

# Effect of water availability in grazed paddock on milking frequency and milk yield

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# Introduction : AMS in Belgium and grazing

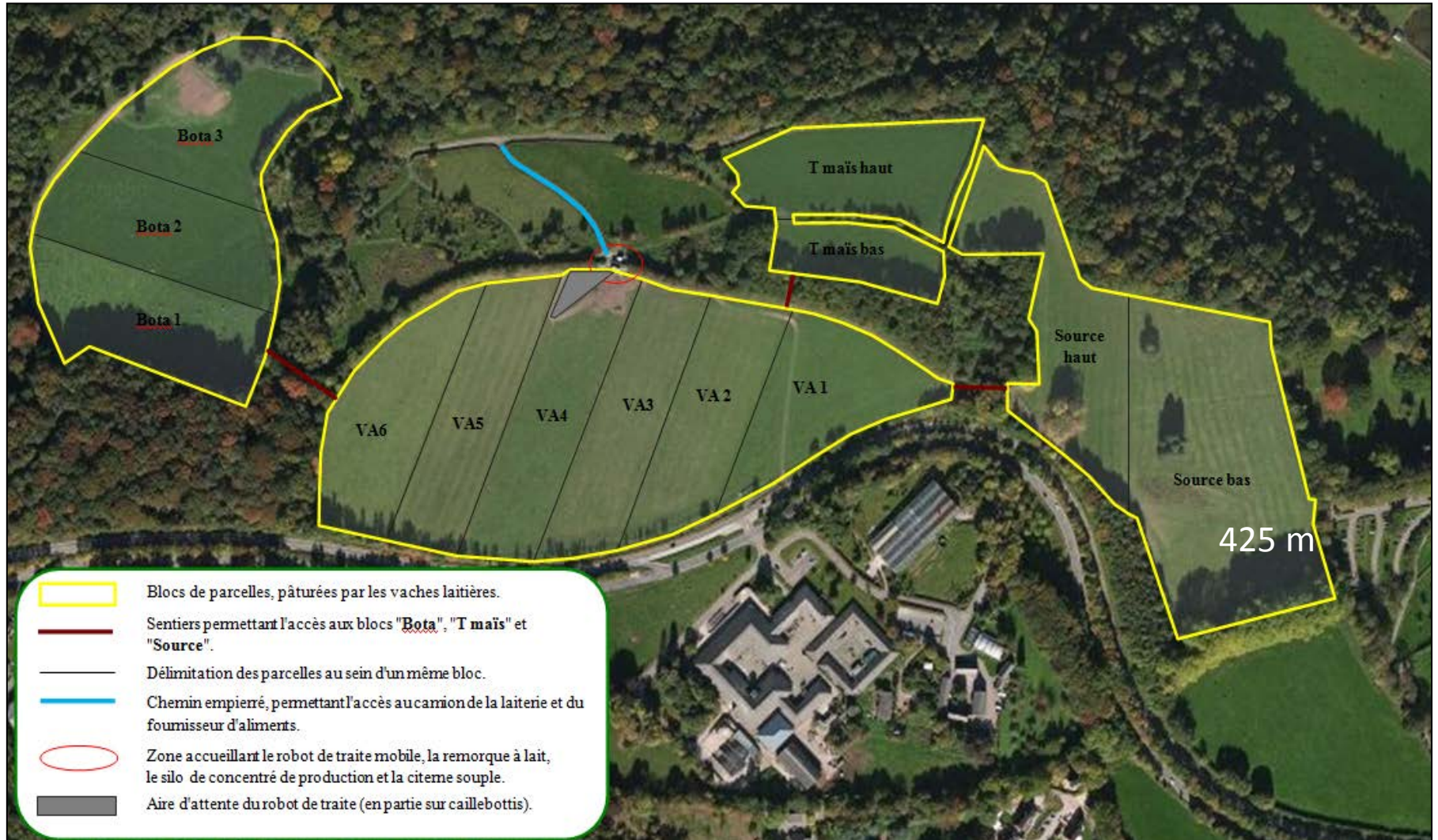
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- **Trend with the AMS : Release of grazing**
- **Grazing** : natural practice, animal health, period of recovery, reduced feeding costs, appreciated by the consumers, benefit impact on the environment .
- **The project :**
  - ✓ prove that grazing is not inconsistent with AMS
  - ✓ optimize the system
- **The aims:** effects of availability of water in the paddocks on milking frequency and milk yield



# Materials and methods : grazing system

48 cows on 13 paddocks (1,33 ha)

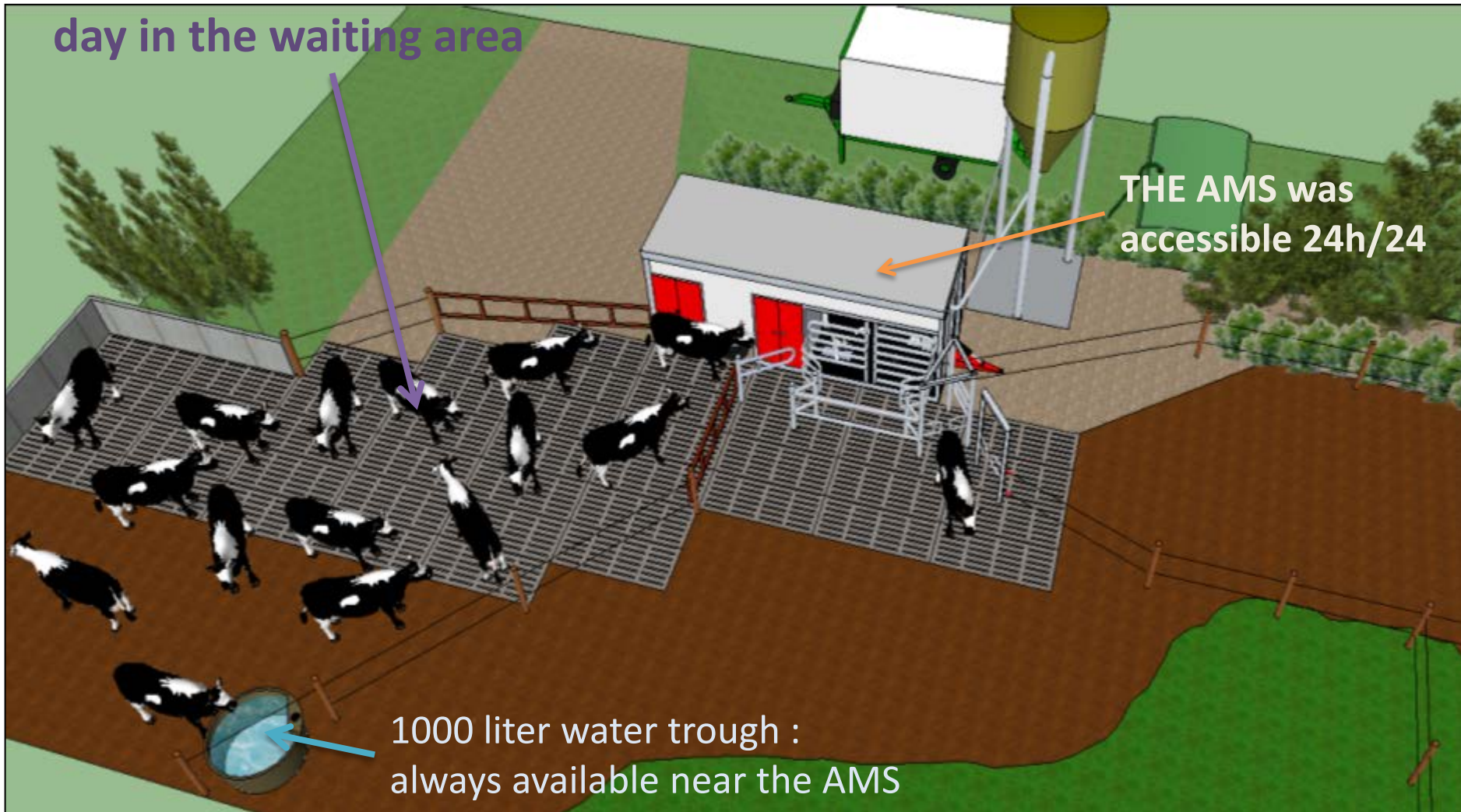


# Materials and methods : milking settlement in pasture

Cows were fetched twice a day in the waiting area

THE AMS was accessible 24h/24

1000 liter water trough : always available near the AMS



# Materials and methods : experimental design

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- **Type of paddocks :**
  - Control paddocks : with an extra individual automatic bowl
  - Test paddocks : no water available except in the trough near the AMS.
- **Cows grazed successively 3 days in control paddocks and in test paddocks**
- **Experiment during 1 month : from 15 August to 15 September**
- **Diet: grazed grass and concentrates in the AMS**

# Results :

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- Mean temperature during the experiment : 17°C
- Average days in milk of the cows : 211 d
- Mean distance between the AMS and the paddocks : 150 m
- Cows received 2,7 kg concentrates per day in the AMS.



# Results : frequentation of the AMS

Water availability	Control	Tested	P > F
Milking frequency (n/c)	2,0	2,3	P<0,001
Refused milking (n/c)	0,44	0,77	P<0,05
Voluntary returns (n/c)	0,5	1,3	P<0,001

**Voluntary returns** = milkings + refused milking + milking failures – number of fetching

- **When no water was available in the paddocks :**
  - Milk frequency higher due to voluntary returns
  - Voluntary returns twice higher, with as result, increased frequentation

# Results : production parameters

Water availability	Control	Tested	P > F
Milk yield /milking (kg/c)	8,9	7,6	P<0,001
Milking time /cow	5min 15s	4 min 52s	P<0,001
Milk yield /cow/day	17.8	18.3	NS

- **Milk yield/milking higher in the control paddocks.**
- **No difference in milk yield**





# Conclusion and perspectives

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- **As observed in other studies, water stimulated the cows to visit the AMS**
- **However no differences were observed in milk yield :**
  - Water intake is influenced by the diet, the climate, the days in milk, the individuals behaviour (Melin et al., 2005)
  - The weather was fresh and the DIM high in our study
  - The experiment lasted only for one month
  - The paddocks were close the AMS
- **Perspectives :**
  - What are the effects of temperature variations and of dry matter content in the grass ?
  - How do the cows behave with hot weather and when the AMS is far away?
  - What is the limit of the system for production and welfare ?

A photograph of a green field with cows under a cloudy sky. The text "Thank you for your attention" is overlaid in green with a white outline at the top. The text "Questions ?" is overlaid in green with a white outline at the bottom. The background shows a grassy field with several cows, a line of trees in the distance, and a cloudy sky.

Thank you for your attention

Questions ?