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Thirsty summer for potatoes

Roots
Potato prospects

The tabloids have warned of crisp shortages and high prices, echoing the consequences of the last prolonged summer drought of 1976. But what has been the true effect of the summer on potato prospects for 2018? CPM asks the question.

By Lucy de la Pasture

June was officially defined as a drought in many parts of the UK. July followed with blazing temperatures and more dry weather and the relentless summer kept its grip as lifting ‘green top’ began in August.

In 1976 the drought brought vegetable shortages and astronomically high prices for some items, particularly potatoes which were 40% down on production and prices rose to six times their normal value. It's this memory that has fuelled the fears of a similarly steep rise in potato prices in 2018.

Fortunately many more potato growers have irrigation available to them than 40 years ago and their battle has been with the enormous evapotranspiration rates of crops. Overtime bills have clocked up with application overnight and early morning proving the best way to maximise the

usefulness of any applied water.

For those unable to irrigate there's been little help they can give the crop, it's just been a case of wait and see. But according to Shropshire agronomist Graeme Ditty, potato growers have proved to be very resourceful in meeting the challenge the hot weather posed.

Inventive thinking

“There's been some inventive thinking, with growers managing to get water to out-lying land that's never been watered before. I've even heard of a grower who's managing to get irrigation to land that's 4km away from his water supply.”

On the plus side, blight risk has remained low, says Graeme, which will give options later in the day if blight becomes high risk. “We haven't had to use any of the ‘big hitters’ yet,” he adds.

The difference between irrigated and non-irrigated crops is stark this season, with crops that have received water generally looking well. By contrast, in crops where abstraction licenses have limited supply or irrigation isn't possible, some varieties have set a lot of tubers and tuber size is very small, reports Graeme.

It's a similar story in other parts of the country, with Will Gagg, farm manager for the AHDB's Strategic Potato Farm in the North, reporting unprecedented water usage.

“In the last two months we've emptied three reservoirs, we've never even emptied

one before. It's the equivalent of a year and half's water. By comparison last year we used about a third of one reservoir,” he comments.

“We're doing everything we can to preserve water, including irrigating mostly at night and using boom irrigators (rather than rain guns) wherever possible to avoid evaporation. It's so dry that we're having to do some irrigation in the day too. We had a thunderstorm last night and one field caught 14mm of rain. I've just been walking there, and you wouldn't know it had rained at all.”

A small break in the weather at the end of July did little to alleviate huge soil moisture deficits and yields are widely predicted to be



Graeme Ditty says potato growers have been remarkably inventive, getting water to fields that have never been watered before.

down in both the UK and Ireland. It's a likely outcome of the summer that Will agrees with.

"Yields will certainly be down, I'd estimate as much as 25% across the farm. We have about 10% of our potato land that is unirrigated, and on those fields, we'll be looking at very small yields and very small potatoes."

Graeme reports unirrigated Premiere, lifted green top at the beginning of Aug, as yielding 20-25t/ha which when compared with the 50t/ha it could be expected to achieve in a normal season, illustrates the potential impact on potato yields.

For many unirrigated crops, the time that a dose of water would save the day has long since passed, believes NIAB-CUF's Dr Mark Stalham. "In many cases a large dose of water would be deleterious to the crop where it effectively ceased growing during the last three weeks of July. Any significant rain now will result in growth cracks and secondary growths."

And that's exactly what happened in 1976 — the drought ended in Aug and the rain didn't stop resulting in a difficult harvest and misshapen tubers.

Greens are also likely to add to the outgrade pile, with many soils cracking and allowing light into the ridge. But it's not just shrinking soil that's causing the problem.

"In some fields where the canopy is going over, the leaning stems are opening up the ridges and greening could be an issue," adds Graeme.

The extremely high soil temperatures that



Internal and external sprouting has been seen in a number of varieties this summer due to the heat.



Significant rain is likely to produce tuber defects, such as secondary growths and cracking, where crops weren't able to be irrigated this summer.

accompanied the prolonged heatwave during July also produced a heat-related defect, causing in-crop dormancy break. "Canopies aren't as dense as normal and soil temperatures high and we've seen internal sprouting, eyes budding and external sprouting already, generally in indeterminate varieties," says Mark.

Where the market allows the option to use maleic hydrazide to control sprouting, this hasn't been possible in most unirrigated crops because it's been too dry.

"Crops are stressed so they'd be unlikely to take up enough of the chemical and the more likely effect would be to slow the crop down and restrict yield," he adds.

Healthy crop

Graeme agrees it's important to only use maleic hydrazide on a healthy crop that's growing, adding that the label recommends application when the smallest tubers required to reach marketable size are not less than 25mm long, typically 3-5 weeks before haulm destruction. With many crops having tubers the size of golf balls in early Aug, tuber size would be a serious consideration even if rain arrived in the maleic hydrazide application window.

Where crops have sprouted in the ground, this presents an additional problem to be aware of at lifting, warns Graeme. "It's easy to damage the sprouts as potatoes come out of the ground and this allows an entry point for tuber diseases."

AHDB's Dr Glyn Harper, senior scientist at Sutton Bridge, suggests growers look at each field on a case by case basis. "Where sprouting is an issue, try and do all the normal things to reduce disease ingress, such as not harvesting when wet and, where required, making sure wounds cure properly after putting into store. Remove field heat as fast as is practically possible and be aware of risks of condensation," he warns.

None of Graeme's maincrops have reached the stage where burning off is a consideration (at the time of writing) but if ground conditions become suitable for diquat (Reglone) application then reduced doses may be all that's required in many cases.

Syngenta have reinforced their label advice, reminding growers to do the SMART test before applying diquat to crops.

In a statement, the company suggests that if crops have begun to senesce and have low vigour, then growers can still use 0.5 l/ha of Reglone in borderline conditions, but not if it's exceptionally dry and any part of the field fails the test. The SMART test should be undertaken 5cm below the tubers,



Mark Stalham says maleic hydrazide hasn't been an option in some crops because they are under stress.

to ensure that moisture has penetrated to tuber depth.

Mark warns that flailing to remove the haulm also has to be approached with caution when the evaporative demand of the crop is high. "The risk of internal defects occurring may be higher if flailing than using split dose Reglone under these conditions. If there's no chemical alternative because a rapid kill is needed, then flail very early in the morning when the crop has had a chance to rehydrate overnight to limit the risk of shock," he says.

On the plus side Mark points out that there's a lot of natural senescence and skins are setting well in the dry conditions.

Glyn recommends growers decide at harvest whether and for how long they'll be able to store their crop depending on its condition. He recommends growers should make sure their stores are ready for an early CIPC application (see www.cipccompliant.co.uk).

Graeme sums up by saying the dice has been rolled for this season and the market will need to learn how to deal with this season's crop and adjust its spec. He's encouraged that some processors have already dropped their bottom riddle size in response to the smaller tuber size that's become commonplace in this thirsty summer of 2018. ■



Cracking ridges are likely to result in an increased proportion of greens at harvest.