

Weeding out concerns

Potato agronomy

A tricky start to planting plus the potential of growers managing unfamiliar varieties due to short seed supplies means weed control could require some careful planning. *CPM* explores herbicide timings and programme choices for the season.

By Rob Jones

These days, potato weed control programmes are mostly based on a pre-emergence application of a residual herbicide, or a combination of residuals, to coat ridges and provide lasting control of emerging weeds up to the point of canopy closure.

There's also the option of adding a contact-acting herbicide to help burn down weeds that have germinated since the soil was disturbed at planting.

But with wet weather applying additional pressure on spring workloads, agronomists from around the regions have been preparing for less-than-ideal conditions in some situations, as they share their thoughts on fine-tuning early season weed control this spring.

For Lancashire-based Agrovista agronomist John Ball, effective weed control in potatoes is down to 'getting the job done right first time'.

He advises across a range of crops including potatoes, vegetables, combinable crops and forage, grown on soil types which run from high organic matter Lancashire moss and black sands, to light blowing sands.

Crop safety concerns

John says these soils present challenges when it comes to herbicide use, with respect to both efficacy and crop safety. "You have to be quite careful about which products you use, particularly with metribuzin, depending on the variety. And on the moss soil it's difficult to get residuals to work," he comments.

"On the moss you require something that's more robust if it's to work well, whereas on the light sand you want something that's a little bit kinder."

Most of the potato growers John advises produce maincrop ware for packing, but some are growing for the chip shop trade. Varieties include Maris Piper for chipping, Sagitta, Nectar, Melody and Estima for pre-pack.

In terms of broadleaf weeds, field pansy and groundsel are the predominant species present, while annual meadowgrass is the main grassweed problem, with ryegrass an increasing threat.

While Maris Piper's sensitivity to metribuzin on lighter soils is well

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documented, one of the challenges this season will be the limited herbicide sensitivity data — or in some cases ▶



Get things right pre-emergence and the necessity for costly later sprays is reduced, says John Ball.

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James Wrinch can see up to 40 different varieties grown in any one season.

► complete lack of data — available for several of the newer varieties, says John.

And due to seed shortages in more mainstream cultivars, these varieties find themselves being grown more widely. “This is going to be a massive challenge. We’re going to require products with excellent crop safety on all soil types. It’s just going to make this season a little bit more difficult,” he explains.

John’s starting point, as in previous seasons, will be a pre-emergence ‘tailored mix’ comprising 3 l/ha Praxim/Soleto (metobromuron) plus 3 l/ha Defy (pro sulfocarb). “That’ll be my standard safe mix if I’m going with just a residual. Then I’ll build around that depending on the weed spectrum I’m expecting,” he says.

On the moss soils, this might see some metribuzin incorporated into the soil pre-ridging for a little more ‘bite’, adds John.

Soleto plus Defy will be applied to the ridges before cracking, with Gozai (pyraflufen-ethyl) also likely to be included. “If I’m not incorporating metribuzin, I’ll probably go with Soleto plus Defy as soon as ridging is finished.”

Where groundsel, mayweed or field pansy are present, PPO-inhibitor herbicide Gozai has a clear advantage over alternative PPO carfentrazone, he adds. As for Soleto, it brings broad-spectrum activity and good tank mix compatibility, providing excellent control of annual meadowgrass as well as brassica weeds like charlock, chickweed and mayweed, says John.

Where black bindweed is likely to be a problem, adding 2.5 l/ha of a pendimethalin product such as Stomp Aqua to a metobromuron plus pro sulfocarb mix is a good option, he explains. “Get things right pre-emergence and

the necessity for costly later sprays is reduced.”

After the long, wet winter, John has some concerns around the prospects for good soil conditions at planting, which can affect weed control. “Much depends on what growers have had in the ground ahead of the potato crop. I’ve seen an increase in use of cover crops before potatoes, especially for potato cyst nematode (PCN) control, and that will only increase with the SFI multi-species cover crop options coming in. These seem to leave the ground in a lot better condition for planting,” he explains.

After an exceptionally wet winter in what’s usually one of the driest regions in the UK, soil conditions for potato planting are in some cases less than ideal this spring, agrees Suffolk-based James Wrinch.

Independent agronomy

Working out of Bromeswell near Woodbridge, on the East Suffolk coast, James is managing director of East Suffolk Produce – a grower group producing 60,000t of ware and 5000t of seed across some 1400ha of potatoes.

He’s also a specialist independent potato agronomist, advising growers from Suffolk down to the M25 in Essex on soil types ranging from loamy sands through to clays.

He can see up to 40 different varieties grown in any one season. “We’re early growers generally in the east of Suffolk, so varieties include Marfona, Maris Piper, Desiree, Camel, a little bit of King Edward and then we move into more maincrop varieties like Lanorma, Sensation, Manhattan and Mozart,” explains James.

He says planting has been underway off and on since late February. “We’ve been right up against the edge of acceptable moisture levels pretty much through this planting campaign so far. We have some soils that are plucking out of the back of the planter and we aren’t necessarily achieving ideal conditions for residual herbicides in all instances.

“I’m conscious that I have more shadows and valleys in ridges than I’d like and that’s going to produce more weed pressure. In places, weed control will be harder than it might have been if we’d had more time on our side,” he adds.

James explains that weed challenges vary with soil type, but groundsel is proving to be a particular problem in the veg rotations of East Suffolk, which necessitates the use of multi-way tank



Praxim/Soleto offers broad-spectrum activity and good tank mix compatibility, providing excellent control of annual meadowgrass, according to agronomists. Photo: Blackthorn Arable.

mixes including pendimethalin when pressure is high.

“Groundsel has a very waxy leaf; it seems to germinate all year round and it seeds early. I definitely see it as my challenge on the lighter land,” he says. And although James doesn’t have a ‘standard’ potato herbicide programme, he’s starting to favour splitting residual and contact herbicide chemistry.

“Last year, we had a difficult spring and split residuals and contacts for the first time. We didn’t have to go back with a contact in most cases because we had sufficient moisture to make the residuals work extremely well.”

He adds he used a lot of metribuzin where soil types and variety restrictions permitted, plus aclonifen. However, there were some instances on rented land where black bindweed found a hole in the herbicide programme and did cause some issues.

“One adjustment I’ll be making this year is adding in more metobromuron. Sometimes you just don’t have enough information to risk not including something that has more activity against black bindweed,” says James.

Furthermore, Gozai is his partner product of choice where he opts to add a contact herbicide to the mix. “Where there’s plenty of weed emergence and soil conditions are on the drier side, it works extremely well to back up residual partners.”

Timing-wise, his preferred approach is to allow ridges to settle after planting and then apply a residual herbicide within 10-14 days of planting. Crops are then reviewed on a weekly basis until emergence. “Usually, you’d say that with

planting in early March, you have about four weeks to ridge cracking, but last year it was five or six weeks.

“When we start planting later, you get into mid-April and seed is lively, it can be 3-4 weeks to ridge cracking, so you can’t let it go too long,” he adds.

Asked about his go-to mix this year, James says it’ll be 1.75 l/ha Emerger plus 3 l/ha Praxim plus 0.3 l/ha metribuzin, 10-14 days after planting, except where there are variety restrictions and on out-and-out sands.

“We’ll then review any weeds that are escaping the residuals, pre-ridge cracking and apply Gozai as required.”

Lack of herbicide sensitivity data on less mainstream and newer varieties is indeed a consideration this season, points out James. “If in doubt, go with safer products; a Defy plus Praxim plus Gozai mix is as safe as anything.”

However, he highlights that his approach in crops on the Essex clay is very different. “Residual chemistry works on having fine soil particles and creating a chemical seal. We don’t always have that on the clays, so we’ll be using pre-emergence metribuzin if we can, then going back with rimsulfuron plus/minus more metribuzin post-emergence, depending on the variety.”

With potato growing costs in the realm of £9,500/ha, and possibly as high as £11,000/ha (excluding storage and other expenses), this puts any conversation about saving money on weed control into context, according to James.

“We’re discussing £60-£120/ha, which is only about 1% of the current value of growing the crop, so we ought to do the right thing [in terms of weed control], regardless of whether we’re spending an extra £20/ha per hectare or not,” he concludes.

Up in Angus, Perth and Fife, annual meadowgrass and black bindweed are

top of Crop Services (Scotland) agronomist Calum Cargill’s weed hit list in potato crops.

He advises across crop areas anywhere between 4ha and 200ha and a split of approximately 60% seed and 40% ware. Soil types are predominantly light, sandy to medium loams.

“Black bindweed is always problematic, regardless of what herbicide route you go down, but the main weed problem for me is annual meadowgrass — if you get control of that wrong, it’s a nightmare,” he says.

Value in flexibility

Given the changeable Scottish weather, when conditions come right for planting it’s a case of getting on with the job, says Calum. And with flexibility paramount, his preferred approach is a one hit pre-emergence application combining residual plus contact actives.

“At the minute (end of March) the ground is very, very wet and I can foresee a lot of problematic seedbeds coming our way, although it’s amazing how quickly things can turn around once we get a bit of wind and sun.”

His go-to programme is based around residuals Praxim and metribuzin, and contact Gozai, with the Praxim plus metribuzin combination giving good control of annual meadowgrass.

“My basic approach is anything between 0.5 and 0.75 l/ha of metribuzin, plus a minimum of 2 l/ha of Praxim and 0.4 l/ha of Gozai.” He adds that a higher 2.25-2.5 l/ha rate of Praxim is justified by weed burden, along with the addition of Emerger.

Where there are cleavers to deal with, clomazone is considered, and actives like prosulfocarb and pendimethalin also come into the equation, depending on weed spectrum, he says.



With ALS herbicide-resistant chickweed and mayweed populations present in Scotland, potatoes provide a good opportunity to get on top of these weeds with an alternative mode of action. Photo: Blackthorn Arable.

For Calum, herbicide timing is very much dependent on the weather and the workload on-farm. The aim, he says, is to try and hold off on applying herbicides for as long as possible after planting and let the beds settle.

“Once potatoes have been in the ground a fortnight, it’s a race against time to get them sprayed before they come through. If I see moisture I’ll go; if it stays dry I’ll leave it until the last possible minute,” he adds.

With ALS herbicide-resistant chickweed and mayweed populations present in Scotland, potatoes provide a good opportunity to get on top of these weeds with an alternative mode of action, which has a benefit across the wider rotation, explains Calum. “But, if you get poor-ish weed control, you have to use rimsulfuron, which is an ALS inhibitor, post-emergence.”

Controlling weeds in potatoes is expensive, he acknowledges. “But what cost [do you put on] poor weed control?” he asks, to conclude. ■

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