trans4num: Transformation for sustainable nutrient supply and management



Novel biobased fertilizers on crop and grass & clover ley production



Processing of abattoir waste to utilise food waste products and to produce a phosphorus and carbon-rich bio-fertiliser. This bio-fertiliser is derived from animal bones, resulting in a fully circular recovery process with zero waste. Experimental and demonstration field plot trials will be established comparing the efficiency of this fertiliser to conventional mineral fertilisers and traditional organic amendments (e.g. farmyard manure).

Challenges addressed by the NBS

• Viability of using these novel alternative fertilisers from abattoir waste in comparison to standard bagged dry fertilizers in order to produce crops.

Which biophysical, agronomic, and farm management implications does the NBS have at field and farm level?

• **Increased recycling of nutrients** within the food production system, and less reliance on importation of newly produced macro fertilizers.







Which indicators/criteria are used to assess the success of the NBS in addressing the challenge?

The success of the NBS in addressing its challenges is assessed using the following indicators/criteria:

- Yield and quality of arable crops and grass & clover.
- Comparisons will be made with conventional P fertilisers and the novel abattoir waste source. Measuring P unit equivalents in the conventional to this novel source.

These indicators provide a comprehensive assessment of the NBS's success in addressing its challenges.



trans4num ambition is to broadly enhance the NBS implementation in Europe with an integrative and tested multi-level approach, in dialogue with academic partners, practice partners and societal

