

How many calves can your calf house accommodate safely?

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For every calf house there is a magic number – that is the number of calves that it can safely house. Keeping more than the magic number can put your calves at risk. The number depends on:

- The floor area of the house.
- The ventilation and drainage in place.

Floor area

Calves up to 100kg require a pen area of at least 1.67m² each. Better performance and less disease are associated with 2-2.5m² per calf with a cubic air capacity of 6-8 cubic metres per calf. The smaller the floor area, the fewer calves that we can house safely in the building. If we keep an excessive number of calves in a house, we increase the risk of causing diseases like scour and pneumonia.



Adequate ventilation

- Fresh air sweeps out the dust, ammonia and bugs, but it is important to control the speed at which it enters the house.
- Need an outlet and an inlet:
 - » The outlet area required is 0.04m² per calf.
 - » The inlet area required is two to four times the area of the outlet. Refer to the AHI CalfCare leaflet – Existing Calf Shed Assessment for more information [click here](#).
- Keep dust to a minimum – rolling out bales of straw is more effective at keeping the dust load down than shaking up straw. Care is needed when using a straw blower as dust creates irritation and makes it easier for bugs to become established in the airways of the calf.
- Yorkshire boarding is preferable to space boarding or vented sheeting. It provides draught free air into the shed without allowing in the rain. It also helps keep calves warm as wood provides more insulation than tin.
- A calf house should not share an air space with older animals. Smaller group sizes (8-12) in each pen are easier to manage.
- A roof pitch of 22° (a rise of 1 in 2.5) is recommended for optimal ventilation.
- Calf sheds should be sealed to 4 feet (1.2m) in height to prevent draughts from occurring. A draught is a flow of air of greater than 0.5m/second that gets in below the animals' height.
- Calves perform best at 15-20°C as they do not generate sufficient heat to insulate themselves from colder temperatures until their rumen is fully developed (around weaning).
- Deep beds of straw are an effective way of protecting the young calf from the cold. They should be able to 'nest' so that their legs are covered by straw when lying down.
- Breathable washable calf jackets are useful for a dry new born calf up to one month of age- from then on they are starting to generate more of their own heat as the rumen starts to develop.



Drainage

Moisture must be controlled for two reasons because it:

- Increases survival and spread of bugs.
- Decreases the temperature in the calf house.

To allow good drainage the slope of the floor should be 1:20 and it should be smooth so that water does not pool. Areas of wet concrete should be kept to a minimum. When the calves are in their pens in the shed, it is advised that you do not wash down the calf house floors, or utensils such as buckets in the calf house itself, but do so in a separate preparation area. When the shed is emptied, deep cleaning with power washers, steam cleaners and appropriate disinfectants should be carried out as soon as possible afterwards. Once cleaned out and disinfected a long rest period is an effective means of ensuring that bugs are eliminated from the calf house.

If your number is less than the number of calves you need to house

- Sell calves earlier than planned – remember calves must be retained on farm for at least two weeks.
- Provide temporary accommodation – each bay of a conventional hay shed (15 ft. X 22 ft.) for example can accommodate approximately 15 young calves comfortably.
- Move some of the older calves outdoors and provide in situ shelter or access to a shed at night time or in wet weather.

