

Making parlour time more profitable and more effective

by Neil Birkett, Rosebeck Services, Roseberry Court, Ellerbeck Way, Stokesley, North Yorkshire TS9 5QT, UK.

Optimism for dairy farming appears to be growing and as an industry we must strive to improve in all areas to make the most of this optimism.

Pleasing news is the fact that there are an increasing number of milk producers who are driving forward and managing their time in the parlour to make it effective and profitable. Naturally there will always be some producers who take the opposite viewpoint, looking at time in the parlour as a chore, rather than an opportunity to drive profitable milk production.

Managing milk quality

The milking parlour is 'the place where milk quality is managed'. On any given dairy unit, improvements come about when good parlour management and good routines and protocols are put into action.

It is no accident that some producers out-perform their nearest neighbour in terms of producing better quality milk on a regular basis.

Improving udder health is at the centre of managing mastitis on any farm. Understanding why and imple-



A well dipped teat needs full coverage.

menting the changes suggested by veterinarian or a hygiene consultant, along with ideas from a successful neighbour, are becoming increasingly important.

As a supplier in the dairy hygiene and health sector it is our responsibility to not only give advice on the appropriate products to incorporate into the system, but to give advice on all of the factors influencing milk quality.

Routines and protocols at milking time are deemed the mainstay of good parlour management, yet producers must also look at what hap-

pens before and after the parlour.

Managing mastitis is more than being good at treating a clinical case. It is much more about reducing the number of new infections:

- Minimise contamination of teat skin and teat ends between milkings.
- Clean and comfortable bedded areas.
- Clean and clear walkways at parlour entrance and exits.
- Adequate feeding space.
- Stop bacteria from entering teats at the start of milking.
- Good pre-dipping and wiping techniques.

– Stimulate and time manage oxytocin release.

- Avoid over milking.
- Improve pre-milking preparation.
- Do not over milk at either the start or end of milking.
- Keep teats clean and skin healthy.
- Post dip with a quality, proven and licensed barrier product to kill all contagious pathogens and protect the teats between milkings.

Your overall aim should be to milk cows efficiently and produce the best quality milk possible.

Consideration should be given to applying consistent cow handling routines. These are very important as cows are creatures of habit and respond best when they know what you expect them to do. The aim should always be to bring cows into the collecting yard and parlour with the least amount of stress possible. Rushing cows into the parlour creates muck splash and that increases the risk of mastitis.

Having an over aggressive backing gate that pushes cows up the collecting yard too quickly also creates stress, producing excessive adrenalin leading to poor milk letdown as adrenalin suppresses oxytocin release.

In summary, aim to get cows into the parlour stress free and clean. If it is important to move cows slowly to achieve this, start a few minutes ear-

Continued on page 24

Fig. 1. No pre-milking preparation. This leads to an initial dump of milk from teat cistern, followed by a long wait for peak flow.

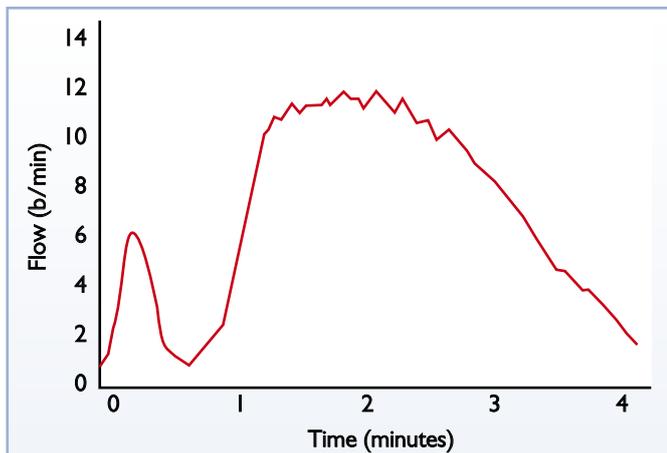
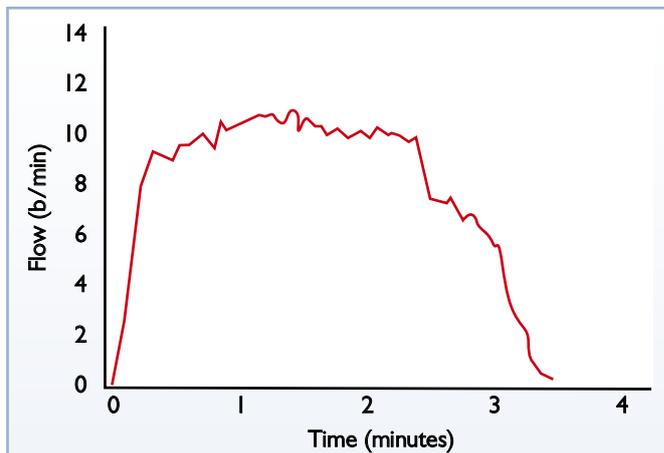


Fig. 2. Good pre-milking preparation leads to a higher peak flow and quicker milking out.





The Minnesota method of ‘Dip, Strip, Wipe and Apply’ is widely practised in pre-milking teat preparation.

Continued from page 23
 lier. Once cows reach the milking parlour the aim is to achieve a very low risk of new infection, again consistency and training count. More bacteria enter the teat at the start of milking to trigger new intra-mammary infections than people realise. On the back of every new or repeat infectious case there is always a somatic cell count response. Therefore every milker must be aware of the correct routine and must adhere to it as preventing new infection is vital. It may require staff attitudes to milking to change.

Proper preparation

Training and encouraging milker’s ‘to do it right’ is important and on many farms this is a significant challenge the owners and managers face. Eating breakfast 20 minutes earlier than your neighbour is scant reward if you are producing below par milk quality and treating too many clinical cases.

Remember, proper preparation prevents poor performance. Does pre dipping add time to milking? It will at first as cows and milkers have

to adapt to a new regime. However, most people note that once settled, milking time is actually quicker.

Does withdrawing milk and treating clinical cases add time to milking?

Again, the answer is yes. Oxytocin release is the key. From first stimulation, pre dipping or touching the teat, milk letdown takes 60-90 seconds to achieve full flow.

No preparation on the other hand leads to initial milk from the teat cistern, then a long lag time before full milk letdown. This is where over milking at the start of milking takes place, damaging teat ends and increasing infection risks.

A fully prepped teat is hygienically cleaner at the start of milking – it reaches a higher peak flow and milks out quicker, resulting in less over milking at the end of milking.

Furthermore, in one trial when ‘no udder preparation’ was compared to dedicated pre-milking preparation of pre-dipping (10+ seconds cleaning and wiping) a lag time of 60 seconds led to the following:

- A reduced milking time of 0.6 minutes.
- Increased milk yield of 0.32 litres with increased peak flow rate.

If the cow gives more milk faster, the unit-on time is less and the damage to teat condition is significantly lowered.

The technique used for wiping the teat is also important. Too often just wiping top to bottom will deposit bacteria and dirt right at the teat end. Once the unit is applied this dirt and debris is blasted up into the teat canal.

It is far better to wipe in a circular motion round the teat with a final thumb wipe or two across the teat end to remove all debris.

Wiping across the teat end can be reasonably aggressive; it stimulates oxytocin release exceptionally well and is very good at breaking down any teat end hyperkeratosis. This is time very well spent.

All milkers should wear nitrile gloves as their hands can often be the biggest source of new infection.

When pre dipping choose a specific, fast-acting pre-dip. Tests have shown that pre-dipping then drying with a single-service towel reduces environmental bacteria on the teat by 85% in comparison to wet towels and/or sprays.

Further tests revealed that up to a 46% reduction in new clinical cases

could be achieved with pre dipping compared to dry wiping only.

When addressing teat skin and teat end condition problems, a pre dip called Alcide Pre Gold, based on lactic acid and chlorous acid, reduced the formation of hyperkeratosis and, when combined with an efficient teat wiping technique, greatly improved teat condition compared to other products.

Damaged teats provide a home for infectious bacteria, as well as often increasing the risk of slower milking and liner slip, further proof that proper preparation and good milking techniques pay dividends in the long run.

Parlour maintenance

Frequent vacuum and pulsation testing should always be carried out. Liner replacement schedules should be followed with potentially more frequent changes in hard water areas.

Poor quality or over worn liners will increase liner slip, increasing milking time and teat damage.

Another point of caution – if teat condition is poor, often the reaction

is to lower the vacuum pressure but this increases liner slip, prolongs milking time and increases teat damage. Variations away from the parlour manufacturer's set levels usually end in disappointment and poor results, so stick to the guidelines.

Post-milking dipping or spraying is an area where opinions will always differ – mainly relating to time issues and convenience.

My view is simple; I believe 8 out of 10 people are poor at spraying cows post-milking both in their accuracy and timing. On the other hand, I also firmly believe nine out of 10 people are good at post-dipping, achieving full and accurate teat coverage with substantially less product being wasted over the udder and belly. I have heard very few veterinarians recommend post-milking spraying over post-milking dipping and as a result will take some convincing to the contrary.

Importance of timing

The important factors are timing, coverage and the quality of the product used. Waiting until a whole line of cows have finished milking before applying the post milking germicide is commonplace. However, when one starts to go down the line of cows to dip or spray, you will invariably find that many cows have had the clusters off for three or more minutes.

This allows the teat skin to dry and makes washing away the milk film and killing the contagious pathogens present in the milk a greater challenge.

It is far better to dip the teats at the time of cluster removal or as close to this point as possible. This can bring dipping time in line with spraying, as doing it this way will not

take any longer than speed spraying a whole line.

This is even more evident if the last two or three cows are sprayed when on the move out of the parlour – if you miss half the teat when they are standing still, how good will you be when they are moving?

More importantly, killing the optimum number of contagious bacteria is vital to break the cycle of re-infection that plagues the dairy industry. You cannot compromise on germicide if you want to break the cycle of re-infection, that is the simple truth.

Milking removes moisture from the teat skin and aggravates the skin surface (over-milking causes real damage) so the post milking application of an emollient is vital to assist in repair, recovery and natural protection. Applying an emollient without compromising the germicidal strength of the dip is often where your product choice can be improved as many teat dip and spray products lose their killing strength as more emollient is included.

The chlorous acid/chlorine dioxide teat dip products in the Alcide range have the highest germicidal protection index. They remain active longer, prolonging killing power. In addition, the ability to include emollients and a barrier without losing germicidal strength is unique.

Should the herd be under any level of environmental pathogen challenge, be it mild or significant, then it is well worth considering a germicidal barrier. These products can only be used as dips due to their increased viscosity.

Dipping versus spraying will always be a bone of contention.

To support dipping, research has shown that dipping with a high quality germicidal barrier teat dip has

reduced new intra-mammary infections by 40% more than spraying – further proof teat dipping outperforms spraying when dedicated time and effort is placed into parlour routines.

The next step is to ensure the cows leave the parlour in the same calm manner in which they entered; leaving at speed or being chased out is not conducive to good management. A speedy uncontrolled exit will again create muck splash as, if the teat canal is wide open post milking for up to 30 minutes, you may be gambling with the risk of new infection entering the udder.

Remember, treating cows and withdrawing milk is not only a loss of profit, it is very time consuming.

Maintaining clean passages in the actual parlour between batches of cows is well practised, but how good are you at keeping areas around the entrance and exit of the parlour clean throughout milking?

Keeping these areas cleaner will greatly reduce the muck splash risk and hence the risk of new infection when cows exit the parlour in a slow manner.

No silver bullet

Mastitis is an extremely frustrating disease that plagues milk producers worldwide. There is no single answer to any individual problem and no overall 'silver bullet'.

Milk producers wishing to maintain good dairy hygiene will be applying good routines and protocols to milking and good luck can prove a useful ally. For the rest of the milk producing world who desire to improve milk quality, the following simple guides may help:

- Keep cows in a clean, dry and comfortable environment.



Dipping is often regarded as slower than spraying. However, the improvement in mastitis control outweighs the time issue after time.

- Ensure cows teats are clean, dry and well stimulated before applying the clusters.
- Only use an effective, proven and licensed germicide post milking.
- Update, clean and continuously check the efficacy of the milking plant.
- Provide a high quality dry cow therapy programme.
- Separate and cull cows with chronic mastitis.

The route for new infection is through the teat canal, so pay attention to the business end of the udder and protect it.

Have you decided on your overall milking goals? Is it to produce high quality, highly saleable milk?

I believe having the desire to produce the best quality milk possible is the way forward for the future of dairy farming. ■