Nurse cow dairy system to promote calf health and welfare

Problem
The organic principles strongly encourage more natural rearing conditions for dairy cows, including access to outdoors and young-adult contact, and this is also what citizens expect.

Solution
Implementing calf-nurse cow rearing systems. Nurse cows are coming from the dairy herd, and dedicated to rear 2-3 calves. Calves-nurse cows herd is on pasture during a long grazing period.

Impact
Improve calves’ welfare and health
Improve farmer’s working conditions: less arduous tasks, and more pleasure
Economically efficient for autonomous grazing system: no investment, little or no feed purchase

Practical recommendation
The rearing of calves involves several successive phases (see figure 1 below):
1. Dam-calf contact: after birth, calves can stay with their mother from 1 to 8 days
2. Optional phase of artificial milk feeding: lasting from 1 to 2 weeks
3. Fostering phase: 2 or 3 calves are put together in a small fostering pen with a nurse cow. After a couple of days, all nurse cows and calves are gathered in a single herd. Fostering phase needs close monitoring from farmer, until adoption succeeded.
4. Grazing phase: Herd turn out on pasture as soon as the weather allow. Housing occurs during the autumn, according to soil and climate conditions.
5. Weaning and separation phase: they can be done simultaneously or separately, around the time of housing. Calves are between 4 and 10 months of age, depending the calving period and grazing system implemented on the farm. Separation has to be done gradually to minimize calves and nurse cows’ stress.

Figure 1: Time line of the nurse cow rearing system.
This system is easier to manage when there are spring grouped calvings: calves are at the same age, and can go on pasture at 1 month until 8 to 10 months of age (depending on region climate). Moreover, benefits on calves’ health are higher, especially for parasite diseases, when certain practices are implemented.
Practice Abstract

- **Neonate diarrhoea and *Cryptosporidium infection* (during first days of life):** less risks when (i) no artificial milk feeding phase; (ii) separation of diarrheic calves and (ii) early turn out on pasture,

- **Gastrointestinal nematodes infection (on pasture):** seasonal calving from February to April allowed a long and protective first grazing season with nurse cows and the development of immunity at the end of this season.

Further information

**Video**
- Check the following video for further instructions (French with English subtitles): <https://www.youtube.com/watch?v=ErFTEYQd2LE&list=PLJGHaiNi0RENIdTNypZcnTz-Pfq9DVLD>

**Further readings**
- Rearing calves with nurse cows: experiences of French organic dairy farmers: [https://orgprints.org/id/eprint/34000/](https://orgprints.org/id/eprint/34000/)
- Suckling dairy calves/nurse cows system and risk of gastrointestinal nematodes infection during the first grazing season in organic farms: [https://orgprints.org/id/eprint/42122/](https://orgprints.org/id/eprint/42122/)

About this practice abstract and GrazyDaiSy

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**GrazyDaiSy website:** [https://projects.au.dk/coreorganiccofund/core-organic-cofund-projects/grazydaisy/](https://projects.au.dk/coreorganiccofund/core-organic-cofund-projects/grazydaisy/)

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