

# Transition Cow Management

The Cafre dairy unit has been designed to best meet the education and training needs of agriculture students and the dairy industry, to enable the delivery of knowledge and technology transfer and to comply with all relevant legislation and animal welfare recommendations.

This is one of a series of technical notes aimed at farmers and students. The notes are designed to provide the level of technical detail required to assist farmers in adopting technologies and practices demonstrated in the new Greenmount Campus dairy unit on their farm business.

During the transition period from dry cow to early lactation, the dairy cow is vulnerable to stress and subsequent production diseases such as mastitis and lameness. Cow management and facilities should be focused to minimise stress during the transition period.

## Benefits of extended resting time on straw post calving:

- Local AFBI (Hillsborough) research results have shown that when heifers are housed for a minimum 2 days on straw after calving, lying time during the first day in the cubicle house almost doubled
- Lying times in dairy cows can decrease during the days after calving

- Reduced lying behaviour in the post calving period may lead to subsequent lameness problems
- Dairy animals lie for longer on straw than cubicles
- Allowing post calving cows adequate resting time on straw may improve welfare, particularly for heifers

## Size of straw-bedded pens

When calculating the size of straw bedded pens, consideration should be given to the profile of the herd calving pattern and individual cow size. Target space allowance required for loose housed stock can be found in Table 1.

**Table 1. Space allowances for loose housed dairy cows**

Animal Weight (kg)	Bedded area (m <sup>2</sup> )	Feeding area (m <sup>2</sup> )	Total area per cow (m <sup>2</sup> )
500	6.0	2.5	8.5
600	6.5	2.5	9.0
700	7.0	3.0	10.0

Source: Kingshay 2007

The distance from the bedded area to the feed area should be as short as possible. Long narrow bedded areas are best. This allows cows to walk on and off the straw bedded area without

having to walk over large areas of straw. Straw areas should be no more than 10m to 12m wide as shown in Figure 1.

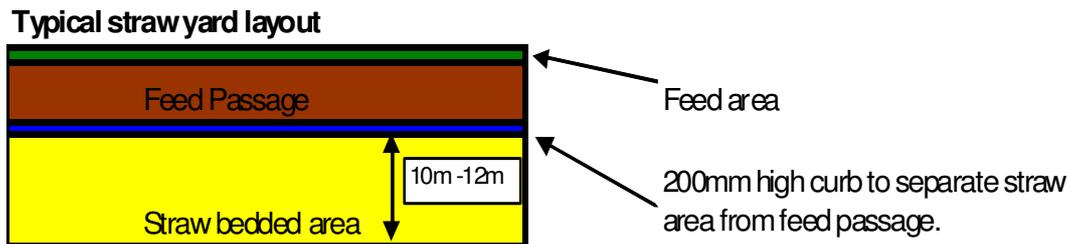


Figure 1. Straw bedded pen layout

**Division between straw and feed area**

A 200mm x 250mm kerb division between the straw bedded and the feeding area is recommended to reduce the amount of slurry dragged into the bed by the cow's hooves. It also has the advantage of providing an edge to scrape against, aiding mechanical clean-out. Above the kerb is also a good location for water drinkers and pen dividing gate posts.

**Feed passage and feed barrier**

The feeding area for cows on straw should always be a separate non-bedded area with good access from the straw area. Cows should not feed on the straw bedded area as this will increase straw soiling and therefore bedding requirements. The feeding passage should be 3.5m – 4.0m wide.

Depending on the accessibility of the handling facilities, consideration should

be given to the installation of self-locking feed barriers to restrain cows for health examination.

**Ventilation**

Ventilation in the building must be adequate to allow stale, humid air to escape and be replaced with clean, dry air. This will help reduce the incidence of respiratory diseases and help keep the bedding dry. This will also reduce the load of mastitis pathogens in the bedding. Good drainage from straw bedded pens is essential. A 2% - 5% slope is recommended to avoid water/urine pooling on the pen floor.

**Location of water troughs**

It should not be possible for a cow to drink from a water trough while standing on the bedded area. A water trough fixed to a suitably sized wall panel is sufficient to ensure cows can only drink from the feeding area side.

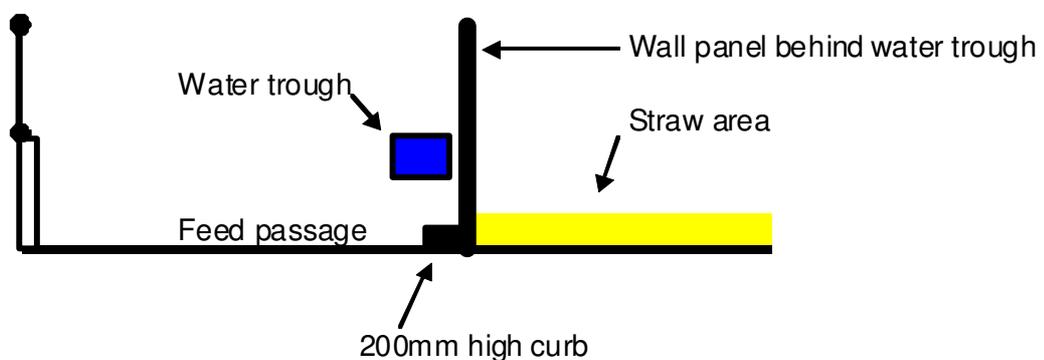


Figure 2. Straw bedded pen cross section detail

### **Managing straw-bedded pens**

Management of the straw area is critical. There should be careful attention to stocking density within the pen to ensure sufficient space requirements per cow. Stocking densities for cows on straw should follow the Table 1 recommendations on target space requirement.

- Straw usage should typically be 10kg to 15kg of straw per cow per day. However, this will be affected by pen design, cow diet, and straw quality.

- Cleaning out every 2 to 3 weeks is recommended to ensure clean and dry straw pens.

### **Moving cows from the dry cow group to the pre-calving pen**

- Movements should consist of groups (ideally 2-3 cows) of animals as opposed to singles in order to promote subgroup behaviour and minimise stress.
- If possible, movements of animals should ideally occur on a weekly basis to allow for social stabilization within the group.



Figure 3. The 'Maternity Wing' of the Cafre Dairy Unit