

Tips for Post Sowing Pre-Emergence (PSPE) spraying

In dry seeding conditions, many pre-emergent herbicides will not be applied upfront, or IBS (incorporated by sowing). This may be due to crop safety reasons and/or concerns of efficacy if herbicide are left sitting in dry soil for an extended period 4-6weeks.

- Check for crop emergence! Despite not receiving any rain after seeding, crops may still germinate on the back of residual soil moisture.
 - PSPE applications of Group C herbicides (listed below) and Group G (14) are not safe to apply to emerged crops. Check what percent of paddock areas have emerged and seek advice about product choice if significant areas have emerged.
 - Grass pre-emergents propyzamide and Ultro® are generally 'safe' to apply if a small percent of a pulse crop has emerged, however best to check and take caution.
 - Take extra caution when applying grass pre-emergents to canola that may have emerged. A propyzamide product (Edge Unify®) has now been registered for post-emergent use on canola, but not until the 4-leaf stage of canola.
 - Whilst some cereal pre-emergents have registrations for post-emergent applications (Boxer Gold®, Mateno Complete®), it doesn't always mean they are safe to be applied PSPE and/or to newly emerged 1 leaf cereal plants.
- Consider adding in a knockdown herbicide if weeds have emerged but not the crop, or an insecticide to control establishment pests.
 - This can be an effective strategy for deep sown crops (faba beans) where a flush of weeds (ryegrass, marshmallow) occur before crop emergence.
 - You may hear of the practice 'haircutting'. This is a risky, off label technique where a knockdown herbicide (paraquat) is applied when a very small percent of the crop (usually cereals) is poking through, usually chasing ryegrass. There are some strict guidelines associated with this, and we have seen it go wrong many times! Always seek advice before considering.

Broadleaf sprays in pulse crops

- For more in-depth use patterns, see our [Pulse Pre-emergent](#) incrop note.
- Group C (5) herbicides (such as metribuzin, diuron, simazine and Terbyne®) should be applied after a rainfall event when applied PSPE. This ensures there is moisture in the top 10cm to 'slow down', or 'buffer' the herbicide from moving down the soil profile and damaging the germinating seed. Ideally apply the herbicide(s) after a rainfall event of 10mm or more, but this may vary based on soil type and how 'dry' the soil was beforehand. PSPE rates should be reduced by 20-30% from the recommended IBS rate to improve crop safety. Reduce rates further if rolling hasn't occurred (furrows have the potential to funnel rainfall and herbicides into the crop row), or if the seed was sown shallow (<30mm). Just remember, the herbicides need to be sprayed prior to crop emergence!

- There may be specific recommendations for Group G (14) pre-emergents Reflex® or Terrain®, for certain pulse crops under specific conditions. Note that Terrain® isn't registered for PSPE application in pulses. Reflex is not registered for PSPE applications in lentils. If applying Reflex PSPE (beans, chickpeas, peas and lupins), the same rules apply as above. It is safest to wait until after a rainfall event. Keep in mind that these products are highly damaging to emerged seedling crops, so take extra caution to check for crop emergence.

Grass sprays in pulses & canola

- When applying grass pre-emergents standalone (propyzamide – pulses and canola, Ultro®- pulses only), the ideal timing is prior to a rainfall event (5-20mm) to incorporate the herbicide into the topsoil. However, if mixing with a Group C and applying to a dry soil, then apply after the rainfall event, as discussed above. If the germinating rain looks to be significant (>25mm) and the soil is dry, then wait till after the rain. There is a risk that the heavy rainfall will move the herbicide too far (out of the ryegrass germination zone) reducing efficacy and potentially causing crop damage.
- Be careful with shallow sown pulses when Ultro® is applied over press wheel furrows, particularly in lighter soils. Lentils are more sensitive than beans or chickpeas to PSPE Ultro®.
- When applying propyzamide PSPE on canola, take care in dry soils; there have been instances where intense rainfall has damaged/suppressed canola when applied PSPE over press wheel furrows.
- It is worth noting that the volatility risk of propyzamide and Ultro® is low, so the products can sit unincorporated on the soil surface without the risk of significant loss. Keep in mind that the products won't be fully activated until a rain washes the product off the stubble (especially for propyzamide) and incorporates the herbicide into the grass germination zone.