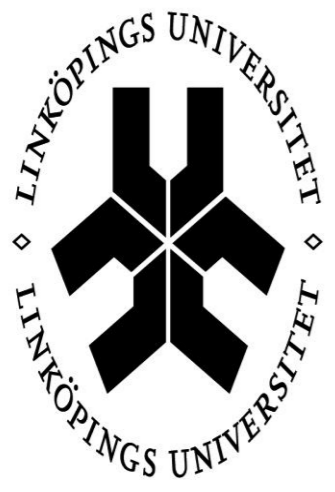


Screening of *HvNAM-B1* polymorphism, grain nutrient content and seed size in 80 Scandinavian barley cultivars

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Background & objective

The locus *NAM* in wheat and barley affects both seed size and nutrient content. A non-functional allele of the gene increases the seed size but at the expense of protein and micronutrient content. The selection for yield leads to reduction in nutritious quality.

The objective of the study was to (i) investigate when does the selection for yield occurs in barley either during early domestication or modern plant improvement (ii) to measure the grain micronutrient concentration

Methods

- DNA Extraction
- PCR
- Restriction analysis (CAPS)
- Protein analysis by Kjeldahl method.
- Mineral (Fe and Zn) analysis by inductively coupled plasma emission spectrometry
- Statistical analysis (ANOVA)

Results

- No variation in grain protein and mineral nutrient concentration among the different groups
- Increased chlorophyll levels, seed size and decreased plant height in modern cultivars

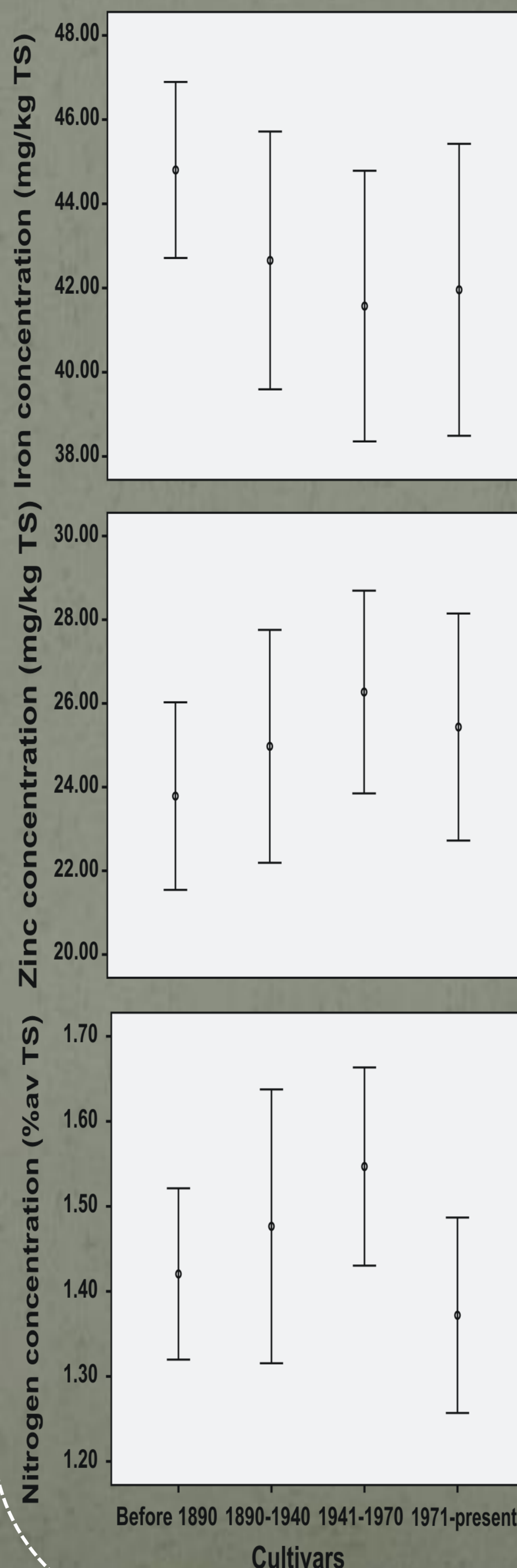
Conclusions

- There is no variation in the grain micronutrient concentration and diversity of *HvNAM-1* gene among the different groups of barley cultivars
- Variation was found in the seed size, chlorophyll content and plant height

Acknowledgements

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(i) Variation in the nutrient concentration of Barley cultivars



(ii) Comparison of growth parameters for the different cultivars

