N AND P BUDGET IN SELECTED DAIRY FARMS
IN VIEW OF CHANGES IN POLISH AGRICULTURE

Key words: nitrogen and phosphorus budget, farm, nutrients cycle, milk production

Summary

Polish agriculture is subject to an intensive reconstruction following economic-political changes after 1989. In Podlasie region it is manifested e.g. in the concentration and intensification of dairy production. Development of dairy farms results in their increasing impact on the environment, particularly through nitrogen and phosphorus emissions. For environmental and economic reasons, the effective use of nutrients becomes more and more important in these farms.

Studies were undertaken to assess nitrogen and phosphorus management and the possibilities of its improving in four dairy farms typical for Podlasie region. N and P budgets and some relevant productive factors were studied.

N surplus ranged from 108 to 174 kg N·ha⁻¹ in the years 2000-2002 and N efficiency varied between 12.7 and 23.1 % in three typically dairy farms. In one farm with plant and milk production the respective figures varied from 57 to 86 kg N·ha⁻¹ and from 32.4 to 40.3 %. Apart from some extreme cases P surplus was from 4.2 to 16.6 kg P·ha⁻¹ and P efficiency from 17.4 to 56.8 %.

It is possible to improve N and P budgets in analyzed farms trough improving: bulk fodder quality, manure management, soil pH and crop rotation structure.

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