

## Practice BBF n° 7

# GUARANTEED LEVEL OF NUTRIENTS MANURE PRODUCTS

## Introduction

**Category:** Good Practice (GP)

### Practice identity card

*#Bio-based fertilizers, food, GP, The Netherlands, nutrient levels, precision fertilization*

*#Nutrient analysis of animal manure allows precise application based on crop and soil needs.*

*On-farm measurement equipment and NIR technology can ensure nutrient consistency before application.*

*Accurate analysis reduces reliance on synthetic fertilizers and optimizes nutrient use efficiency.*

### Short description

- ➔ To ensure optimal nutrient use, it is important to guarantee the nutrient levels in animal manure before application. This approach is especially relevant for slurry and other processed forms of biobased fertilizers. By precisely determining the nutrient composition, farmers can supply nutrients based on the crop and soil need. This is currently not the case due to reliance on assumed nutrient values. This practice applies to all crops where animal manure is used.
- ➔ Farmers often turn to artificial fertilizers to make specific adjustments in nitrogen or phosphate levels. However, with guaranteed nutrient levels in animal manure, these adjustments can also be made using manure, reducing reliance on synthetic fertilizers. Achieving this requires on-farm measurement equipment capable of providing fast and accurate nutrient analysis directly in the manure storage. Before application, an additional measurement should be taken by the arable farmer, for example using near-infrared (NIR) technology. More information about this can be found in the precision farming GP about NIR.

## Implementation process

**Which fertiliser type is considered as the standard in this region?** Organic manure (assumed nutrients) & artificial manure

**What was the on-farm issue/challenge/opportunity that led to the implementation of the practice?** The challenge: the animal manure space is not used to its potential. In the ideal world the use of artificial fertilizer will be very much limited. To manage this, nutrient levels of animal manure should be known, so the animal manure space can be used to its full potential.

## Application process/mode

- **In which form is the BBF applied?** liquid
- **How is the BBF applied on the field?** drip irrigation

## Logistics

- **Storage safety risk:** low
- **Logistic aspects to consider:** Nutrient results should be known before applying, allowing some time to adjust the fertilizer plan.
- **Skill/education level required for safe and effective application of the BBF?** rather low
- **Availability of the BBF in this region:** very low
- **Availability of the BBF in the wider EU:** very low

## Agronomical traits

- **N-P-K composition of the BBF:** Will be known if can be measure (= this RI)
- **C:N ratio of the BBF:** Will be known if can be measure (= this RI)
- **All materials present in the BBF:** animal manure
- **Can the BBF be applied to a multitude of cultivation techniques, or is the use limited to one or a few techniques?** Not yet but we need multiple cultivations techniques which will be suitable for the use of the different manure fractions.
- **Targeted crop categories:** food, feed, fibre, oil, ornamental
- **Influence on soil quality:** Improved organic matter and improved usage of nutrients.
- **Soil types suitable for the BBF:** peaty, sandy, clay, loamy, silty, chalky
- **Expected effect on crop yield:** increase
- **Expected effect on crop yield variation:** decrease
- **Expected effect on crop quality:** increase
- **Expected effect on crop quality variation:** decrease
- **Which costs may increase upon using the BBF?** equipment
- **Which costs may decrease upon using the BBF?** pesticides; mineral or other types of fertilisers
- **Expected long-term/indirect benefits of using the BBF:** Circular agriculture.
- **Is the use as fertiliser the most valuable application of the material at hand?** Most likely yes

## Administrative context

- **Status of the legal framework that regulates the use of the BBF:** well-developed
- **Are there any policy barriers complicating the use of the BBF?** Yes, the maximum space to use animal manure is limited by policies.
- **Does the BBF contain any hazardous substances, and if this is the case, which one(s)?** No
- **Is the use of the BBF compliant with EU organic farming practices?** Yes, if the manure is organic.
- **Expected effect on the leaching of nutrients?**

Much lower for all.

- **Are there any gaseous emissions to be considered upon using the BBF?** No
- **Greenhouse gas (GHG) reduction potential of the BBF:** substantial
- **Effects expected on the time occupation of the farmer upon using the BBF?** none
- **May the use of the BBF contribute to a better public image of agriculture?** Yes, increasing circular agriculture. More healthy growing plants with less artificial fertilizers.

## Contact

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**Eu member state:** The Netherlands

## Find out more

**Source of information:** Wageningen University, part of "Bemest op z'n best"