

## SELECTIVE DRY COW THERAPY PROTOCOL AND RISK FACTORS

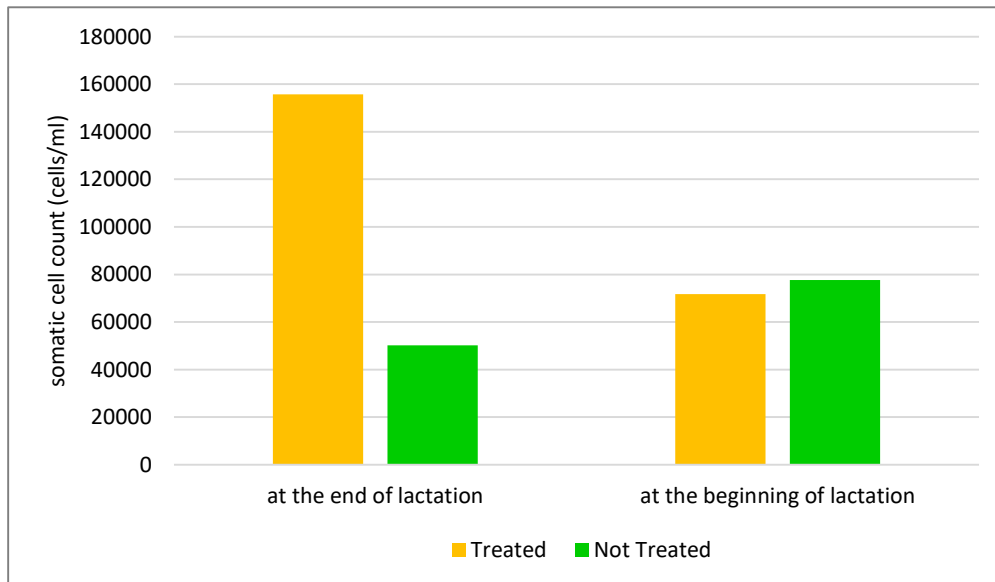
### Which cows can not be treated with antibiotics at dry off?

MAGA operative group used a protocol based on health quality of milk collected during the last 30 days of lactation (Zecconi *et al.*, 2019):

- Total somatic cell count <100,000 cells/ml for primiparous cows and <200,000 cells/ml for multiparous ones
- Percentage of the sum of neutrophils and lymphocytes on somatic cell count <69.3%
- Negative response of Vetscan, an instrument that counts total somatic cells and single fraction of differential somatic cells

### What were the results of the application of this protocol?

This protocol was applied in three farms in the North of Italy and 243 cows were monitored in the period between the end of lactation and the beginning of the next one.



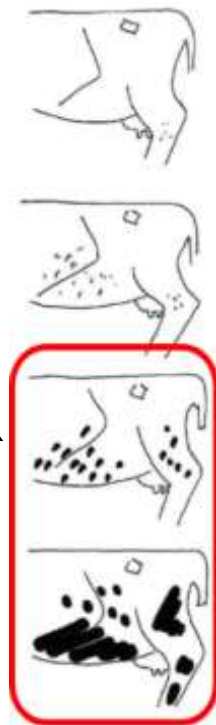
As reported in previous figure somatic cell count is higher at the end of lactation in cows a treated with antibiotics than cows no treated. At the beginning of the next lactation milk reported a decrease in somatic cell count for treated animals and, as expected, an increase for no treated ones. But no significant difference is showed between the values of somatic cell count of the two groups at the beginning of lactation (<100,000 cells/ml). So is useful, because this explain that Selective dry cow therapy protocol doesn't affect udder health.

## When to expect high somatic cell count at the beginning of lactation? What are risk factors?

Risk factors at dry off, that predispose to high somatic cells count at the beginning of the next lactation (>100,000 cells/ml), have been identified thanks to the results achieved.

RISK CONDITIONS AT DRY OFF	RISK RATE*
High somatic cell count at the end of lactation (>100,000 cells/ml)	+++
Dry off without antibiotics	+++
Dry period > 55 days	++
Protein milk content <=3,6%	++
Dirty upper legs and flanks	+

\*risk of somatic cell count inscrease at the beginning of the next lactation



Dry off without antibiotics is one of the risk factors, because, as previous described, somatic cell count has an increasing trend. For this reason, is useful to pay attention at other factors that can be monitored and changed:

- Avoid long dry period, because teat sealant could lose its effectiveness
- Ensure clean bedding and equipment for cows to reduce the risk of pathogen contamination between environment and animals
- Monitor milk qualitative components, especially protein percentage