

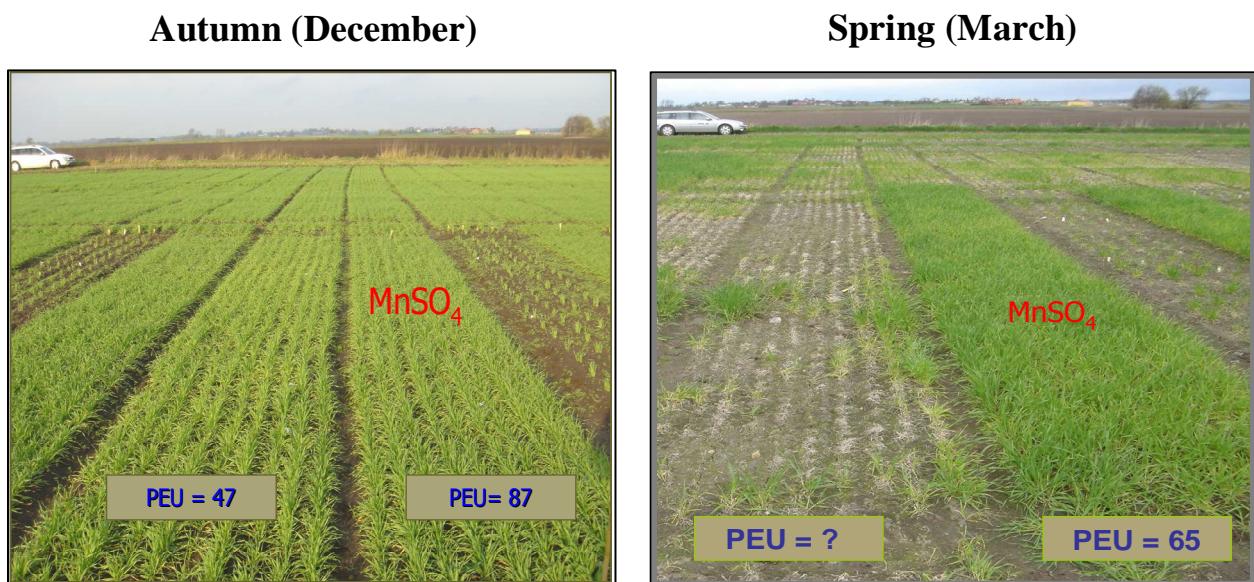
Newsletter autumn 2009

During November the plant growth gradually stops. Thus, right now is your last chance to ensure that the crop is well supplied with manganese (Mn) and is able to resist the winter period.

Manganese plays a key role in winter hardiness and survival of crops. Even plants without any visual Mn deficiency symptoms might be severely stressed and unable to survive the winter. The only way to ensure winter hardiness and survival of crops is by analysing the Mn status with a Mn tester (NN-Easy55) from NutriNostica ApS (read more here www.nutrinostica.dk).

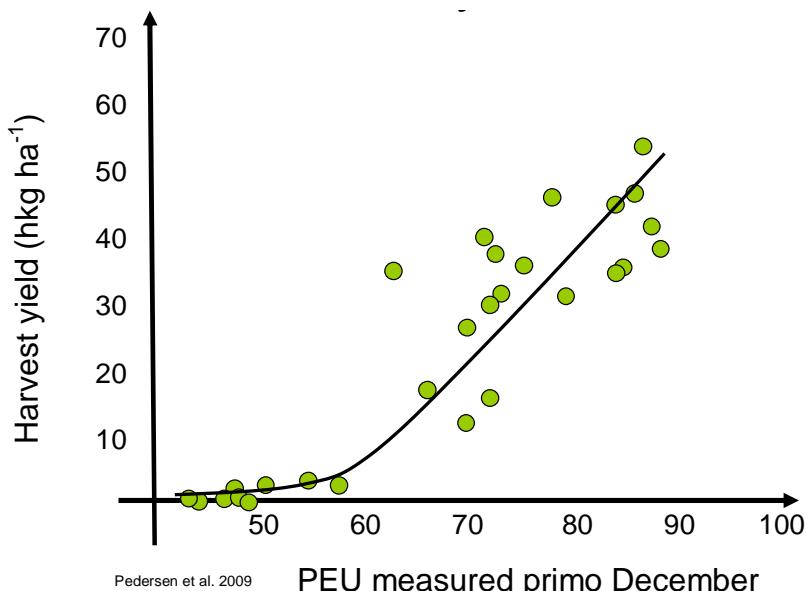
Manganese deficiency is measured in PEU units. Right now, you need to ensure that the PEU is above 85. If this is not the case, harvest yields will already suffer now and ultimately plants might be unable to survive the winter.

Hidden manganese deficiency leads to wintering



The pictures above are taken late autumn (left) and early spring (right) on a sandy soil with manganese deficiency. The left plot in each picture is untreated, while the right plot is sprayed with manganese. None of the untreated plants managed to survive the winter.

PEU values during autumn and the harvest yield



Even hidden Mn deficiency can cause significant yield losses. In a Danish experiment with winter-barley, a clear correlation between the plant Mn status measured in December and the harvest yield was found (see figure above).

A PEU increase in the interval 60 to 85 caused impressive yield responses – despite no visual symptoms were present! By e.g. changing the PEU value from 75 to 85 during autumn the harvest yield of winter-barley was increased by approximately 15 hkg per ha.

Please notice that visual symptoms do only appear at PEU values lower than 60. This means that a lot can be gained by fertilizing plants to prevent hidden Mn deficiency.

The Mn tester is able to diagnose Mn deficiency in the field 100% accurately. No other available technology is capable of this. The Mn tester (NN-easy55) is currently used by all leading agricultural consultants in Denmark. In addition, the instrument is widely used by consultants, farmers, gardeners and horticulturists in e.g. Sweden, Norway, Finland, Germany, Great Britain, The Baltic, Poland and Holland.

Read more about the manganese-tester on www.nutrinostica.dk or contact us at +45 5051 5840.