



“If you’re going to invest in the system, it’s important to accept the management that comes with it.”

## Sugar beet survey

# Smart sugar beet

With the development of the Conviso Smart system offering a lifeline to sugar beet growers struggling to grow the break crop, *CPM* explores how it can be best deployed on farm.

By Charlotte Cunningham

Although sugar beet growers have been rocked by turbulent times of late, it’s a crop that’s looking likely to remain in rotations for the foreseeable future.

This is according to the results of a recent survey carried out by *CPM* and Limagrain, whereby 74% of growers revealed that they’ll continue to grow the crop – and not decrease its total area on farm.

“Sugar beet is still a very valuable crop for those who have it in the rotation,” says Bayer’s Roger Bradbury. “It’s a spring crop and brings diversity to the rotation giving growers an opportunity to try and manage problem weed populations in the autumn before the crop is planted.”

Among those growers continuing to realise the value of sugar beet is Yorkshire farmer, Andrew Wilson. Farming 160ha near York, sugar beet accounts for around 20ha of the crop area. “I don’t remember a time when we didn’t grow sugar beet,” he laughs.

While confidence in the crop may remain, there’s no doubt a struggle when it comes to plant protection products – with a decline in active ingredients registered for use in sugar beet during recent years.

However, on the weed control front, there

is an innovative solution in the Conviso Smart system which can help growers better manage their weed burdens. The system brings together the latest developments in breeding and chemistry and is based on two complementary components – an herbicide-tolerate variety which is then treated with a specific herbicide product.

While more than 50% of growers have either grown or currently grow Conviso Smart varieties – with 18% of these growers saying the varieties account for 76-100% of the total beet area – 18% revealed they’re not aware of the system. So how exactly does it work?

“The variety is a modern sugar beet hybrid type which carries a trait that confers tolerance to a dedicated ALS herbicide – Conviso One (foramsulfuron+ thiencazabone-methyl),” explains Roger. “The Conviso Smart system is those two components together – you can’t have one without the other.”

The benefits are varied, although most growers (59%) said their primary reason for utilising the Conviso Smart system was for control of weed beet, while 45% said it was due to the simplicity of the spray programme and a further 39% noting the broad spectrum of weeds the system is able to help control. “Smart beet has basically solved the problem with weed beet – it’s been very strategically useful,” says Andrew.

Limagrain’s Ron Granger picks up the conversation and says while there’s been a drive for several years to increase sugar beet area, this was limited due to the ongoing challenges with weed beet. “However, having the Conviso system in place has given growers the option to return to the crop.”

But the benefits go beyond just weed beet, says Roger. “The ALS components of Conviso One deliver effective, broad spectrum weed control, with the

foramsulfuron driving the grassweed efficacy and the thiencazabone-methyl component driving broadleaf weed control and providing an element of residual activity.

“In order to use the technology to best effect and preserve effectiveness of the system for the future, it’s really important for the farmer and agronomist to work together to understand the weed spectrum resistance profile of populations at field level and deploy the technology appropriately and accordingly.

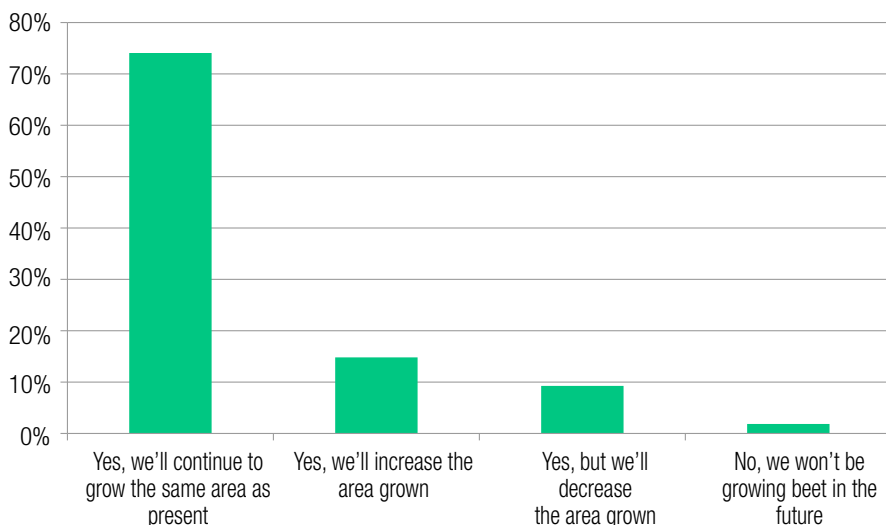
“Where they have the system, it also gives growers the potential to use fewer herbicides. But its one Achilles heel is common field speedwell, but again, if you understand the burden in your field, you can account for this and perhaps use selective chemistry in sequence to manage it while taking advantage of Conviso One for a range of other weeds.”

But it’s important to manage expectations, he warns. “Particularly with growers who haven’t used the system before, I think there’s a feeling that it’s possible to control really large weeds with it. It’s important

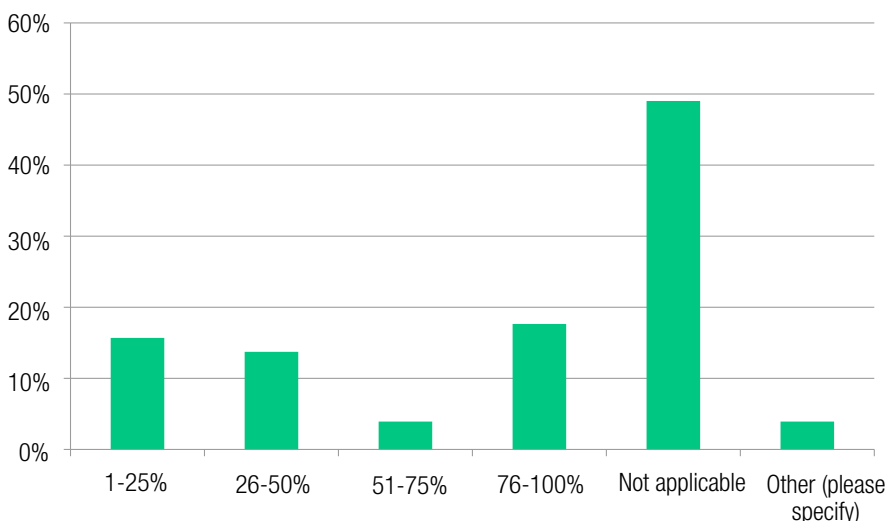


Ever since Conviso Smart was introduced the desirable agronomic characteristics have become better with yields increasing, says Ron Granger.

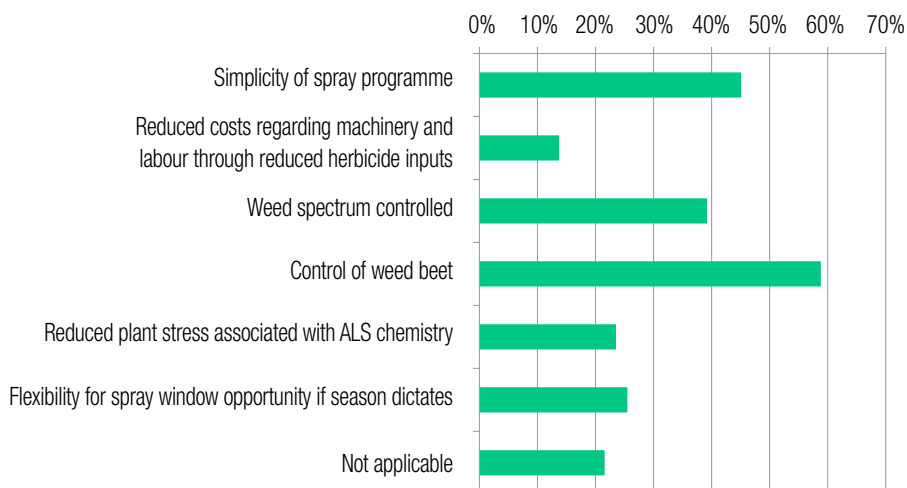
## Will you continue to grow sugar beet on your farm in the future and if so, how do you envisage its future?



## If you're growing Conviso Smart varieties, what percentage of the total beet area does this account for?



## Why have/will you adopt the Conviso Smart system on your farm?



Smart beet has basically solved the problem with weed beet, believes Andrew Wilson.

to understand not all species are equally susceptible, so from an efficacy and resistance management perspective most reliable performance comes from treating weeds when they are small.

"So, it'll control some species at a larger growth stage, but for others it's more effective when the weeds are smaller. Groundsel is a good example – people say it doesn't control it very well. But actually, it's one of those weeds which grows very quickly and once they're bigger and more established, the control is more variable."

In terms of the approach to the herbicide aspect of the system, most growers (43%) said they prefer using Conviso chemistry with a post-emergence spray, while 22% said they use the chemistry alone. But is there a 'best' approach?

"It's perceived as a one-hit product, and in certain conditions / seasons it does work as one," says Ron. "However, when we have these seasons of warm, wet conditions we get additional flushes of weeds. In these situations, it's worth considering other pre- and post- emergence herbicide programmes with differing modes of action. This will depend on the season, but the beauty is that Conviso One is flexible in terms of where you use it."

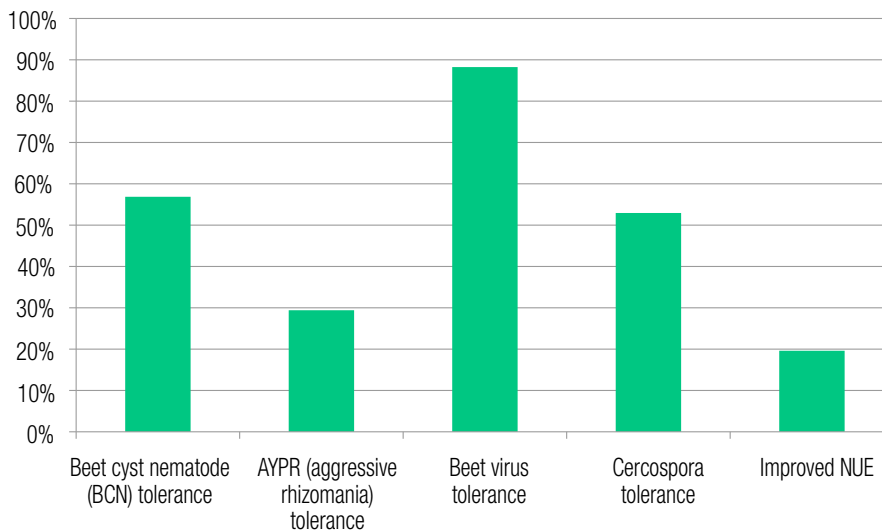
Andrew makes the most of this flexibility and uses it alongside post-emergence sprays. "This is partly because we sow nurse barley alongside the beet as part of our IPM strategy for aphid control."

To protect the chemistry, Roger says general resistance management principles should be applied to the system too.

"This means treating weeds when they're small and incorporating different cultural methods as part of the management of the weed profile throughout the rotation."

As with anything, for all its pros there are some cons, with 43% of growers

## As breeders develop new Conviso Smart varieties, what additional genetic traits would be of most value?



▶ stating that yield capability is a restriction of the system, while 35% made reference to the associated cost compared with traditional seed and chemistry. The yield lag within these varieties has been a key reason for Andrew dropping his Conviso area during recent years. However, breeders argue this is set to change.

“Yes, there’s a higher cost associated, but unless they use the Conviso Smart system, some growers can’t grow sugar beet because of how severe the weed beet issue is and on top of this we do see additional advantages from the system,” believes Ron. “Ever since the genetics were introduced the varieties coming through and added to the Recommended List have shown both higher yield potential and better agronomic security.”

Something he points out is that when the Conviso Smart varieties go through the Recommended List trials, they’re sprayed with a conventional chemistry programme – not the Conviso One they’re designed



Sugar beet is a very valuable crop for those who still have it in the rotation, says Roger Bradbury.

to be used with – which Ron believes impacts the official yield figures. “When we accumulate the data from both internal and independent trials, we’re looking at up to a 5% uplift in yield compared with the RL data on our Conviso One Smart varieties.”

Looking to the future, as breeders develop new Conviso Smart varieties, having beet virus tolerance was deemed the most valuable potential trait by the majority (88%) of growers, followed by beet cyst nematode tolerance (57%) and cercospora tolerance (53%). So is this likely in the future?

“Betaseed is a European breeding programme which tends to be more progressive when it comes to targeting new traits,” says Ron. “We know from our breeders that they’re currently trying to stack additional resistance genes. BCN is a key one – I think everyone in the industry is realising that – but beet virus and cercospora are key targets we’re particularly focusing on.”

“Regarding beet virus tolerance/resistance it’s important to point out that with the introduction of neonics, targeted breeding was reduced, but we’re now looking at the genetics again and essentially going back to basics. The hope is that growers should start seeing better traits over what we have presently coming through in varieties within the next three years.”

In terms of what’s on offer now regarding Conviso One varieties, Ron says Limagrain’s BTS Smart 9485 remains ever popular. “BTS Smart 9485 boasts one of the best all-round packages in this sugar beet category, offering high yield potential in combination with improved disease and bolting resistance.”

Delving into the figures in more detail, the variety has a treated yield (adjusted tonnes) of 93.1% with very good bolting tolerance

figures of 3055 ESB and 19 NSB. “This is on top of a good disease resistance profile offering 6.1 for rust, 6.7 for powdery mildew and (5.9) for cercospora,” notes Ron.

The longevity of the system will all depend on how well it’s applied on farm, and as such, there are careful stewardship guidelines which must be adhered to, continues Ron. This is despite 29% of growers saying they only have limited information on the guidance. “This is something we as an industry have to be very strict on – we can’t afford to break the chemistry,” he says.

Looking closer at this, Roger recommends actions such as clearly labelling Conviso Smart beet fields. “It’s also simple things like cleaning the drill thoroughly before and after drilling and considering spraying Conviso Smart beet after the conventional herbicides where possible. Tank rinsing and sprayer hygiene is obviously really important too.

Having good communication on farm between everyone involved with the crop, including contractors, is vital to minimise the risk of spray errors. Conventional varieties are very sensitive to Conviso One herbicide so spray drift or residues from failing to rinse the spray tank thoroughly or worse still spraying a non-Conviso Smart variety will kill the crop.”

“Have a plan and policy around bolter management too in order to ensure everyone is scrupulous to avoid a new problem coming into farm. Pay close attention to the label advice – it’s a single application of 1.0 l/ha, not a split dose approach.

“It’s a great system, but not one that’s going to suit everyone and the attention to detail is critical. If you’re going to invest in the system, it’s important to accept the management that comes with it. Failure to do so could be damaging for both the crop and the future of the chemistry.” ■

## Winner announcement

Congratulations to prize winner Tony Pulham from Suffolk who responded to the CPM/Limagrain survey and provided insight on sugar beet and the Conviso Smart system. Tony won a Sencrop weather station worth £1800.

He answered the tie-breaker question of: ‘The most important attribute when choosing a Conviso sugar beet variety is...’ with: ‘Flexibility, less workload, better chemistry and yield.’

To engage with future surveys, visit the CPM website and sign up to the newsletter.