NO SILVER BULLET FOR **BLACKGRASS** CONTROL

Growers need to employ a combination of cultural and chemical strategies and pay attention to detail in order to successfully control blackgrass infestations. This was the message from speakers at OPICO's recent Beating Blackgrass conference. John Swire went along.

Nick Myers of ProCam told delegates at the conference that even relatively low populations of blackgrass can have a significant impact on yield. Research conducted by ADAS has shown that just 10 plants/m^2 can give losses of 1.7t/ha. moreover, blackgrass is an extremely pernicious weed, and a minimum of 97% control of infestations is needed just to keep populations of the weed static.

"Also there appears to be no new products coming through the pipeline to help in the control of blackgrass, and there are more threats in the form of endocrine disruptor legislation and even things like the water framework directive. Some of the existing products seem to be less effective in their use. A collection of over 400 manufacturer trials looking at the performance of flufenacet either with pendimethalin or diflufenican over the last 15 years almost suggests that there has been a 2% loss of efficacy per year.

He went on to add that there was no 'silver bullet' and instead a flexible integrated approach was needed: "Agronomists are recommending increasingly complicated stacks and sequences of herbicides to get control. But these are losing efficacy and reliability and resistance is spreading. So, developing cultural control strategies such as utilising delayed drilling, cultivation and spring cropping is increasingly necessary to lower blackgrass populations."

The other problem we have with herbicide control is that we have not got any effective post-emergence or contact materials to follow up the residuals. There has been a general decline in performance over the years of Atlantis. There are still some sensitive fields out there but some are showing control as low as 20%. The upshot of all this is that we are seeing an increase in herbicide spend. We are now looking at an average herbicide spend of around £110/ha in wheat which is quite probably unsustainable with current wheat prices."

Ploughing can be a good way of controlling blackgrass according to Nick Myers: "By burying the seed to below 6cm it prevents germination and more importantly over the period of around three years the majority of the buried seed will degrade. There is usually a 70-80% decline in the seedbank over 12 months. So ploughing followed by working off the surface for three to four years can be a very effective way of controlling blackgrass. However, this has to be good ploughing, as poor inversion will give poor control of the seedbank.

"There is also a debate nowadays about stale seedbeds and delayed drilling. If this technique is used then it is important that the seedbeds be left long enough for the vast majority of the seed to germinate. One of the problems of delayed drilling is that we have variable dormancy in the blackgrass seed. Warm dry summers tend to produce a low dormancy and get a faster chit and faster growth in the autumn. In a summer like 2012 when it was very cold and wet meant we had increased dormancy and a lot of the blackgrass didn't grow until well into November. Delayed drilling can reduce herbicide cost but yields will also fall as well, although the drop in yield between September sown wheat and that sown in November is not that great.

"The key thing with delayed drilling is no so much that you are going to get extra control but its more that you are putting your residual chemistry onto soils that are cooler and more moist and so are giving your herbicides a better chance to work more effectively. Warm dry soils are not particularly suited to working with residual chemistry.

Research suggests that the most efficient non-chemical control method of controlling blackgrass is by switching to the ultimate stale seedbed, spring sowing or even complete fallow. To be really effective with both these techniques you need to do at least a two-year cycle.

Also at the conference was Robert Plaice of Gowan, manufacturer of the herbicide Avadex, which many farmers are using as part of their resistance management strategy.

Robert explained that Avadex has a different mode of action from other herbicides. So despite 56 years of use, it has not lost its efficacy against blackgrass: "As there are no new active ingredients on the horizon Avadex can be the base of a resistance management strategy because there has been no proven resistance over the last 40 years.

"It should not be used alone. It improves the performance of the herbicide stack, which most farmers acknowledge is needed for good grass-weed control. It also needs to be applied correctly at the right time by well calibrated machinery and there are a few important do's and don'ts you need to know. It is best positioned as the starter herbicide and so do apply it pre-emergence. It forms a chemical barrier through which germinating weeds grow. Weeds absorb the chemical and are controlled. Avadex de-waxes and sensitises blackgrass and other weeds, boosting the overall efficacy of the herbicide programme."

He advised however that particular attention must be paid to seedbeds and drilling depth. "Do apply Avadex to well-prepared moist seedbeds. Very cloddy seedbeds should be avoided and loose and puffy seedbeds consolidated before drilling. Avadex needs some moisture to be activated. Drilling depth is crucial so do make sure that drilling depth is correct - for wheat, triticale and rye this is 4cms and for barley 2.5 to 4cms."

He concluded by saying that Avadex is a key component in any black-grass control programme. "Tri-allate is known to work in a different way to almost all other cereal graminicides and is once again finding a key position in many weed control programmes, its robust performance proven with over 50 years of use in the UK."

"Don't forget that it is recommended in winter barley as well as winter wheat. There are fewer actives that can be used in winter barley. It is also recommended in durum wheat, triticale, winter rye, winter field beans, spring barley, peas, spring field beans, forage legumes, sugar beet, fodder beet, mangel and red beet. It controls wild-oats, volunteer (tame) oats and moderate populations of Italian rye-grass and annual meadow-grass." ■