Potato Growing Costs

The recent Teagasc Crop Costs and Returns booklet make for some interesting, if not scary, reading for many growers. All cost including fertiliser, seed, diesel, parts etc. are going to be higher this year than 2021 and will put increased pressure on margins for the 2022 crop.

The figures for potatoes are based on quotes from industry and contractors so while they may not be exactly correct in every situation, they are still a very good guide to the likely cost of growing a crop this year and also bear in mind **they do not include a cost for land rental**.

When you compare the costs from 2021 to 2022 the increase in input costs such as seed, fertilisers and sprays per ha is approximately €666/ha (€270/acre). When you take all costs into account including diesel, energy costs, interest etc. the total increase from 2021 comes to about €883/ha (€337/acre) extra this year. The total estimated figure including storage for 6 months of €10,357/ha (€4,191/acre) excluding land rent really is not for the faint hearted.

The full publication is available in the link below;

Teagasc Costs and Returns Booklet 2022

Fertiliser

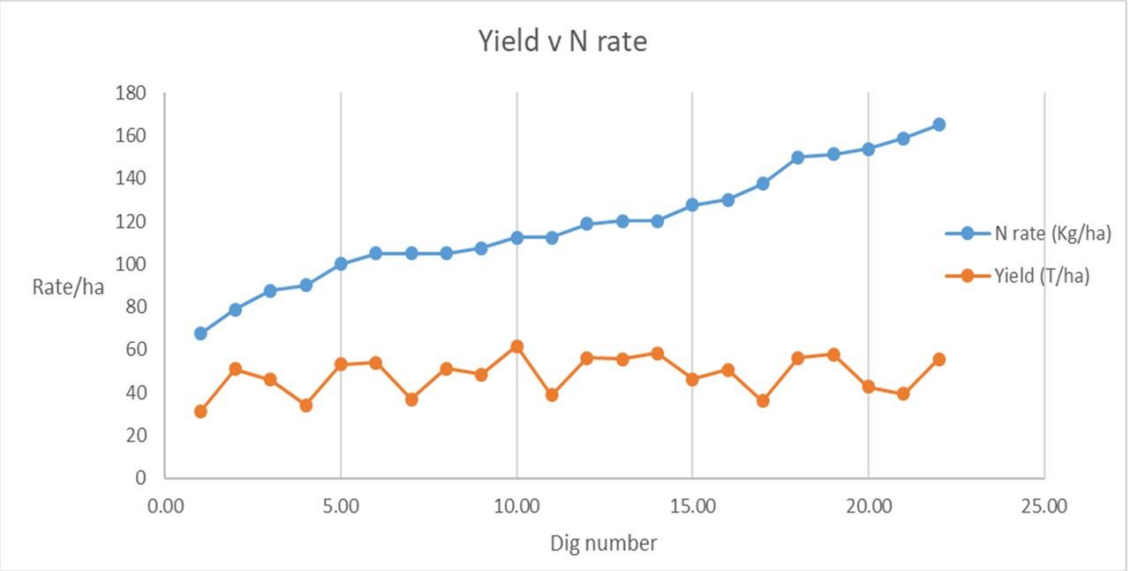
When buying fertiliser this year many co-ops are looking for some payment upfront in order to reduce the amount credit farmers owe this year, while every situation is different many potato growers will also face the same issue. From talking to some people in the trade there is a fear that speciality blends or mixes may be difficult to source this year so if your mix contains sulphate of potash for exapmle then order early to try to avoid disappointment.

As part of the Bord Bia potato yield digs growers are asked to fill up some agronomic details on the crops. Details such as rotation, seed source, whether the crop is irrigated or not and also the amount of fertiliser used.

In 2021 the details on the amount of fertiliser and particularly nitrogen used on crops makes for some interesting reading. The total amount of nitrogen used on crops ranged from 70 kg/ha (50 units/ac) up to 165 kg/ha (132 units/ac).

On the graph below each point represents an individual field dig and it can be clearly seen that increasing the nitrogen rate (blue line), in many cases, did not increase yield (orange line). Yields ranged from 32 t/ha (13 t/ac) up to 62 t/ha (24.8 t/ac). This highest yielding crop was achieved using 112.5 kg/ha of N (90 units/ac).

Figure 1; 2021 Yield Dig Survey (Yield vs N Rate)



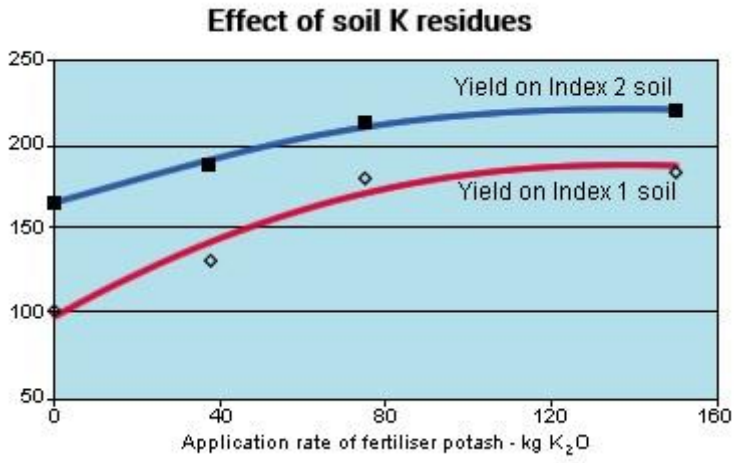
While this is only data for the 2021 season it does suggest that there is scope for some growers to reduce nitrogen levels. All these crops were Rooster and

were grown on continuous soils. What is also interesting is that 8 of the top 10 yields were from crops grown from certified seed, overall there was 60% of the crops grown from certified seed.

Fertiliser costs from the Costs and Returns above are predicted to be approximately €950 per hectare however these are based on soil indices of 3 for P & K. where the soil index is lower then you can expect the fertiliser costs to be inexcess of €1,000 per hectare so every field should have an up to date soil test carried out before planting.

The graph below which are from trials from the Rothamsted and Woburn in the UK, shows the importance of soil K index on yield, where index 1 soils never yielded as well index as crops grown in soils which were in index 2 no matter how much potash was applied.

Figure 2; Effect of Soil K index on yield



pH is another important factor, as many growers traditionally liked to grow potatoes in soils that a relatively low pH i.e. 6.0 - 6.5 for fear of common scab. Liming soils ahead of potatoes may increase common scab pressure, so avoid soils that have a very low pH soils <6.0, as they are likely to have poor utilisation of the applied fertiliser.

Planting Earlies

With soil conditions almost near perfect, for this time of year, many early crops are going into the ground as we speak. However it doesn't take much rain at this time of year to make things soft and sticky again. On the plus side, soil temperatures for the week up to February 1st are between 2.3 and 3.4^{o}C above normal according to Met Eireann so there has been a good opportunity to get some of the early crops into the ground. With soil temperatures over 6^{o}C in many places seed will get a good start this year.

As always be careful when handling chitted seed to avoid chit damage or breaking off the chits when filling the planter, otherwise any advantage that the mild weather is giving the crop, will be quickly lost. remember uneven emergence will cause problems right up to harvest.

Spacing: having a uniform spacing will be more important with earlies because they are harvested before full maturity otherwise this can lead to uneven tuber size at harvest and reduce yield.

Weed Control: Ensure that there is adequate soil moisture prior to applying residual herbicides especially in the sands, before covering with plastic or fleece. You only get one chance to get this right if not you will have poor weed control under covers or plastic.

Seed

The true impact of Brexit, combined with the fall out from the pandemic and transport issues is starting to be felt not only here but also in the UK and particularly in Scotland. The recent SACAPP conference outlined all the problems that Scottish growers are having to deal with and Irish growers are being directly impacted with many of the varieties that were grown over there for the last number of years. At this stage it is dfficult to say what amount of seed will be avaliable so gowers should place orders immediatley if not already done.

Table 1; Available seed treatments for 2022

Name	Amistar	Allstar	Fungazil/ Gavel	Maxim	Rhino
Active ingredient	Azoxystrobin	Fluxapyroxad	Imazalil	Fludioxonil	Flutolanil
Concentration	250g/L	300g/L	100g/L	100g/L	460g/L
Rate per tonne	3 L	0.8 L	0.1 – 0.15 L	0.25 L	0.2 L
Latest Timing	In furrow	In furrow	Before chitting	Before chitting	Before chitting
Diseases;					
Rhizoctonia	***	***		***	***
Silver scurf			***	**	
Black Dot	***				
Skin Spot			***		

When treating seed good coverage is essential in order to get the full benefit from each chosen product. Ensure that the seed is clean with no open eyes before treatment, to avoid the risk of damage to the chits, which can lead to uneven emergence.

You should also remember that good rotations are also very useful in controlling disease.

Table 2 below shows the effect of increasing the number of years between crops on the levels of infection. Work carried by the British Potato Council (Nolan, Firman, & Allen, 2000) clearly shows that a gap of 6 or more years between crops has a significant effect in reducing the levels of infection.

Table 2: Rotation effect on disease levels

Years	No. of stocks	Sil. scurf	Black scurf	Com. scab	Pow. scab
			% Disease		
4	17	12	0.4	3	0.8
5 - 6	18	9	0.5	4	0.6
6 +	11	4	0.1	5	0.1

Common scab appears to be the only disease where rotation had little or no effect.

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