



Sledge for pre harvest weed control in pulse crops.

In early 2021 Sledge® was registered for use in pulse crops prior to harvest. When used prior to harvest, Sledge can significantly reduce weed seed-set, reduce harvest difficulties and improve grain samples.

Sledge can now be used in chickpeas, faba beans, field peas, lentils and narrow leaf lupins as soon as the crop has reached full maturity.

Timing

For best results, Sledge should be applied when weeds are in full flower. In some weed species such as wild radish this can be difficult just prior to harvest however several weeds such as sowthistle and prickly lettuce flower later and good seed-set reductions can be achieved when applying Sledge in pulse crops prior to harvest.

To avoid yield losses, the pulse crops should be at physiological maturity when applying Sledge. The minimum level of maturity for each crop is;

Chickpea: Apply at or after 90-95% of the chickpea seeds have reached physiological maturity - typically when 80-85% of pods within the crop have turned yellow-brown.

Faba bean: Apply at or after hilum turns black in the pods at the top of the canopy. Typically when 30-80% of pods ripe and dark. The plant may still be green at this stage, particularly if it is a late maturing variety.

Field pea: Apply at or after seed moisture is less than 30%. Typically when the lower 75% of pods are brown with firm seeds and leathery pods.

Lentil: Apply at or after the crop starts to yellow (senesce), typically less than 15% green pods.

Lupin (narrow leaf only): Apply at or after 80% leaf drop. Application prior to windrowing will result in severe loss of grain yield. Not to be used with glyphosate.

The withholding period for harvest of grain is 7 days.

KEY POINTS:

- Effective reduction in viable weed seed set of several broad leaf weeds.
- Timing critical
- No problem with residues
- Excellent crop safety to pulse crops mentioned. No yield or quality penalties.
- Can be applied by air
- Fully registered with APVMA
- Valuable tool for managing herbicide resistant weeds.



Figure 1 - Chickpea at time of application; 85% pods yellow/brown; Green and brown seed; Less than 30% grain moisture content.



Figure 2 - Lentils at time of application; 70% crop yellowing and browning; Less than 15% green pods.



Figure 3 - Narrow-leaf lupins at time of application; 80% leaf drop; Green/Brown pods and green seed.



Figure 4 - Field peas at time of application; Green/Brown pods with leathery appearance; Some hard seed; Less than 30% moisture.



Rate and Application

Apply Sledge at 200 mL per hectare. Good coverage is essential so a minimum of 100L/ha of water is required.

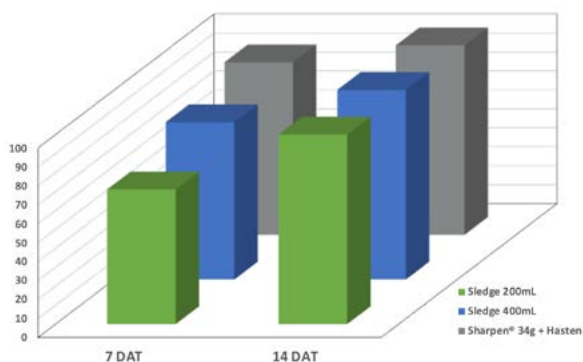
The addition of Hasten® or similar esterified seed oil product at 1L/100L or Uptake® or similar emulsified mineral oil at 0.5L/100L may improve results.

Where paraquat or glyphosate are used pre-harvest to overcome slow and uneven ripening, the addition of Sledge can improve the desiccation of problem weeds such as sowthistle, prickly lettuce, turnip weed and Indian hedge mustard.

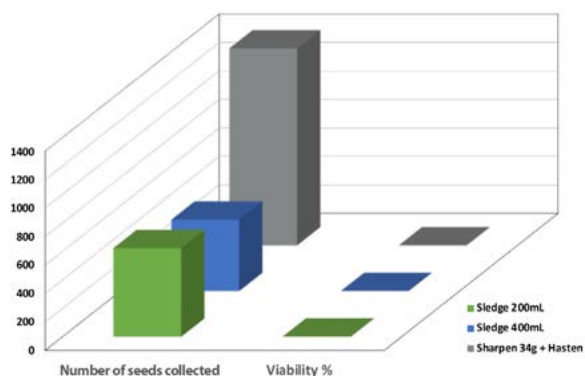
Effectiveness

The maximum effectiveness of Sledge for seed-set reduction is achieved when the crop has reached the minimum maturity level and weeds are still flowering. Where weeds have finished flowering, but seeds are still green, reduction in seed viability is still significant.

Sowthistle foliage desiccation



Sowthistle Seed-Set reduction



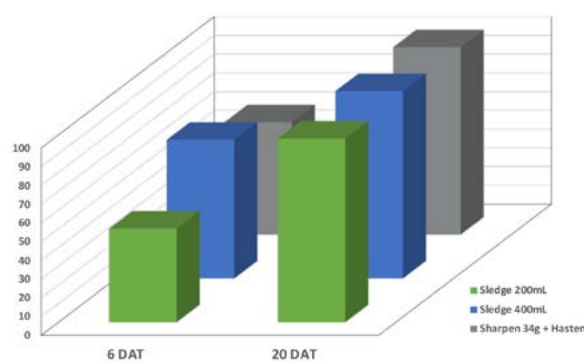
Residues

No problems with residues in pulse crops, with the MRL set at LOQ, the Limit of Quantitation.

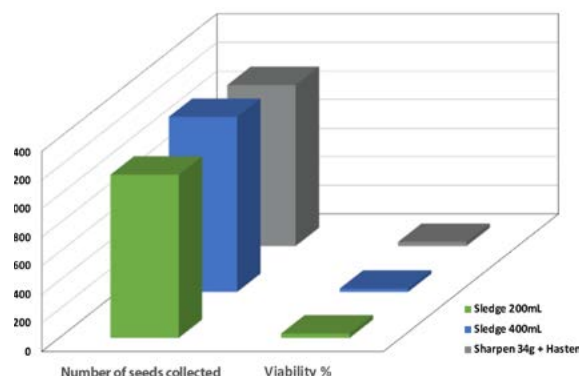
Herbicide Resistance

The presence of large numbers of broadleaf weeds prior to harvest is generally the result of a failure earlier in the season. This may be because crops were unable to be sprayed in a timely manner due to weather, poor spraying conditions, later germinations or post emergent herbicide failure. In the event of post emergent herbicide failure, it is essential to reduce seed-set of weeds in the first year herbicide escapes become evident. There are significant long-term benefits in preventing suspected herbicide resistant weeds setting seed and germinating the following season. Sledge is a Group 14 herbicide (previously Group G).

Turnip weed foliage desiccation



Turnip weed Seed-Set reduction



DIRECTIONS FOR USE

CROP/SITUATION	WEEDS CONTROLLED	RATE/HA	CRITICAL COMMENTS
Pre-harvest application in chickpea, faba bean, field pea, lentil and lupin (narrow leaf only)	To improve harvest efficiency and for the reduction of seed-set and viability of weed seeds including- Indian hedge mustard (<i>Sisymbrium orientale</i>), Sowthistle/ Milk thistle (<i>Sonchus oleraceus</i>), Prickly lettuce (<i>Lactuca serriola</i>), Turnip weed (<i>Rapistrum rugosum</i>), Wild Radish (<i>Raphanus raphanistrum</i>)	200 mL	Aim to spray weeds at full flower. The crop should have at least reached the minimum level of maturity specified for each crop but no less than 7 days before harvest. Refer to the CROP SAFETY section of this label for the minimum stage of maturity for each crop.
	The addition of Sledge to paraquat or glyphosate may improve weed control and reduction of seed set and viability of weed seeds, as listed above. May also assist with harvest efficiency.	200 mL plus recommended label rate of Raze or other glyphosate product (except lupin) or 200 mL plus recommended label rate of Inferno or other paraquat product	Aim to spray weeds at full flower for maximum seed set reduction. Refer to the relevant sections of the Raze or Inferno product label to establish the minimum stage of maturity for each crop and application rate. Do not apply less than 7 days before harvest.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

Always read the entire label prior to use.

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