Field Assessment of Eprinomectin Efficacy   
and Resistance in Strongyle Nematodes of Dairy Goats   
in Chiang Mai Province, Thailand

Thanakorn Rompo1\*, Saruda Tiwananthagorn1, Tawatchai Singhla1, Boondarika Nambooppha1, Nariaki Nonaka2, Ryo Nakao2

\*lead presenter

1 thanakorn.rom@cmu.ac.th, Faculty of Veterinary Medicine, Chiang Mai university, Thailand

2 Faculty of Veterinary Medicine, Hokkaido University, Japan

**Background/Objective:**

Strongyle nematodes are recognized as one of the underlying issues affecting goat health.   
To minimize losses, it is necessary to ensure anthelmintic efficacy. Eprinomectin, an alternative anthelmintic for dairy goats, is registered with a zero-day withdrawal period. However, evidence of strongyle nematodes resistance to eprinomectin in northeastern Thailand has recently been published. Therefore, a fecal egg count reduction (FECR) test was conducted to assess the antiparasitic efficacy.

**Methods:**

The study was conducted on a dairy goat farm, in Chiang Mai, Thailand. The goats were randomly allocated into two groups. 0.2 mg/kg of eprinomectin were injected subcutaneously in the treatment group (n=30) , while the control group (n = 14) was left untreated. Rectal feces were collected on the day of administration (Day0) and 14 days after the administration (Day14). The strongyle nematode eggs were counted using the modified McMaster method, and FECR was calculated.

**Results:**

The fecal examination results showed average strongyle nematode egg counts (eggs per gram of feces; epg) for the treatment and control groups on Day0 as 2,052 (1,679) and 2,103 (1,573), respectively. On Day14, the counts were 2,110 (1,862) and 2,406 (1,162) respectively. The resistance of strongyle nematodes was shown as an FECR percentage of -7.7 with a 90% confidence interval (CI) of -49.4% to 29.2%.

**Conclusion:**

This study is the first to indicate a reduction in efficacy of eprinomectin against strongyle nematodes on the dairy goat farm in northern Thailand. Further molecular identification of strongyle species is needed to determine which are prevalent or resistance to eprinomectin.

**Keywords:**

Strongyle nematode, Eprinomectin, Anthelmintic Resistance, Dairy Goat