

Teagasc Notes for week ending Friday 7th August 2020

Management and Storage of Round Bale Silage (Deirdre Glynn ASSAP)

Baled silage is made on over two-thirds of all farms in Ireland and accounts for one third of all silage made. It is the primary silage-making system on both beef farms and smaller-sized farms.

Silage effluent is extraordinarily toxic — it is 200 times more potent in water than human sewage, so the damage it can cause to watercourse eco-systems is profound. If the effluent leaks from a bale onto the ground and reaches a watercourse, it uses up all the oxygen and fish are killed. It is very difficult to contain and it can find its way into springs; wells and boreholes and public water supplies.



It is vital that you do not store round bale silage in a field within twenty metres of a watercourse or water body including rivers; streams and drains or dry drains.

Safe Stacking Location

The bales may only be stored within 20m of a watercourse within a farmyard, if there is adequate facilities that have the ability to collect and store all discharge, otherwise a penalty will be imposed on payments. This is a requirement under the **Nitrates Regulations**.

Baled Silage when stored correctly can be of better quality, with less wastage than pit or clamp silage, although it costs more to produce. This makes it important to store correctly.

A high-quality crop, good quality bale wrap, with a good wrapping system will have been wasted if the bales are not handled, stacked and stored correctly or left in an unsuitable environment.



Storing bales on their rounds (as illustrated above) is not recommended for stacking higher than one layer. Stacking in more than one layer deforms bales, the seal on the film overlap opening through the constant heavy

pressure, which can cause secondary fermentation of the silage reducing nutritional value of the feed and encourages mould growth.

Deformed bales are more labour intensive to feed out. Bales stacked on their round are more prone to puncturing due to less wrap in the rounds than the flat, especially when stored on concrete surfaces



Storing on the ends (as illustrated above) is the advised choice, as the bales have up to 4x more wrap on the ends than the sides, which provides better protection from puncturing, an improved ensiling process and better nutritional value to the animal. Bales that hold their shape are easier to feed out and safer for transporting.

The dry matter content influences the stability of the stack so you should limit the height of the stack. The maximum stack height of the round bales should be roughly three times the bale diameter. Follow the guidelines for wrapped bales:

- Below 25 % dry matter – stack in a single layers;
- Between 25-35% dry matter – stack two bales high;
- Between 35-45% dry matter- stack up to three bales high

Care should be used when transporting and stacking bales to minimise damage and deformation. Most bale handlers or bale clamps are designed for handling bales. Choice of bale handler can significantly reduce the damage caused to adjacent bales when picking or stacking.

Safety must be a top priority. While freshly-wrapped, stacked bales may seem ‘structurally sound’, bales can sag and move over time and may become hazardous

Protect

- Fence off the stored bales from livestock, etc. Painted markings on bales do not provide fully secure protection from bird damage; they can significantly reduce the scale of damage. Use white emulsionpaint (not oil based) on black plastic. 'Eye' shaped designs are more effective than X or O designs.
- take appropriate steps to reduce the risk of rodents
- inspect the bales regularly for any damage to the plastic film, and repair damage immediately

Feeding

- Bales can be fed to cattle at any stage after wrapping
- Aim to have bales consumed within two days of unwrapping

- Physically remove and discard mouldy bales or parts of bales and do not offer to livestock. Wear an appropriate face-mask, etc., when handling mouldy forage, and adopt appropriate hygiene precautions afterwards.

Collect plastic

Collect the plastic wrap after removal from bales and dispose of it in an environmentally friendly manner.

