

Soils, Nutrients and Fertiliser Factsheet

Spring Beans



Spring beans

1. Fertiliser saving opportunities

- Beans do not need any fertiliser N. Beans are legumes and fix atmospheric N which supplies N for growth. The sparing effect on soil N, and the availability of N from decaying roots, boosts the yield and reduces the fertiliser N requirement of the following crop
- Use a recent soil test to determine P and K requirement
- Essential to incorporate P and K, especially where soil is at Index 1 and 2
- Order seed early, demand will be high in 2022
- Plant in late February/early March
- Apply lime as recommended on the soil report. Target pH 6.8 – 7.0

Table 1. P & K requirements for beans

Soil Index	P (kg/ha)	K (kg/ha)	Product	Rate kg/ha	Cost €/ha
1	50	125	0 – 10 – 20	500	325
2	40	60	0 – 10 – 20	400	260
3	20	40	0 – 10 – 20	200	130
4	0	0	–	–	–

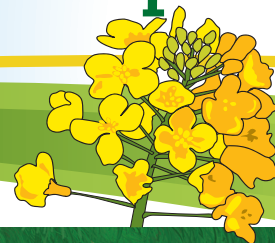
Table 2. Effect of substituting spring barley for spring beans

Crop	*Fertiliser cost €/ha	Difference €/ha	No. of hectares substituted	Farm saving €
Spring Barley	635	505		
Spring Beans	130			

* Index 3 fertiliser costs (est.)

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Winter Oilseed Rape



Crops with a high Green leaf area index (GAI*) and soils with high P and K index values present opportunities to make fertiliser savings

*Green area index (GAI) is the ratio of leaf green area to the area of ground on which the crop is growing

1. Target P and K applications to soils that need it

- Omit P & K application on P & K Index 4 soils and consider reducing P & K applications on high Index 3 P (>8 mg/l) & K (>120 ml/l) soils (for one year only)
- Target maintenance application of 35 kg P/ha and 75 kg K/ha for soils at Index 2 or lower

2. Measure your GAI and calculate the N requirement

- Large canopies in the spring contain N which will reduce the need for bagged N
- Target a GAI of 3.5 at early flowering
- Adjust the overall N requirement by taking into account the canopy and target GAI. See table below for guidance on different canopies

3. Target your fertiliser applications for maximum effect

- Crops with large canopies do not need early N
- Utilise ASN or protected urea for the first application to minimise leaching losses as soils can be close to, or at, water holding capacity at this time of year

Table 1. Nitrogen application to oilseed rape for 4.5 t DM/ha crop

Crop type/Timing	Split – Mid February	Main Split – Early to mid February	Seed Fill – early April
Thin patches (GAI 0.5) Total 225 kg N/ha	70 kg N/ha	120 kg N/ha	35 kg N/ha
Good crop GAI 1.0 Total 210 kg N/ha	70 kg N/ha	90 kg N/ha	70 kg N/ha
Large canopy GAI 1.5 Total 170 kg N/ha	0 kg N/ha	100 kg N/ha	70 kg N/ha

Table 2. Nitrogen application to oilseed rape for 4.5 t DM/ha crop

	P kg/ha	K kg/ha	Compound* kg/ha	N ** kg/ha	total Cost €/ha (a)	Your area grown ha (b)	Your total Spend €
W. oilseed rape (GAI 1.5) Total 4.5 t/ha	35	75	370 x 10 .10.20	250 x ASN + 150 x Urea	€599		= a x b

*To apply maintenance dressing, compound @ €770/t. ** total N = 170 kg/ha based on a GAI of 1.5 in February, urea @900/t.