POLICY BRIEF NO. 7

NUTRI-CHECK NET
OPTIMISING CROP NUTRITION

Title

Lithuania: Three management stages - a method for optimizing nutrient use

Objective

The aim of this policy brief is to summarise the insights gathered during the NUTRI-CHECK NET project on how to enhance the optimisation of nutrient use on Lithuanian farms by paying more attention to the assessment and adjustment of fertilization strategies both during the growing season and after harvest. The project analyses show that the assessment stage is one of the least used elements of nutrient management.

Lithuania has an official fertilization planning methodology[1], regulations and measures for fertilization with organic[2] and mineral[3] fertilizers, including fertilizer accounting, maximum NPK rates for plants during the growing season, fertilization planning options, including using the fertilization planning functional component (PPIS) of the application information system (https://paseliai.vic.lt). General recommendations for fertilization NPK planning by scientific institutions have also been prepared.

This provides a basis for the widespread use of the fertilization planning method, but the legal regulation pays too little attention to fertilization planning, based specifically on soil test results. The use of soil tests in nutrient planning is considered by the Lithuanian National Expert Group to be one of the three most important methods for nutrient management planning.

There is also currently no standardized method that would allow assessing how well the planned fertilization strategy for the year actually worked, for example, taking into account yield, nutrient use efficiency or seasonal changes. In addition, better guidance on making fertilization adjustments during the season can improve fertilization practices.

The project results show that these actions have great potential to increase nutrient use efficiency and improve fertilization strategies[4].

Methodology

- A 9-country thematic network called "NUTRI-CHECK NET" was formed in 2023-2025, consisting of 26 Crop Nutrition Clubs (CNCs) of farmers and consultants and 9 National Expert Groups (NEGs). The project partners reviewed the perspectives, costs and benefits of stakeholders (CNCs and NEGs) in addressing the challenges of CNM and the available tools.

- Crop Nutrient Management (CNM) guidelines and tools to support farmers and consultants were reviewed in all 9 partner countries. The information was divided into broad categories of management steps: 1. Planning, 2. Checking and adjusting and 3. Review.

- Stakeholders were interviewed and surveyed, including to understand whether reviewing and considering the success of nutrient management is a common aspect of nutrient management approaches.

- Stakeholders were also interviewed and surveyed about common needs, gaps and barriers related to tools for decision-making on nutrient management.

NUTRI-CHECK NET
OPTIMISING CROP NUTRITION

Key findings

- CNM tools are available for each stage in the management process, some tools are old and used widely whilst some are new but used less.
- Stakeholders involved in making nutrient management decisions rarely reviewed the success of a nutrient management plan[3].
- Where nutrient management strategies were reviewed in terms of success, the most common indicator of success was crop yield. Commercial tools and services could aid stakeholders in reviewing nutrient management strategy success[4], but a recurring barrier remains as how to incorporate the results of these tools and services into future nutrient management plans[3].

Policy Implications & Recommendations

- Although the framework is well developed for the nutrient planning phase, it is recommended that more attention be paid to the importance of soil testing for fertilization planning or soil parameter monitoring. Farmers should be incentivized to carefully monitor their fertilization plans, including keeping track of fertilizer applications, and performing analyzes of soil nutrient status.

- It is also recommended that more attention be paid to the fertilization evaluation phase, as this area currently receives much less attention than the planning phase. Clear, scientifically sound and practical guidelines should be developed to help farmers assess how their fertilization strategy has actually worked, for example by using yield data, field observations or nutrient use efficiency.

- It is recommended that more attention be paid to the systematic collection of knowledge during the season, so that farmers can make more informed adjustments and document experiences that can later be used in a more structured end-of-season evaluation.

- A more balanced focus should be placed on the three stages of nutrient management – planning, monitoring and adjustment and evaluation. Although the planning stage is more emphasized and developed in Lithuania, the latter two stages are much less used methodologically. Greater use of these stages together should be encouraged as a key element of good agricultural practice, which can have both agronomic and economic benefits.

- Finally, farmer promotion initiatives, their consultation and clear information about the benefits of the three stages – planning – adjustment and evaluation – as a method can encourage farmers to give priority to using this method, improving nutrient management on farms.

- Recommendation tools and digital services should be subsidized and encouraged for widespread use, where farmers can easily log and keep track of their applications, and adjust next applications accordingly.

Key References

- [1] Development of a unified methodology for creating fertilization plans:

https://am.lrv.lt/uploads/am/documents/files/Tr%C4%99%C5%A1imo%20metodikos_Galutin%C4%97%20ataskaita%20_2021%2007%2020%20-%20Copy.pdf

- [2] Description of environmental requirements for manure and slurry management: **:** https://www.e-tar.lt/portal/lt/legalAct/TAR.AE113D1C5ECF/asr

- [3] Description of requirements for the use of fertilizing products No. 3D-332: *https://www.e-tar.lt/portal/lt/legalAct/2c672db081f911e98436e02a0124fc68/asr*

- [4] Kendall, S. (2025). 3 Step checking approach to nutrition management at Nutri-Check Net final conference: Final Conference | 18th November 2025 | Brussels - YouTube