Test and validation

2024WP3_Lely_002
Status: Completed

Stakeholder impact
SI-1: User Experience Evaluation

Problem Owner:
Lely

Involved:
Wageningen Livestock Research
Lely



Opportunities for Using Autonomous Robots to Harvest and Feed Fresh Grass

Interviews with farmers

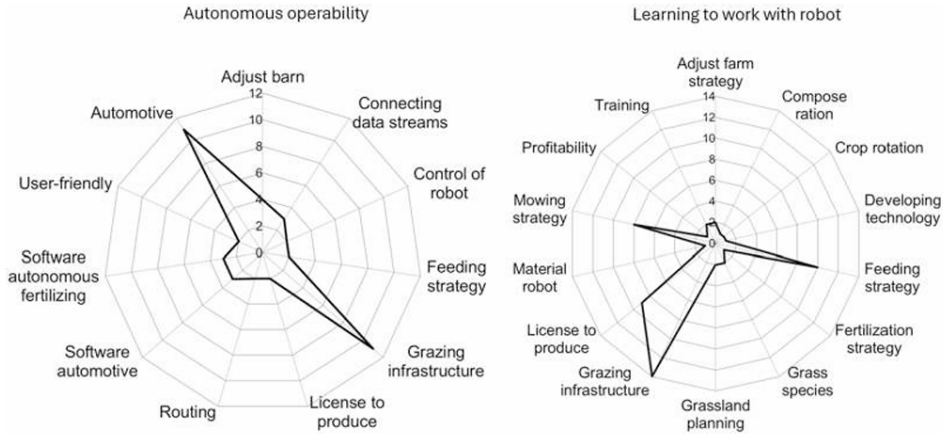


Figure 2. Topics related to autonomous operability (left) and learning to work with robot (right).

Broad knowledge question
To understand how farmers envisage using a robot that can harvest fresh grass, fertilise grassland and deliver the harvested grass as feed in a single operation to support farm management. What requirements would they have for such a machine, and what challenges do they anticipate?

Approach
A largely autonomous robot is available that can harvest fresh grass, fertilise grassland, transport the harvested grass and dispense it into a feed trough in a single operation.Ten Dutch farmers were interviewed about the benefits, drawbacks, implementation considerations and functionalities needed to integrate such a robot into their farm management practices.Farm sizes ranged from 35 to 230 hectares, while stocking densities on the grazing platform ranged from 2.7 to 10.0 cows per hectare.

Goal
The findings of this study will help guide the development of the knowledge and technology needed for farmers to make optimal use of such a robot on their farms. They will also provide machinery manufacturers with insights to support further technological development.

Results and reflection
Overall, farmers viewed the robot as a tool with the potential to optimise both grass production and utilisation. They identified opportunities to extend the grazing season into early spring and late autumn by using the robot to harvest fresh grass when conditions were unsuitable for cows to graze.Grazing infrastructure was identified as an important factor influencing the robot's operation.The findings were presented at the 31st General Meeting of the European Grassland Federation (EGF) in 2026.Publication: , Opportunities identified by dairy farmers for using autonomously operating robots to harvest and feed fresh grass - Research Portal - Wageningen University & Research.

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