

Improved Nitrogen Use Efficiency

By the first of April, DLF-TRIFOLIUM has initiated a cooperation with KVL (The Royal Veterinary and Agricultural University), Copenhagen, to investigate and improve nitrogen uptake and metabolism in grasses.

Initially, the research will be conducted by a new Ph.D. student, Pia Nord-Larsen under the supervision of associate professor Thomas Jahn and Prof. Jan K. Schjørring, KVL, grass breeder Niels Roulund and senior scientist Christian S. Jensen, both from DLF-TRIFOLIUM. Recently, scientists at KVL succeeded in identifying some of the key proteins involved in transport of ammonium in plant cells.

With the new knowledge in hand, the present project will focus on two areas: firstly, to increase the amounts of proteins controlling N-uptake and metabolism by means of biotechnology, secondly, to develop a nitrogen-focused selection method to assist DLF-TRIFOLIUM's advanced breeding programmes. The latter method is based on the ability to make DNA-markers, which will track the inheritance of genes important for optimal nitrogen use efficiency.



DLF-TRIFOLIUM and KVL have been engaged in a number of joint research projects over the years. This collaboration project makes the first joint effort specifically aiming at solving the challenge of the still increasing nitrogen use constraints.