



## SuMaNu Policy Recommendation 2

*The SuMaNu project platform has produced a set of policy recommendations to support transition towards more sustainable agriculture and efficient nutrient recycling. These policy recommendations reference and complete each other and the reader is encouraged to read them all.*

### Fertilisation planning and nutrient balancing

To optimise nutrient use efficiency and enhance nutrient recycling on farm level, all farms (esp. livestock farms) in the Baltic Sea Region (BSR) should implement:

- Annual field-level fertilisation planning for nitrogen (N) and phosphorus (P)
- Annual farm-gate nutrient balancing for nitrogen (N) and phosphorus (P)
- Regular soil nutrient content determination

To support farm-scale measures:

- National guidelines for fertilisation planning for both N and P should be developed in all BSR countries.



## Sustainable fertilisation planning

To avoid overfertilisation, increase nutrient-use efficiency and ensure sufficient crop nutrient supply, N and P fertilisation should be planned annually on a field parcel level. N and P are not only the most critical crop nutrients for crop production but also the major nutrients causing deterioration of surface and ground waters. Phosphorus is also a non-renewable resource with finite mineral reserves. Fertilisation planning should be based on the national fertiliser guidelines that take account crop need, expected crop yield and soil fertility.

### National guidelines

Guidelines for both N and P application rates should be developed on a national level to provide a framework that considers economically optimum fertilisation together with limiting risk for nutrient losses. The guidelines should be updated regularly to account for results from field trials, new varieties, price estimates (fertilisers and crops), and must be within maximum application rates which should be common for all countries for both N and P (see also Policy Recommendation 1).

National guidelines should consider nutrient requirements for expected yields of relevant crops, previous crops in the rotation, previous applications of manure or other organic fertilisers and relevant soil characteristics. Soil characteristics should be determined by soil analysis on a regular basis.

### Manure use

Manure use in the fertilisation plan must be based on the N and P contents in the manure, determined according to national standards (see also Policy Recommendation 3), not excluding the share of nutrients lost due to spreading techniques or timing. This offers incentive to use better manure management techniques and practices (see also Policy

Recommendation 3). Only after the sustainable use of manure has been planned, should additional fertilisers be considered if needed to meet crop requirements for expected yields.

### Record keeping

It is essential to keep records of the fertiliser planning and use. Thus, we recommend promoting the use of FaST (Farm Sustainability Tool for Nutrients) that is proposed in the framework of the Good Agricultural and Environmental Conditions (GAECs) as part of the new common agriculture policy (CAP) proposal. This tool is being developed to help farmers to manage nutrients sustainably and to increase the digitalisation of the agricultural sector.

## Farm-gate nutrient balancing

Nutrient balances are tools to keep track of nutrient flows on the farm. Farm-gate balances can help farmers to optimise nutrient use, improve farm economy and give an overview of potential environmental risks from their operations.

Farm-gate nutrient balances are calculated as the difference between nutrients imported and exported to the farm and should be done annually to follow changes in nutrient use efficiency on the farm. Nutrient inputs come from seeds, feeds, animals, and various fertilisers that are brought to the farms, as well as symbiotic and asymbiotic N fixation and atmospheric nutrient deposition. Nutrient output occurs when main products leave the farm e.g. animals, eggs, milk, crops that are sold from the farms, and potentially manure if spread on another farm.

National reference values should be given for different animal and crop products to aid with the calculations. National reference values should also be created for different farm types to help assess the nutrient use

efficiency of the farm. A farm-gate balance module could be integrated into the FaST as a quick and easy digital tool.

