



Pfizer Animal Health is a research-driven global pharmaceutical company that offers full technical back-up on their top-quality range of products that have been specially manufactured for the dairy farmer.

The available product range categories include the following:

- Intramammaries
- Reproductive hormones
- Rehydration therapy
- Vaccines
- Intra-uterine pessaries
- Injectable antibiotics (with zero milk withdrawal)
- Anti-bloat drench
- Dips
- Dewormers

**For more information, please contact:
Obad Lukhele | Export Manager: sub-Saharan Africa
Pfizer Animal Health, South Africa**

**Tel +27 11 320 6107 | Fax +27 11 895 1507 | Cell +27 82 826 6541
E-mail obed.lukhele@pfizer.com**

Preventing harmful residues in milk

by Dr Chris van Dijk, veterinarian

No one wants antibiotic-contaminated milk in the marketplace. Owing largely to upgraded testing standards and the availability of new drugs, harmful drug residues in milk are at an all-time low around the world. South African veterinarians and farmers are also playing an important role in the quest to supply wholesome milk without traces of antibiotics or hormones to the end user.



Clearly, dairy producers have a tremendous incentive to keep harmful drug residues out of the milk they sell. However, their concerns can backfire when they allow fear of residues to interfere with sound treatment decisions. Adopting a “no antibiotic” approach could cause serious animal and public health problems for a dairy, and is not prudent given today’s safe dairy antibiotic options.

New modern antibiotics, approved for use in lactating dairy cattle that are now available, have zero milk withdrawal, offer a broad spectrum of anti-microbial activities and is also an extremely safe compound. This prescription drug, available from your veterinarian, has the backing of its manufacturer that a harmful residue in milk will not occur when the product is used according to the label. Producers should never perform extra-label drug use on their own, and veterinarians should always advise producers of the new withdrawal time (if available) for a drug-administered extra-label.

Test the tank, not the cow

To prevent harmful drug residues in milk, the obvious solution would seem to be testing the milk from individual cows to ensure a totally unadulterated product. Unfortunately, it is not that simple. The problem with testing individual cows is that the assays for screening milk for Beta-lactam drugs were not intended for use on individual cows. While none of the tests appear to produce a negative result on an antibiotic-spiked milk sample, many produce “false positive” and “false harmful” results when used to test samples from individual cows.

Many properties of milk from individual cows – including somatic cell count, fat content and viscosity – can cause a false positive. These components do not affect the tests in the same way when diluted at the bulk tank or tanker truck level.

Another problem with testing individual cows is that those most likely to cause a harmful residue are usually not the ones being tested. Most drug contamination risk comes from three types of cows: (1) the recently treated dry cow, (2) the dry-treated cow that freshens early and (3) the treated lactating cow during her milk discard time. None of these cows would be tested for drug residues, and their milk would enter the bulk tank erroneously.

Confirm positive tankers with another test

Some milk screening tests detect residues at lower levels than have been determined to be acceptable in milk. In other words, a low-level drug residue may be detected by an extremely sensitive test, yet not be in violation of established limits. When an initial tanker screening test shows a “positive” for antibiotics, the result should be confirmed with an alternate test. Retesting with the same test is simply a confirmation of the test, not of the milk’s content. Confirming the residue with another test will help sort out the samples that show “positive” on the first test, but are still actually acceptable for sale. In future articles this highly sensitive and sometimes controversial topic will be discussed in more detail. *DMA*

The way we harvest milk from our cows

by Rykie Visser, export and regional manager, DeLaval
(Suppliers of all your milking machine needs)

Tel +27 82 863 0364 Fax +27 12 430 2819



Milk is one of the most important animal products for human consumption. The demand is to produce high quality milk with a composition that meets the consumers' needs.

Milking is not only a procedure where the milk is drained from the cow's teats, it is an event where many mechanisms are activated in the body of the cow. The possibility to interact with the cow in order to produce milk with high quality and optimal yield, is therefore partly through the milking technique and milking routines.

The purpose of this series of milk harvesting articles is to explain the correct way of milking our cows, and to ensure that we can do so for the life-span of the cow, without harming the animal. We will learn to understand how the cow is functioning and see how the technique has succeeded to meet the demands of proper milking.

FIGURES:

1. The most natural way of milking a cow, her own calf!
2. The principle of hand milking – squeezing milk from the teats

1



2



Milking is also an occasion where the farmer often has the opportunity to control and observe the cow. How is the milking machine acting on the teat? The principle of machine milking differs from the principle of hand milking or suckling. During hand milking the milk is pressed out, while during suckling the milk is mainly pressed, and to some degree, sucked out (see Figures 1-3).

During machine milking the milk is sucked out by means of vacuum supplied by the milking machine, an aspect that we will discuss in the next edition of *Dairy Mail Africa* (See Figure 4).

If a constant sucking is applied to the teat, the cow will experience a lot of pain and possible permanent damage to the teats. Therefore the milking machine is constructed so that sucking is interrupted by rhythmical motions (opening and closing) of the liner. Consequently, the teats are exposed to massage and congestion in the teat end is prevented.

Why do we want to milk our cows with a machine? It is obvious that if we let the calves suckle on the cows that we will not benefit from the milk produced from the cow, although we have to make sure that the calf gets the first milk (colostrum) from her soon after birth.

But then we want to harvest the milk ourselves, either for own consumption or for selling it to other people in need for it. By milking with hand we can only milk a certain amount of milk from the cow, and will lose at least 30-40% of the milk, which will stay in the cow's udder. Machine milking will enable us to milk out all the milk from the cow, and in this way we stimulate the cow to produce more milk. We will discuss in the next issues of *Dairy Mail Africa* how you can produce quality milk from your cows and to secure higher milk production. A simple cheap way to milk a few cows is by making use of a mobile milking machine. See Figure 5 for the DeLaval solution.

(Please feel free to contact the author should you need more information on machine milking)



FIGURES:

3. Hand milking into a bucket

4. Machine milking

5. Simple machine milking – DeLaval mobile machine

Different ways

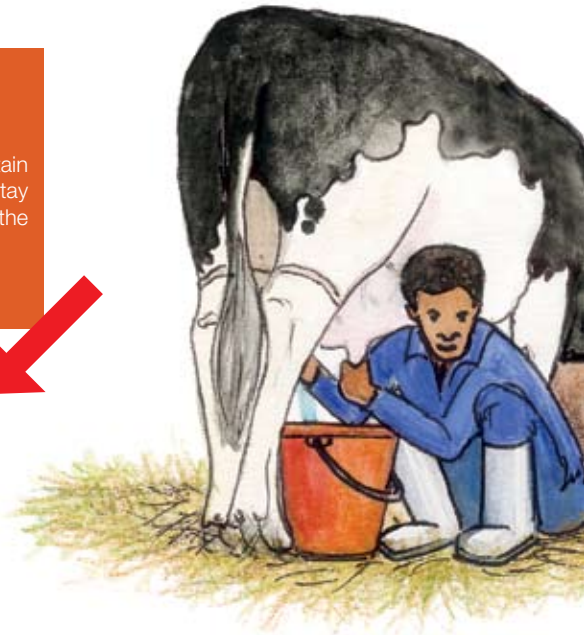


Calf

The most natural way of milking a cow, is when her own calf suckles from her. Make sure that the calf gets the first milk (colostrum) from the cow soon after birth. The colostrum provides the calf with antibodies that will make it strong. Calves that drink colostrum soon after birth will be strong and healthy.

Hand milking

By milking with hand, we can only milk a certain amount of milk from the cow. Some milk will stay in the cow's udder. When a cow is hand milked, the milk is squeezed from the teats.



to milk your cow

Machine milking

During machine milking, the milk is sucked out of the teats by means of a vacuum supplied by the milking machine.

You will harvest 30-40% more milk and also stimulate the cow to produce more milk.

A milking machine must always be in good working order. A machine that is not working well can damage a cow's teats.

A simple cheap way to milk a few cows is by making use of a mobile milking machine.

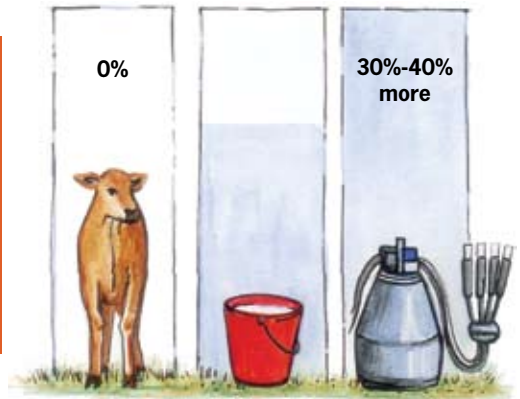


How much milk do you get?

If you let the calf suckle on the cows, you will get no milk.

If you milk by hand, almost a third of the milk will stay in the cow's udder.

If you milk with a milking machine, you will get 30-40% more milk than when hand milking.



 DeLaval



**DeLaval - We have the solution
to your dairy needs from small to large scale
dairy farming**



DeLaval Carello

**Single or double bucket unit.
Stainless steel.
Single phase electricity.**

DeLaval Direct to Can system

**Available from 1- 6 can units.
Herd size 1- 50 cows.
Easy to install.
Affordable.**



**Contact your nearest DeLaval dealer or Rykie Visser at +27 82 653 0364
DeLaval - We drive progress in milk production**