



AGOLIN RUMINANT®



Effect of Agolin Ruminant on Methane, Propionate and Animal Performance

Objective

Evaluate live animal methane production, propionate levels and animal performance following inclusion of AGOLIN RUMINANT

Trial details

- Number of animals: 12 castrate store lambs
- Duration: 21 days adaptation, 3 days in metabolism chambers
20 days grow out.
- Diet: 1.1 kg/day (fresh weight) of dry diet based on chopped hay, barley, soyabean meal, molasses and vitamins/mineral mix (50:30:10:9.5:0.5)
- Supplementation: 100 mg/head/day AGOLIN RUMINANT to treatment group
- Trial Protocol: Individually housed, animals were weighed weekly. Treatments were randomised between metabolism chambers to avoid any bias. Methane production was measured over three consecutive days. Rumen fluid was collected from whole rumen contents immediately at slaughter at end of trial.



Source: Prof. Jamie Newbold, University of Wales, Aberystwyth, UK.

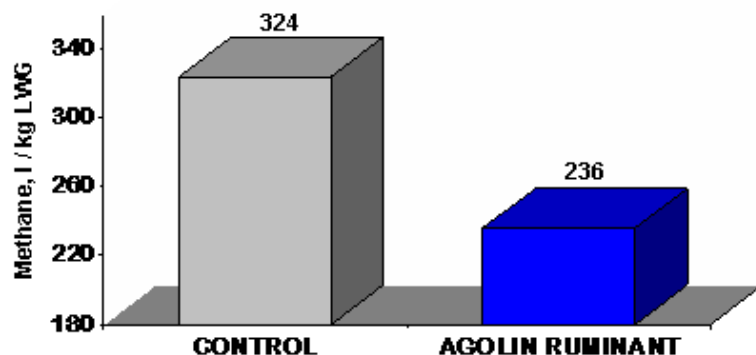
Effect of Agolin Ruminant on Methane, Propionate and Animal Performance

Results

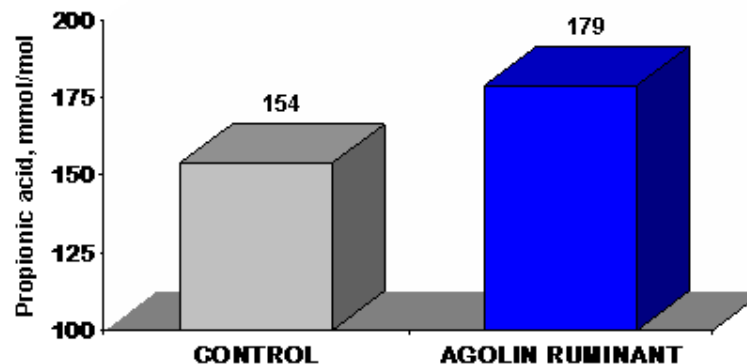
AGOLIN RUMINANT treated animals produced 27% less methane than control animals (236 litres vs 324 litres/kg lwt gain).

Total VFA concentration in the rumen showed no significant change. However, there was a strong trend toward increased molar proportion of propionate (+16.2%) in treated animals (179 vs 154 mmol/mol).

METHANE PRODUCTION



PROPIONIC ACID PRODUCTION

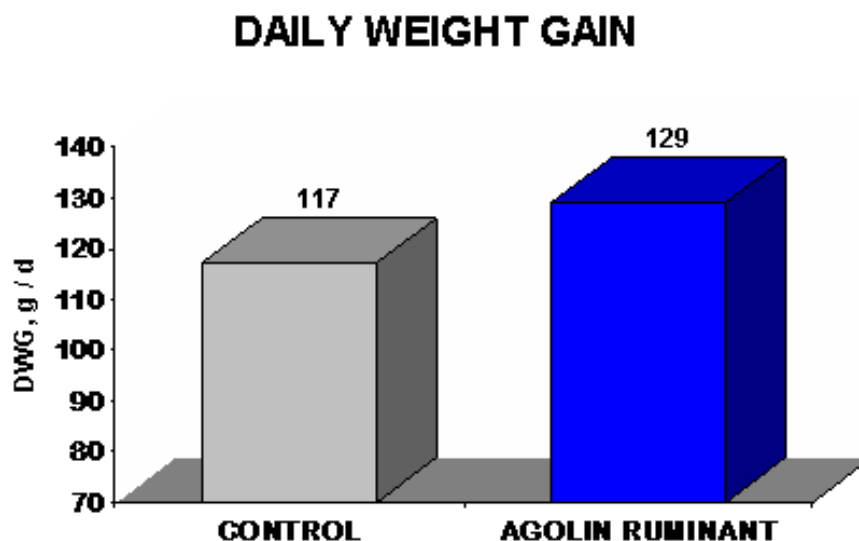


Source: Prof. Jamie Newbold, University of Wales, Aberystwyth, UK.

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Results

Daily weight gain in AGOLIN RUMINANT treated animals was 10% higher than in the control group (129 vs 117 g/day).



Source: Prof. Jamie Newbold, University of Wales, Aberystwyth, UK.

Effect of Agolin Ruminant on methane emission in dairy cows



Objective

Long term effect of Agolin Ruminant on
Methane emission in dairy cows

Trial details

Carried out by INRA, Clermont-Ferrand Theix
Animals in trial: 6 lactating, rumen-cannulated Holstein
Dairy cows
Duration: 6 weeks
Technique: SF6 tracer Gas technique to measure enteric
methane production

Ration:

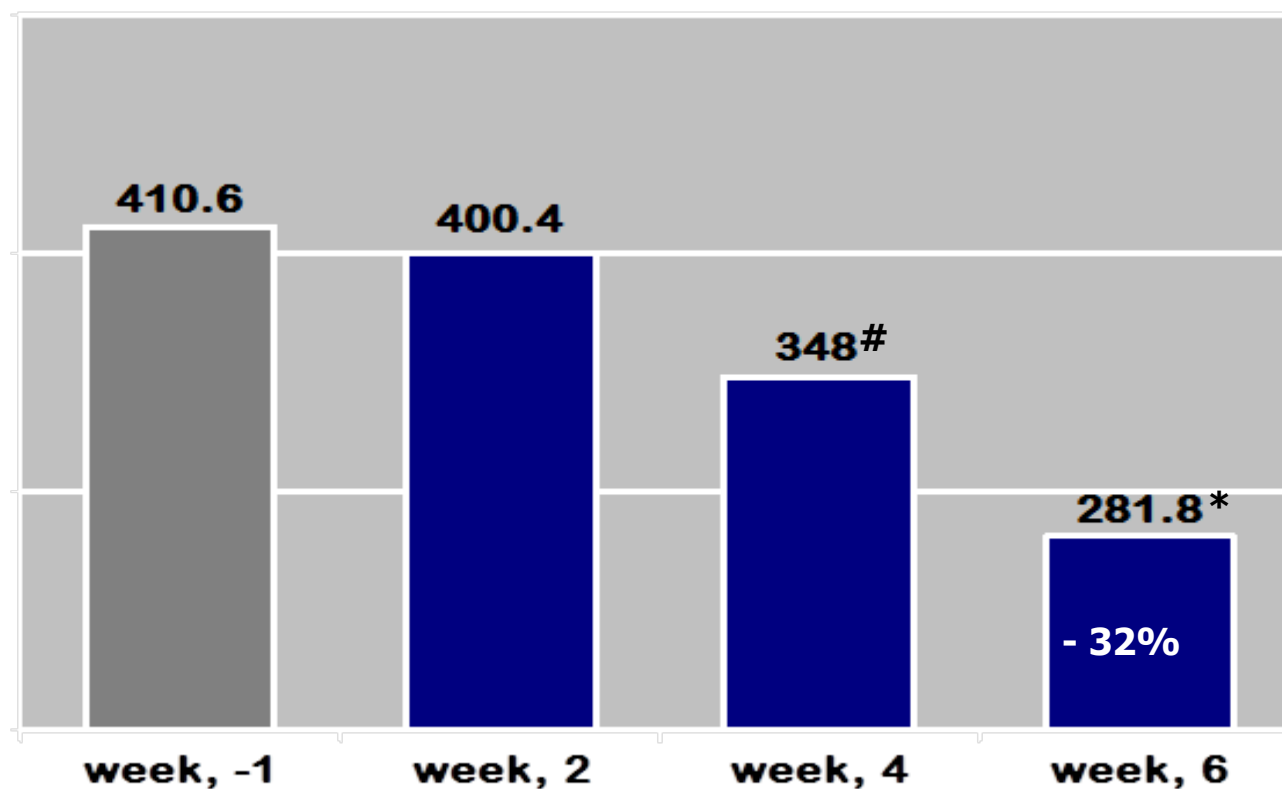
Standard dairy cow ration based on corn silage, hay and concentrate
Supplementation: 1g AGOLIN RUMINANT per animal and day

Trial protocol:

Feeding once a day in the morning
Methane emissions were measured one week before (-1) and at week 2, 4 and 6.



Effect of Agolin Ruminant on daily methane emission in dairy cows (CH₄, liters/day)



* = $p < 0.05$, # = $p < 0.08$

Source: INRA, France, 2011

Effect of Agolin Ruminant on methane emission in dairy cows



Objective

Mid term effect of Agolin Ruminant on
Methane emission in dairy cows

Trial details

Carried out by ILVO, Institute for Agriculture and Fisheries Research, Belgium

Animals in trial: 4 multiparous lactating, Holstein dairy cows

Duration: 8 weeks

Technique: individual metabolic open circuit chambers

Ration:

Standard dairy cow ration based on grass silage, corn silage, concentrate and soybean meal

Supplementation: 1g AGOLIN RUMINANT per animal and day

Trial protocol:

Access to water: unrestricted

Feeding: 95% of the potential intake

Methane emissions were measured in weeks 2,4,6,8; data from week 6 are not reported due to measurements problems. Data of week 2 (without Agolin) were considered as control.

Metabolic open circuit chambers



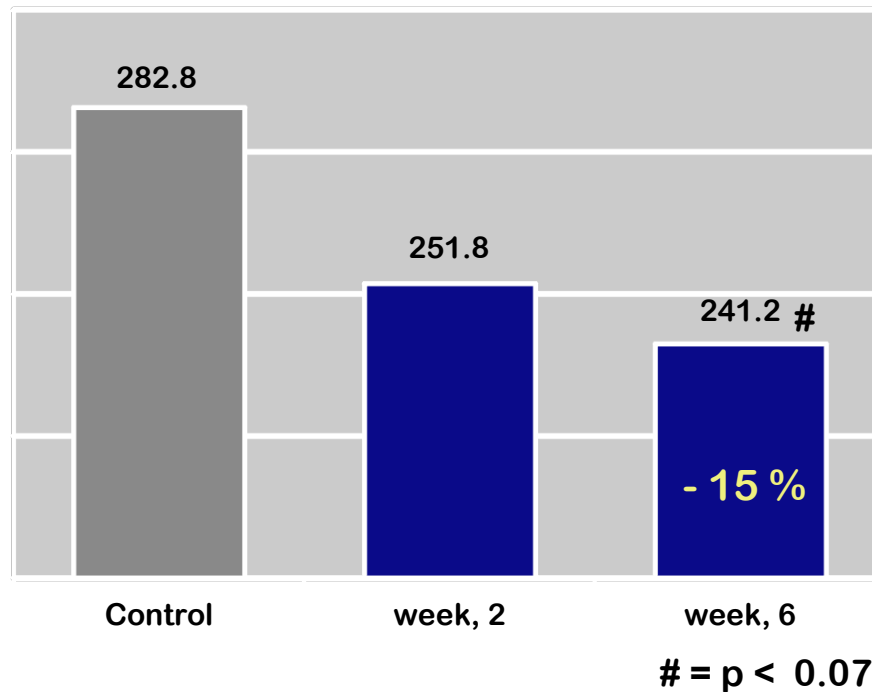
Each chamber has a volume of 12.3 m³, which was completely changed by the ventilation system every two minutes
Gas was analyzed every second



Effect of Agolin Ruminant on daily methane emission in multiparous dairy cows



Absolute daily enteric methane production (g/d)



Effect on performance and methane

Objective

Monitor dairy performance and methane production over 6 months, University of Aberystwyth

Trial design

Number of animals: 76 Holstein in control group, 73 animals in experimental group

Duration: 4th September 2015 - 24th February 2016 (174 days)

Feeding: Grass silage 50 %
Corn silage 25 %

Supplementation: 1 g Agolin Ruminant/day/animal

Methane measurement: Greenfeed system



Results from preliminary report



	Control	AGOLIN	Difference, %
Milk, kg/head/day	28,3	31,2	+ 10,2% *
Milk fat, kg/head/day	1,32	1,44	+ 9,0%
Milk protein, g/head/day	0,96	1,05	+9,4%
DMI, kg/head/day	20,82	21,69	+4,2%
Methane, g/kg milk	17,2	13,8	-19,7% *

* significant