



Cow based calf rearing as a strategy to reduce antimicrobial use in dairy production

Context

On the majority of the dairy farms, organic farms included, the calf is separated from its mother shortly after birth. A species-appropriate behaviour of cow and calf is therefore not possible e.g. positive affection like licking or learning from the mother or other adult animals.

Furthermore, depending on the production system, reducing immunoglobulin in colostrum milk, if not consumed directly by the calf, impedes the calf's proper immunity. Moreover, the specialisation and separation of dairy and veal/beef production has led to systems that depend on antibiotics to keep animals healthy.

To allow the animals to behave in a more species-appropriate manner

again, some dairy farms have decided to practise cow-calf rearing. In contrast to classical rearing, the calves can drink directly from a cow's udder until weaning. The "mothers" continue to be milked.

Authors

Michael Walkenhorst, Manuela Helbing, Bernadette Oehen ([FiBL](#))

Contact:

Michael.walkenhorst@fibl.org

Visit [original publication](#)

Keywords

Dairy, milking, calf rearing, AMU

Problem & Solution

In specialised calf rearing, antibiotics are often used for calf diarrhoea or pneumonia and in dairy products because of mastitis. There is a need to reduce AM in organic animal husbandry, more specifically in calf rearing and dairy production. One approach more and more implemented in organic systems is cow-based calf rearing. In most conventional and organic farming systems, the calf is separated from the cow and reared separately with warm milk from a bucket. The cow-calf system makes use of the knowledge of the natural behaviour of cows. Cows will not be the whole day at the side of their calves. First, the calves are hidden, and the cow visits them multiple times a day to let them drink milk.

Outcome

In a cow-calf system, the calf stays healthier on the dairy farm because it gets the milk fresh, warm, in sufficient quantity and with all the intact immunoglobulins that the cow forms due to the germs present in the barn. Later the calves are in a group with other calves playing and not at their mothers' side all day round. Concluding that calves can suckle alongside milking.

Furthermore, it was shown that cows with suckling calves are less prone to mastitis and the calves develop a stronger immune system and are less stressed and healthier. The calf remains healthy when it stays on the dairy farm until the age of 16 weeks.

Economically, the system reduces the time for warming up milk and cleaning the bucket. Consumers are interested in the production system.

However, all those systems require close monitoring of the animals. This also includes a regular check-up of the teats and the udder and how well it is emptied.

Practical recommendations

There exist multiple systems in which dairy production alongside cow-based calf rearing is possible.

- After birth, the calf stays with the mother for up to 2 weeks.





- In week 3, the cow and calf stay with the dairy herd but are also separated for 12 hours.
- From week 4 – 7, the cow stays in dairy herd and the calf in the herd of calves. The calf is allowed to drink twice a day from its mother.
- From week 8-13, the calf is separated from the cow, milk comes from a foster-mother. Letting the calves continuing suckling at a foster cow after separating it from its mother helps prevent the parting pain of the calf.
- From week 14 – 16, the amount of milk give is reduced.

In depth examples of working systems can be read under Mother-bonded and Fostered Calf Rearing in Dairy Farming: <https://www.fibl.org/de/shop/1660-mother-bonded-calf-rearing>

Illustrations & Photos



Cow feeding calves in a calf rearing farm; photo: Thomas Alföldi (FiBL)

Imprint

Publisher: Research Institute of Organic Agriculture FiBL

Permalink: <https://orgprints.org/id/eprint/51952/>

Project website: <http://www.roadmap-h2020.eu/>

This practice abstract was elaborated in the Roadmap project, based on the EIP AGRI practice abstract format.
© 2023

Follow ROADMAP

