Part of the Cawood Scientific Group

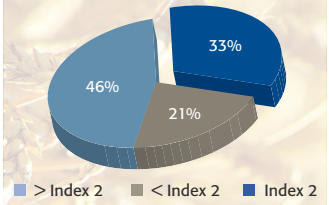
Soil Nutrient Status

Data Summary 2011 – 2012

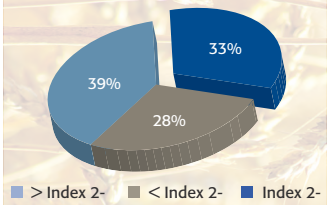
For the 2011/2012 soil summary we have again split our focus on the four different crop categories so that you can get an indication of how the soils for your crop type have been performing across the country. We have also included the trend in mean P, K and Mg levels which goes back over the last 17 years. This year's summary also looks into trace elements. On the following page we have provided a review of the percentage of trace element deficient soils sent to NRM over the last 10 years.

Arable and Forage Soils

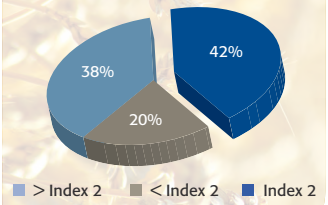
Phosphorus 33% of soils at target value



Potassium 33% of soils at target value

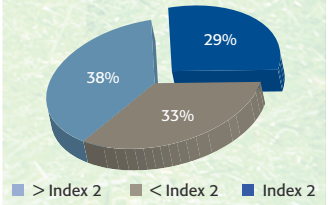


Magnesium 42% of soils at target value

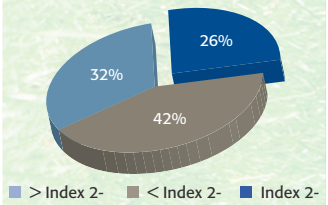


Grassland

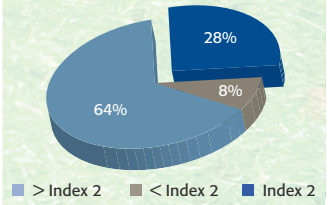
Phosphorus 29% of soils at target value



Potassium 26% of soils at target value

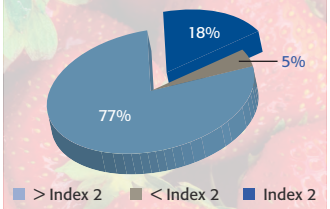


Magnesium 28% of soils at target value

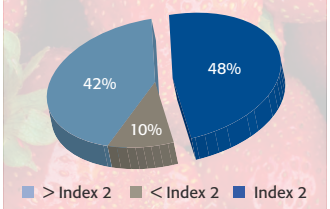


Fruit, Vines and Hops Soils

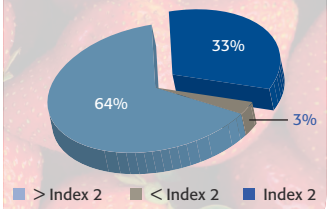
Phosphorus 18% of soils at target value



Potassium 48% of soils at target value

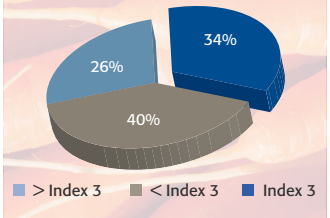


Magnesium 33% of soils at target value

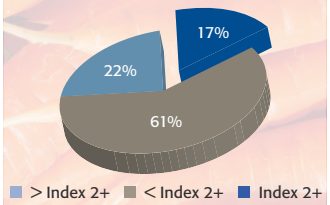


Vegetable and Bulb Soils

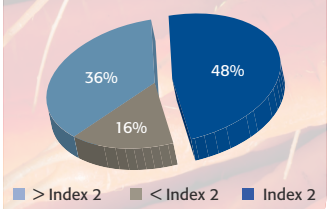
Phosphorus 34% of soils at target value



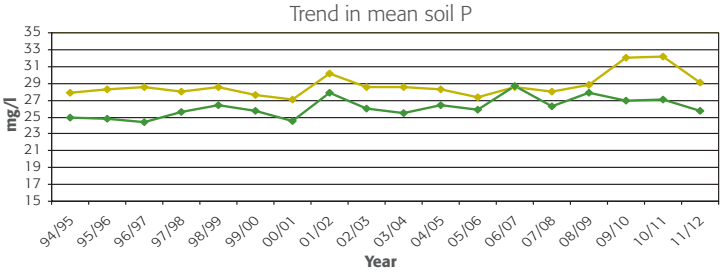
Potassium 17% of soils at target value



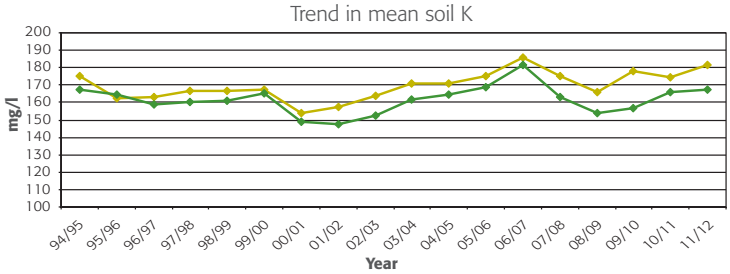
Magnesium 48% of soils at target value



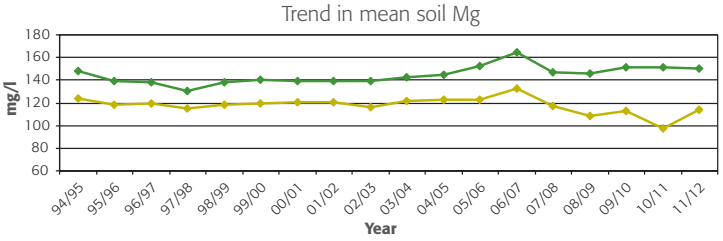
Trend in mean soil P



Trend in mean soil K



Trend in mean soil Mg



Grass Arable

Conclusions should be drawn cautiously as this data was not necessarily representative of all UK fields and data collations were not statistically rigorous.

Micro Nutrient Analysis

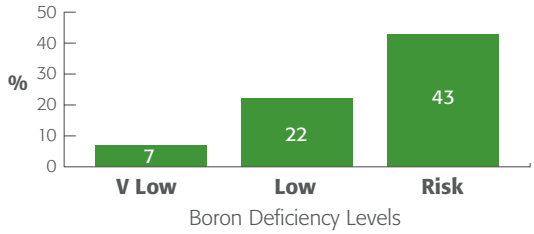
Having your soil analysed for its available micro nutrient content is important for determining its fertility and to understand how there might be a limitation to crop yield due to deficiencies in particular micro nutrients.

Micro nutrient availability in your soil can be the determining factors for plant health, photosynthesis and plant reproduction. As well as deficiencies there may also be issues identified with excessive concentrations. For example, high levels of one nutrient causing chemical binding of another essential nutrient making it unavailable to the plant.

Boron

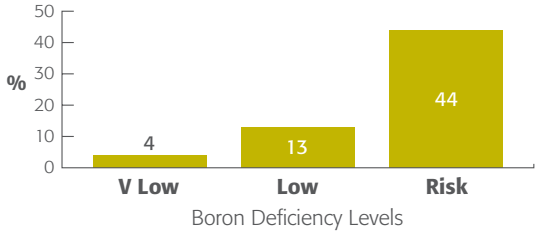
Plays a significant role in the synthesis of sugars in the plant – Availability of Boron is related to soil pH, an increase in pH increases Boron availability.

Deficiencies in Grassland Soil



Boron Deficiency Levels

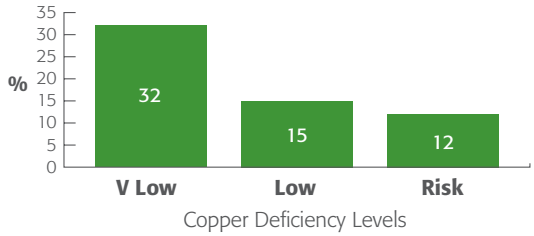
Deficiencies in Arable Soil



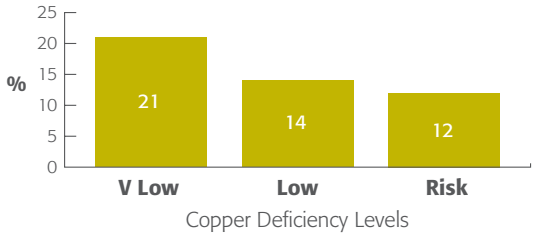
Boron Deficiency Levels

Copper

Essential micronutrient for; photosynthesis, respiration, carbohydrate distribution, Nitrogen reduction and fixation, protein metabolism and cell wall metabolism.



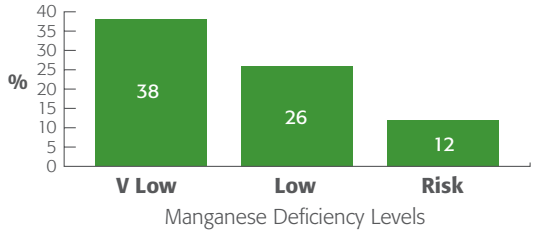
Copper Deficiency Levels



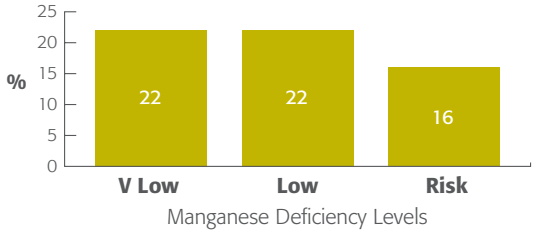
Copper Deficiency Levels

Manganese

The main bio chemical function of Manganese is its role in the oxidation/ reduction process for photosynthesis and nutrient activation. It is also a specific component of enzymes in the plant.



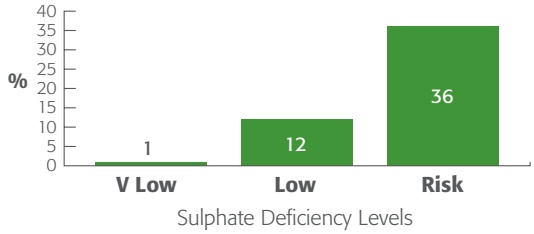
Manganese Deficiency Levels



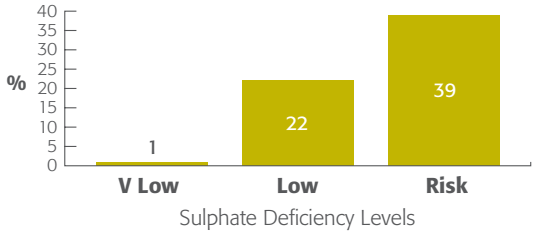
Manganese Deficiency Levels

Sulphate

Important for the metabolism of Nitrogen and the building of amino acids and proteins.



Sulphate Deficiency Levels

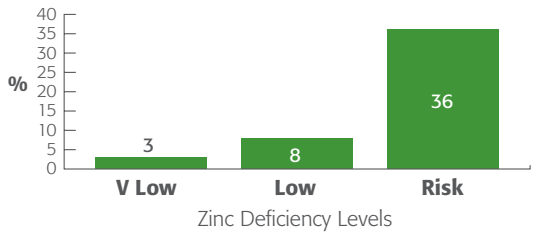


Sulphate Deficiency Levels

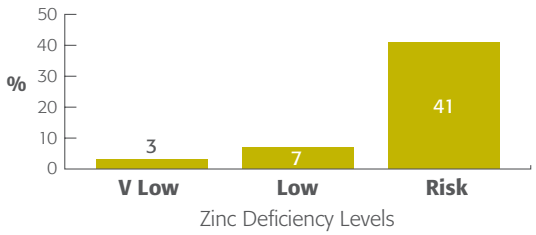
Zinc

Important for the metabolism of carbohydrates, proteins and phosphate.

Stimulates plant resistance to dry and hot weather and bacterial and fungal disease due to its influence on cell wall permeability.



Zinc Deficiency Levels



Zinc Deficiency Levels

For further information on the analytical services that NRM provides in the agricultural sector please contact our customer service team on:
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