

Weed Resistance Action Group: update on glyphosate resistance in UK

Early in 2025 we announced the first confirmed case of glyphosate resistance in Kent and later confirmed two additional cases (Gloucestershire and North Yorkshire). All demonstrated significantly reduced control from appropriate doses of glyphosate. A fourth population (Essex) also showed decreased glyphosate sensitivity in the tests. All of these cases are in Italian Ryegrass and were very high-risk resistance situations. During spring 2025 Bayer CropScience funded ADAS to enable investigation of further suspected cases, typically where plants had survived earlier treatment. This note is to highlight the outcomes from those investigations and the messages that result from all investigations so far.

SUMMARY

Despite widespread publicity and activity only ten cases (representing 8 farms) were highlighted for investigation in spring 2025. Glasshouse plant-based tests on these ten populations has indicated there is a high risk that there is resistance on a further three farms. Seed from these new populations will be thoroughly tested over the next few months to fully confirm if they should be classified as resistant (in addition to the three cases confirmed already). The rapid, plant-based, investigation is only an indication of high risk and does not necessarily imply that the detailed tests will confirm them to be additional field selections of glyphosate resistance.

With good background on all the cases investigated there are many common principles:

- **All the three cases identified as resistant and four high risk of being so, are from high risk crop management situations** (no cultivation and/or very little soil disturbance, larger weeds allowed to grow without earlier control when small, such as can happen before spring crops).
- It is likely that all cases have evolved from **independent selections**. There is no geographic pattern to their incidence.

The [WRAG Guidelines for minimizing the risk of glyphosate in the UK](#), first published in 2015 and informed by AHDB & industry research, remain highly relevant and these cases all highlight why they were produced and the need to use them. The key management includes: Prevent Survivors, Maximise Efficacy, Use Alternatives, and Monitor Success.

ACTIONS AND IMPLICATIONS

- There are **many reasons for poor control**, thorough investigation is essential to confirm causes.
- Vigilance and appropriate action can minimize development of field cases of resistance.
- All farmers and agronomists should be fully aware of the risk and are recommended to read and act on the [WRAG Guidelines for minimizing the risk of glyphosate in the UK](#), including Prevent Survivors, Maximise Efficacy, Use Alternatives, and Monitor Success.
- The independent nature of populations developing highlights the importance of **on-farm hygiene**. Italian Ryegrass seeds are often present alongside the crop heads at the time of harvest. To prevent spread thoroughly clean combines (and other equipment such as balers or cultivation machinery) and when possible keep all straw within the field (and definitely on farm).

TESTING IN SPRING 2026

- To monitor the situation and evaluate the potential for additional cases of glyphosate resistance, Bayer Crop Science will fund ADAS to conduct a further year of focused testing in spring 2026.
- As in 2025, this testing will target populations of Italian Ryegrass surviving glyphosate application prior to drilling a spring crop as this has been identified as high risk situation.

- The testing will require farmers/advisers and others to;
 - Complete a questionnaire to evaluate risk [if there is over-subscription, this may be used to identify the highest risk samples].
 - Dig up Italian ryegrass plants from the field (enough plant material to cover an A4 sheet of paper in total) and send them to ADAS (in sealed plastic bags with the completed questionnaire).
 - Test results will be reported back to the farmer/advisor in weeks so that action can be taken if needed. Note a positive rapid test results does not automatically mean that glyphosate resistance is present at a field scale but populations identified from this testing can be taken forwards for further investigation.
 - Overall summaries for regions will be produced but individual test results and locations will be kept confidential.
- If after assessing your own risk you identify a need for testing you should do so through your agronomist (who have the relevant details). In the event you do not have an agronomist you should contact your Bayer Crop Science representative, or in exceptional circumstances, ADAS.

FURTHER BACKGROUND NOTES

Species

- The situation refers only to annual Italian Ryegrass (*Lolium multiflorum*) this is NOT Perennial Ryegrass (*Lolium perenne*).
- Italian Ryegrass grown as a commercial forage crop is not the issue here; these are wild populations (arable weeds) and subjected to selection for herbicide resistance on-farm.
- Rigid or Annual Ryegrass (*Lolium rigidum*), a common weed in Australia, is a different species. Although like Italian Ryegrass, be careful about reading across findings from this species and region.

Combining a pro-active and re-active approach

- Glyphosate stewardship is both pro-active and re-active.
- *Pro-active*: Best practice glyphosate use should reduce the risk.
- *Re-active*: Monitor and react quickly and appropriately to any individuals surviving application.

There is further relevant information provided by Bayer CropScience at

<https://cropsscience.bayer.co.uk/insights/weed-management/glyphosate-resistance-faq>

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



<https://www.linkedin.com/groups/12757011>

