

# Potato Newsletter

## March 2020

### SEED

Very few earlies have been planted to date these should be priority as soon as conditions allow planting to begin. Some seed has been in sprouting trays longer than normal, these will need to be monitored. Long soft sprouts can be knocked off at planting and will result in uneven emergence. The damage incurred by knocking off the sprouts provides an ideal entry point for diseases to enter the seed tubers. If sprouts are getting too long get the trays outside as soon as possible in full light to harden off the buds. Failing that if there is enough time, consider running the seed over a roller table to knock off the sprouts, re-box the seed, ventilate and allow to re-heal.

**Fig.1: Monitor sprouted seed**



Where the plan is to bring out the seed from cold store just before planting remember it is always better to have the seed temperature lower than the soil temperature.

When you remove the seed from the cold store condensation can easily form if the outside air is a few degrees above the seed temperature. Therefore if the seed is going to be out of store for a few days before planting place the boxes in a draughty place or ventilate positively to remove the condensation. This normally will take up to two days, the tuber temperature will not rise much in that length of time. If weather delays planting

simply put the seed back into the cold store once it is dry.

### SOIL CONDITIONS

Avoid working in wet soils as you are more likely going to cause compaction that will affect crop growth. Work from the UK shows that working in wet soils will increase the likelihood of creating compaction, reduce drainage and subsequently increases the risk of wet weather diseases such as blackleg, powdery scab and pink rot. Heavy clay soils will naturally take longer to dry out than sand or loam soils. Compaction will reduce root development and consequently nutrient uptake thereby increasing fertiliser costs.

It has also been shown that compaction will delay emergence, reduce the rate of leaf emergence, delay canopy development, while also reducing the total amount of light intercepted and as a result reduce yield (Table 1.).

**Table1: Effect of emergence date on yield**

Date of crop Emergence	Total yield (T/ha)
May 15	55.4
May 30	52.7
June 15	49.0
June 30	44.6

Source AHDB

Bed forming and de-stoning in poor conditions can result in compaction at depth and consequently reduce yield. Trials in the UK have shown that de-stoning at a depth of **25 cms** will give the same yields as de-stoning at depths deeper than **35 cms**.

## FERTILISER

When calculating your fertiliser requirements consider what you are trying to do with the crop. Nitrogen is needed to promote top growth so varieties that produce large canopies are late maturing e.g. Kerr Pink probably don't need huge amounts of nitrogen. Excess nitrogen on crops will delay maturity and desiccation (*remember we have no diquat*), reduce dry matter and consequently delay harvest. For processing varieties these will have a negative effect on fry colours. Phosphorous will drive tuber production so for salads extra phosphorous, is often needed to produce higher numbers of tubers this is normally applied as a foliar application.

Tables 1-4 show the recommended rates of N, P & K for the different crops and are based on the Teagasc Green Book 2016 guidelines. While these tables show maximum rates for different situations they should not be used as targets, many crops will grow adequately with less nitrogen, previous experiences with varieties also need to be considered.

**Table 1: The nutrient requirement kg/ha (units/acre) for maincrop varieties >120 days e.g. Rooster/Golden wonder are:**

Soil Fertility (P & K Index)	N kg/ha (units/ac)	P kg/ha (units/ac)	K kg/ha (units/ac)
Poor (1)	170 (136)	125 (100)	305 (244)
Deficient (2)	145 (116)	100 (80)	245 (196)
Moderate (3)	120 (96)	75 (60)	185 (148)
High (4)	95 (76)	50* (40)	120 (96)

**Table 2: The nutrient requirement kg/ha (units/acre) for early potatoes 60-90 days e.g. Homeguard/Premiere are:**

Soil Fertility (P & K Index)	N kg/ha (units/ac)	P kg/ha (units/ac)	K kg/ha (units/ac)
Poor (1)	155 (124)	125 (100)	170 (136)
Deficient (2)	130 (104)	115 (92)	140 (112)
Moderate (3)	105 (84)	100 (80)	110 (88)
High (4)	80 (64)	50 (40)*	80 (64)

**Table 3: The nutrient requirement kg/ha (units/acre) for salad potatoes 60-90 days e.g. Maris Peer/Charlotte/Gemson are:**

Soil Fertility (P & K Index)	N kg/ha (units/ac)	P kg/ha (units/ac)	K kg/ha (units/ac)
Poor (1)	120 (96)	125 (100)	245 (196)
Deficient (2)	100 (80)	115 (92)	185 (148)
Moderate (3)	80 (64)	100 (80)	120 (96)
High (4)	70 (56)	50 (40)*	65 (52)

**Table 4: The nutrient requirement kg/ha (units/acre) for seed potatoes are:**

Soil Fertility (P & K Index)	N kg/ha (units/ac)	P kg/ha (units/ac)	K kg/ha (units/ac)
Poor (1)	155 (124)	125 (100)	170 (136)
Deficient (2)	130 (104)	115 (92)	140 (112)
Moderate (3)	105 (84)	100 (80)	110 (88)
High (4)	80 (64)	85 (68)*	80 (64)

\*Where soil P test is above 15 mg/l, no P fertiliser is necessary

Proceedings from the 2020 National Potato conference can be found at [www.teagasc.ie/publications/](http://www.teagasc.ie/publications/)

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