Drivers for grazing and barriers to grazing on dairy farms with and without automatic milking

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Objective

- To study the technical and social factors that affect the extent of grazing on commercial dairy farms with and without AMS
Theory of Planned Behavior

Attitude

Subjective Norm

Perceived Behavioral Control

Extent of grazing

Technical possibilities

Ajzen, 1991

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Theory of Planned Behavior

Attitude

Subjective Norm

Extent of grazing

Perceived Behavioral Control

Technical possibilities

Attitude
A function of the belief in the effect of grazing on various topics and the importance of these topics for the dairy farmer.
Theory of Planned Behavior

Attitude
Subjective Norm
Perceived Behavioral Control
Technical possibilities
Extant of grazing

Attitude
grass growth, grass utilisation, income, labour, job satisfaction, animal health, mineral losses, development of the farm
Subjective norm
A function of the social normative beliefs with respect to grazing and the importance of these beliefs
Theory of Planned Behavior

Subjective norm
image of the dairy sector, image of individual farms, marketing of dairy products, advise of farm advisors

Attitude

Subjective Norm

Perceived Behavioral Control

Extent of grazing

Technical possibilities
Theory of Planned Behavior

Attitude

Subjective Norm

Perceived Behavioral Control

Extent of grazing

PBC deals with the perceptions of the dairy farmer about having the necessary resources available
Theory of Planned Behavior

- Attitude
- Subjective Norm
- Perceived Behavioral Control
- Technical possibilities
- Extent of grazing

PBC
knowledge of the dairy farmer on grazing management, infrastructure of the farm
Theory of Planned Behavior

- Attitude
- Subjective Norm
- Perceived Behavioral Control

Extends of grazing

Technical possibilities

kg milk ha\(^{-1}\)

Technical possibilities
Method

- On-line questionnaire
- 212 valid responses from commercial dairy farmers
- Combined with technical data and economic data of annual accounts
- Factor analysis
- Multiple linear regression
Theory of Planned Behavior

- Attitude
- Subjective Norm
- Perceived Behavioral Control
- Extent of grazing
- Technical possibilities

Factor analysis
Theory of Planned Behavior

Attitude

Subjective Norm

Perceived Behavioral Control

Extent of grazing

Factor analysis
Attitude towards grazing: Farm Continuity Beliefs Grass Yield Beliefs

Technical possibilities
Multiple linear regression model
Multiple linear regression model

- 47% of the variation in the extent of grazing
- 0.01 level: Farm Continuity Beliefs, Perceived Behavioural Control and Milk production per ha
- 0.05 level: Social Normative Beliefs
Drivers and barriers

- Driver: Social Norms
- Barrier: Grass Yield
- Driver/barrier: Farm Continuity and Perceived Behavioural Control
  - Consistent with choices in grazing management
Automatic milking

• Limited effect
  • only significant effect of milking system on Perceived Behavioural Control
  • infrastructure of the farms
  • knowledge of the farmer on grazing management
Take home messages

• Extent of grazing is not only determined by technical factors but also by social factors.

• The factors that drive grazing and are barriers to grazing can be used as effective information in dissemination to dairy farmers.
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