# *Soil Nitrogen Bulletin*

*March 2015*

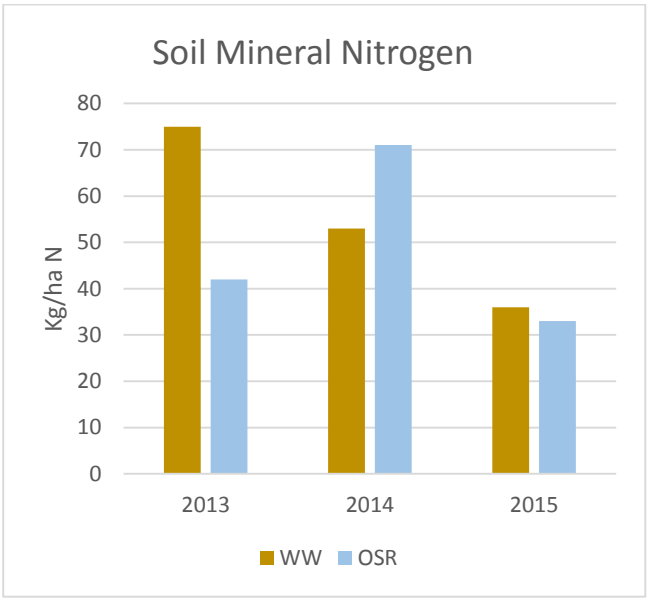
**Just when we thought that soil Nitrogen levels were about as low as possible in 2014, the results from our 75 samples taken in late February for 2015 are lower still. This underlines just how wet a winter we have experienced yet again, but also raises some important implications for nitrogen fertiliser strategy for the season ahead.**

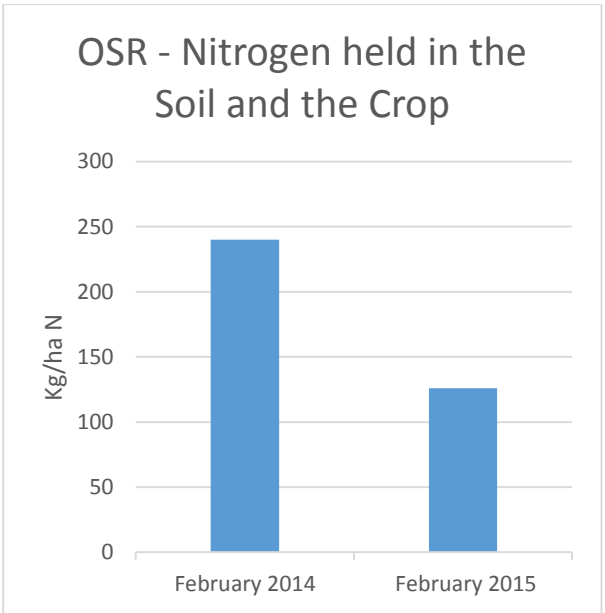
The average amount of Soil Mineral Nitrogen available this spring is just 38 Kg per hectare, compared to 54 Kg/ha a year ago. Our results also reveal that the crops themselves contain less nitrogen than in 2014 due to slower autumn and winter growth.

Unlike the previous two years in which levels of Soil Mineral Nitrogen have varied significantly between wheat and rape crops, we can confidently say that nitrogen levels in 2015 are low across the board, as the graph on the top right highlights.

Whilst the wet winter has undoubtedly resulted in losses through nitrate leaching, the generally high yields in 2014 will also have removed significant amounts of nitrogen from the soil.

Studying the results further also highlights that manure has not had as positive an impact on soil nitrogen as in previous years (this seems to be the case for all types of organic manure), suggesting that a large amount of the available nitrogen was leached over the winter. This is shown in the graph overleaf on page 2 on "*Soil Mineral Nitrogen & Manure Use*".



This is particularly true in oilseed rape, where the figures show that a lot less nitrogen is present in rape fields than last year, when both soil and crop N content (SNS) are taken into account (see graph at the bottom of the previous page).

This is hardly surprising, given the large canopies that built up in 2013/14. We would add however that overly large canopies do not necessarily equate to higher yields.

In common with previous years SMN is very predictable by soil type. This year heavy soils contained on average 52kg N; medium soils 39kg N; and light soils 28kg N. Thus, lighter soils are more prone to leaching as we would expect.

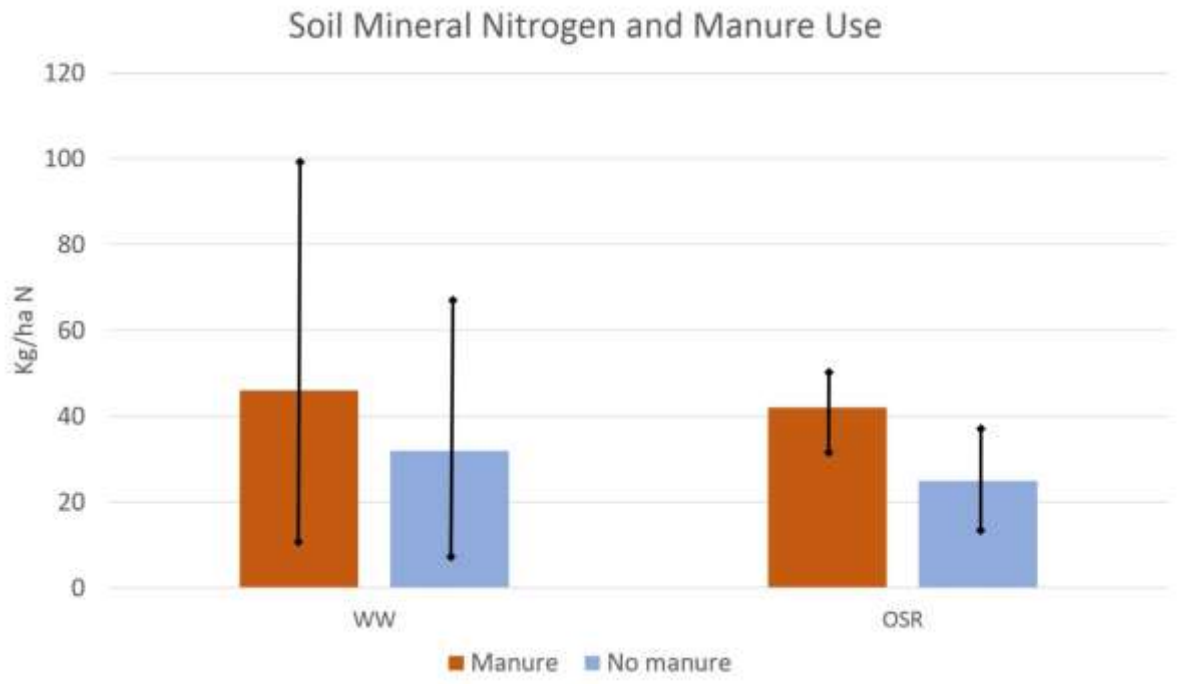
*"Generally high yields in 2014 had depleted soil nitrogen levels before winter even started"*

## *So what does this mean for nitrogen strategy this spring?*

The economic optimum rate of nitrogen will be greater this year as a consequence of low soil nitrogen. The implications of this will differ between farms, but growers should consider increasing the planned dose where this is practical. This will be easier for farms using liquid N than for those who have already purchased solid product.

Nitrogen doses will also need to be applied slightly earlier to meet the crop's requirements. This is particularly important in second wheats, the area of which has increased significantly across CCC members' farms this year.

The increased area of Skyfall will also need careful management to ensure that economic optimum proteins are achieved, and those who grow other milling varieties that have perhaps not applied Nufol or late N should consider making preparations for this on the likes of Cordiale, Gallant and Crusoe.



## A quick note on the replacement for the Soil Protection Review…!

The SPR Booklet is now obsolete. But before your get too excited, a slight preview on what will be replacing them:

> GAEC 4 – Reasonable steps must be taken to maintain "Minimum Soil Cover", unless there is an agronomic justification for not doing so. In many cases there is now a requirement to have a green cover in place prior to spring cropping (this can be regenerated stubble).
>
> GAEC 5 – Measures must be in place to limit soil erosion, and there is a requirement to remove compaction immediately post-harvest.

Growers need to be aware that unlike the SPR booklet, even if steps have been taken to mitigate erosion there is still the possibility of fines being imposed if the affected area is greater than 1 ha & these areas need to have been recorded prior to any inspection.