

Nitrogen Content of Table Beet (*Beta vulgaris* L. ssp. *vulgaris*) Related to Growth Stages

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Summary

To derive fertiliser recommendations according to the “Kulturbegleitendes Nmin Sollwert System” (LORENZ et al. 1989) it is required to estimate how much nitrogen (N) is already in the crop and how much N will be taken up until harvest. Objective of this study was to check a method proposed by FELLER und FINK (1997) which uses observed plant growth stages to estimate the amount of N in the crop. The definition of growth stages was based on a coding system that was published as “Erweiterte Allgemeine BBCH-Skala” by HACK et al. (1992).

In two field experiments with table beet (*Beta vulgaris* L. ssp. *vulgaris*) nitrogen supply, plant density, sowing date and cultivar were varied and time courses of fresh matter and N in crop were measured. The use of observed growth stages resulted in a small error (10 kg N ha⁻¹, standard deviation (SD) = 48 kg N ha⁻¹) of estimated N in crop. The method is recommendable because it is accurate and easy to use. The estimation by another method that was based on time after planting was less suitable because it showed a considerably larger estimation error (–100 kg N ha⁻¹; SD = 100 kg N ha⁻¹).

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