

# Commercial organic fertiliser as supplementary fertilisers in potato crop production

## Problem

During the first 35-50 days after emergence, potatoes require an optimal nitrogen supply in order to develop a good haulm and tuber growth. Manure and slurry cannot meet the demand of the crop during its growth stage. High or late fertiliser inputs lead to a late nitrogen supply, which delays the maturing of the plants, complicated the removal of the haulm and decreases tuber quality.

## Solution

Effective commercial organic N fertilisers can optimally complement the basic supply for potatoes in spring, which consists of the preceding crop, rotted manure and slurry.

## Outcome

Commercial organic N fertilisers allow a relatively accurate dosage of the nitrogen supply without increasing the infestation risk of *Rhizoctonia*. Due to the relatively high costs, commercial fertilisers are, however, only economically viable as an addition to farm manure.

## Applicability box

### Theme

Nutrient availability, pest and disease control, crop-specific measures

### Geographical coverage

Potato cultivation areas

### Application time

After emergence

### Required time

Additional fertiliser application

### Period of impact

Potato crop

### Equipment

Standard fertiliser spreader

### Best in

Potatoes

## Practical recommendation

The **nitrogen requirement** varies depending on variety and usage. The conventional fertilisation amounts to 120 kg of N per ha in table potatoes and potatoes for processing. Early potatoes and seed potatoes require slightly less nitrogen at about 100 kg of N per ha.

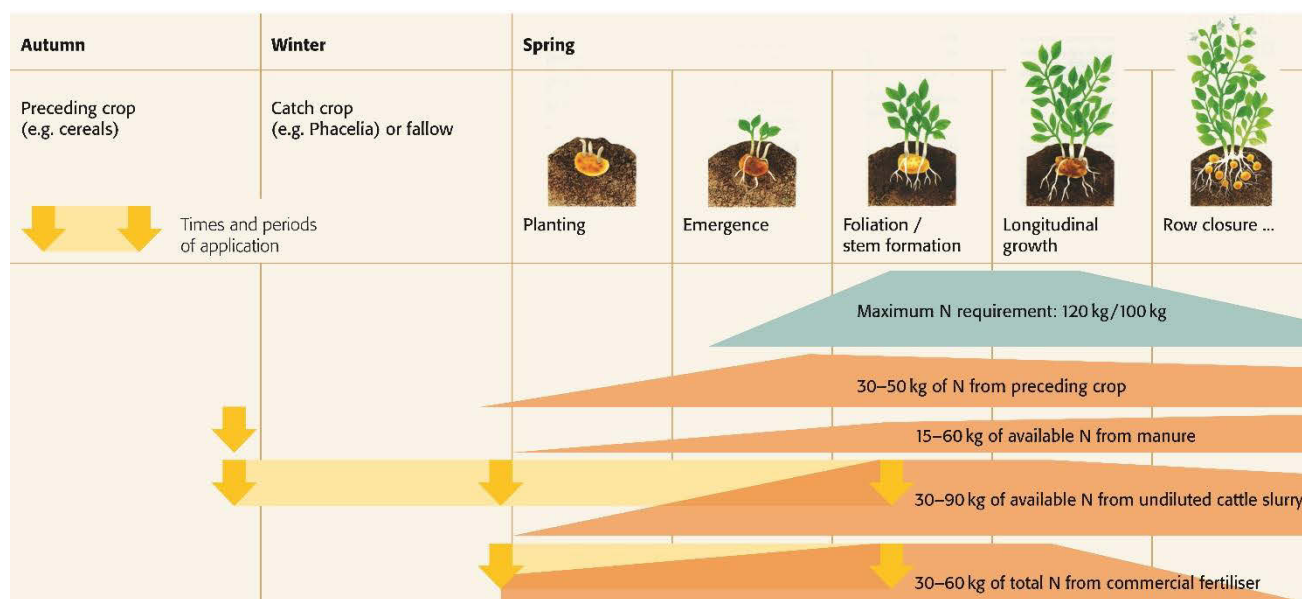


Figure 1: Nitrogen requirement and composition of nitrogen supply during the different growth stages of potatoes

The nitrogen supply strongly depends on the conditions for N mineralisation (weather, humus content of the soil, preceding crop residues). Thus, optimising the N supply is complex (Figure 1).