Sharpen up control of the toughest weeds in maize and sweetcorn

Using Sharpen® backed up by Arietta® to manage problem weeds – and the growing threat of resistance

- ✓ **Sharpen pre-plant:** Rapid & robust burndown of tough broadleaf weeds
- ✓ **Sharpen pre-emergence:** 8 weeks of broad-spectrum residual control
- ✓ **Arietta post-emergence:** Control of velvetleaf, fathen, yellow bristle grass & other problem weeds

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Controlling the key weeds at the key crop stages

Including Sharpen and Arietta in the spray program for maize and sweetcorn crops will improve control of some of the most damaging weeds in local cropping, strengthen crop establishment, maximise yield potential and help ease resistance pressure on other major herbicides.

1 Using Sharpen + glyphosate for pre-plant burndown

- Improved control of fathen and other problem weeds
- Faster burndown than glyphosate on its own
- Reduced reliance on glyphosate to help keep it effective for years to come

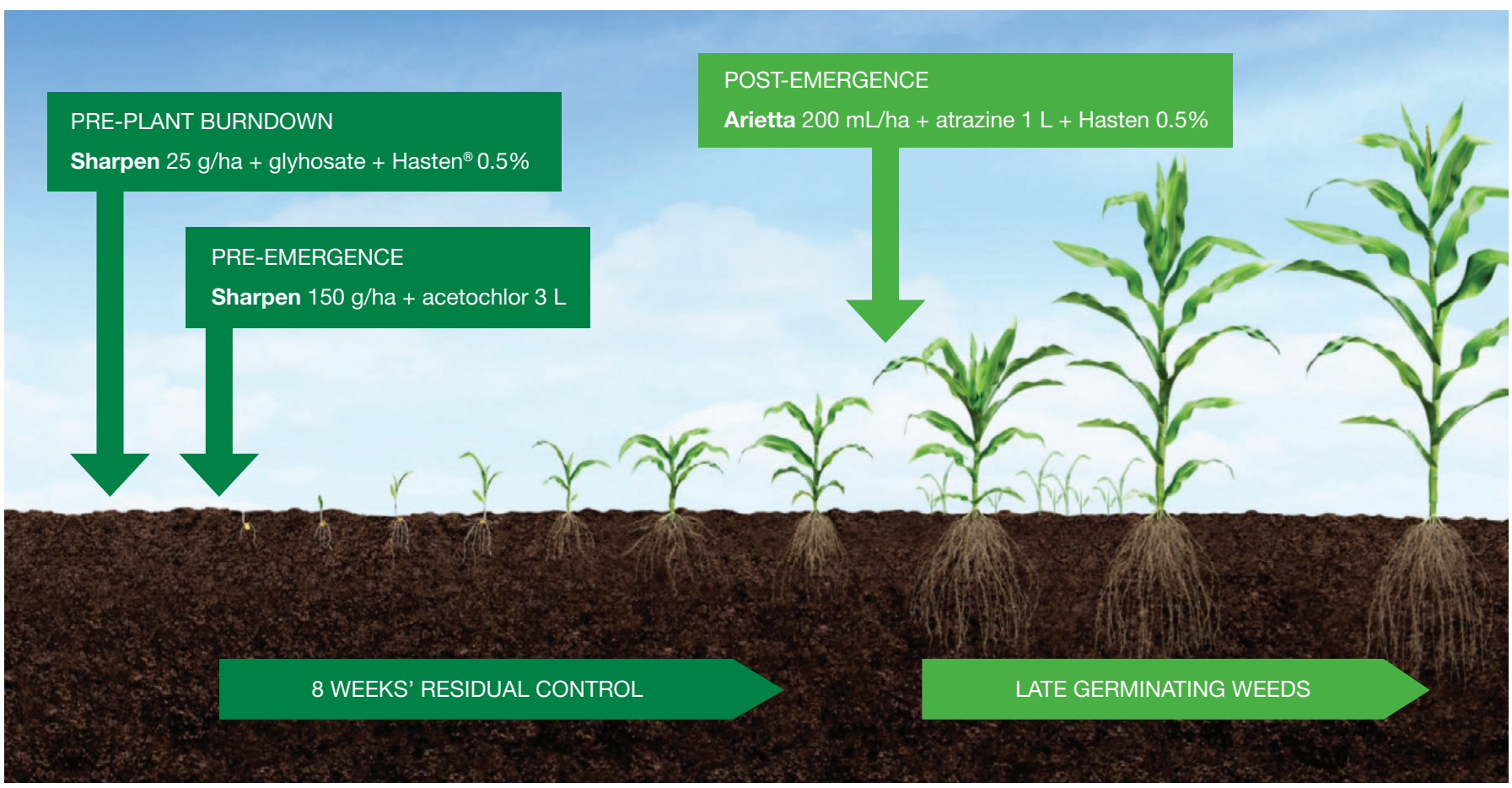
2 Using Sharpen + acetochlor for pre-emergence weed control

- Excellent control of hard-to-kill broadleaf weeds
- Up to 8 weeks' residual control through Sharpen's systemic activity
- Stronger crop establishment to maximise yield potential
- Reduced reliance on older chemistry and extra mode of action diversity

3 Using Arietta + atrazine for post-emergence weed control

- Control of key weeds at more advanced growth stages than any other maize herbicide
- Exclusive control of velvetleaf – up to 8-leaf
- Excellent control of yellow bristle grass up to 3 tillers
- Alternative mode of action to help manage resistance

Application Timings



Delaying the full impact of **resistance**

Repeated use of the same herbicides will inevitably cause resistance in weed biotypes if those herbicides keep being used on the same weeds for long enough. But alternating the modes of action for weed control can delay the development of resistance.

Resistance expert Dr Peter Boutsalis of Plant Science Consulting reported on the spread of resistance in New Zealand at the recent Pioneer Conference.

The gathering speed of resistance

The good news is that New Zealand still has only 20 examples of resistance (different weed species and different modes of action), whereas Australia has 90 and the US 161. But those much higher numbers overseas show where we could soon be headed without careful management.

1970s	1980s	1990s	2000s	2010s
1 example of resistance	**3** new examples	**3** new examples	**2** new examples	**7** new examples so far

The message to maize growers

Dr Boutsalis's advice to maize growers was to manage the resistance risk by:

- Alternating the use of herbicides from different chemical groups
- Tank-mixing two herbicides at full label rates to target the same species
- Being aware of the relatively high risk of over-reliance on simpler, older chemicals.

His presentation also highlighted that there is so far no resistance anywhere in the world to Sharpen and that both Sharpen and Arietta are in the lowest risk category for developing resistance – and are therefore most useful in helping protect the effectiveness of other products too.

The relative resistance risk for maize and sweetcorn herbicides

MOA group	Actives & product names	Resistance risk
B	flumetsulam (Preside™, Aim®, Blast™, Valdo®) halosulfuron (Sempra®) nicosulfuron (Guardian®, Latro®, Neeko™ Oleo, Adapt®)	HIGH if overused
C1	atrazine (Gesaprim®, Atraflo™, Atratec™, Nu-trazine™) cyanazine (Bladex®, Cytec®) terbuthylazine (Gardoprim®, Terbaflo, Tyllanex®) metribuzin (Sencor®, Jazz™, Metriphar®)	
C2	linuron (Afalon®, Linuron 50 DF, Linex™ Flo)	LOWER RISK
C3	bromoxynil (Emblem®, Bromotril®)	LOW RISK
E	saflufenacil – **Sharpen®** New mode of action	LOW RISK
F2	topramezone – **Arietta®** New mode of action mesotrione (Callisto®, Mesoflex®, Primiera®)	LOW RISK
K1	pendimethalin (Stomp® Xtra, Strada®, Ruck™, Pend-X™)	
K3	acetachlor (Roustabout®, Sylon®, Joker®, Maize Guard®) alachlor (Corral™, Alanex®, Taipan® Encaps®) dimethenamid-P (Frontier®–P) s-metolachlor (Dual Gold®) propachlor (Ramrod®)	
O2	dicamba (Banvel®, Buttress™, Cutlass®, Kamba®)	
O3	clopyralid (Versatill™, Archer®, Multiple®)	

Source: P. Boutsalis

Arietta®

Herbicide

Choose your own schedule to control velvetleaf, fathen and other problem weeds in maize and sweetcorn

Arietta gives you a more flexible timeframe for post-emergence spraying and better knockdown of problem grasses and broadleaf weeds.

- The only herbicide registered to control velvetleaf in maize
- Controls big weeds: broadleaf weeds up to 8 leaves and grass weeds up to 3 tillers
- Controls bad weeds: yellow bristle grass as well as velvetleaf, barnyard grass and other tough species

Visit **crop-solutions.basf.co.nz**
for more details or visit your local distributor.

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ALWAYS READ AND FOLLOW LABEL DIRECTIONS.
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