



Cereals - Best Practice For Pesticide Residue Minimisation



The challenge

Your customers and consumers expect residues to be kept to a minimum, even if higher levels would be of no concern for human health. Farmers and their advisers should ensure that any actions do not compromise ICM best practice and grain quality. See ACCS standards covering Crop Protection.

Targeting the active ingredients that leave low but regular residues will give maximum benefits. By understanding the issues, following the guidance and making adjustments to your crop protection programme, you can minimise any residues of the following crop protection products:

- ✓ the plant growth regulators chlormequat and mepiquat
- ✓ glyphosate when used as a pre harvest treatment
- ✓ storage insecticides like pirimiphos - methyl and chlorpyrifos - methyl

Things you can do:

1. Spraying

- ✓ It is vital your sprayer is correctly maintained and calibrated
- ✓ Precise sprayer bout matching is important as is the use of engineering controls to avoid off target drift.
- ✓ Work with your neighbours at farm boundaries to ensure they do the same

2. Chlormequat

“timing is more important than rate to help residue minimisation”

- ✓ Review and implement options (nutrition, variety, field location, drilling date, seed rate, rotations and soil type) to help minimise lodging and avoid unnecessary crop protection inputs
- ✓ Confirm acceptance of usage on crops grown under contract
- ✓ Keep to the label recommendations
- ✓ Do not use more than 1612 grams of active ingredient on any crop (2.5l/ha of a 645g/l formulation)
- ✓ Apply before GS 32 (2nd node detectable) unless the risk of lodging is high and label allows. For winter barley and triticale apply before GS 31 (1st node detectable)
- ✓ For stem shortening and minimum residues in wheat, barley, rye and triticale the optimum timing is GS 30 (leaf sheath strongly erect)
- ✓ For stem shortening and minimum residues in oats the optimum timing is GS 31-32 (between 1st node and 2nd node detectable)
- ✓ Remember crops must be actively growing and that spring crops rapidly move through their growth stages
- ✓ Review relevant manufacturer and HGCA literature – “Avoiding lodging in winter wheat – practical guidelines”. February 2005



3. Mepiquat

“timing is more important than rate to help residue minimisation”

- ✓ Review and implement options (see chlormequat) to help minimise lodging and avoid unnecessary crop protection inputs
- ✓ Confirm acceptance of usage on crops grown under contract
- ✓ Keep to the label recommendations for the latest application timing
- ✓ Optimum timing is generally earlier between GS 32 and 39 (2nd node detectable to flag leaf ligule just visible)
- ✓ Plan to avoid the latest growth stage timing and aim to treat at GS 33-37 (3rd node detectable to flag leaf just visible) to balance efficacy and minimise residues
- ✓ Remember in the spring, crops rapidly move through their growth stages especially when close to the latest application timing
- ✓ Review relevant manufacturer and HGCA literature (see chlormequat)

4. Glyphosate

“timing and rate are both important to help minimise residues”

- ✓ If used for grass or broad-leaved weed control, consider treatment at other points in the rotation
- ✓ Confirm acceptance of usage on crops grown under contract
- ✓ Keep to a minimum rate (1l/ha of a 360g/l formulation), which is adequate to dry out leaves and stems
- ✓ Do not apply until 30% grain moisture is reached (grain retains a thumb nail imprint)
- ✓ Earlier applications will give significantly higher residues
- ✓ Rainfall and dews between application and harvest can reduce residues from the outside of the grain
- ✓ Keep to the 7 day harvest interval
- ✓ Review relevant manufacturer and HGCA literature – “Pre-harvest glyphosate application to wheat and barley.” Information Sheet 02/Summer 2008

5. Pirimiphos-methyl and chlorpyrifos-methyl

“hygiene and monitoring measures can minimise the need for post harvest treatments”

- ✓ Utilise good hygiene practices
- ✓ Use pest monitoring to justify use at store cleaning stage or when used as an admixture
- ✓ Confirm acceptance of usage on crops grown under contract
- ✓ Use moisture and temperature management to control or prevent the development of pest populations
- ✓ Review relevant manufacturer and HGCA literature – HGCA Signposts – Best practice in grain storage for cereals and oilseeds.” Autumn 2007

Use the experience of your BASIS registered crop advisor to help review this guidance. Remember, a few simple actions that are well planned and executed can make a big difference.

For more background information on this topic visit the – ACCS website library section www.assuredcrops.co.uk and www.hgca.com

Always read the label. Use pesticides safely

For additional copies telephone 01932 589800 or

e-mail: liz@aekerrigan.demon.co.uk