toxicity of avocado leaves to animals. I have not written to you sooner because I hoped that I would be able to do more work on this subject. Unfortunately circumstances have been such that I have been unable to do any more than that Professor Hodgson reported to you in his letter of August 27, 1943.

What we have done is briefly as follows: We fed leaves of Fuerte, Nabal and Mexicola avocados, representatives of hybrid, Guatemalan and Mexican races, to adult male rabbits. The rabbits were starved for 24 hours prior to giving them the leaves. This was done to make sure that the animals would eat them. The leaves were properly washed to remove dust and spray residue. The leaves were fed to the rabbits at 5 P.M. and at 8 A.M. the next morning the rabbit fed with Fuerte leaves was found dead. (It had probably died several hours before.) The rabbit fed with Nabal leaves looked sick and died before noon. The animal fed on leaves of Mexicola continued to eat the leaves until he finished all that he had been given (about 150 g) and showed no ill effects.

As you see, this was only a preliminary trial. Only one animal on each variety. Still the indication was clear. Dr. Krichesky of the Zoology Department performed an autopsy on the dead rabbits and reported that their lungs were "congested."

I made one hot water extract of Fuerte leaves. This was concentrated and placed in gelatin capsules and forced down the throats of two rabbits. These produced no evident ill effects on the animals.

Qualitative tests for cyanogenetic glucosides were negative. However, on an acid extract of Fuerte leaves I did get a positive test for alkaloids.

This is all the information I have at present on this subject. I regret that I shall probably not be able to pursue this study any further at present.

Sincerely yours, D. Appleman,
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