

Dry matter intake and weight gain of grazing heifers on tall fescue and perennial ryegrass

Cromheeke M.^a, Vandaele L.^a, Baert J.^a, Reheul D.^b, Cougnon M.^a, Vanden Nest T.^a & Peiren N.^a

^a ILVO, Merelbeke, Belgium, contact: maarten.cromheeke@ilvo.vlaanderen.be

^b Ghent university, Faculty of Bioscience Engineering, Gent, Belgium

INTRODUCTION

In North-West Europe more periods of **summer drought** are expected due to climate change. This **jeopardizes** the production of high **quality forage grass**. Ryegrasses (*Lolium* sp.) dominate the grassland but they are relatively sensitive to drought stress. **Tall fescue** (*Festuca arundinacea* Schreb.) is more **drought tolerant**, resists cold temperatures and flooding and adapts to different kinds of soil conditions. The **lower voluntary intake and digestibility** of tall fescue compared to ryegrass inhibit the adoption of this species in North-West European dairy production. Several **new varieties** with **higher digestibility** have been developed but still there is a **paucity of results of animal trials** with these new varieties

METHODS

Hypothesis

→ Life weight gain (ADG) and dry matter intake (DMI) is comparable when grazing on tall fescue and perennial ryegrass

Experimental field:

→ 4 paddocks (36m x 156 m) / 2 paddocks with perennial ryegrass (LP) and 2 with tall fescue (FA)

| Paddock 1 (LP) | Paddock 2 (FA) | Paddock 3 (FA) | Paddock 4 (LP) |
|-----------------|----------------|----------------|-----------------|
| Barmazing (LP2) | Paolo (FA1) | Paolo (FA1) | Barmazing (LP2) |
| Melforce (LP4) | Apalona (FA2) | Apalona (FA2) | Melforce (LP4) |



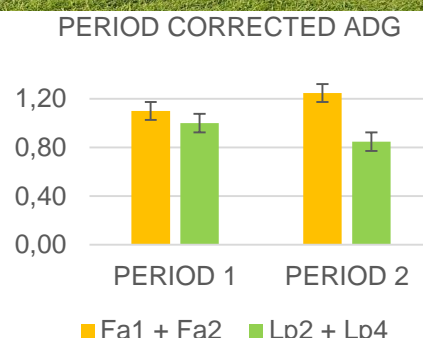
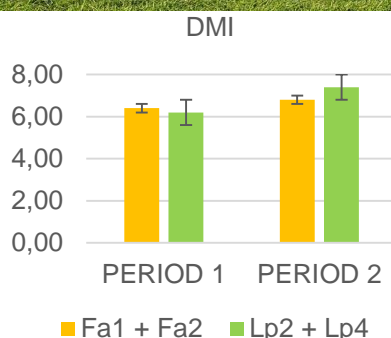
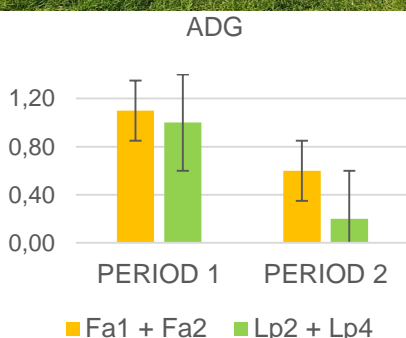
Cross over design:

→ 2 groups of 6 animals / 2 periods of 4 weeks

Data:

→ Life weight gain / dry matter intake

RESULTS



DISCUSSION AND CONCLUSIONS

Despite the **low number of observations** and the rather **short measurement periods**, we found a **significantly better** life weight gain on tall fescue than on perennial ryegrass. This underpins the **good intake** of these new varieties of tall fescue **under grazing conditions** and is promising for further implementation on farms in North-West Europe.

Further research questions:

- Can we **replicate** these results in **different seasons and different years**?
- How can we fit in **tall fescue into common rations** of ruminants without losing animal productivity considering also the economic and ecological aspects?
- What is the impact on **CH₄ production** of this climate adaptation strategy?