Agriculture and Food Development Authority

Notes

Teagasc Notes for week ending Friday 2nd April 2021

Fertiliser for first cut silage

Grass silage has a large nutrient demand and adequate nitrogen (N), phosphorus (P) and potassium (K) are essential for maximising the grass yield to produce enough winter feed.

Fertiliser Requirements:
N is the key driver of grass yield and a good crop of grass silage (5t/ha of DM) will require 80 - 100 units of N per acre from slurry and chemical fertilizer. Grass silage will take up on average 2 units N per day, therefore, you need to apply N at least 50 days before cutting to ensure full crop N utilisation. P and K are also essential to maximise grass yields. Look at your most recent soil test reports to determine the P and K requirements for silage fields. A crop of grass silage will remove approximately 4kg of Phosphorus per tonne and 25kg of Potassium per tonne of grass DM

Cattle Slurry:
Slurry is an extremely valuable and low cost source of N, P and K that can provide a large proportion of crop P and K requirements. The nutrient content will vary depending on how watery the slurry is (Dry Matter (DM) Content). An application rate of 3,000 gallons/ac of good-quality cattle slurry (7% DM) will supply enough P and K to grow a good crop of grass silage. It is crucial that nutrients from slurry are deducted from the overall crop requirement for N, P and K. Spreading the slurry using trailing shoe or band spreader (LESS) instead of the splash plate will also increase the availability of N from the slurry.

Potassium (K)
Where more than 72 units/acre of K are applied in one application, large amounts K may be taken up by grass which may upset the K: Mg: Na balance in herbage. If your soils are low in K from recent soil results and the amount required is greater than 72 units, only apply build up in autumn. It is important to consult your nutrient management plan when deciding on levels of Potassium required. High levels of K in the ensiled silage can lead to issues with milk fever in spring. It is well worth getting your silage tested in winter for this reason.

When to spread
Apply crop N, P and K requirements when closing silage fields in early April. Where cattle slurry is applied, delay the top-up fertiliser applications for one week. In wetter soil conditions, fertiliser N can be split 50:50. For example, 50% in early April and the remainder seven-to-10 days later to reduce the risk of N losses.

Sulphur
Sulphur (S) deficiency is most likely on light free-draining soils with low soil organic matter. Grass silage crops require 20kg of S/ha per cut. The application of S to soils where it is required will improve grass DM yields and quality as it helps to maintain an optimum N: S ratio and N to be used more efficiency.

Lime
Grassland should have a soil pH of 6.2-6.3. Having the right soil pH is worth an extra 7 units/acre of N. For example, if you spread a bag of 18-6-12 per acre with pH less than 6.0, you are actually only getting 9-3-6 from your bag of fertiliser. It is too late to apply lime before of 1st cut silage, but plan to spread it after 1st cut in late May/June.

Lime can be spread on bare grazing ground at any time during the year, so take the opportunities to spread as they come. If you have 9 acres grazed off, you can spread an 18t tonne load at 2 tonnes per acre. Since January 2021, it is a requirement under the nitrates regulations that all farmers stocked at 170kg/ha or above must apply lime.

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