

The empirical studies were drawn from the pilot project which was conducted by Stockholm University, Swedish University of Agricultural Sciences, Vatema AB and Institute of Technology and Life Sciences (Pol.). The farmers were introduced to the farm-gate nutrient balance concept, a method for assessing how the risk for nitrogen leaching from individual fields is dependent on farming practices, and farm walks together with agricultural advisors (from the public advisory offices), and they were provided with soil surveys and subsidized lime and catch-crop seeds. Complementary to a fertilization plan is the calculation model developed to assess how the risk of nitrogen leaching from individual fields is related to farming practices, including crop rotation, ploughing timescales, previous year yields and fertilization activities. The plan specifies the optimal dosages of mineral fertilizer and manure for each crop, taking into account its nutritional requirements and soil fertility, i.e. content of available macronutrients [GOULDING et al. 2008]. Achieving a balanced and sustainable management of organic and mineral fertilizers on farms poses a significant challenge, and affects production results as well as the state of the environment [BEEGLE et al. 2000]. The subjects were selected initially as representing farmers of all type of farms (ranging from 13 ha to 150 ha of arable land), and representing crop, husbandry and mixed farms. The farmers were drawn from different age groups and educational backgrounds. 1). 1). 1