

**PROLONGED CALVING INTERVAL AND REDUCED  
SUPPLEMENTATION IN AN ORGANIC DAIRY HERD**

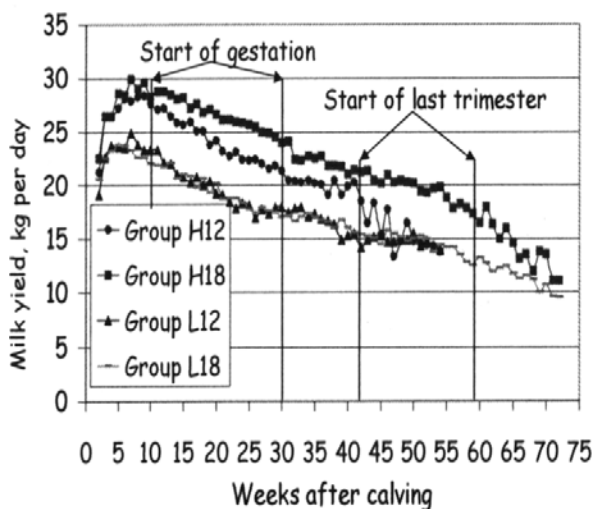
J. Sehested, A. Danfær

*Introduction*

The proportion of organic feed in the total ration for cows in organic dairy herds has to reach 100% in 2005, and there is a demand for 60% roughage in the total ration. This puts pressure to the market for supplementary feeds, and gives basis for an increasing proportion of roughage in the feeding ration and thereby a decreasing intake of energy. Long calving interval could be a strategy for adapting organic dairy production to a high proportion of roughage in the diet and a high degree of self-supply or local supply of feeds.

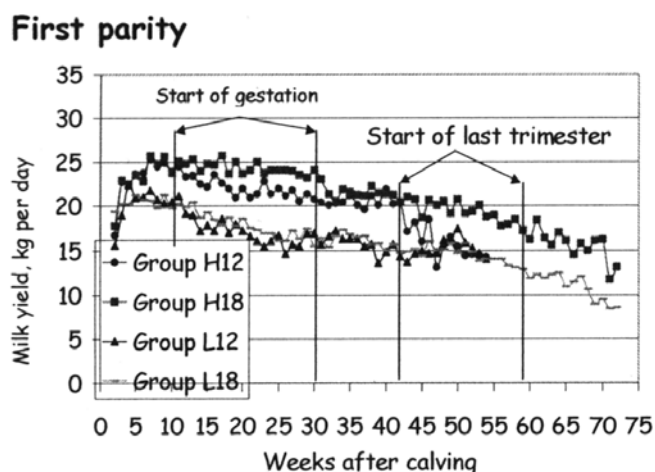
*Methods*

A two times two factorial design including reproduction strategy (12 or 18 month calving interval) and feeding strategy (balanced standard supplementation of concentrate feed or no supplementation) were applied to a dairy herd of 60 Danish Holstein cows at the organic research station Rugballegaard from mid 2000. The experiment will run until mid 2004. The main feed has been grass clover herbage as grazing or silage.

**All parities**

Rad je priopćen na "54<sup>th</sup> Annual Meeting of the EAAP", Roma 2003.

Jakob Sehested, Allan Danfær, Danish Institute of Agricultural Sciences, P.O. Box 50, DK-8830 Tjele, Denmark, E-mail: jakob.sehested@agrsci.dk, allan.danfær@agrsci.dk



EXPERIMENTAL DESIGN AND TREATMENTS

| Group                | H12     | H18     | L12     | L18     |
|----------------------|---------|---------|---------|---------|
| Concentrate suppl.   | +       | +       | -       | -       |
| Calving int., months | 12      | 18      | 12      | 18      |
| - planned, days      | 320-390 | 500-570 | 320-390 | 500-570 |

REPRODUCTION

| Group               | H12 | H18 | L12 | L18 | n   |
|---------------------|-----|-----|-----|-----|-----|
| Days to 1st service | 74  | 235 | 74  | 212 | 117 |
| Services, no.       | 2,4 | 2,3 | 2,3 | 2,3 | 117 |
| Calving interval    | 400 | 535 | 390 | 512 | 73  |

*Results and discussion*

Milk production was increased by supplementation of concentrates and by parity. The persistency of lactation was higher in first parity cows than in older cows, but did not seem to be influenced by feeding level. The obtained calving intervals were in accordance within the planned intervals, and were not affected by feeding strategy. The number of services per gestation and frequency of clinical treatments (data not shown) were not affected by treatment.

However, the lactation curves surprisingly indicate an interaction between feeding strategy and reproduction strategy on persistency of lactation. Persistency was affected only at the high feeding level (H). The curves clearly

show that milk yield was depressed during the last trimester of pregnancy at the high feeding level (H), but not at the low (L). Further more the curves indicate, that milk yield was depressed by the onset of pregnancy at the high feeding level. Progesteron might be a main factor in this effect.

### *Conclusions*

Reduced supplementation of concentrates

- reduced milk production level
- did not influence persistency of lactation
- did not influence calving interval or number of services per gestation

The reproduction strategy

- interacted with feeding level on persistency of lactation
- pregnancy depressed milk yield during the last trimester at the high feeding level
- onset of pregnancy tended to depress milk yield at the high feeding level.

## **PRODUŽENI INTERVAL TELJENJA I SMANJENO DODAVANJE U ORGANSKOM MLIJEČNOM STADU**

### **Sažetak**

Omjer organske hrane u ukupnom obroku krava u organskim mliječnim stadima mora postići 100% u 2005. godini a postoji zahtjev za 60% voluminoznog krmiva u ukupnom obroku. Time se vrši pritisak na tržište za dopunskom hranom i daje temelj za povećani omjer voluminoznog krmiva u obrok, pa tako i smanjen unos energije. Dugi interval teljenja mogla bi biti strategija za prilagodbu organske mliječne proizvodnje na visoki omjer voluminoznog krmiva u hranidbi i visoki stupanj snabdijevanja krmivom vlastite ili lokalne proizvodnje.

Smanjeno dodavanje koncentrata

- smanjena razina proizvodnje mlijeka
- nije utjecalo na trajanje laktacije
- nije utjecalo na interval teljenja ili broj servisa po gastaciji

Reproduktivna strategija

- međusobno je djelovala s razinom hranjenja i trajanjem laktacije
- steonost je smanjila prinos mlijeka u zadnjem tromjesečju uz visoku razinu hranjenja
- nastupanje steonosti imalo je tendenciju smanjenja prinosa mlijeka uz visoku razinu hranjenja.

Primljeno: 10. 12. 2004.