

This year we had approximately 250 sample to be analysed for our Sulphur Survey. Please see below for the results. Each result will be advised on an individual basis.

Optimum Result

Analysis	Result
Nitrogen (%)	1.90 Feed 2.10 Milling
Sulphur (%)	0.12
N : S RATIO	12.4 : 1 - 15.4 : 1

What is so important about Sulphur?

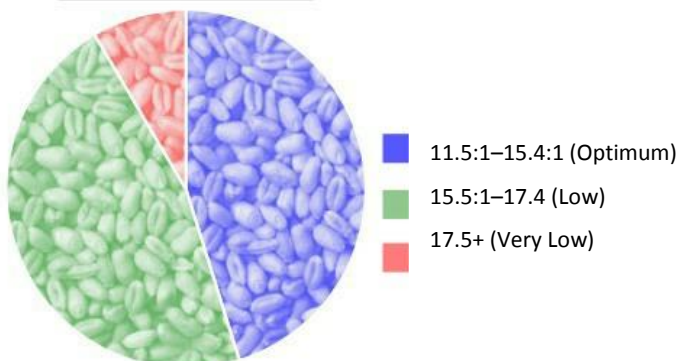
- Sulphur is present in all crops and plays an important role in plant metabolism. Sulphur is essential for the formation of plant proteins, amino acids, some vitamins and enzymes.
- Most compound fertilizers containing sulphur also contain nitrogen, highlighting the close link between these two elements.
- Sulphur is essential in the production of milling wheat. Low S levels in bread are detrimental to health.

Conditions which Sulphur deficiencies are more likely to occur:

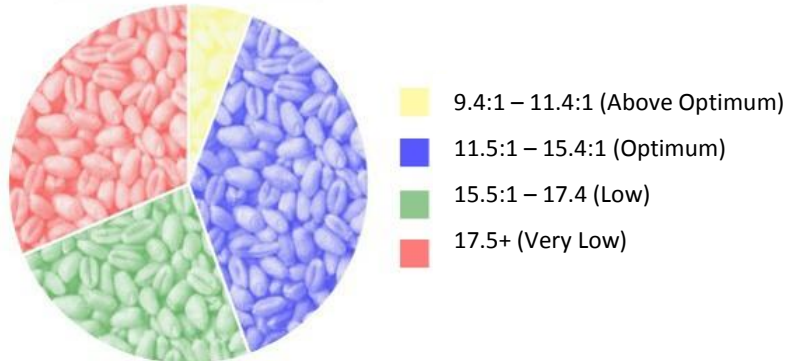
- Low sulphur content due to; Light and sandy soils with little soil organic matter.
- Sulphur leaching due to; high rainfall during winter.
- Low mobility of sulphates caused by a dry spring.
- Low temperature causing a low mineralisation rate.
- Low input of organic matter and mineral sulphur.

Sulphur Survey Results

N:S Ratio 2015



N:S Ratio 2016



What action is needed?

All crops need sulphur every year, as little comes from the atmosphere any more.
 Wheat – Where response is likely, apply 50-70 kg SO₃/ha in early March to early May.
 Barley – Where response is likely, apply 50 kg SO₃/ha in mid-March to mid-April.
 Oilseed rape – Apply 75-100 kg SO₃/ha to all OSR grown on mineral soil in late February to early March.
 Applications of Sulphur should be assessed every year.

Options for applying Sulphur:

Solid Fertiliser

The YaraBela product range contains sulphur as calcium sulphate which is highly soluble and reaches plant roots quickly. In addition, calcium sulphate, unlike ammonium sulphate, does not reduce the amount of available nitrate in the formulation.

YaraBela SULPHAN (24% N + 15% SO₃)

YaraBela AXAN (27% N + 9% SO₃)

YaraBela SULFAN (26% N + 35% SO₃)

Liquid Fertiliser

When applied at the right rate and in the right conditions, Chafer liquid fertilizers ensure an accurate and balanced uptake of required nutrients into the crop. Chafer liquid fertilizers utilize balanced nitrogen sources, fully available phosphorus, potassium and sulphate forms.

CHAFER NURAM 35 + S (35% N + 7% SO₃)

CHAFER N19 + 19% SO₃

CHAFER N25 + 14.3% SO₃

Sulphur Granules

Specifically formulated TIGER 90CR® sulphur fertilizer (0-0-0-90) is designed to quickly degrade, disperse and convert to sulphate throughout the growing season.

Sovereign Sulphur

Sovereign breaks down physically with rainfall, but only converts to plant useable sulphate as soils warm up in the early spring.

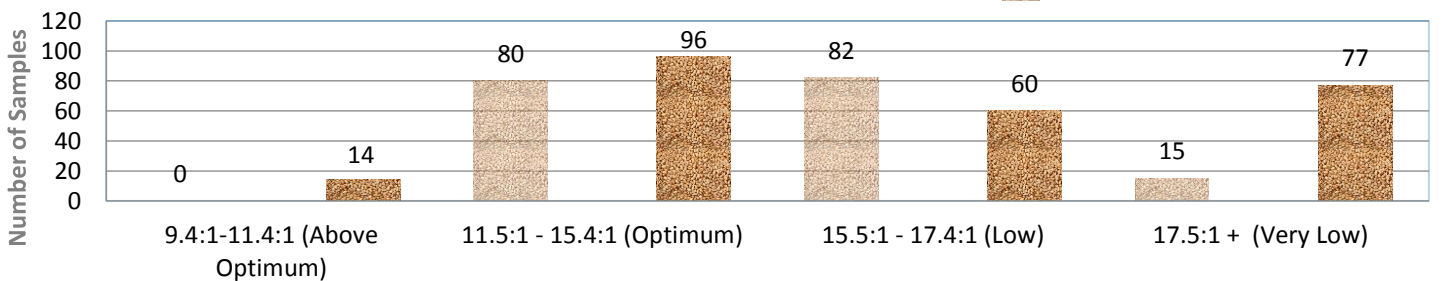
Contains 90% S (225% SO₃)

Manure

There are modest levels of sulphur in manures. However, if Autumn applied sulphur is prone to leaching and may not be available for crop uptake in the Spring. If Spring applied, manure applications need to be considered when calculating crop requirements.

Comparisons to last year:

N:S Ratio 2015 vs 2016



Summary of results:

1. Where growers applied the right amount of sulphur the ratios improved.
2. We need to keep sulphur levels up, to ensure the crop has enough to reach its full potential.
3. Sometimes too much nitrogen was applied in relation to the amount of sulphur, affecting the ratio.
4. We need to look more carefully at soil conditions/rooting to ensure sulphur uptake as the crop can only take up sulphur through its roots.
5. Assess the use of organic manures as a source of sulphur.
6. Results will be discussed on an individual basis.

Kind Regards,
Jessica Smith

Cobb Agri and Hutchinsons would like to acknowledge the support of Lancrop Laboratories and Yara.

