



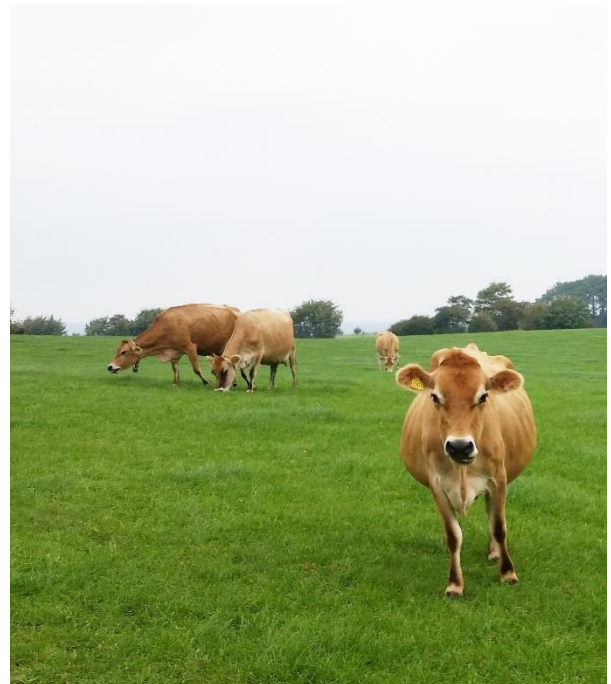
## SuMaNu Policy Recommendation 3

*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.*

## National standards for handling and spreading manure

### Summary

- Establish national standards for determining manure quantity and nutrient content for all livestock and manure types.
- Allow spreading of manure primarily in the spring and summer for growing crops and limit autumn spreading only for establishing winter crops.
- Define minimum acceptable technologies and practices for manure handling and spreading while phasing out and banning those with poor environmental performance.



## Why national manure standards?

Any strategy for sustainable manure nutrient use must start with a reasonably accurate estimation of the quantity of manure produced and the nutrient content in the manure. Both manure quantity and content vary between livestock types and can also vary between farms for the same livestock type depending on production levels, feeding regimes, age group of the animals, housing system, water additions, storage conditions etc. There are only a few methods to estimate the quantity and nutrient content in manure and they each have their strengths and weaknesses. For more information, guidance, and descriptions of acceptable methods to determine nutrient content, please see the results from the Interreg BSR Manure Standards project<sup>1</sup>.

Each country should decide which of the acceptable methods are best suited for their circumstances. The method descriptions should be clearly specified in all national regulations related to manure handling and use. We also strongly encourage all countries that currently have some form of manure standards in place to review the underlying data, verify that the values represent current conditions, and update the values as needed. Furthermore, since there are many factors that affect manure nutrient contents, it is important that the manure standards are updated regularly to accurately describe the current animal production.

## Why focus on timing?

To improve nutrient use efficiency of manure, manure should be spread at a time when the nutrients will most likely be directly utilised by crops. This reduces the risk for runoff and leaching losses to the environment and decreases the need for mineral fertilisers. Crop nutrient uptake is most effective during early growth stages in the spring and early summer, or in early autumn in conjunction with the establishment of winter crops. Late autumn and winter spreading of manure slurry increases the risk of nutrient losses to waters and is a

practice that is generally done because of inadequate storage capacity.

Restricting spreading times to primarily spring and summer months will essentially increase the minimum requirements for manure storage capacity. Thus, regulations for minimum storage requirements will have to be recalculated for each country. It is therefore essential to have guiding standards for estimating manure production so that everyone is held to the same standard (see: national standards for manure quantity above).

## Require better technologies and practices

Certain technologies and practices for handling and spreading manure have long been surpassed by newly developed technologies in terms of environmental performance. These outdated practices are often still used because they are cheaper or easily accessible, however, it is time to phase them out and then forbid their use. Raising the requirements for technologies that are acceptable to use by setting minimum standard levels for housing systems, storage and spreading of manure would promote implementation of the already known better practices.

Some examples of outdated techniques and practices to avoid include, storing manure in the animal houses or under slatted floors which increases gaseous emissions and should be avoided by removing the manure quickly to a separate storage. Manure should be stored in special storage facilities designed to reduce emissions to air and waters with water-tight structures and artificial or natural covering. Filling the slurry storage must be done from below the surface to minimise disrupting the crust cover. Mixing the slurry tank is necessary to homogenise it before spreading, but mixing with cascading fountains must be avoided and all mixing should occur below the surface. To avoid the greater ammonia loss and unevenly distributed spreading patterns from broadcast spreading of slurry, band spreading with trailing hose applicators should be

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<sup>1</sup> <https://www.luke.fi/manurestandards/en/results/>

the baseline practice. For solid manures, rapid incorporation into the soil should follow spreading.

Small farms with a limited number of livestock units could be given exceptions due to economic reasons. Countries around the Baltic Sea should together organise a specialist task group to determine acceptable baseline for practices and technologies for housing, storage and spreading manure as well as which technologies to phase out and ban.

## Incentivise environmentally friendly practices

In addition to determining the baseline standard for manure handling and spreading, the expert group should put together a list of best sustainable management practices and technologies for manure handling and use. This list should include not only best techniques and practices for reducing ammonia loss, but also for reducing greenhouse gas emissions, runoff and leaching and increasing nutrient recycling. This list could then be used to promote better manure management practices above the acceptable baseline practices. Support should be offered on a national level to encourage the adoption of the extra measures that would reduce the environmental or climate impact of livestock rearing but are difficult for farmers to justify economically on their own.

## Specific recommendations concerning farm-level measures

- Develop national standards for determining manure quantity and nutrient content for relevant livestock and manure types and incorporate the use of these standards into national regulations and other measures. For countries that already have national standards for determining manure quantity and nutrient content, focus should be put on reviewing and updating the data behind the standards.
- Form a Baltic Sea Region (BSR) manure management task group to determine baseline for acceptable manure handling and spreading practices and technologies.
- Phase out and ban practices and technologies that are known for poor environmental performance.
- Limit manure spreading to the spring and summer with autumn spreading only when establishing winter crops. Late autumn and winter spreading of slurry should be forbidden.
- Update national minimum storage requirements for livestock manure based on spreading all manure when plants can take up the nutrients.
- Provide investment support or other incentives for farmers and contractors to implement practices that are considered to increase the sustainability of manure handling compared to the baseline acceptable standard. Acceptable management practices that would meet these criteria should be determined jointly for the BSR.

