

**Experiment Eight (2011)**

**Efficacy of pumpkin seed oil in reducing fecal egg counts in meat goat kids**

*Procedure:*

Four – five month old Boer crossbred meat goat kids were placed in individual pens (4 ft x 4 ft) on solid concrete floors into one of two treatment groups. All goats received a commercially pelleted 15% crude protein meat goat feed from Southern States. In this experiment, 13 kids were drenched with water (untreated) or 11 kids received pumpkin seed oil at a rate of 0.9 ml/lb of body weight (6 ounces pumpkin seed/75 lbs body weight) every other day. The pumpkin seed oil (Swanson Organic Pumpkin Seed Oil) was purchased at [www.amazon.com](http://www.amazon.com). Lamb body weights were measured weekly for 35 days. Fecal and blood samples were also collected at weighing to determine individual fecal egg counts and packed cell volume (PCV). The packed cell volume determines the anemia level in the animal as a possible indicator of barber pole worm infection. If an individual animals’ PCV was < 15%, animals were dewormed with moxidectin (0.2 mg/kg) and removed from the study. Pooled fecal samples were also collected on days animals were weighed to identify worms.

*Results:*

During the 35-day period, no kids were dewormed and removed from the study. Average body weight increased steadily over the study period for the un-treated group, however, in the group treated with the pumpkin seed oil, body weight decreased over the first seven days and then started to increase again (Figure 1). Figure 2 represents the average PCV of each group over the 28 day period and was numerically lower for the untreated compared to the pumpkin seed treated group. Average fecal egg counts kept decreasing in all groups over the study period regardless of treatment but was numerically lower in the pumpkin seed group compared to the untreated group (Figure 3). The most predominant species of parasite present in the pooled fecal samples collected from CON and PUM-treated animals at each sampling was the barber pole worm.

Figure 1. Average body weights of meat goat kids receiving pumpkin seed oil every other day (PUM) or left untreated (CON) over a 35 day period.

Figure 2. Average packed cell volume (PCV) of meat goat kids receiving pumpkin seed oil every other day (PUM) or left untreated (CON) over a 35 day period.

Figure 3. Average fecal egg counts of meat goat kids receiving pumpkin seed oil every other day (PUM) or left untreated (CON) over a 35 day period.

Cooperative Extension Education in Agriculture, 4-H and Home Economics, Delaware State University, University of Delaware and United States Department of Agriculture cooperating, Dr. Dyremple B. Marsh, Dean and Administrator. It is the policy of Delaware Cooperative Extension that no person shall be subjected to discrimination on the grounds of race, color, sex, disability, age, or national origin.