

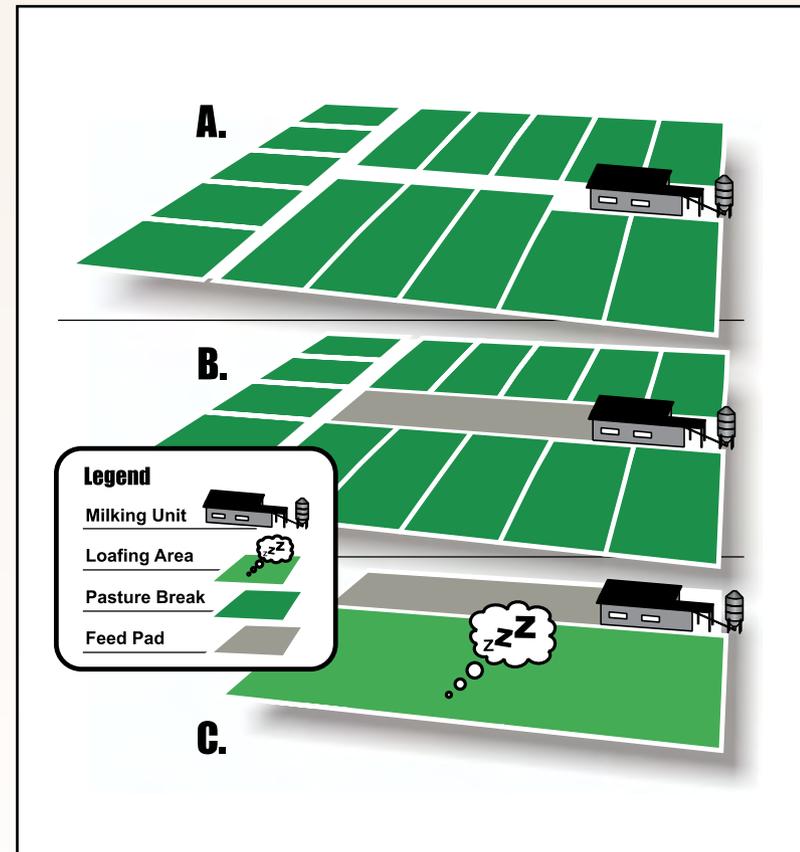
AMS in pasture based systems – Australian conditions

Farmers moving to automatic milking systems in Australia should continue to maximise their pasture utilisation as it still remains the cheapest source of feed. The on-going impact of drought means that many will also consider a feed pad and associated loafing area to be essential too.

Research undertaken at Camden has been aimed at understanding how an AMS can be managed under Australian conditions. The broad options for Australian automatic systems are:

- A. Pasture based system – no feed pad
- B. Pasture based with feed pad
- C. Australian style intensive feeding

Many farms could expect to change between systems at different times of year or from year to year depending on climate, input prices and milk prices so infrastructure needs to allow the necessary level of flexibility.



Experience at Camden suggests that a set up that allows for three pasture breaks a day provides the most flexibility and can help ensure good cow traffic around the farm. Having a feed pad also increases your options and is considered highly desirable in times of drought.

Pasture based system - no feedpad

If the system does not incorporate a feedpad, supplementary feed can be provided in the paddock.

If pasture is allocated in small 'portions' (30-50% of the desired daily intake made in any one paddock) when cows have depleted this feed source, they will move out of the paddock. This will create an opportunity for cows to be milked at regular intervals.

Accurate pasture allocation is essential to ensure that the amount of available pasture is 'just right' to encourage cows to walk out of the paddock in search of more feed within an appropriate time interval.

Over allocation and under allocation of pasture is likely to impact on milking frequency and machine use efficiency.

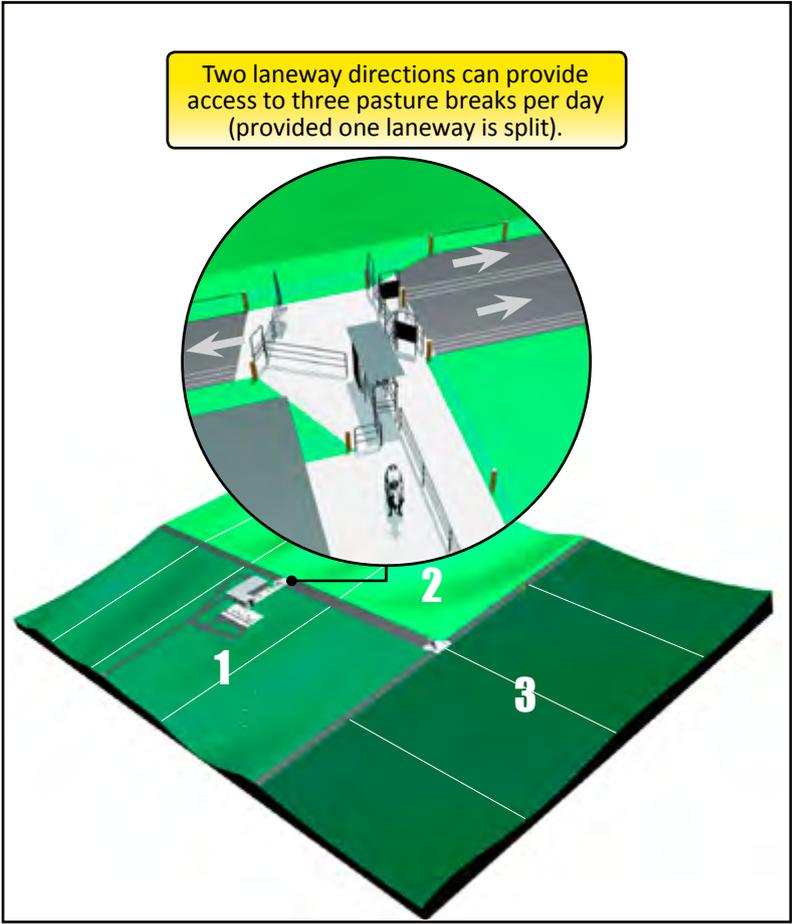
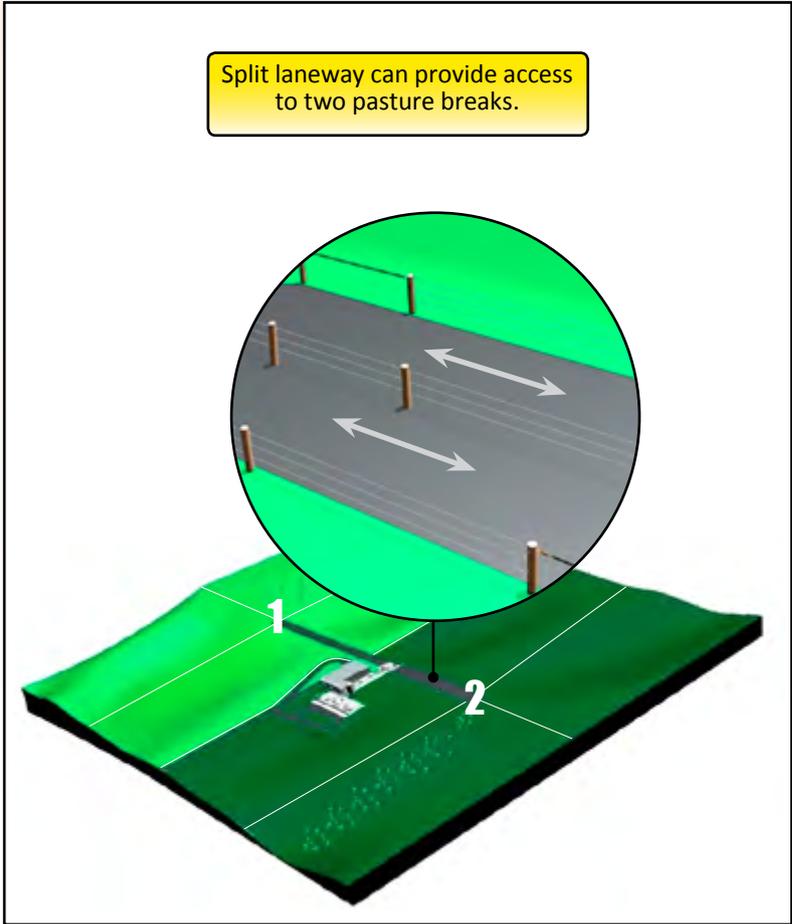
Farms can be set up to offer two or three new pasture allocations each day.

Be aware that offering three breaks encourages more cow movement around the farm and potentially, more traffic through the milking unit.

Three breaks a day results in a more even machine use (distributed) pattern over a 24-hour period.

Laneway set up	Access issues...
I want to work with what I've got...	<p>In this case your current layout determines how many pasture breaks you can have.</p> <p>If you currently have only one central laneway and you are not keen on changing the set up, then two pasture breaks is the only option.</p> <p>If your current layout has more than one key laneway then it may be possible to adopt a 'three break' system.</p>
I don't mind spending to get the laneways right...	<p>Here, the first task is decide how many pasture allocations you wish to have and then determine the layout that best achieves this.</p> <p>If you currently have a central laneway but don't mind taking on the re-development challenge, it is possible to create a 'three break' layout.</p>

Traffic is controlled using automatic drafting gates – cows are directed to holding yards, new pasture breaks or back to the same paddock after passing through the milking unit.



Pasture based system with feedpad

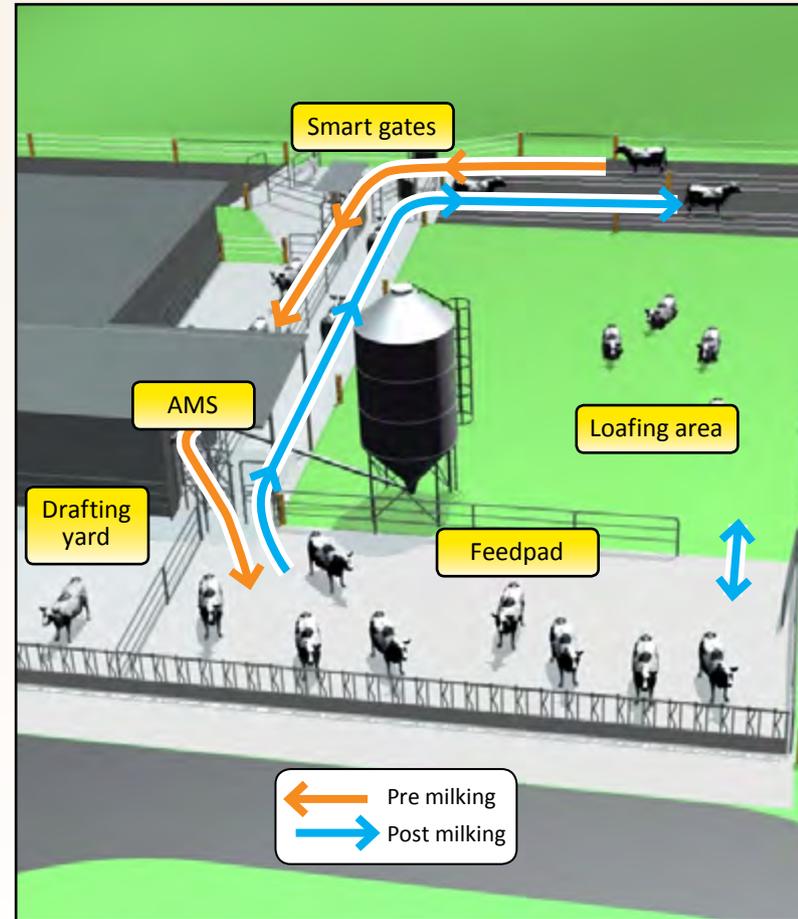
A feedpad with provision for loafing effectively acts as a third 'break' of feed i.e. two pasture breaks plus feedpad access. Note though that if there is no loafing area, then the feedpad will only be able to be used as a supplement to the given pasture breaks of the day.

The management of cow traffic depends on your set up.

- If you have a feedpad but no associated loafing area, be aware that cows will tend to leave a feedpad to access a comfortable loafing area for rumination.
- If your feedpad does have a loafing area associated with it, the management strategy to encourage cow movement will need to be different. In this case, the feedpad could be set up allowing cows to move from the loafing area to the feeding area via one-way gates. Cows could then move through a drafting gate to gain access to the loafing area after feeding.

Setting up entries and exits so cows can have access to feedpads before and after milking provides the greatest flexibility.

Access to feed pre-milking will mean intake is not limited by how often the cow is milked.



Above: The coloured lines show an example of the pre and post milking pathways cows can take to access the feedpad and paddocks.

Australian style intensive feeding

In an Australian style intensive feeding system, the feedpad, loafing and milking units are all in the same area.

Cow traffic can be controlled using one-way gates placed between the feeding and loafing areas.

In a semi-controlled cow traffic system, cows have free access via one-way gates from the loafing area to the feeding area. After leaving this area, cows pass through an automatic drafting gate and are drafted either to milking or to the loafing area if they do not have milking permission.

An alternative approach involves locating drafting gates prior to the feeding area. This way cows can be drafted through the milking unit prior to gaining access to the feed area or directly to the feed area if they don't have milking permission.

A well designed intensive feeding system can allow for grazing if conditions are right.



Above: Cows can be seen loafing in the background in a dry paddock adjoining the feedpad.