



## Topping Time



Springtime brings us to that time again – when you have to start stopping the seed set of weeds. And don't forget its not just a matter of getting out the sprayer. There is a bit of preparatory work to do if the job is to be as good as possible.

### **Pasture topping.**

Classical spray topping is done with paraquat. It is fast acting, so stops seed development almost immediately, but will not kill the whole plant. This means that regrowth is possible if the plant still has enough time and moisture to do this. So it is done very much toward the end of each season.

To be successful, all plants must be producing their heads in unison. Wild grasses rarely do this – overall survival is increased by having a degree of variation in such factors. So you must do a bit of work to get them synchronised.

Grazing pressure is the usual technique. Hard grazing will remove any existing seed heads (do it before the brome becomes unpalatable). Then remove the stock to allow the next flush of heads to run up. If stock are left in the paddock the grasses will respond to the continuous grazing by producing heads lying flat on the ground – another survival technique! You want upright heads that are easily hit by spray.

Apply Paraquat 250 at 400 ml/ha when the first grass seeds reach soft dough. This is generally at the first hint of ryegrass haying off. Use fine droplets and high water volumes to get good coverage. Adding additional wetter may also improve performance.

Barley grass is much more difficult to top successfully, as it produces early seed heads on some tillers unless grazing is carefully managed. It may need a couple of cycles of crash grazing and spelling to get from the start of head emergence to mid spring when topping becomes feasible. Remember if you spray it too soon the conditions will not be dry enough and it will reshoot. Also, if you have a mix of grasses the others will not be at the right stage for topping. Also take care to do the crash grazing before the heads have started to harden and become unpalatable.

Glyphosate can be used instead of paraquat, but it needs to be applied earlier as it takes time to kill the plant. Use 240-360 ml/ha of Glyphosate 450 when ryegrass begins flowering. Complete coverage is not essential since it is a systemic herbicide. Some broadleaves can also be topped if using glyphosate, most notably capeweed. Again, flowering is the time to do this (those with ageing eyes will appreciate that it is easier to pick flowering capeweed than flowering ryegrass!).

A side benefit of topping is that the pasture has better feed value (and palatability) over summer than if it hays off naturally. The sugars that the plant would use for energy during head production are retained in the stems and leaves (this is the same principle exploited in making hay).

If retaining feed is not an issue – no animals, plenty available, rubbishy paddock etc – some paddocks could be sprayed earlier with a higher rate of glyphosate to ensure a complete kill with no possibility of seed production. In this case you want the plants to be controlled while conditions are still wet. They will then rot down and contribute to soil organic carbon and structure.

### **In-crop control.**

At this time of year there can only be a small yield increase from controlling weeds, so any control measures will be to make harvesting easier or for seed set control.

Obviously your options are more limited than they are in pasture, but some strategies are available.

Paraquat topping can be used in legume crops, where the pod protects the seed from the spray to a large extent. Timing is often a compromise though. You must consider

not only the best timing for the weed seed head (in most cases it will be ryegrass) but also the crop yield. Lupins ideally should be topped at 80-100% leaf drop to minimise yield losses, but if the ryegrass has matured seed by this stage the benefits will be reduced. If the ideal timings for crop and weed do not coincide you must decide whether to sacrifice yield or seed set control by going early or late.

There may also be issues with spray coverage when some ryegrass heads are below the crop canopy. Higher volumes and/or air blast sprayers may overcome this to some extent.

Selective herbicides are often applied in cereal crops for late radish control, and this must also be considered a "topping" exercise. The radish that is being targeted are usually escapees from an early selective spray. In this case resistance will be suspected – and feared!

If the early spray was not an SU (and SU resistance is not an issue) the answer is simple – go in with Triasulfuron at 10 g/ha with 1% spray oil. This is a very potent radish killer and safe on all cereals regardless of development stage.

If however the early spray was an SU, then the clean-up must utilise different chemistry. 2,4-D is the first to spring to mind, but this cannot be used after the flag leaf first appears. It will seriously affect pollen development, and the head will have missing grains. It can be used when the crop has reached the milky dough stage – the head is then fully formed and grain only needs to fill and harden. This usage however is not registered for all states.

One downside to late radish topping will become apparent if a full dose of the herbicide used does not reach the plant because much of it is shielded by the crop. In some seasons there may not be enough time for the radish to die before harvest. There will then be green stems trying to go through the harvester. Not nice!