



# The Fertilizer Association of Ireland

## Fertilizer Advice Under 2020 Drought Conditions

Forecasted rain is very welcome at present as soil moisture deficits have climbed to drought conditions, especially on the east and south east. Soil moisture deficits (SMD's) range from ~40mm in the south-west to a high of 80mm in the east (as reported by Met Eireann). This will seriously restrict plant growth especially in the east and the plant demand for nutrients (N, P, K & S) will have greatly reduced due to lack of soil moisture over the last 7 to 10 days. Predicted rainfall should ease the situation somewhat but this will depend on significant reductions in SMD's to bring fields back to field capacity. This should help the uptake of plant nutrients and a return to plant growth.

See right: Met Eireann Soil Moisture Deficit Map for well-drained soils on 7<sup>th</sup> June.

### Grassland Management

#### Silage Cutting

Where silage has not been cut it is likely that grass nitrogen levels are low due to poor N uptake from dry soils conditions. In this instance it is wise even if crops are light to test grass nitrates (N) and if sugars are high and N is low, cut as soon as possible weather permitting. Grass quality will deteriorate daily as the plants will produce more stem in times of drought stress.

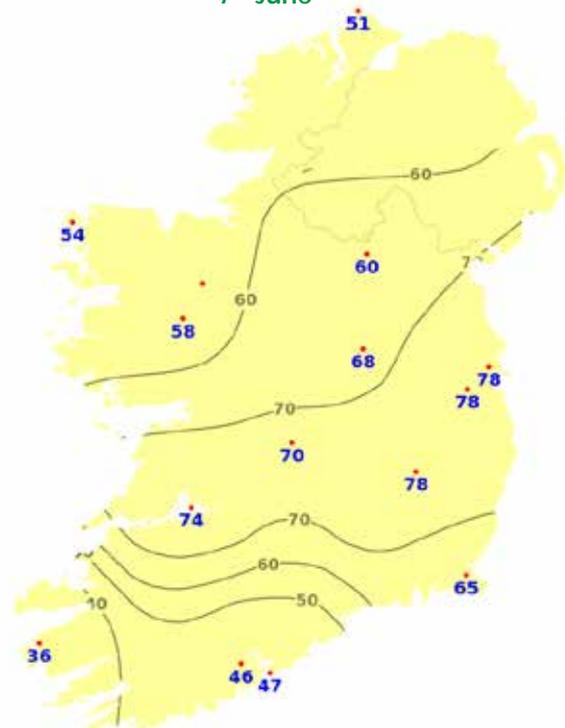
#### Post 1<sup>st</sup> Cut Silage

**Cattle Slurry** - With expected improvements in soil moisture levels over the coming days, apply cattle slurry on silage fields to replenish major nutrients such as P and K's and maximise the recovery of slurry N with damp conditions. Where a 2<sup>nd</sup> cut of silage is planned apply 22 to 25m<sup>3</sup>/ha of cattle slurry and apply a N & S type fertiliser such as CAN + S or Protected Urea + S to supply remaining crop N requirements. Second cut silage crops yielding 3t DM/ha will require 75kg N, 12kg P, 75kg K & 12 kg S/ha.

**Fertiliser** - Forecasted rain will activate any fertilisers (N, P, K or S) applied over the last number of weeks. This fertiliser will be available and will kick start plant growth once rain fall returns later in the week. Where no fertiliser has been applied to date on 2<sup>nd</sup> cut silage fields, apply recommended rates of N, P K & S to increase yields where there is an absence of slurry. For example, N-P-K blends such as 13-6-20, 15-3-20 followed by N + S fertilizer will be required especially where slurry has being applied.

### Well Drained Soil Moisture Deficit

7<sup>th</sup> June





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### Grazing

Grass is continuing to grow on the grazing platforms but at a reduced rate (45 to 55kg DM/ha). Forecasted rainfall will help grass recovery growth rates. Check PastureBase Ireland (PBI) for grass growth rates in your location. Continue to apply fertiliser where there are good growth rates (>50kg DM), improvements in SMD's and grass covers are present. Apply N at a rate of 0.5 to 1 unit N /day as a guideline where conditions allow. Adjust / reduce N applications rates on a case by case based on grass growth rates.

### Lime, Phosphorus, Potassium & Sulphur Advice

1. **Lime**- Check soil test results and consider using the current dry conditions to address low pH levels on a proportion of the farm. Apply lime to silage ground that is not intended for second cut silage. Also tightly grazed paddocks or ground that has been earmarked for reseeding in the autumn should get lime based on soil test recommendations.
2. **Phosphorus (P)** is a key driver of root growth, development & grass tillering. Availability of P will help stressed plant roots to recover and promote water and nutrient uptake. In addition it will promote grass tiller development and help swards recovery after the dry spell. Therefore apply low to medium rates of P fertiliser with next fertiliser application.
3. **Potassium (K)** has a major role to play in the uptake and regulation of water in the plant. Now more than ever sufficient levels of soil available and applied K will be essential for the plants to withstand the drought conditions and aid rapid recovery.
4. **Sulphur (S)** Consider the application of sulphur to increase the efficiency of N uptake and utilisation. Sulphur is very important at this time of the year. Sulphur aids in plant protein production and therefore grass that has sulphur will remain higher in protein and retain feeding quality later into the season.

### Conclusion

1. Fertiliser applied in the last 3 to 4 weeks will be available once soil moisture levels recover
2. Have fertiliser available in farmyards ready to go as soil moisture levels improve.
3. Apply cattle slurry on silage fields where conditions are suitable, spread chemical fertiliser as soon as field greens up or rain is forecast. Complete fertiliser application for 2<sup>nd</sup> cut silage over coming week.
4. On grazing ground, check grass growth rates on Pasture Base Ireland (PBI) and adjust N rates to supply between 0.5 to 1 units N/day depending on grass growth. Apply fertiliser where grass growth rates are good with improving SMD's based on predicted rain fall over coming week.
5. Apply low to medium rates of P and K on grazing ground to help root recovery, water uptake and grass growth.
6. Apply N + Sulphur or a "High-N" NPK compound + Sulphur.
7. Consider lime application to address low soil pH levels.