

# Summary: Dairy Cow-Calf Separation and Natural Weaning

## The Problem

Calves are typically separated from their dam (mother) shortly after birth, in contrast to their natural bond, as they would stay together for up to a year or more. Calves are separated for reasons of economic gain, by increasing milk yield for consumption, control over calf feeding and hygiene.

## The Solution

Recently there has been a renewed interest in rearing calves with cows. Keeping them together, if carefully managed, can provide multiple benefits. Rearing cows with their calves improves welfare by reducing the risk of some diseases, avoiding the distress of separation and allowing maternal behaviour towards the calf. Allowing suckling also improves the future social behaviour of calves.



## Cow health



Cows which suckle their calves have a reduced risk of some post-calving diseases and a retained foetal membrane. They benefit from improved uterus involution, reduced risk of clinical mastitis (by up to 2.5 times) and reduced residual milk in the udder. Removing the calf is stressful to the dam, as indicated by physiological signs, such as a raised heart rate, increased visible eye-white and reduced rumination.

## Cow behaviour

Cows which suckle their calves are able to express natural maternal behaviours including licking, nursing and bonding with the calf. Behavioural indicators which show that removing the calf is stressful include vocalising, increased activity and restlessness and reduced lying, ruminating and sniffing. Cows are normally more stressed 12-24 hours after separation, when they would naturally return to their calf after a period of leaving them to feed.



### Calf health



Licking by the cow stimulates calf activity and assists their breathing. Licking also improves circulation, urination, defecation and drying; which reduces heat loss. Absorption of colostrum (the dams' nutritious first milk) is essential for early immunity and is improved by avoiding separation. Bouts of diarrhoea are also reduced for three weeks. Suckling improves digestive functioning and prevents sucking being redirected to abnormal 'cross sucking' of other calves or pen fixtures.

### Calf behaviour

Calves reared with the dam have the freedom to experience a natural bond with the dam, which results in more confident social behaviour and reduced abnormal behaviour. Removing the calf from the dam is stressful; which is indicated by reduced grooming, eating and lying and increased head butting, vocalising and urinating. Calves are more stressed 12-24 hours after separation, when the calf and dam would be reunited. Suckling, alternatively, induces calmness and reduces stress.

### Cow Productivity

Rearing a calf with a cow can increase milk production, by increasing overall milk yield, but the quantity available for human consumption will be reduced. Suckling can prevent the typical reduction in milk yield for five days after separation. Cow-calf rearing can reduce the calving-conception interval, but is longer if the calf remains with the dam for a long period. Milk yield is reduced by approximately 20% through calf intake. This reduction in yield can be seen as an investment in the health of the future herd, as the calves are healthier. Restricting the period calves can access their dam to suckle, for example to twice a day, is one method to prevent losing too much milk to the calf.



### Calf Productivity

Suckling the dam has a large overall improvement on calf health, due to increased daily weight gain (more than threefold compared to individual housing) and avoiding a growth check at separation. Mortality can also be reduced and navel injuries from cross-sucking are avoided. Suckling reduces the risk of infection and improves milk absorption and digestion. Calves learn from their dam how to drink water and eat roughage, and benefit from an improved future milk yield and maternal behaviour themselves.

### Management and Business Ethics

Potential benefits of cow-calf rearing include reduced labour, compared to individual housing of calves and avoiding cow-calf separation. A higher job satisfaction and increased consumer acceptability have also been reported as reasons some producers choose this system.

