

Cabriolet beef in the southeast

Finishing beef cattle on an unroofed slatted unit in Wexford

Kay O'Connell
Teagasc Drystock Advisor, Wexford

Paddy and Bridget Murphy, along with their son Padraic and daughter Sinead, finish up to 1,500 cattle each year on their farm near Arthurstown, in south Wexford. The animals consist of continental and early-maturing breeds with some Friesian cattle also finished.

Over three generations, they have tried several housing types and have settled on unroofed slatted units as the best to finish cattle in. Today, in their farmyard, you will see a the slatted unit built in the 1970s with a low roof and resulting poor ventilation, a slatted unit and a slatted shed with straw lieback built to grant specifications in 2007, in addition to the more recent addition of unroofed slatted units.

All are in use today, but the Murphys' preference is for the unroofed slatted unit. Paddy said: "I'd love to have another three of these and take down the roofed units."

Why? "We've found that the cattle are healthier on the unroofed slatted unit," continues Paddy. Many will argue that it depends on the conditions in the sheds you are comparing with. Paddy agrees but he has compared

the different sheds in his own yard and believes the unroofed slatted unit works best.

"We even built an outwintering pad but decommissioned it as we found managing it difficult in some weather conditions, in addition to the cost and disposal of woodchip," says Paddy.

The Murphys source stock from all over the southeast and buy direct from farms and from marts. Stock that have come from many different sorts of houses are mixed on arrival. "We have found that regardless of where they were previously the cattle that are put onto the unroofed slatted unit have less coughs and snots than those in the roofed slatted units which means they hit the ground running in terms of performance," says Padraic.

"I can come home in January or February with a load of cattle out of sheds, put them on the unroofed slats and don't have a bother... or on a mild, muggy morning in November/December I would nearly be afraid looking into the roofed houses as there will always be something coughing whereas the cattle outdoors on the slats are content and thriving."

Design

The Murphys have two unroofed units in place. The first was put in place four years ago with the most recent one added in 2017. It consists of a slatted tank 32m x 10.1m x 2.7m deep, with 2.4m high concrete walls around three sides with sliding doors at each end. A feed trough runs the length of



Caption

the tank. Metal cladding is pivoted on the bar above the feed trough to protect the feed from the weather.

The cladding can be bolted shut when the troughs are being filled with feed. There are three pens and the unit holds 120 finishing cattle which works out at 2.75m² per animal. This is within the Department of Agriculture, Food and the Marine recommended stocking rates for slatted housing which specify an animal area of 2m² to 2.5 m² per animal >275 kg on slats (Table 1).

According to the Murphys, the key to the success of the unroofed slatted unit is shelter. The stock are sheltered on all sides which is very important. Slat mats are essential in Paddy's opinion: "Cattle don't mind what's coming down on top of them once they have comfort beneath them and they aren't in a draught."

Research shows that cattle spend about half of their day lying. Lying time can be from 60 to 80 minutes' duration with about 10 to 15 periods per day. How long an animal spends lying each time will depend on the housing environment but total lying time is fixed.

Paddy insists his cattle are cleaner on slats than they would be on straw –

unless very large quantities of straw were used. Researchers in Teagasc in Grange, Co Meath, recently did an analysis of 18 studies which looked at the effect of floor type on performance, lying time and dirt scores of finishing beef cattle.

They concluded that concrete-slatted floors are adequate housing systems for the performance of finishing beef cattle when compared with straw bedding. They also found that placing rubber mats on concrete slatted floors had no effect on performance, lying time or animal cleanliness.

However, they did conclude that further research examining different rubber mat types is needed. It must be noted that they were comparing roofed slatted houses. There appears to be little research done on unroofed slatted units.

As the Murphys' unit is unroofed, regulations require that all the rain that falls on the tank needs to be collected. The minimum slurry storage capacities required by legislation will vary from 16 to 22 weeks depending on where you are located in Ireland.

In Wexford, there is a requirement for 16 weeks' storage for slurry. Therefore, the additional storage required to account for rainfall when

compared with a roofed slatted tank is 151m³ (33,000 gallons). At a cost of €48.27/m³, the additional slurry storage capacity for not covering the tank would cost €7,288.

Roofs are costed at €50/m² but can range from €45/m² to €60/m², for

standard steel frame structures, built to conform to DAFM specifications. At €50/m² to roof, the Murphys' unit would cost approximately €16,000. For Paddy, the benefit is not the potential cost saving: "It's the improved health and performance of the stock in the unit – as we mentioned earlier they are less like to develop respiratory infections or pneumonia which means less treatment costs."

The provision of housing that meets all of the animal's requirements is one of the key factors to profitability on beef-finishing farms. Cattle should have access to water and feed to meet their needs, freedom of movement, sufficient light for normal behaviour, adequate ventilation and clean conditions. If any of these areas are inadequate, animal performance will be reduced.

For the Murphy family, unroofed slatted units are meeting these requirements. Regardless of the type you choose to build, when designing accommodation facilities for fattening cattle consideration should be given to labour availability, feeding system, type of diet, group size, drinking system, and facilities for handling and storage of the manures produced.



Padraic and Paddy Murphy with Kay O'Connell

Table 1: Department of Agriculture, Food and the Marine recommended stocking rates for slatted housing (no cubicles)

Livestock	Animal area (m ² per animal)
Dairy cows	4m ² per cow
Suckler cows	2.5m ² to 3m ² per cow
Sucker cows with calves	Allow 1m ² extra for spring born and 1.75m ² for autumn-born calves
Other cattle over 275kg	2m ² to 2.5m ² per animal
Smaller cattle under 275kg	1.2m ² to 1.5m ² per animal