



Producing high feed value grass silage

Need/issue: Forage feed value

Aim: To present key management decisions required to produce high feed value silage

How to implement:

The following are key factors in the production of high feed value grass silage:



1. Fertilizer application:

- apply 120 and 100 kg nitrogen per hectare for first and second harvest
- base phosphorus and potassium application on soil analysis and crop requirement. Up to 26 kg potassium is removed per tonne of herbage DM harvested.

2. Date of harvest:

- digestibility declines by 3.3% units for each one-week delay in harvest
- harvest swards prior to seed head emergence and prior to accumulation of dead material at the base of sward canopy

Description:

Silage feed value is a combination of **nutritive value** (e.g. energy concentration) and **intake potential**, both of which are impacted by digestibility

Silage feed value is a key factor influencing the profitability of many systems of sheep production because of its **impact on:**

- forage and thus nutrient intake
- ewe body weight gain and condition score
- lamb birth weight
- lamb body weight gain
- level of concentrate supplementation required to achieve a given level of animal performance

For sheep, targets are: dry matter (DM) digestibility > 75%; digestible organic matter in the dry matter > 71%; metabolisable energy concentration > 11.4 MJ/kg DM



3) Wilt

- target DM concentration of at least 25% for clamp silage and 30% for baled silage
- rapid wilt is essential, the key factors affecting drying rate are solar radiation, wind speed and spreading herbage evenly on the ground
- spread herbage after mowing

4) **Reduce forage chop** length but digestibility is the key factor influencing feed value

5) **Ensile, consolidate and seal rapidly**

Prerequisites and/or limits

To achieve high feed value silage crops may be lighter than normal at harvest but a second harvest from some of the area will ensure adequate feed supplies

Country: Ireland

Dairy and meat sheep

Category of Animal: ewe, replacement, lamb

Topic:

- Health
- Nutrition
- Management

Level of solution:

- Knowledge
- Practical

Source of information:

<https://www.teagasc.ie/news--events/daily/sheep/high-feed-value-grass-silage-.php>

Podcast: <https://share.transistor.fm/s/f85c9464>

https://www.researchgate.net/publication/283658009_Silage_production_-_factors_affecting_the_utilization_of_ensiled_forages_by_beef_cattle_dairy_cows_pregnant_ewes_and_finishing_lambs_A_review

https://www.teagasc.ie/media/website/publications/2012/IGA-Focus_on_digestibility_for_high_levels_of_an.pdf

<https://www.teagasc.ie/media/website/publications/2018/Segment-003-of-TF-Jan-Feb-18-FeedingEwesCropped.pdf>

