TECHNICAL RESEARCH REPORT

ECTOGON-284

# ECTOGON-284 IN CATTLE

To evaluate the effect on ectoparasites (ticks) when premix Ectogon-284 is included in an animals daily diet.

K-State University, Manhattan, KS, USA 2018

**TRIAL**

The objective of this trial is to establish if adding Ectogon-284 to a calf diet would have a positive impact in repelling ticks over that of an identical control diet.

Trial and Control groups were fed a standard diet which included a feed pellet. In the Trial group the feed pellet was pre-treated with Ectogon-284 to provide 4g/h/day of the product. This was administered over two feeds.

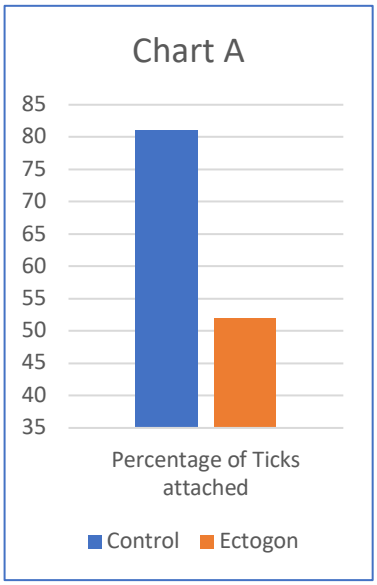
Efficacy was determined by a forced Tick Infestation Challenge. Ticks were placed inside a tick feeding patch which was created by gluing a stockinet to a short-clipped ring on the back of calves. Inside the stockinet enclosure a 25cm diameter ring of normal hair length was maintained and ticks were placed onto the hair during the infestation process. Patches were removed after 24 hours and ticks (attached and unattached) counted.

A pre-trial Challenge was carried out at Day 0 (zero) on all animals. No significance was determined between study groups. Ectogon-284 was then introduced to the Trial group and fed. Animals were not challenged during the Loading Phase (21 days).

Ectogon-284 Activity Phase began at Day 22. At Day 24, a second Challenge was completed.

**RESULTS**

- The Trial Group demonstrated a decrease of 43% in tick attachment (Chart A)
- All animals individually saw less attachments in the Trial Group over Control




**Conclusions**

**Overall there was a significant difference observed between study groups with a greater number of unattached (repelled) ticks observed on Ectogon-284 treated animals compared to control animals.**

**It is also estimated that repellence may well be increased in a field situation due to natural tick behaviour and the differential between treated and non-treated could be exacerbated. This is insofar that in the environment the tick is open to choose its hosts' suitability over being artificially placed on the animal.**



denis brinicombe group

TECHNICAL RESEARCH REPORT

# ECTOGON-284 IN CATTLE

To evaluate the effect on animal behaviour in response to fly irritation when premix Ectogon-284 is included in an animals daily diet.

K-State University, Manhattan, KS, USA 2018

**TRIAL**

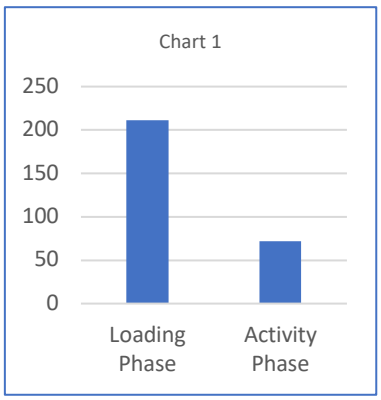
The objective of this trial is to establish if adding Ectogon-284 to a calf diet would have a calming influence on animal behaviour in response to an introduced fly burden over that of an identical control diet.

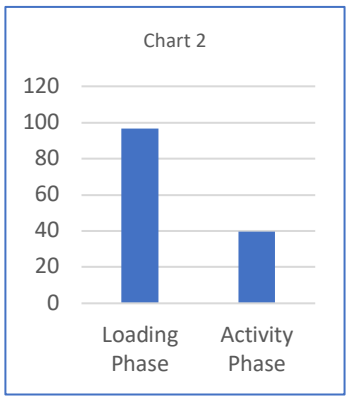
Trial and Control groups were fed a standard diet which included a feed pellet. In the Trial group the feed pellet was pre-treated with Ectogon-284 to provide 4g/h/day of the product. This was administered over two feeds.

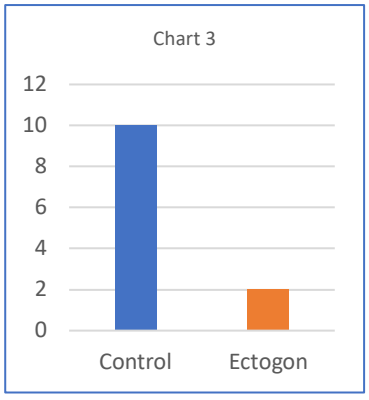
Efficacy was determined by monitoring recognised animal behavioural characteristics when faced with an introduced fly challenge. These characteristics were recorded as; A. Tail Swishing B. Head Turns and C. Leg Kicks. Study groups were monitored both during the Loading Phase (initial 21 days of feeding) and the Activity Phase (105 days; late June – early October) when Ectogon-284 was considered to have hypothesised to reach peak effectiveness.

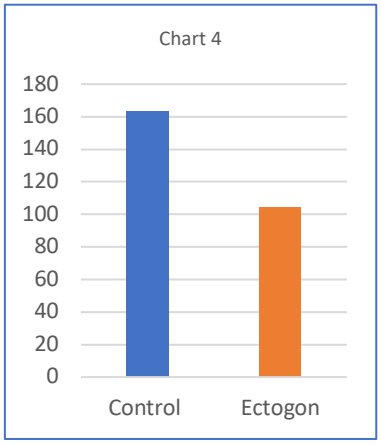
**RESULTS**

- Tail swishing reduced by 66% from Loading to Activity Phases in the Trial Group (Chart 1)
- Leg kicks were reduced by 59% from Loading to Activity Phases in the Trial Group (Chart 2)
- Head turns were 80% lower in the Trial Group during the Activity Phase (Chart 3)
- Tail swishing was 36% lower in the Trial Group during the Activity Phase (Chart 4)




**Conclusions**

**Overall there was a significant behavioural difference observed to concludes that animals fed Ectogon-284 are less impacted by fly nuisance.**

**By combing the results contained within these 4 identified areas, it is statistically demonstrated that distress and irritation caused by fly nuisance can be reduced by an average of 60% when fed a supplement containing Ectogon-284.**