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## TO BEAT BLACK-GRASS

### 5 control strategies for 5 years

This initiative aims to encourage farmers to adopt **comprehensive strategies** to tackle black-grass by maintaining a planned, integrated approach at the individual field level for **at least five years**.

**Why five years?** Because this is how long it takes to *substantially* reduce the black-grass seed burden in the soil, providing new seed production is minimised. The *relatively* short seed persistence of black-grass (74% annual seed decline in the soil) is its one weakness. 5 for 5 aims to exploit this weakness.

- ✦ Opportunistic (rotational) ploughing
- ✦ Post-harvest stubble cultivations
- ✦ Min till/direct drilling/strip tillage
- ✦ Min tillage for spring crops
- ✦ Inter-row hoeing/harrow

- ✦ Delay autumn drilling
- ✦ More spring sown crops
- ✦ Fallow - ideally >2years
- ✦ Grass ley breaks (>2years)
- ✦ Crop rotation

- ✦ Patch spraying
- ✦ Roguing
- ✦ Crop destruct ( AD?)
- ✦ Minimise seed spread  
(in crop seed, straw, equipment & manure)
- ✦ Novel methods  
(e.g. seed capture/destruction)

- ✦ Crops (e.g. barley)
- ✦ Competitive varieties
- ✦ High seed rates
- ✦ Narrow rows
- ✦ Drainage
- ✦ Cover crops

- ✦ Use glyphosate pre-sowing to kill weeds effectively
- ✦ Rational pre-emergence herbicide use
- ✦ Less dependence on high resistance risk post-em herbicides
- ✦ Reassess value of older actives (e.g. clodinafop in mixtures)
- ✦ Use alternative modes of action in non-cereal crops
- ✦ Monitor impact of herbicide resistance
- ✦ Correct timing and application technique

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Consulting

#### What do I do?

Plan a strategy for each field involving all five of the main components shown in the diagram. There is no single 'blueprint' - the most appropriate strategy will vary from field to field.

#### What's new?

There are no major new methods of control – that is the point of the 5 for 5 initiative. The aim is to get the existing weapons used more effectively in the battle against black-grass.

## Can these aspects of your strategy be improved?

These are just a few examples, not a comprehensive list.

**Stop seeding:** Do you patch spray with glyphosate in the first week of June? That is the ideal time in wheat. Do you always hand rogue before mid-June? This is when black-grass seeds start shedding. Are you able to locate patches reliably so the same areas can be sprayed/rogued for several years if necessary?

**Cultivations:** What are the aims of your post-harvest stubble cultivations and are you confident these are achieved? Can your standard of ploughing be improved to achieve a better degree of inversion? This is vital to the success of rotational ploughing and may be easier to achieve before spring crops. Does your cultivation strategy take account of the infestation level in each field?

**Sowing date:** Are you able and willing to delay sowing winter wheat until mid-October or later? This not only reduces infestations but pre-em herbicides tend to work better too. Can you grow more spring crops? These are more effective than delayed autumn sowing. Are you willing to grow several successive spring crops or put fields down to grass or fallow – possibly even for five years?

**Competition:** Higher seed rates can be very useful but how high are you willing to go? Cover crops have many benefits but how are they contributing to black-grass control on your farm? Are wider rows reducing crop competition and thereby encouraging black-grass?

**Herbicides:** Are you destroying all weeds effectively prior to sowing the crop? If not, why not? Are you willing to experiment to find the best pre-em for your own farm? Results from trials on other farms, with different soil types and resistance, may be misleading. When did you last have a resistance test done on your black-grass?

### The three 'R's are also an important part of 5 for 5: Record, Review and Revise

- **Record** the amount of black-grass, and its location in every individual field, to assess progress.
- **Review progress** annually to identify the most successful strategies.
- **Revise the plan**, if necessary, but do not expect dramatic improvements within only 1 or 2 years.

Photo taken in July 2017 is a 3rd successive spring wheat crop in a field previously in continuous winter wheat with a long history of resistant black-grass. The farmer: **Recorded** the amount of black-grass - there is none; **Reviewed progress** and concluded that the absence of black-grass is a good indicator of a successful strategy; **Revised the plan** of returning the field to winter wheat and decided to plant a 4th successive spring wheat crop in spring 2018 to capitalise on his success and reduce the black-grass seed bank even more.



### In essence, 5 for 5 is all about:

- refining existing control strategies rather than relying on unproven new 'gimmicks'
- recognising that beating black-grass requires a multi-year commitment at the individual field level
- being more proactive and disciplined in tackling black-grass

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CROPROTECT is a knowledge exchange system to support UK growers in sustainable crop protection.

See <http://croprotect.com> (or search for 'CROPROTECT') for more information.

An electronic version of this leaflet is available on the CROPROTECT website and links to additional black-grass management information are listed on the UK Weed Resistance Action Group website:

<https://cereals.ahdb.org.uk/wrag>

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Designed by Lynda Castle