Soil Analysis as Predictors of K Supply to Grass. (S04-krogstad053800-Poster)

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Abstract:

Potassium (K) uptake in grass crops from ammonium acetate lactate extractable K (KAL) and reserve K (interlayer K + structural K) in soil was studied in 16 field experiments on different locations and mineral soil types in Norway. The K release from soil, both from KAL and reserve K, was considerable, often even at the highest level of K fertilisation. The KAL values were rapidly reduced and levelled off at a minimum level differing between the different soil types. This minimum level for KAL is a useful parameter in fertilisation planning, as the grass easily took up the content of KAL in excess of the minimum level. The minimum value was significant correlated to the content of clay + silt and organic matter in soil. The decrease in KAL during the growth season was closely correlated to the KAL value in spring minus the minimum level, and therefore the amount of K supply to the grass crop from the KAL fraction can be calculated. Further, the KAL value next spring may be estimated. The K release from reserve K was related to acid soluble K.

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