Breeding dairy goats for organic farming – sustainable and animal-friendly

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46th ICAR Meeting, Session 7
Bled, 20 May 2024

Zuchtwertschätzteam Baden-Württemberg

Agenda

- Background
- Breeding value estimation for lifetime performance
- Breeding for health and robustness
- Advice and further training
- Outlook

Background

- Bavaria and Baden-Wuerttemberg: >80% of dairy goat farms are organic (Manek et al., 2017)
  - e.g. in Baden-Wuerttemberg approx. 50 farms with approx. 5.000 goats (Kern, 2019)
- Herds of 80 – 500 dairy goats
- Goat breeding structures in Germany are significantly little developed
  - mainly natural mating
  - different types of performance testing and breeding programs
  - no exchange between database systems

Define breeding goal, establish performance testing

High milk yield with high fat and protein content and good robustness, especially in pasture based systems

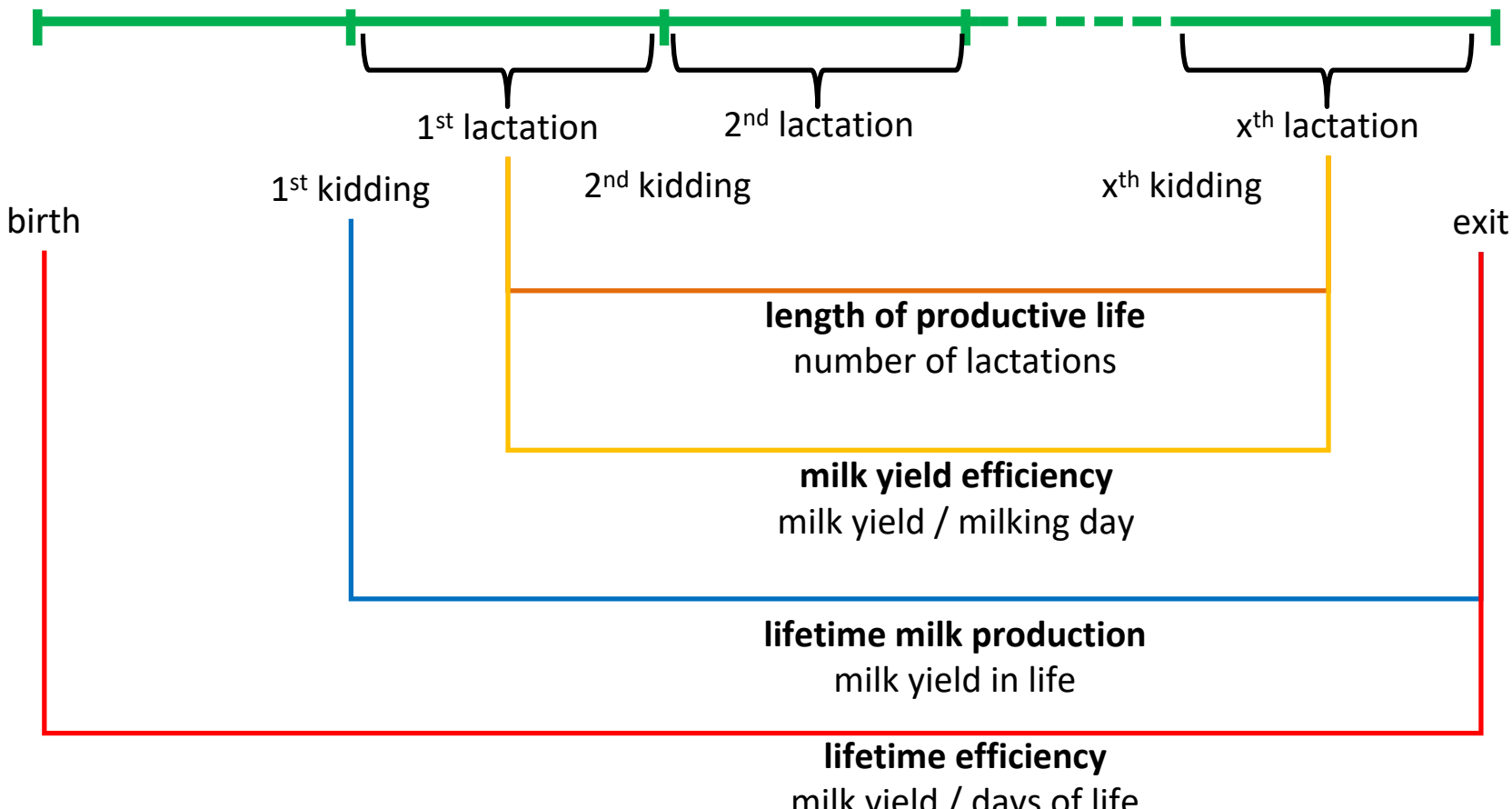
→ Derive appropriate traits for milk lifetime performance as well as health and robustness

→ First studies in GoOrganic project (2016 – 2022)

→ Continuation in HealthyGoat project (since 2021)

Breeding for lifetime performance

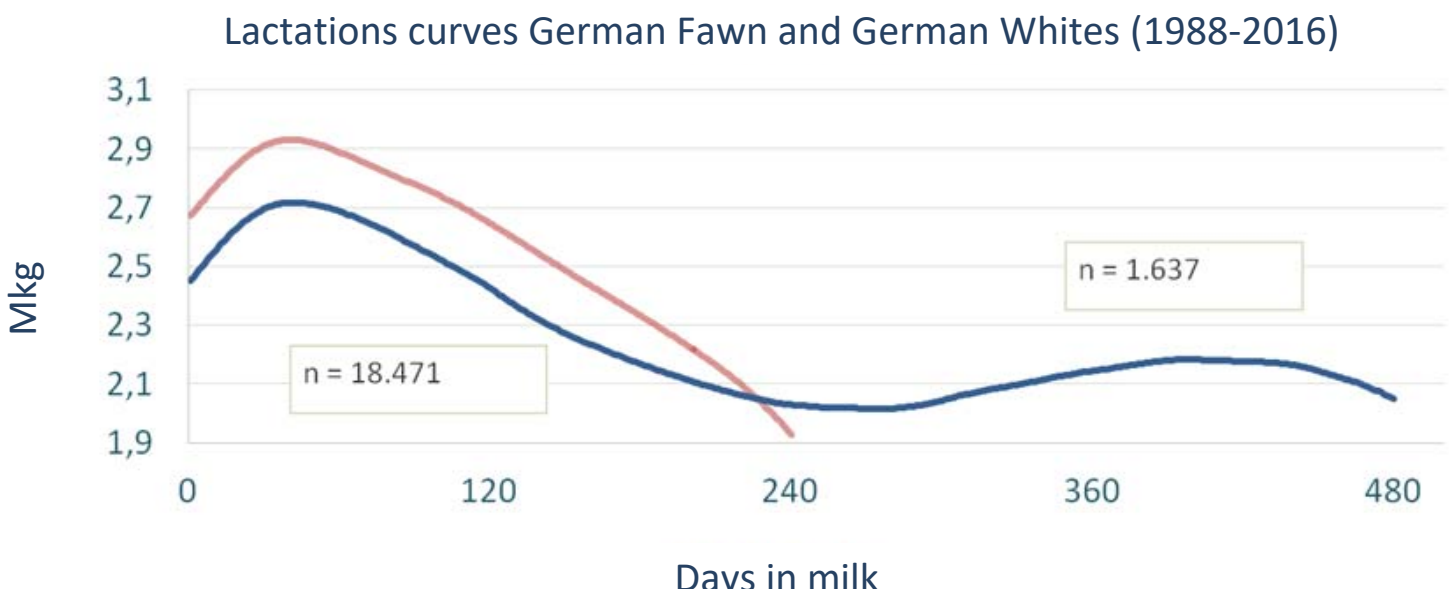
Possible traits to define lifetime performance



Source: Herold et al., 2019

Increasing continuous milking

Dairy goats are milked up to two years without kidding in-between (Moog et al. 2012).



Source: Herold et al., 2019

Goal: Breeding value for lifetime performance

Heritabilities on the diagonal, genetic correlations across the diagonal, (standard error)

	Length of productive life (days)	Lifetime efficiency (milk-kg/day in life)	Milk yield efficiency (milk-kg/milking day)
Length of productive life	**0,24** (0,02)	0,71 (0,05)	0,32 (0,06)
Lifetime efficiency		**0,31** (0,02)	0,76 (0,04)
Milk yield efficiency			**0,18** (0,03)

Source: Herold et al., 2019

→ taking into account continuous milking and auxiliary traits

Breeding for health and robustness

Breeding for health and robustness

→ implement a health and robustness monitoring system – GMON goat

- Developed for kids, goats and bucks
- Central animal health key for dairy goats

→ simplified diagnoses key implemented in data bases ZDV and serv.it OVICAP

- GMON goat is based solely on the observations of goat farmers and not on diagnoses by veterinarians
- By the end of 2023, 716 observations from 11 farms had been entered in Baden-Württemberg and 6,471 observations from 49 farms in Bavaria
- GMON goat is important information for farmers for herd management and animal selection

Advice and further training

Advice and further training

Goal: actively involve breeders and goat keepers in the breeding programm →*Animal breeding in farmers' hands*

→Feedback and evaluations in the herd manager

→Stable schools / working groups

- regional
- online

→Breeding location decision

→On-Farm-learning modules

→Farminars

→…

Stable schools

Regional working groups

- on-site meetings at participating farms
- approx. 4 hours

Online working groups

- Online meetings
- approx. 2 hours

Sharing experiences with colleagues is the best further training

- fixed group of participants
- permanent moderator
- „rules of the game“
- hosting farm determines the topic

The group knows more!

Outlook

Ausblick

- Goat farming in Bavaria and Baden-Württemberg is a small but growing niche
- Work of the breeding value estimation team and the various goat breeding projects support goat farmers in Bavaria as well as in Baden-Württemberg and Thuringia
- goat farmers also benefit from performance testing organization services in the areas of milk performance testing and LKV goat herd manager

→ Goat breeding well positioned for the future

→ Genetic gain in the sense of sustainable and animal-friendly breeding is possible

Note of thanks

Gefördert durch

Bundesministerium für Ernährung und Landwirtschaft

BÖL
BUNDESPROGRAMM ÖKOLOGISCHER LANDBAU

aufgrund eines Beschlusses des Deutschen Bundestages

Gefördert durch:

Bundesministerium für Ernährung und Landwirtschaft

Projektträger

Bundesanstalt für Landwirtschaft und Ernährung

aufgrund eines Beschlusses des Deutschen Bundestages

www.goorganic-ziege.de

www.gesundeziegen.de

Questions?

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