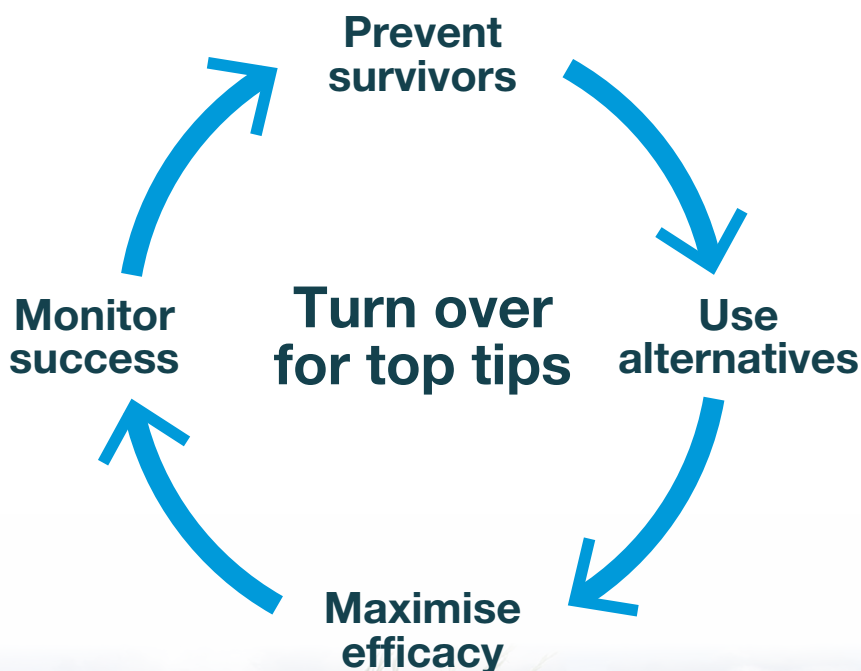


# Minimise glyphosate resistance risks in weeds



# Top tips to tackle resistance risks

## Use alternatives/prevent survivors

To control weeds, use multiple and diverse approaches, including sufficient cultivations and other non-chemical techniques. Avoid using more than two glyphosate applications. Do not make repeat applications to the same (surviving) plants. Use other herbicides in sequence or in mixture (if recommended).

## Maximise efficacy

**Dose:** Typically, annual grasses require a minimum of 540 g a.i./ha for seedlings up to 3 leaves, 720 g a.i./ha when tillering and 1,080 g a.i./ha when flowering. The choice of nozzles and water volume can be influential. Since hard water can reduce glyphosate effectiveness, the addition of water conditioner is recommended, where appropriate. Use a forward speed of no more than 12 km/hour.

**Timing:** Apply to actively growing plants in warm conditions (15–25°C), with at least 6 hours before any rainfall. Ideally, spray when plants have at least 5 cm of growth but before the start of rapid stem extension. Apply prior to ‘shading’ from other plants. Do not apply to plants under stress, such as waterlogging or drought.

## Monitor success

Investigate any unexpected survivors and quickly remove surviving individuals (e.g. via cultivation). Report survivors to your crop protection adviser and/or the product manufacturer. As there are many reasons for poor control, send samples (whole plants or seeds) for resistance testing to help confirm the cause. Black-grass and Italian rye-grass are key species at risk of developing glyphosate resistance.

## Further information

With the first case of glyphosate resistance in a UK weed (Italian rye-grass) confirmed, it is critical to follow the full AHDB/WRAG guidance to minimise the risk of resistance development and spread.

Scan QR code or visit [ahdb.org.uk/glyphosate](https://ahdb.org.uk/glyphosate)

