Teagasc
Agriculture and Food Development Authority

SIGNPOST
Farmers for Climate Action

Signpost Worksheet

LIMING PLAN

Apply lime based on soil test report results.

WHY SPREAD LIME?

1. Release up to 70kg of soil nitrogen (N)/ha/year for free. This will allow chemical N use to be reduced and consequently reduce greenhouse gas emissions.
2. Some 65% of soils on drystock farms and 39% of soils on dairy farms don't have the right soil pH.
3. Increasing soil pH will allow you to grow 10-15% more grass (5 to 8 bales of grass silage per year).
4. The economic return is high. For every €1 you spend on lime on a drystock farm, you get back €4.50. For every €1 you spend on lime on a dairy farm, you get back €8.

THE FACTS AND ADVICE ABOUT LIME

How much?

- Test soils on a regular basis (every three to five years) to determine lime requirements.
- Only apply lime based on a recent soil test report.
- Do not exceed 7.5t/ha in a single application.

When?

- Prepare a farm liming plan. This will identify where lime is needed, and when and at what rate it should be applied.
- Lime can be spread all year round. Having a lime plan in place will open up opportunities to get it applied over the year when conditions are suitable and land is available.

How often?

- Apply lime often as per the soil test report.
- On very acidic soils, apply 50% now and the remainder in two years' time.
- Apply lime to 20% of the farm annually.

Which lime to use?

- Calcium ground limestone is the most common: it's fast acting (less than three months) and offers rapid pH adjustment.
- Magnesium (dolomitic) ground limestone is available: this is somewhat slower to react but has a higher liming value.
- Granulated limes: finer limes (less than 0.1mm particle size) and very reactive –apply as maintenance product whensoil pH is >6.0.

Lime and high-molybdenum soils

- Soils with high-molybdenum (Mo) status may give rise to copper deficiency in grazing animals.
- Increasing soil pH to >6.2 increases Mo availability.
- To reduce elevated Mo levels, maintain a somewhat lower soil pH of 6.0-6.2.

Lime and slurry/urea

The type of N in slurry and urea is ammoniacal N and prone to loss if applied to freshly limed soils. To avoid N loss the following is recommended:

- leave seven days between applying urea or slurry and applying lime;
- leave three months between applying lime and following with urea or slurry application; and,
- no interval required between liming and NBPT urea.

Avoid applying lime to species-rich grasslands to maintain swards' species biodiversity.

Liming Plan

TWO-YEAR LIMING PLAN

Field name	Soil pH	Lime advice (t/ha)	Field size (ha)	Best time to spread	
				Lime required 20__	Lime require 20__
			Total ha		
			Total lime required in tonnes		

Note: apply a maximum of 7.5t/ha in single application of ground limestone; where >7.5t/ha split the application – 50% now and 50% in two years' time. Leave a minimum of three months between lime application and closing for grass silage.

The Signpost Programme is a collaborative partnership of farmers, industry and State agencies, working together for climate action. For more information please visit: www.teagasc.ie/signpost . The Teagasc Climate Centre is a virtual centre to co-ordinate agricultural climate and biodiversity research and innovation across Teagasc.