



ADAMA

Triathlon® herbicide

Physical compatibility guide

Triathlon® is a unique broad spectrum herbicide for early broadleaf weed control in winter cereals, incorporating 3 herbicide Modes of Action (MOA). Triathlon® is compatible with a range of products and has been extensively tested for crop safety on multiple varieties and situations. The table below summarises the compatibility testing that has been completed to date.

Product and maximum rate tested	Formulation	Active Constituents	Company	Physically Compatible Yes/No	Crop Safety Field Tests	Recommended Adjuvant	Comments
Alpha-Scud® 300 80 mL/Ha	EC	alpha-cypermethrin 300 g/L	Adama	Yes – 20 L/Ha	Not Tested	Not Required	Not tested biologically.
Atlantis* OD 330 mL/Ha	OD	mesosulfuron 30 g/L + mefenpyr-diethyl 90 g/L	Bayer CropScience	Yes – 20 L/Ha (with constant agitation)	Yes x 6	BS1000* 0.25%	Not recommended. Crop effects in trials were significant.
Axial* 300 mL/Ha	EC	pinoxaden 100 g/L + cloquintocet-mexyl 25 g/L	Syngenta	Yes – 20 L/Ha	Yes x 2	Adigor 0.5%	Increased crop effects were observed in trials. Use with caution.
Crusader* 300 mL/Ha	OD	pyroxulam 30 g/L + cloquintocet-mexyl 90 g/L	Dow AgroSciences	Yes – 50 L/Ha	Not Tested	BS1000* 0.25%	Some increase in crop effects is likely. Use with caution.
Dimethoate® 500 mL/Ha	EC	dimethoate 400 g/L	Adama	Yes – 50 L/Ha	Not Tested	Not Required	Not tested biologically.
Mandate® 125 mL/Ha	EC	clodinafop-propargyl 240 g/L + cloquintocet-mexyl 60 g/L	Adama	Yes – 20 L/Ha	Yes x 4	Uptake* 0.5%	Good crop safety observed in trials. Do not use beyond recommended application window.
Mentor®	EC	metribuzin 750 g/L	Adama	Yes – 50 L/Ha	Yes x 1	Not Required	Increased crop effects were observed in trials. Use with caution.
Moddus† Evo* 400 mL/Ha	DC	trinexapac-ethyl 250 g/L	Syngenta	Yes – 20 L/Ha	Yes x 5	Not Required	Normal crop shortening is observed and some light crop spotting is possible.
UAN – Flexi N* 30 L/Ha	SL	nitrate 25% + ammonium 25% + urea 50%	CSPB	Yes 50/50 Dilution	Yes x 5	Not Required	Some spotting observed in some trials. Commercially acceptable. Apply below 25°C. UAN can burn in some circumstances.
UAN – Flexi N* 50 L/Ha	SL	nitrate 25% + ammonium 25% + urea 50%	CSPB	Yes 50/50 Dilution	Yes x 5	Not Required	Some spotting observed in some trials. Commercially acceptable. Apply below 25°C. UAN can burn in some circumstances.
Victory® SL 50 mL/Ha + LVE MCPA 600 mL/Ha	SL	clopyralid 300 g/L + 570 LVE MCPA ester	Adama	Not Tested	Yes x 2	Not Required	Some minor crop affect was observed. Commercially acceptable.



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Notes

- Most compatibilities were conducted with Triathlon® at 1000 mL/Ha, the highest label rate. Crop safety and any minor mixing issues are likely to be reduced at lower rates of Triathlon®
- In all mixtures, observe the entire label requirements of the mixing partner, including recommended crop stage, spray volumes etc
- The Triathlon® label recommends not to use crop oils with Triathlon® alone or Triathlon® tank mixtures with other products. Mixtures with crop oils will always heighten the risk of adverse crop effects
- The physical compatibility test conducted in the laboratory was a more complete test than that conducted in field tests. Mixtures were compared at different water hardness and under different temperatures
- Compatibility is limited to those specific products and product manufacturers listed unless an alternative product is clearly an equivalent formulation
- Adverse environmental conditions such as frosts, waterlogging, drought, pests or anything else that can stress the crop can compound affects to the crop and should be avoided when tank mixing Triathlon®.

Tank-mix compatibility is affected by a range of factors

Water quality: Water quality can have a significant effect on tank mix compatibility; some products may be unstable in hard water or breakdown very rapidly in alkaline (high pH) water or react adversely with acid (low pH) water. Adama recommend where possible that rainwater be used for spraying and especially where tank mixing multiple products. When multiple products are to be mixed together or where water quality is uncertain it is recommended that a jar test be performed with the water to be used, prior to mixing large quantities in the boom sprayer.

Formulation quality: Some formulations of products may change from year to year or formulations may not always be of the same quality or as compatible as they were in previous years. This can sometimes be the case with some products from different suppliers and with some crop oils and wetters. Again, Adama recommend doing a jar test to determine if new formulations or new products react the same way in tank mixes as other similar products may have done in the past.

Formulation Type: EC formulations are often believed to be more likely to cause crop effects than other formulation types. Historically the solvents used in EC formulations have had a tendency to be more damaging to crops. However in recent years considerable advances have been made in making EC formulations such as Triathlon® safer to crops, users and the environment. The Triathlon® formulation can cause typical DFF (diflufenican) leaf spotting under certain conditions and in certain tank mixes but this can be attributed predominantly to the DFF and not the formulation type. When used alone Triathlon® will not cause any negative affect to crop yield, however some tank mixes may have an affect under particular conditions.

Water volumes: In most situations, the lower the water volume used for spraying, the higher the probability that any physical incompatibilities between products will become evident. Water volumes should not be a major factor when tank mixing Triathlon® as long as the minimum water rates are used; 50 L/Ha by ground and 30 L/Ha by aircraft.

Mixing order

The order in which chemicals are loaded into the spray tank can affect the level of physical compatibility and the following chart is a guide as to the order that should be followed.

Step 1	Water volume to 50%	
Step 2	Water Conditioners (E.g. Ammonium Sulphate, Li-700*)	
Step 3	Water dispersible granules (WG) (E.g. Farmozine® WG, Simanex® WG, Diuron WG, Metsulfuron-methyl, Chlorsulfuron)	
Step 4	Wettable powders (WP) (E.g. Axiom® MZ)	
Step 5	Suspension concentrates (SC) (E.g. Soprano®, Orius®)	
Step 6	Emulsifiable concentrates (EC) (E.g. Triathlon®, Radial®, Trifluralin, Mandate®, 2, 4-D LV Ester 680)	
Step 7	Soluble concentrates (SL) (E.g. Wipe-Out®, Spraytop®, Zulu®)	
Step 8	Adjuvants, wetters and oils (E.g. BS1000*, Hasten*, Kwickin*)	



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Always read the complete product label appearing on the container before opening or using products. ADA24437



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