

SHOOTING TIMES how to...

Beat the pests and save crops

The extreme weather this year may have played havoc with our crops, but there are valuable lessons to be learned for the future, says **Clive Wood**

What a season! It's certainly been a very difficult spring and summer for establishing game and conservation crops. We are running at least a couple of weeks later than normal in most parts of the country, and with a late, cold start followed by one of the longest periods of drought that I can remember, getting crops established and away from danger has been a challenge.

We all thought that, after such a long, cold winter, the number of insects and soil-living pests would be reduced and pose less of a risk for this season. It's fair to say now, that this was wishful thinking, as I am sure this has been one of the worst summers for pests for many years.

Rewinding back to December and January, the only explanation that can be made for this observation is that the snow came so quickly and in such large

quantities, that it more than likely created an insulating blanket protecting Mother Nature's nasties for a couple of months, rather than the opposite.

Men are always wisest after the event, and it's far too easy to report on what you should and should not have done at this stage. It is possible to observe a number of problems that appear to keep surfacing on a regular basis. Here are 10 common covercrop issues to note. ■



Getting crops established and away from danger has been a challenge

The ten worst problems and their solutions

1. Maize

Major problems with nutrient deficiencies have been seen in maize crops, brought on by very dry seed beds and shallow root systems leading to a poor uptake of nitrogen, phosphate and potash. Keeping the plant a healthy colour has been hard and since the beginning of August, crops have been showing severe yellowing, indicating magnesium deficiency.

Remedy

- Dig deeper next season — a seed depth of 3–4in is critical for good root development and to preserve moisture at optimum seed depth.
- Plough earlier and drill on lighter soils.
- Minimal cultivation (top working) is an option for heavy soils for preserving moisture and avoiding baking out.
- Foliar feeding with trace elements is required if covercrops start to go off-colour.
- Use hybrid maize varieties that are more suited to dry conditions.



2. Kale- and cabbage-stem flea beetle

Kale has taken a hammering from the flea beetle. The life cycles of both black and striped cabbage-stem flea beetle are very similar. Adults winter in margins and hedgerows emerging in April to feed, mate and lay eggs in the soil. The next generation of adults start to emerge in late July. The numbers seen in some areas this season have been incredible. Constant attacks will stunt the plant. Due to the proximity of crops in gamestrip situations, the problem seems to get worse each year.

Remedy

- In regions where large acreages of commercial oilseed rape are cultivated, plant the crops later in the year (July) when soil temperature is much warmer and requires much less management time and expensive inputs.
- Try to use kale blends which utilise a number of different systemic seed dressings.
- Rotate kale plots regularly, this helps to avoid egg hatches from the previous crop.
- Spray with cypermethrin-based chemicals.



3. Herbicides

Due to the dry conditions, many people have been caught out this season with poor results from pre-emergence herbicides. The use of these herbicides is becoming a bit of a lottery, and if we get the wrong conditions at application, such as heavy rain, they can knock the vigour out of crops overnight. Some maize growers have applied one of the new contact and residual herbicides and then realised that the crop is not good enough or requires a patch-up. As a result, the use of forage rapes and mustards is impossible and has created major frustrations.

Remedy

- You can replant in the same season with a late covercrop option, but the ground will need reploughing to remove the strong residual lair.
- Chemical choice at the planning stage is important if millets and sorghum are to be used within maize crops.
- Avoid pre-emergence herbicides in maize crops if possible.
- Take advice from an agronomist qualified with the BASIS Certificate in Crop Protection.



4. Slugs

The grey field slug is still a major problem in all gamecover crops. Despite the dry conditions this spring, the numbers hatching were incredible. These are as damaging to young kale plants as any flea beetle. The use of metaldehyde slug pellets is under great threat at present, with levels of the chemical showing up in water courses. The new non-metaldehyde replacements, such as SluXX and Sluggo, are more environmentally-friendly and, surprisingly, still very effective.

Remedy

- Treat stale seedbeds with non-metaldehyde slug pellets such as SluXX or Sluggo before any crops are planted.
- For brassicas, drill metaldehyde pellets with the seed. This action, when trialled this year, produced very good results.
- Applications of SluXX or Sluggo immediately post-drilling usually represents good value for money and is very environmentally-friendly.
- Keep seedbeds firm, roll when possible.



5. Club root in kale

Warm soil conditions have fostered club root in brassica crops and cysts can live in the soil for eight to nine years between host crops. It can be moved very easily by foot and machine. Constant use of drives by beaters throughout the season will move the problem around, as will quad bikes and ATVs. Often, the first sign is that the crop stops growing and leaves begin to brown at the edges, in which case check the root.

Remedy

- Step up bio-security to stop the problem arriving in the first place.
- Improve drainage.
- Rotate kale crops regularly.
- Club root thrives in acidic soil — keep checking to ensure PH levels are correct if you have problems.
- Feed the soil and the crop heavily with manure and nitrogen. The problem is less of an issue in fertile soils.
- Use resistant varieties.



6. Aphids

Again, due to suitable conditions, the numbers of aphids present this season have been very large. The black aphid seen on many plants this year is really only responsible for colonising in large numbers, creating a mess and reducing green-leaf area.

The peach potato aphid is the most commonly seen in gardens and is capable of feeding and transferring viruses at the same time. Often, leaves start to go brown at the edges when a virus starts to spread.

Remedy

- Spray with a cypermethrin-based spray.



7. Pollen beetle

Pollen beetles have been present in large numbers this season. Again, they are suited to the bright, warm conditions. Often confused with the black, cabbage-stem flea beetle due to their similarity in appearance, this insect feeds on the flower buds of mustard, gold of pleasure, second-year kale crops, fodder radish and chicory. Left unsprayed, they will feed on virtually every flower bud, stunting the crop and preventing any seed production.

Remedy

- Treat with the same cypermethrin-based chemical as used for flea-beetle spraying.
- Crops that are sprayed in time usually show an improvement within 24-to-48 hours.



8. Cabbage white butterflies

Already this season, a number of kale crops have had to be sprayed for cabbage white butterflies and subsequent damage from caterpillars. This season has been suited to virtually all insect life who have benefited from the warm, sunny days.

Damage is evident in the holes appearing in brassica leaves. It may be possible to live with the problem, but excessive damage will need to be controlled by spraying.

Remedy

- Spray with lambda-cypermethrin if caterpillars and damage are observed. The use of Hallmark with Zeon technology is preferred for caterpillar spraying, as this provides three-to-four days of good control.



9. Leather jackets

These have been a particular pest this season. They are usually more of a problem in permanent grassland that is being converted to new drives. They are very active underground and can destroy new roots in maize and brassicas very quickly if not treated

Remedy

- Never miss the opportunity to add in a soil-acting insecticide to the glyphosate when killing off the old grassland in preparation for ploughing. Note they need careful handling and application.
- Never use these products without clear recommendations and protective clothing.



10. Leaf diseases

Early warm and humid conditions have created an ideal situation for many of the fungal leaf-diseases. Many have now passed for this season, already doing serious damage, especially to triticale and spring bean-crops. We have seen both Alternaria and Septoria in perennial chicory for the first time this season.



The two that will still show this season are powdery and downy mildew in kale and brassica crops. If conditions remain dry with cooling temperatures, the problem will start to be seen.

Remedy

- Prompt action with the correct choice of fungicide will quickly stop the problem in its tracks.

CONCLUSION

The majority of this season's problems are down to the fact that it's been far too dry and the majority of crops are still in need of, at the very least, a really good dousing. It's certainly been a year for the bugs, which thrive on the long, warm days. Next season will, without doubt, bring a different set of problems. Managing risk with a percentage of perennial cropping still makes very good sense when we are faced with the more difficult growing seasons.

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