# MITIGATING METHANE IN GRAZING SHEEP WITH ASPARAGOPSIS (RED SEAWEED)

## FAST FACTS

The study has helped build our understanding of how Asparagopsis works when fed to grazing sheep. The results show:

- Asparagopsis extract can cut methane in grazing sheep
- No short-term safety concerns were seen; and
- Improvements are needed in delivery systems and product shelf life.

## KEY FINDINGS

### 1. Consistent methane reduction with feeding frequency

- In pens, methane (g $CH_4$ / day) **fell by up to 88%** when sheep were fed the extract twice a day.
- In grazing sheep, **reductions of ~45%** were observed at the same feeding frequency.
- Feeding once every two days gave a **smaller reduction of around 23%**.
- Methane reductions in grazing were lower than in pens, partly because sheep don't all eat the same amount, as well as competitive sheep behaviour at feeders reducing uptake.

### 2. No short-term safety concerns

- No concerning residues (bromoform, iodine, bromide) were detected in meat, wool, or waste samples.
- This suggests it is safe in the short term.

### 3. No effects on productivity

- Sheep ate normally and there were no consistent changes in liveweight or fleece quality.
- While productivity didn't improve, methane was still reduced, which could help meet emission goals.

### 4. Practical and storage limitations

- Twice-daily feeding is currently required for maximum effect.
- The active compound (bromoform) degrades over time – most is lost after 4 months, even in cool storage.

## ABOUT THE RESEARCH PROJECT

**Research led by the University of New England has tested how Asparagopsis can reduce methane production in sheep. Trials were run in both pens and paddocks, assessing:**

- **Methane reduction achieved**
- **Safety implications for sheep and the environment; and**
- **Effects on growth, feed intake, wool yield and wool quality.**

The UNE research was funded by AWI in combination with a grant secured through the Federal Government's Methane Emissions Reduction in Livestock (MERiL) program.

## NEXT STEPS

Research is underway testing:

1. The longer-term productivity, health and safety impact of feeding additives over a 2-year trial period in ewes and lambs.
2. "Win-win" solutions for delivering combinations of other feed additives (such as Agolin Ruminant and Bovaer) aiming for both methane reduction, and productivity gains for woolgrowers.