Amazing Grazing

Science in support of future grass based dairy systems

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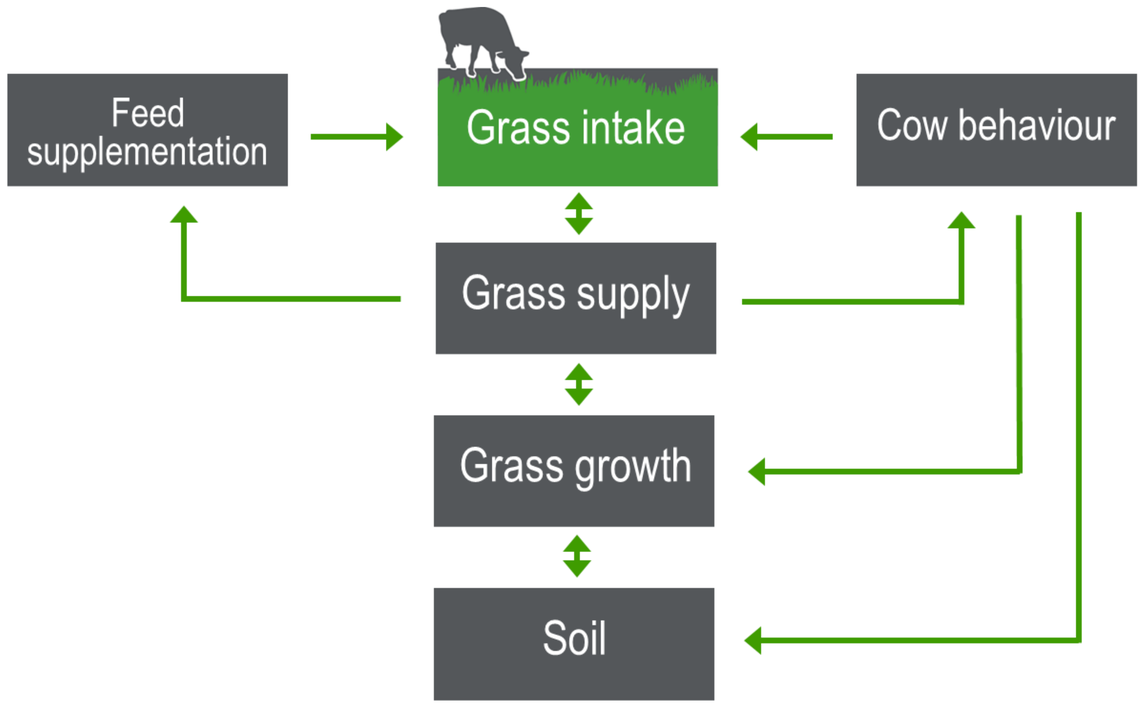
Background

Dairy farmers face grazing challenges due to increasing herd sizes with a lagging growth in the available grazing area. Amazing Grazing supports farmers in managing intensive grazing systems with high levels of feed supplementation.

Methods

The project framework consists of six interlinked components that are elaborated into three activities.

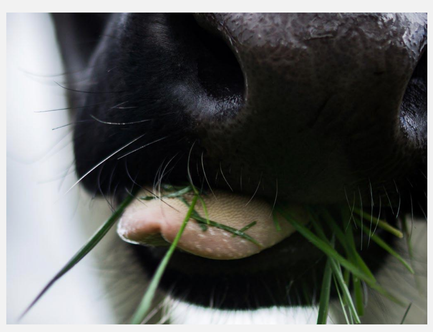
- Grazing experiments at a stocking rate of 7.5 cows ha^{-1}. On clay soil, a Holstein herd grazed under Strip Grazing (SG) or Compartmented Continuous Grazing (CCG). On peat soil, a mixed Holstein and Jersey herd grazed under SG or Kurzrasen (KR).
- Cutting trials on clay, sand and peat soil with a combination of nitrogen levels and growth intervals.
- Working groups of farmers, consultants and researchers, focused on developing planning rules and tools for grassland management.



Grass intake

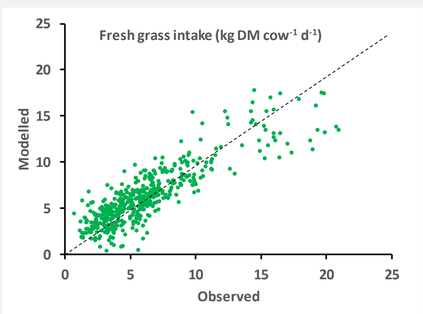
The grazing experiment showed that daily grass intakes of 6 kg DM cow^{-1} are possible in intensive grazing systems with high feed supplementation.

See Holshof et al. at this meeting



Cow behaviour

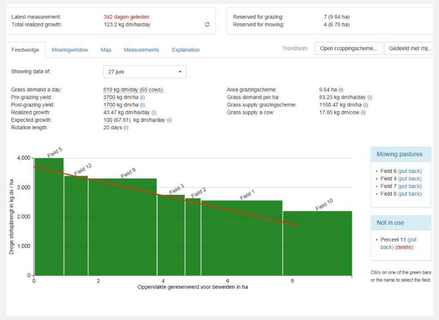
Cow sensor data are used to improve estimates of fresh grass intake. Daily intakes are calculated at the end of the day using, amongst others, pasture eating and walking time, available area, milk, and weight.



Grass supply

To facilitate rotational grazing systems a feed wedge was developed, allowing a variable size of the grazing platform and extended with a cutting window.

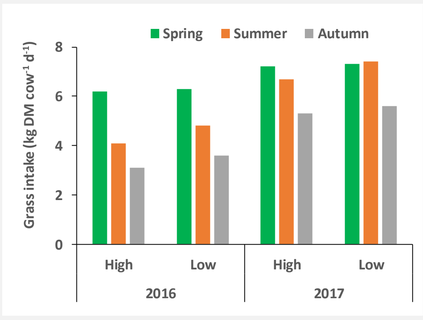
See: Stienezen et al. at this meeting



Feed supplementation

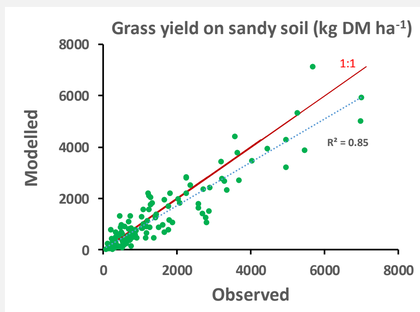
Lower amount of rumen-degradable protein balance in concentrates had a limited effect on fresh grass intake.

See: Zom et al. and Klootwijk et al. at this meeting



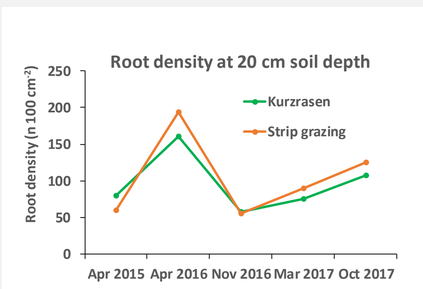
Grass growth

Short term predictions of grass growth were relatively successful for mineral soils, but rather poor for the location on peat soil because of the complex hydrology and soil N turnover.



Soil

In the third year of the grazing experiment on peat soil, the root density at 20 cm was lower under Kurzrasen than under Strip grazing.



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