

# BRACKEN CONTROL

using **Asulox** and the **MICRON ULVA+**

The Micron Ulva+ is an inexpensive, versatile means of applying Asulox for the control or clearance of bracken. The Ulva+ is a light, portable, battery-powered unit that is especially suited to a variety of bracken treatments :-

- Areas of very tall, dense bracken (head-high bracken is difficult to treat by other means);
- Bracken on steep slopes, rough ground or dense tree-plantings which are inaccessible to vehicles;
- Bracken growing along linear features such as fencelines, walls, paths, tracks and railways;
- Treatment of missed-strips and bracken patches left-over from previous primary treatments;
- Large-scale bracken clearance in any open spaces where drift-spraying is acceptable;
- Spot-treatments of bracken to prepare tree-planting spaces during establishment of woodlands;
- Releasing (band-spraying) of seedling tree lines in forestry;
- Spraying of temporary alleys in dense bracken to assist stock-gathering.

The Ulva+ uses a spinning-disc to generate a low volume spray which enhances working efficiency on-foot. The Ulva+ can be used in either a drift-spraying or placement spraying mode (see below). For both operations, the grub-screws in the carrying-handle should be located at position No. 6.

## Drift-spraying mode for use in open spaces

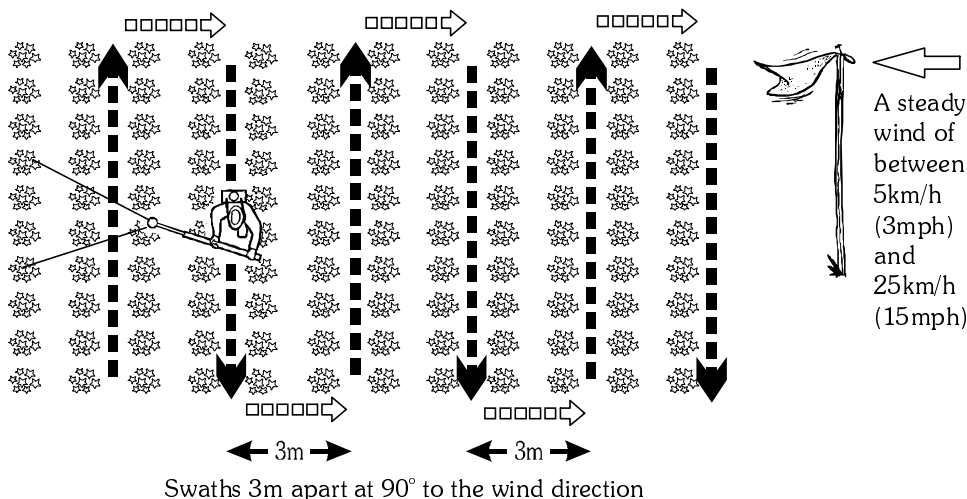
This technique is used wherever the Ulva+ is used for overall spraying of large areas of bracken.

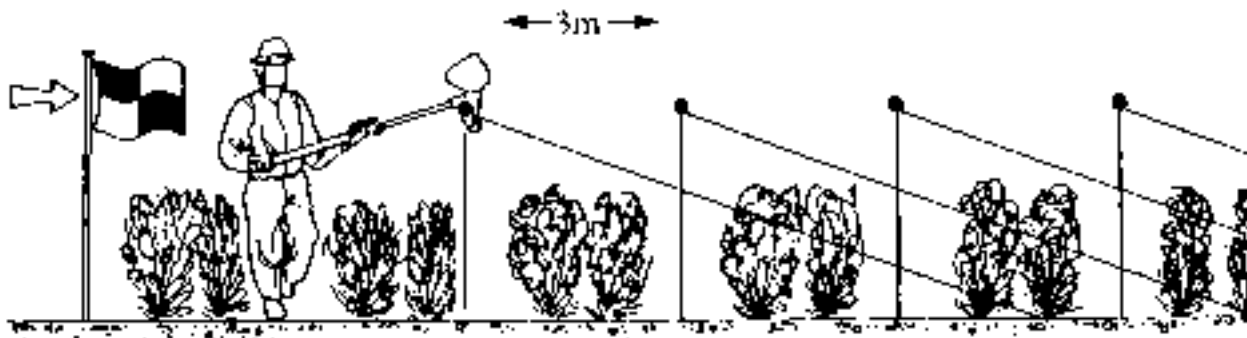
This is a skilled operation using the wind to carry a fine, drifting spray onto the bracken and attention to detail is important. Treatments should only be carried out in a steady crosswind of 5 - 9 km/h (3 - 6 mph), with the bracken fronds in constant motion, otherwise operator contamination and uneven dosing may result.

A buffer zone of at least 50 metres must be left downwind of the sprayed area to protect susceptible non-target plant species and all surface waters in catchments where water is abstracted for drinking purposes.

Insert six batteries into the Ulva+ handle for a fast disc-speed to produce fine droplets.

The Ulva+ spray head should be held approx. 1 metre above the bracken canopy. Always hold the sprayer downwind to prevent contamination of the operator. With the Ulva+ switched on, walk *across* the wind, allowing the spray to blow naturally downwind, away from the operator. Start work at the downwind end of the site and make passes successively upwind to avoid walking through bracken already treated. Successive passes (swaths) through the bracken should be made in opposite directions at 3-metre intervals (not more). Greater accuracy will be achieved by marking the ends of each pass with tall canes in advance of spraying.





### Placement-spraying mode

This technique will usually be used for spot-treatments, band-spraying and linear treatments with the Ulva+. Insert a battery spacer (a 4-cell spacer; Micron part No. 5565) into the Ulva+ handle followed by just two batteries. This will result in a slower disc speed which produces coarser droplets with less risk of drift.

A buffer zone of at least 10 metres should be left downwind of the sprayed area to protect susceptible non-target plant species and all surface waters in catchments where water is abstracted for drinking purposes.

### Use of Asulox for bracken clearance (eradication) measures

Bracken clearance should be undertaken as part of a long-term land-management plan which includes vegetation recovery measures. About 85% control of frond numbers can be expected in the year following applications of Asulox with the Ulva+. To obtain clearance, ensuing regrowth *must* be tackled by an appropriate form of follow-up in subsequent years [the 2 ml Accu-Dos spot-gun is supplied by Micron Sprayers for this purpose].

Bracken clearance treatments with the Ulva+ require a mix consisting of 11 parts Asulox plus 7 parts Actipron (an emulsifiable oil). No water is required. The Ulva+ is supplied with a 1-litre spray bottle and optional back-packs in 5, 10 and 15 litre sizes. Mixing guidelines are given as follows :-

	To mix 1 litre	To mix 5 litres
<b>Asulox</b>	610 ml	3.06 litres
<b>Actipron</b>	390 ml	1.94 litres

Apply the mix at a rate of 18 litres/ha using the table below as a calibration guide :-

Feed nozzle	Flow Rate* (ml/min)	Required walking speed Using a 3 metre wide swath		Time To spray 1 hectare
		km/hour	metres/second	
Pink	135	1.5	0.42	2 hrs 13 mins
Grey	115	1.25	*0.35	2 hrs 37 mins
Black	95	1.05	0.29	3 hrs 9 mins

\* Measured at 20°C: Flow rates will vary according to the temperature of the mix

### Use of Asulox for temporary bracken control measures

Temporary control measures are typically used for tree releasing in forestry & woodland and for treatments to control bracken vigour (height and frond density) in habitat conservation management. Apply undiluted Asulox in doses of 5 - 10 litres/ha as required by the treatment and without any additive. The Ulva+ must be calibrated using an appropriate feed-nozzle according to the treatment area and selected dose.

### Timing of Asulox applications

Asulox should be applied when bracken fronds have at least 3-pairs of fully-expanded pinnae and before the onset of senescence. This period usually occurs between mid-July and the end of September. Do not spray Asulox if rain is expected within 12 hours of application: Rain may reduce efficacy within this period.

**Protective clothing**

Wear coveralls, boots, gloves and a face-shield when handling **Asulox**. When spraying, also wear a hood, face-shield and a disposable mask (the latter will protect the nose and mouth and also guard against inhalation of bracken spores). Micron Sprayers supply an **Ulva+** "bracken pack" which includes these masks.

**Farm animals**

Keep farm animals out of the treated area until all poisonous plants have died back and become unpalatable.

The **Ulva+** and the 2 ml **Accu-Dos** are supplied by:

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