The wet autumn delayed planting of winter cereal crops and created a backlog of work for many farmers. As a result on most farms, the weed control strategies will have to be adjusted since the pre-emergence options were not used due to workload. For most growers, post-emergence treatment will be used this season, but slight adjustments may have to be made especially where troublesome grass weeds are present. With a limited number of active ingredients to choose from, knowing your problem weeds and targeting them will be an important part of any weed control plan. Target the most competitive weeds for control early but also bear in mind that for grass weeds, such as annual meadow grass, the products available work best on small plants. Early application, especially for control in winter barley, is essential.

Weed control strategies
- Refer to field history and the weeds in each field.
- Identify the weeds and their economic importance.
- Know the strengths and weaknesses of available herbicides.
- Apply herbicides to suit the weed stage and weather conditions.

Post-emergence applications need to be applied early at the two- to three-leaf stage for best effect. You should then assess weeds when spring growth commences. Table 1 lists the available herbicides for winter cereals.

Annual meadow grass
Annual meadow grass is considered a moderately competitive weed and is not as competitive as wild oats or cleavers.

### Table 1: Main winter cereal herbicide autumn post-emergence options

<table>
<thead>
<tr>
<th>Name</th>
<th>Rate/ha</th>
<th>Latest timing</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alister Flex Wheat only</td>
<td>0.8-1.0 L</td>
<td>GS 39</td>
<td>Cleaver control up to four whorls, good on fumitory, poppy and volunteer oilseed rape. Good contact effect on grass weeds. Limited residual effect. Use early post-emergence.</td>
</tr>
<tr>
<td>Firebird Wheat only</td>
<td>0.3 L WB</td>
<td>GS 25</td>
<td>Good residual control of BLW and grass weeds esp. AMG. Use pre-emerge for best effect. Second application where label allows for improved sterile brome control.</td>
</tr>
<tr>
<td>Naceto Wheat only</td>
<td>0.6 L WW</td>
<td>GS 13</td>
<td>Max single dose 0.3L/ha (Firebird, Navigate and Griffen WB). 0.6L/ha Naceto, Reliance &amp; Griffen WW.</td>
</tr>
<tr>
<td>Broadway star</td>
<td>0.265 kg</td>
<td>GS 32</td>
<td>Mainly for sterile brome and Black grass but also control wild oats, AMG RSMG.</td>
</tr>
<tr>
<td>Wheat &amp; barley</td>
<td></td>
<td></td>
<td>Very good option for high AMG situation. Add DFF 0.1L/ha for additional BLW control. Use pre or early post emergence. Avoid use at peri emergence on Winter Barley. BLW only. No grass-weed control. Poor on fumitory and poppy.</td>
</tr>
</tbody>
</table>

Continued on p26
from p25}

**Table 2: Brome control in winter wheat in spring**

<table>
<thead>
<tr>
<th>Product</th>
<th>Rate/ Ha</th>
<th>Weeds controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allister flex</td>
<td>0.8 - 1.0L</td>
<td>Charlock; cleavers; chickweed; pansy; deadnettle; fumitory; poppy; volunteer OSR; speedwell; AMG; brome.</td>
</tr>
<tr>
<td>Broadway star</td>
<td>0.265 kg</td>
<td>Cleavers; chickweed; charlock; marigold; pansy; groundsel; speedwell; wild oats; volunteer OSR; brome. Add adjuvant e.g. Torpedo for best results</td>
</tr>
<tr>
<td>Pacifica Plus</td>
<td>400g</td>
<td>Brome; wild oats; AMG; volunteer OSR; chickweed; charlock; deadnettle; groundsel.</td>
</tr>
<tr>
<td>Mix restrictions</td>
<td>330g</td>
<td>Wild oats; blackgrass; brome; AMG; chickweed; mayweeds</td>
</tr>
</tbody>
</table>

But it can multiply quickly, often producing two generations in one season. It can become a problem quite quickly in thin crops and can cause trouble at harvest time. The control of annual meadow grass requires a strategic approach in winter wheat and barley.

There are many effective products for the control of annual meadow grass on the market such as Flufenacet, e.g. Firebird; Prosulfocarb e.g. Defy; Pendimethalin-based – Stomp etc; or Chlorotoluron – Tower. In the spring, products such as Allister flex/ Pacifica can be used in wheat.

Generally, the autumn-applied products are most effective when they are used pre-emergence or early post-emergence.

**Broad leaved weeds**

For some late-planted crops there may be no opportunity to apply a herbicide until the spring. This should still be OK for most weeds but using spring type herbicides such as a sulfonylurea or a hormone-type product need good growing conditions for best effect.

You also need to be aware of label restrictions concerning latest timings and mixing. They can complicate other treatments, e.g. plant growth regulation, trace elements or disease control, so plan carefully.

**Brome**

Brome is an increasing problem in winter cereals and needs careful management to prevent a build-up of weed seed bank. An effective control strategy comes from the integration of cultural and chemical control strategies.

In winter barley, where brome is a problem, chemical control is based on products containing flufenacet but these products need to be used pre-emergence and repeated early post-emergence and will still only achieve 50% to 60% control.

In winter wheat, there are a number of chemical options which can be used in spring but growers must avoid using the same products each year as this will eventually lead to a build-up of resistance.

One farming family who take a planned approach to weed control is that of George and Muireann Byrne, who took over their farm from well-known Larry and Kathleen Byrne, just outside Carlow town.

George grows all winter cereals and plants beans, beet and maize in the spring, giving him good opportunities to break problem weed lifecycles. It takes a lot of skill and effort to juggle and manage a rotation with seven or eight crop types but George is well up to the job, returning some of the best yields and margins every year.

“We plough using minimum till equipment where feasible,” says George. Some barley went in after beans this October using a Lemken disc and Vaderstad drill and the results will be good he believes. His target sowing date has shifted in the last few years with no sowing until after 10 October this autumn.

“Our maize was harvested in the third week of October. Some was pitted for our cattle and some was sold, and it left behind surprisingly good conditions underfoot but he has some beet still to pull and will wait patiently so as not to damage the soil. “I had to stop because the headlands just weren’t to my liking and it’s not gone late yet in my opinion.”

He has been in no rush to sow crops on that land or elsewhere. “I prefer to wait till the weather gives me suitable soil conditions. That means the seed will have the best chance of establishing and weeds will be less likely to compete along with the obvious advantage of lower BYDV risk,” says George. His seeding rates are adjusted upwards with an eye on slugs, crows and the colder, wetter and darker days ahead.

His soils are typical Carlow land, loamy with some lighter pockets and not too much heavy land. This may explain his calm approach to late harvested crops and later plantings this year and his determination to get weeds under control after planting.

“Yields that won’t come right for me, and some headlands, might be left to be sown in spring. I’m not going to fight against them. Winter crops are expensive enough to grow without getting poor yields. Everyone will have a time in their head when they know further delay won’t result in better conditions.” Farmers on heavy land will agree with him, but will have different dates in their mind depending on their individual circumstances.

George would consider winter sown beans this year but like many others he is fearful of crow damage. “I would have to plough for them so they are not lying in a water filled trench.
but if the crows are hungry they
would find them however deep I sow
them. I’ll see how much cereal I get
sown and decide then.”

He reckons there will be no rolling
done this autumn as conditions have
been start-stop and soils are too tacky.
“IT would cause much more problems
than it would solve” says George.
However, his strategy for chemical
weed control remains the same.

George will apply DFF and Pen-
dimethalin up to one week after
sowing this year: If conditions do not
allow for spraying at that stage, then
early post-emergence application of
the same products will be his second
line of attack. “I won’t wait for the
third leaf. Post-emergence this year
will be into November or even early
December for the November-sown
wheat and hybrid barley.”

George is aware of possibility of
spray damage on crops that are just
coming up (peri-emergence) but once
the first leaf is fully out he will be
getting geared up for spraying oppor-
tunities. He will treat barley first and
then on to the wheat and oats. The
ability to correctly time any input to
any crop is critical for good produc-
tion results.

Significant differences
Of any 10 neighbouring farmers on
similar soils, there are often signifi-
cant differences in timing of sprays.
Usually only one of the 10 will have
got it just right. The post-emergence
options are many but whether it’s
Defy and DFF, Firebird or Tower or
Flight, your skill and judgment will
determine if the application can be
made to the soil you manage.

Sterile brome is kept in check us-
ing integrated pest management.
“Graminicides on spring break crops,
stale seed beds with the later planting
has minimised the problem for me,”
says George. The message has been
taken on board: “Don’t look for the
solution to brome in a spray can.”

Winter wheat will often have a fol-
low up treatment of Broadway Star in
February and the oats may or may not
get anything more. Indeed, if post-
emergence application is missed they
still may not require any herbicide
due to their natural ability to compete
with and tolerate weeds.

Of course the only option for the
barley next spring will be: “A cheap
run with a sulfonylurea to control
some BLW like groundsel, fumitory
and charlock. I’ll fight a battle against
weeds whenever I can with rotations,
cultivations, and timings and
products. And when Teagasc clients
read this, I’ll still be out looking to
spray the emerging crops. Once I win
more battles than I loose, I’ll be happy
enough,” George concludes.