



SEED

Many early growers have seed that has been trayed up weeks ago but poor weather has delayed getting these out into the field, check the buds on these. Long soft sprouts will be knocked off at planting and will result in uneven germination. If sprouts are getting too long get the trays outside as soon as possible in full light to harden off the buds. All seed treatments should have been applied before the eyes start to open.

COMPACTION

While very little planting will be done until next month there will be some growers in earlier areas who will try to get crops planted in the coming weeks, these crops can quickly lose any advantages from earlier planting if they go into less than ideal seed beds.

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 (Fig 1.).

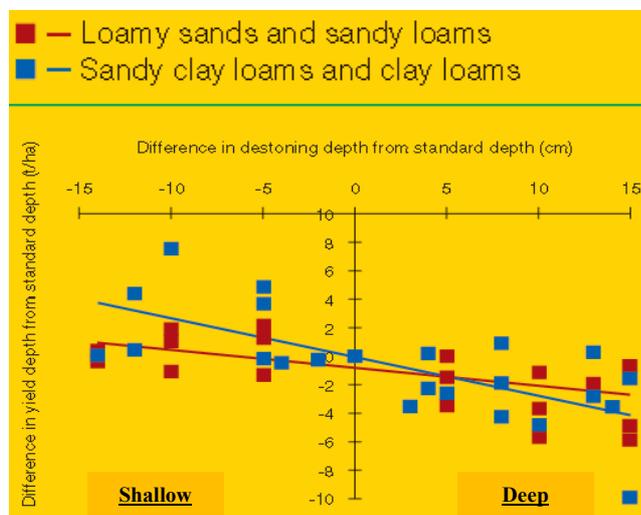
Fig. 1 Effect of emergence date on yield

Date of crop emergence	Total yield (t/ha)
15 May	55.4
30 May	52.7
15 June	49.0
30 June	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. However the risk of creating a compaction layer when working at depths greater than 30 cms increases significantly. Deeper ridging and de-stoning can reduce yield (Fig. 2) and also reduce work rates, while driving up fuel consumption and costs. Sub-soiling is often be used by growers as a means to solving the problem, however again if it is carried out in wet conditions it can make the problem worse.

Fig. 2 Effect of de-stoning depth on yield



Source; AHDB

FERTILISER

Fertiliser will cost approximately €550-600 per hectare (Teagasc costs and Returns 2018) depending on the blend and the soil P & K indexes. Avoid soils that are in index 1 or 2 for P & K as these soils will have a lower yield potential and will cost more in nutrition.

Apply all the compound fertiliser requirements into the seed bed. Potatoes poorly utilise phosphate due to its small root structure so a well prepared seedbed is essential for good nutrient uptake. 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 (Ch. 17 Pg. 104-109), which is available at <https://www.teagasc.ie/media/website/publications/2016/soil-fertility-green.pdf>

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 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

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