

## Dry cows off correctly

See accompanying leaflet from Zoetis (manufacturer of Orbeseal) concerning correct procedures, which apply for both antibiotic DCT and internal teat sealant products. Cleanliness is critical, as the internal teat sealants do not contain any antibiotics to kill any bacteria that may accidentally get inserted into the udder at drying off. Key points are:

- Always dry off cows as a separate procedure.
- Teats must be clean and dry, and thoroughly disinfect the teat prior to inserting dry cow intramammary tubes using surgical spirit wipes.
- When inserting the internal teat sealant, firmly grasp to pinch the base of the teat at the udder attachment. Insert end of tube into teat canal, and slowly inject all contents into teat.
- Do not massage the udder. The internal teat sealant must remain in the teat canal.
- After drying off, apply teat dip/spray as normal, ensuring that all of the teats are covered.

If you would like more information contact our office or visit our website.



**Royal (Dick) School of Veterinary Studies**  
**Easter Bush Veterinary Centre**  
**Roslin, Midlothian, EH25 9RG**

**Tel 0131 651 7474 DHHPS@ed.ac.uk [www.ed.ac.uk/vet/dhhs](http://www.ed.ac.uk/vet/dhhs)**

# SELECTIVE DRY COW THERAPY



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There are two main aims of Dry Cow Therapy (DCT):

- **Treatment** of existing infections within the udder.
- **Prevention** of new environmental infections, which gain access via the open teat canal during the dry period.

### What is Selective Dry Cow Therapy (SDCT)?

Traditionally the approach has been a “belt and braces” effort at drying off, infusing both internal teat sealants (Trade names: Orbeseal, Noroseal, Boviseal, Cephalock) and dry cow intramammary antibiotic tubes at drying off (so-called “double-tubing”). However in most herds with a bulk tank cell count within milk purchaser premium payment bands, this means that over ¾ of the cows at drying off have a low cell count and so are uninfected, meaning that they do not require

any antibiotics. These uninfected cows could receive internal teat sealant alone to prevent new infections, with those remaining cows with evidence of udder infection at drying off getting both internal teat sealants and antibiotic dry cow tubes (ie. we could be smarter at targeting DCT to individual cows). This approach is not new – organic farms (where blanket use of antibiotics is not permitted under organic regulations) have been using this SDCT approach for many years.

### What are the advantages of SDCT?

- **Reduction in overall antibiotic usage**, which both the veterinary and agriculture sectors are under increasing pressure on to slow the development of Antimicrobial Resistance. The Arla farm assurance scheme Arlagården requirement for considering SDCT in their producers is one example of such pressure.
- **Reduction in medicine costs** by not “double-tubing” all cows at drying off
- There is also some research evidence that using antibiotic DCT unnecessarily in low cell count cows may result in more severe mastitis problems after calving, possibly related to the removal of helpful commensal bacteria that live in the cows’ udder.

### What information is needed before undertaking SDCT?

The key to SDCT is to work out the infection status of individual cows prior to drying off, so that they can be categorised into “healthy” or “infected” status, which then allows for appropriate individual treatment decisions to be made.

- **Monthly milk recording information** providing individual cow somatic cell count records (from NMR, CIS or QMMS). This represents the best method of determining the infection status of cows, and should be analysed for the last 3 recordings (usually last

3 months) before drying off. 200,000 cells/ml is the usual threshold used, although this can be altered according to the individual herd status, aims and management.

- **California Mastitis Test (CMT)** of cows in the week prior to drying off. In herds that do not milk record, this can be used as a proxy measure for cell count. However note that it is not as sensitive as milk recording information, and so some cows will be misclassified as “healthy” when they are in fact “infected”.

- **Clinical mastitis records.** Cows with an episode of clinical mastitis in the last 3 months of lactation (or indeed the whole lactation) are more likely to have existing udder infections.

- **Bulk tank somatic cell count.** Although this does not tell you about individual cows, herds with a high bulk tank cell count (over 200,000 cells/ml) will have a higher proportion of high cell count cows, and treatment of existing “infected” cows will be a higher priority.

### What cows are suitable candidates for SDCT?

An individual cow somatic cell count of 200,000 cells/ml is usually used as the threshold for determining the infection status of individual cows:

- **INFECTED COWS:** Cows with an individual cell count greater than 200,000 cells/ml and/or a case of clinical mastitis in any of the last 3 months of lactation require antibiotic DCT to treat this existing infection. These cows can also receive internal teat sealants as well if thought necessary to prevent new infections getting into the udder.
- **HEALTHY COWS:** Cows with an individual cell count less than 200,000 cells/ml in all of the last 3 recordings and no clinical cases of mastitis in the last 3 months can receive internal teat sealants only, as prevention of new infections is key.

**Note** that this individual cell count threshold should be varied according to the individual farm and aims. For example in herds with a high bulk tank cell count and/or high clinical mastitis case rate, it is important to make sure that all of the “infected” cows get antibiotic DCT to clear existing infections. Therefore lowering the individual cow cell count threshold to 150,000 would be appropriate so that fewer “infected” cows are missed.

This decision on which cows get antibiotic DCT and internal teat sealants must be done in conjunction with your veterinary surgeon. Decisions on which thresholds to use and which products to use will depend on factors such as milk production at drying off, teat end damage, main mastitis pathogens present on the farm, dry cow environment, age of cow etc. You must speak with your vet first.

### SELECTIVE DRY COW THERAPY DECISION TABLE

	Cow at drying off	
	↓	↓
	Less than 200,000 cells/ml	Greater than 200,000 cells/ml
Individual cow cell count in last 3 months of lactation	Less than 200,000 cells/ml	Greater than 200,000 cells/ml
CMT at drying off	Negative	Positive
Clinical mastitis case in last 3 months of lactation	None	Present
<b>Cow Udder status at drying off</b>	<b>HEALTHY</b>	<b>INFECTED</b>
<b>Dry Cow Therapy options</b>	<b>Internal Teat Sealant</b>	<b>Antibiotic DCT plus Internal Teat Sealant</b>

For a cow to be classed as healthy she must meet all the criteria in the **green** column of the above table.