

SECTION IV-1 PARLOURS

1. PARLOURS

Parlours are effective milking management systems on many dairy sheep operations. The ability to milk a number of ewes at one time allows for effective milking times, which is extremely beneficial for time management on-farm, and can also be economically efficient, as a milker's time can be reduced in the parlour. In addition, with a parlour system, the animals are standing at a platform which is elevated from where the milkers stand, which avoids bending to apply milking machines.

Although these are very beneficial systems, it is important to understand the differences between parlours, how to manage each type properly, as well as how to manage ewes through these systems, from pre-milking to post-milking.

Fig. 1. Double-sided low-line parlour, milk from behind



1.1 TYPES OF PARLOURS

Although there are many similarities between parlour types, each system has to be handled in a specific way to ensure that all ewes are being handled properly, and that the upmost care is taken to ensure optimal udder health.

1.1.1 MILKING FROM BEHIND

Parlours in which the ewes are milked from behind are called parallel parlours and are the most common type seen. A group of ewes go through a side of the parlour at one time, and are all milked at the same time, and released from the parlour at the same time. Parlours may be single-sided or double-sided (Fig. 1). With the latter, when one side of parlour is milking, the other side is being prepped for milking, which increases parlour efficiency.

When entering a parallel parlour, ewes walk straight into the parlour, and then when they reach their designated milking stall, they turn 90°, so they are standing away from the milker pit at a perpendicular angle (Fig. 2). These parlours allow for easy access to teats, as the ewe's legs do not block the udder and teats.

Fig. 2. Entering parlour. Milk from behind



One downside to parallel parlours is that the group must all be finished before leaving and allowing the next group to enter. This means that the speed is as slow as the slowest milking ewe in the group.

1.1.2 MILKING FROM THE SIDE

Parlour systems that allow milking from the side are called herringbone parlours and are not commonly used when milking sheep. They are essentially the same style of parlour as parallel parlours, except for the stall positions when being milked. The ewes enter the parlour, and they stop at stalls that are angled slightly outward from the parlour, with the ewes' head being farther away from the milking pit than their hind ends. This positioning allows for faster entry into the milking parlour, which can decrease overall milking time. However, fewer ewes can be milking in the same space.

There are a few issues to consider when milking in a herringbone parlour. The first is the possibility of being kicked by the ewes during milking, as both milking prep and attachment of the milking unit have to be done around the back legs. When milking, it is also important to ensure that the teats are being stripped and wiped on the teat farthest from the milker pit first, following by the teat closest to the milking pit, and that the milker unit is placed on the teat closest to the milking pit first, followed by the teat farthest from the milking pit. By milking in this manner, it decreases the risk of contaminating teats when reaching over to wipe, or attach the milking unit, which in turn decreases the risk of transmitting pathogens to the teats.

1.1.3 ROTARY

Rotary parlours have become increasingly popular in the dairy industry, as these systems maximize milking efficiency on-farm. Ewes enter the parlour one animal at a time. Rotary parlours are circular, and rotate slowly, to allow for ewes to walk into their respective stalls. The parlour rotates them around to be prepped, milked and post-dipped, finishing with exiting the parlour. Ewes may face head-in or head-out.

Milkers prep the animals at the beginning of the parlour rotation, apply the milker unit, and then the ewes are milked for the majority of the parlour rotation. Once the parlour has almost finished its rotation, the milker unit is released; the ewe is post-dipped, and ready to exit the parlour.

These systems should be used with automatic take-offs to assure over-milking does not occur; this is because rotation time, i.e. milking time is set by the speed of the rotation of the parlour.

Fig. 3. Rotary parlour for goats



Fig. 4. Pre-milking pen



1.2 PRE-MILKING PENS

Before being milked, ewes are brought into a pre-milking pen, or holding area that is close to the parlour (Fig. 4). Generally, ewes from a whole pen are brought into the

holding area at one time, so they can stay segregated into their respective groups. Ewes then enter the parlour from this area.

1.3 BRINGING THE EWES INTO THE PARLOUR

Ewes are brought into the parlour from their pre-milking pens (Fig. 2). After the ewes exit the parlour (Fig. 5), an entrance gate will be opened to allow a new group of ewes to enter the parlour side. Animals walk directly into the parlour, and after all stalls are filled, the entrance gate will be closed again, and milking procedures will commence.

For the majority of the time, ewes will walk directly into the parlour without issue, however with younger or problem ewes, a producer may need to help guide them to the parlour. This can be done manually, by walking behind the ewes, directing them into the parlour, or automatically with a crowd gate, which pushes the group towards the parlour. It is important that this be done by moving quietly and not shouting or using physical force. Any nervousness will inhibit milk let-down and reduce milk production (see Section I.1.2.2).

Fig. 5. Ewes exiting from the front



1.3.1 HEAD RESTRAINTS

When sheep enter the parlour and go into their individual milking stanchions, there are two options for the head: the head is not restrained, or their head goes through a headlock system, so they are only allowed minimal movement during milking. A locking headgate prevents ewes from moving excessively during milking and encroaching on other animals.

Fig. 6. Head gates. Ewes can't back out



1.3.2 FEEDING CONCENTRATE IN THE PARLOUR

Mangers are often placed on the other side of the headlocks to offer a concentrate feed during milking. While this occupies the ewes, assures that each ewe has access to grain - and may help to bring nervous animals into the head gate readily, there are risks with this type of feeding that should be appreciated.

Fig. 7. Ewes eating concentrate in parlour



DISADVANTAGES

Eating grain either twice or once per day (depending on how often the ewe is milked) is not good for rumen health. The rumen microflora should be fed concentrate, e.g. grain throughout the day - balanced with forages, minerals and vitamins to keep optimal rumen health (see Section I.2.4). Feeding the grain ration this infrequently may cause ruminal acidosis (also called grain overload when severe, or sub-acute

ruminal acidosis when milder) and can cause the ewes to go off-feed, develop laminitis from the toxins released from the rumen, and the milk to absorb bad flavours. Some producers also report decreased cud chewing and sometimes cud dropping because of the digestive upset caused by this type of feeding.

Additionally, relying on milking time to feed concentrate, may mean that some ewes do not get enough and others too much. With the former, this can lower milk production and may harm reproductive performance if the ewes are too thin. With the latter, the ewes will get fat – and this is a waste of money. The best way to feed concentrate is in a balanced ration as a total mixed ration (Section 1.2.4) and to not feed it in the parlour. Importantly, the dairy cattle industry has abandoned this practice now and cows will still readily come in to be milked.

1.4 TYPES OF MILKING SYSTEMS

1.4.1 PIPELINE

An overview of the components of a pipeline parlour system is provided in Fig. 8. In new parlours, pipelines are generally installed as a low-line system (Fig. 9- right), which runs below the milking units. This system provides a consistent downwards flow of milk to the line, which allows for stable vacuum. There is an option of having the pipeline above the ewes, called a high-line system (Fig. 9 - middle), which helps to keep the line away from the animals, and potential damage. Ideally, the highline will be no more than 1.8 m (6 ft) above when the milker stands in the parlour.

Pipelines should be sloped (a minimum of 1%) towards the receiver to help with the flow of milk, and be properly sized so the milk flows through the pipe without blockages and also ensure that the slugging action during the wash cycle provides enough volume and force to adequately clean all interior surfaces of the pipeline and system.

Fig. 8. Adapted from Dairy Practices Council publication DP 70

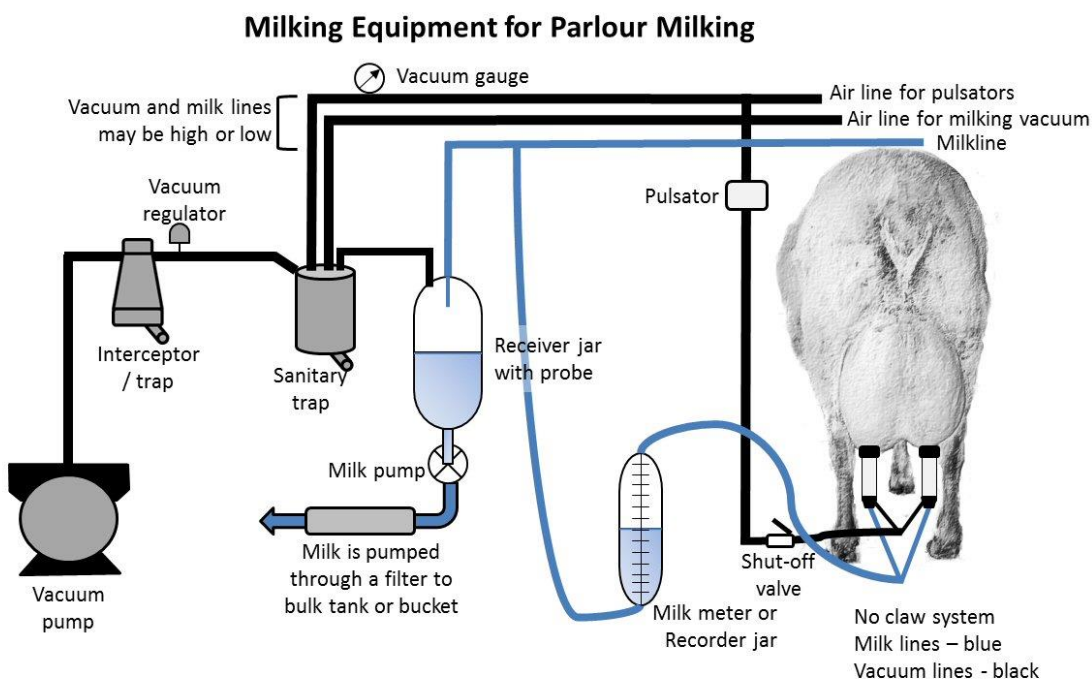
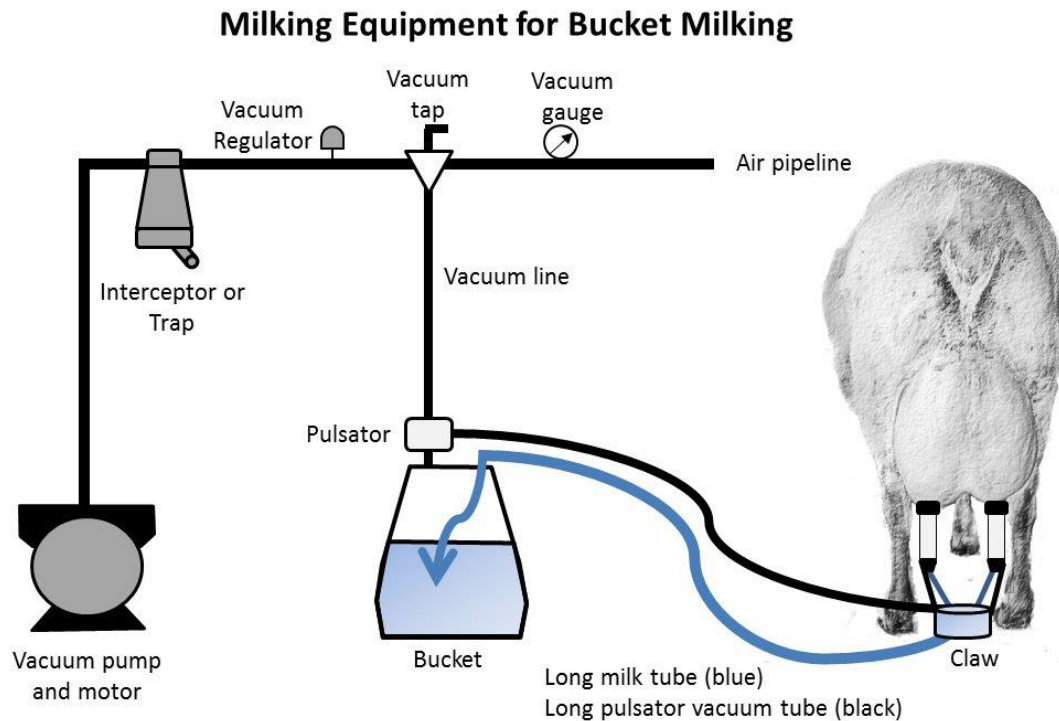


Fig. 9. Left - lowline; Middle - highline; Right - bucket milking system



1.4.2 BUCKET

Fig. 10. Adapted from Dairy Practices Council publication DP 70



A bucket system is commonly used with smaller dairies. It is also used to milk animals whose milk needs to be kept out of the tank (e.g. treated ewes, ewes with mastitis, fresh ewes) (Fig. 9- right). The milk storage unit is a sealed sanitary bucket so that vacuum can be used to pull the milk from the teats and hoses into the bucket (Fig. 10).

1.4.3 HANDMILKING

In this system, each ewe is milked into a pail with the milker sitting on a stool or raised platform beside or behind the ewe (Fig. 11- left). Ewes may be milked from the back or side. It is laborious but requires much lower financial input. Hand-milking of sheep and goats is common in Ontario.

1.5 RELEASING THE SHEEP

At the end of milking, sheep can exit the parlour in a variety of ways. In a parallel parlour, a rapid exit is a common system, where the front gate rises after milking, and all animals exit the parlour at the same time down the return lane to their housing pens (Fig. 11 - right). This exit system can also be done in batch or gang exits, where only a portion of animals are released at each time. This type of system tends not to use headgates. Exiting can also be done with the ewes backing up once released from the head gates. The head gate release is usually at one end of the parlour and all ewes are released at once. In a herringbone parlour, ewes exit the parlour in a single file and travel down the return lane back to their holding areas.

Fig. 11. Left – hand-milking; Right - hydraulic gate for releasing ewes from parlour

