

U.C. Sierra Foothill Research & Extension Center  
Annual Progress Report

Project Leader: Dan Brown

Station I.D. # 85

Project Title: Elimination of barriers to safe, sustainable control of poison oak by goats.

This report may x may not      be copied without the permission of the project leader.

Progress during this report period:

Two trials were conducted to determine if urushiol and/or its metabolites would be found in the milk, urine, and feces of dairy goats eating poison oak. In trial I, six lactating goats were offered poison oak foliage, in addition to their daily allotment for three days. The does were milked twice a day, and the milk sampled every other day and frozen until analysis for urushiol content. These sample were analyzed in Dr. Eloy Rodriguez's laboratory at University of California, Irvine. In trial II, four lactating goats were individually housed in elevated calf pens, at the University of California Sierra Foothill Range Field Station. They were offered poison oak foliage for ten days with no supplementation. Milk yield and foliage offered were recorded. urine and fecal samples were collected for two day at the end of the trial. All the samples were frozen until analysis in University of California Nutrition Labs by HPLC. Results from both trials indicated that there was no urushiol congener in the milk of goats fed poison oak. Results from trial II showed there were no urushiol or catechols in the urine, but urushiol congeners were excreted in the feces. In addition the amount of each congener in the fecal sample was lower than its amount in the leaf sample. Moreover, the percentage of total heptadecatrienylcatechol decreased in the feces while those of the other three congeners increased.

---

Efforts to disseminate information related to this project:

Publications:

Kouakou, B. 1991. Fate of urushiol (poison oak toxicant) when consumed by dairy goats. M. S. Thesis. University of California, Davis.

Major meetings, field days. workshops, etc.:

ref:progrpt.frm