

sheep

The last straw

Due to poor harvest conditions the price of straw has risen to such an extent that it is now difficult to justify its use as animal bedding. But there are alternatives

Michael Gottstein

Head of Teagasc Sheep Knowledge Transfer Programme, Animal and Grassland Research & Innovation Programme

Bedding in non-slatted floored sheep housing helps to store faeces/urine, keep the sheep clean, reduce the spread of potentially harmful organisms and, not least, to provide the animal with a bit of comfort.

The amount of bedding required will depend on diet type (in particular its dry matter), floor type (gravel v concrete), ventilation and issues such as leaking water troughs and leaking eave chutes and down pipes. For a 12-week housing period, budget for between 0.4 and 0.7 of a 4x4 round bale per ewe. The lower usage levels will be most likely achieved in well-ventilated gravel-floored sheds where sheep are fed hay or haylage.

While straw is the most popular bedding option for housed sheep there are alternatives available. It is important to note that currently there has been very little research work done on alternative bedding materials in sheep systems so there will be a degree of trial and error for flock owners.

Woodchips, chopped miscanthus, peat and sawdust are probably the best options but wood shavings, paper, sand and other tillage by-products also have potential. Each material



has advantages and disadvantages and the cost of these materials will be very much influenced by transport costs. Local availability is often a key factor in the total cost.

Woodchip

In the UK, a number of on-farm demonstrations were carried out to look at the effectiveness of woodchip as an alternative to straw bedding on sheep farms. In general, it was found that woodchip was a suitable bedding material for both ewes and fattening lambs with high levels of animal welfare and cleanliness recorded. A few pointers to keep in mind:

- To be effective, woodchip must be made from timber that has a moisture content below 30%. The type of wood used had no effect.
- Woodchip, when used as bedding, requires a lot of handling and con-

sequently is only suitable for use in buildings with machinery access to bring the chip near to its ultimate destination.

- Woodchip was not able to cope with stock on low dry matter diets as effectively as straw – this is probably a bigger issue for cattle than sheep.
- Woodchip needs to be ploughed in the following year or composted for two to three years to allow it to break down fully before being land-spread.
- Woodchip is voluminous and requires dry storage which can be a problem on some farms.
- Chip generated from untreated, recycled, wood must be free from nails, glass, etc, which could cause injury to the animals. Chip from treated wood is not recommended.
- Apply woodchip to a depth of 10cm and replenish with 5cm at intervals as required.



The amount of bedding required will depend on diet type, floor type and ventilation.

Key messages

- There are a number of alternative bedding materials.
- Woodchip is the material that appears to be most frequently used, but this product may present challenges with disposal as it will have to be ploughed in.
- Regardless of which product is used flock owners should take stock of what they have on the farm (both in terms of fodder and bedding).
- A minimum amount of straw will be required in most cases for bedding in lambing pens.
- If in doubt, contact your local advisor who will be able to assist you in working out what you need.

ish with 5cm at intervals as required). However, as peat is very absorbent, animals would benefit if the bedding could be rotavated at intervals.

Peat is a versatile product when it comes to land spreading and does not have the same limitations as woodchip. On the negative side, however, it would appear difficult to see how ewes could lamb on peat bedding but that is more a gut feeling rather than based on any research information.

Flock owners who plan to use peat as bedding should consider having some quantity of straw available to bed the sheep at the point of lambing and for use in lambing pens. You will need about four to five round 4x4 bales of straw per 100 ewes for lambing pens.

Sawdust

There appears to be very little work done on using sawdust as sheep bedding. Sawdust is very absorbent – the challenge appears to be to prevent a dusty environment and dust getting stuck to fleeces. In a Spanish study, sawdust was found to be a suitable (but expensive) method of bedding fattening lambs. Sawdust can be used under straw bedding to extend the working life of the straw.

Out-wintering

Keeping sheep out at grass for longer periods will reduce the amount of bedding required. Important points to keep in mind when out-wintering sheep are:

- Move feeding points regularly to avoid poaching and listeria.
- Avoid causing rutting/poaching with machinery.
- Do not graze grass that you have closed for the spring as you will need this after lambing.

• As a rough guide, the cost of wood chip works out at around €20/m³ to €25/m³ excluding transport costs.

Miscanthus – elephant grass

Miscanthus is a tall stemmy grass which is grown as a fuel (bio-energy) and is also being used to bed horses. Again, depending on geographic location miscanthus is worth considering. It can be purchased in bales (typically 8x4x3) which makes transport and storage relatively



straightforward.

On the down side, to be effective the miscanthus should be chopped or shredded before being used as sheep bedding which requires access to such equipment.

Peat

Peat appears to be a useful alternative and while commonly used on cattle farms there is very little work done on its effectiveness in sheep housing. From a practical point of view, I recommend similar applications of peat as with woodchip (ie apply to a depth of 10cm and replen-