BAR TECH

May 2020

Silage

Silage is not just cut grass, it is the basis of your whole winter rationing and as such, should be treated with as much importance as milling wheat or malting barley. The aim of good silage production is to maximise yields at a target quality (which will be dependent on the target stock class) whilst balancing fertiliser inputs and soil quality.

Start by having an annual forage plan detailing land available for silage, number of cuts, target tonnages and quality requirements

Soil quality is fundamental for ANY crop. Aim to maintain soil pH at 6.2 or above and Index 2 (Moderate in Scotland) for P & K status and monitor soil structures regularly. Please see our Bar Tech February for more information on soil quality.

What's in a ton of silage?

1 ton of grass dry matter will contain around 6.9kg phosphate (P_2O_5), 30kg of Potash (K_2O) and 6.2kg of sulphate (SO_3).

5t DM/ha has long been an industry standard so using that as an example, you will need 35kg phosphate, 150kg of potash and 31kg of sulphate. A healthy sward of perennial ryegrass should be capable of producing a response to up 120kg N/ha in order to achieve that yield and with a protein level of 15% (where cut at the appropriate growth stage).

A few rules should be observed when calculating the silage and fertiliser policies including:

1. N usage by grass should be calculated at 2.5kg/day plus 7 days to avoid high nitrates in silage e.g. 120kg would be used up in 55 days
2. To avoid luxury uptake of Potash, no more than 80-90kg of K_2O should be applied for first cut. Any deficits should be addressed later in the season.
3. Analyse any slurries and farmyard manures and factor the nutrients and availabilities into the annual nutrient plan.

An excellent resource for helping calculate the silage and grazing fertiliser regimes is the AHDB Nutrient Management Guide, formerly known as RB209.

How do I maximise my homegrown silage production?

As well as having the fundamentals in place, it's important to have the right grass and forage crops sown to realise the target yield.

- Perennial ryegrass swards are a good option for longer term rotations of 5 – 6 years, requiring fewer cuts, less overall yield and where grazing is also important.
- Medium term rotations of 3 – 4 years can be satisfied by hybrid ryegrass based mixture such as Hybrid 4X4 or Hybrid Cut & Graze. Hybrid ryegrasses provide a yield advantage over perennials but do not persist as long.
- Drought prone areas should also consider alternative products such as Barforage Nutrifibe a mixture of ryegrasses and soft leaved tall fescues.
- Also for drought prone areas but also those with good free draining soils looking for higher protein silages from a short – medium term rotation are Barforage Protein Sile - a red clover based ley, and Artemis Lucerne
- The ultimate silage mixture capable of achieving over 18t DM/ha in its first year is Barforage High D. Italian ryegrasses are the elite in terms of silage production, capable of high yields from early in the season and are ideal for short grass rotations of 2 years.

Barenbrug's top tips for making high quality silage

Clamp Silage

- Have grass tested pre-cutting for quality and N content.
- Cut at the right growth stage for optimum quality.
- Check the mower is set at the correct height to leave long enough stubble, minimum of 5cm. This will allow the grass to recover quicker.
- Don't cut or make silage when it's raining.
- Mow with a machine which conditions at the time of mowing i.e. a mower conditioner.
- Wilt, then rake to release any ground moisture. Early cut silage may take a day or more to dry down; later cuts (could nearly be hay), maybe 4 hours.
- If it gets rained on, ted it out and start again.
- Cutting to the correct length with the forage harvester is critical.
- If the clamp isn't clamping well (compressing tightly), your cut length is probably too long. Cut wetter material longer, drier shorter.

Baled Silage

- Plastic wrap breaks down under UV light; the cheaper the plastic and the fewer the layers, the quicker it will break down.
- Heavy bales may be heavy with water - there's not a lot of feed in water (if you are buying ask for a quality test. If you are feeding to your own stock, get a quality test - know what you are feeding out).
- Baling too quickly, "we can do more bales per hour", could just indicate that the bales aren't packed as well as they should be.
- Inoculant use is recommended as it enables the grass to reach the right condition to ensile more quickly.
- Inoculant won't turn poorly made, or too wet silage into great silage!
- Replace the harvested fertility
  - Use N to get the grass growing again.
  - Apply K. 30% DM silage removes 7.2kg of K per ton of fresh weight. 2 cuts would need approximately 326kg/ha of K (261 units/acre) replacing.

Free BarForage Catalogue

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