TEAGASC GRASSLAND WEED CONTROL GUIDE 2015

Docks

Best control of docks will be achieved in good growing conditions when docks are actively growing and nutrients are actively being transported to new foliage and roots.
If seed stalks are seen on the plant or if the dock has diseased leaves or is under pest attack it is better to cut/top or graze and allow re-growth of the docks before applying chemical.
Do not apply chemicals in a period of drought as the chemical will not be taken up by the plant leaves in sufficient quantities.
Use the highest water rates on the manufacturer's label for best effects.
Allow adequate time between spraying and cutting silage for the herbicide to work.

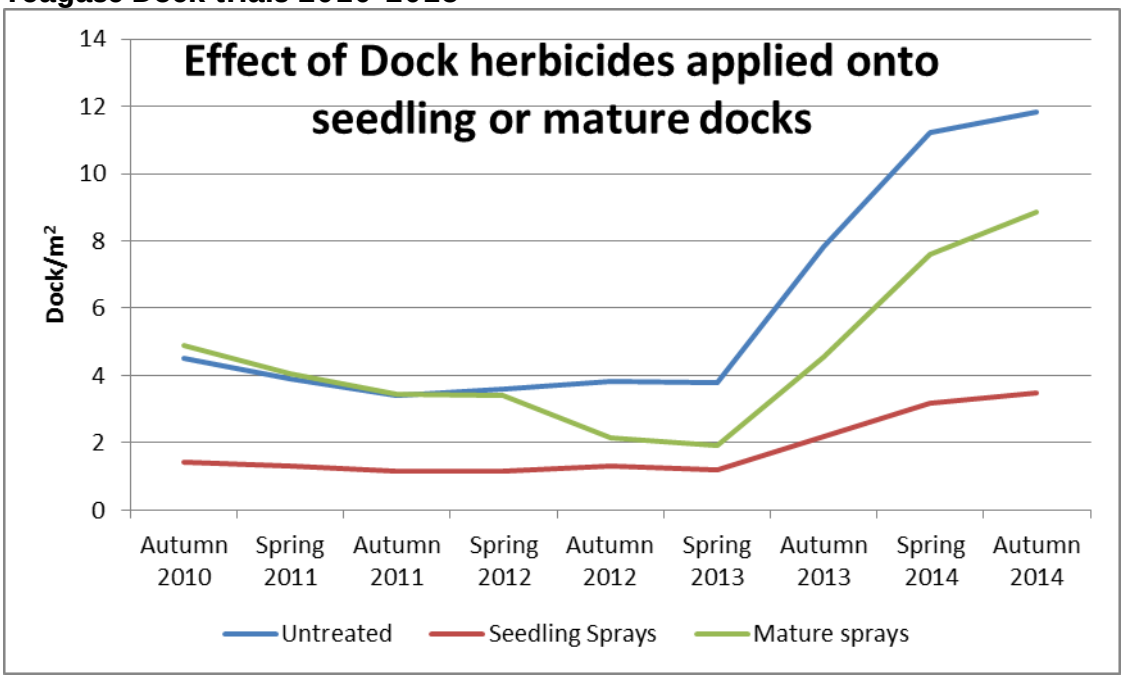
Season Long Dock Control

- Use of herbicides based on aminopyralid, dicamba, triclopyr, fluroxypyr, etc., will give season long control plus a wide range of common grassland weeds.

- Where clover is of consequence Eagle or Prospect may be applied. These products do not harm clover but Prospect may have some effect on the constituent grasses in the sward. These are best applied in good growth conditions and will give season long control. Eagle has label clearance for dock control on grassland, at the 40-60 g/ha rate, 60 g/ha being the full recommended rate for docks. The higher rate should be used where the infestation is high or the docks have a well-established tap root.

Recent Teagasc trials have shown that longer term (up to 4 years) control of docks can be achieved by applying a suitable herbicide (e.g. Starane2 @1.5 l/ha) onto small docks shortly after re-seeding. By applying the herbicide at this stage of the docks development, facilitates almost complete elimination of the docks. The trials have also shown that docks that emerge in the following years rarely establish due to competition from the grass.

Teagasc Dock trials 2010-2015



Prepared by Tim O' Donovan, Teagasc Kildalton College, Summer 2015

Herbicides for Dock Control in Established Grassland

Products	Chemical	Rate / Ha	Comment
Eagle	Amidosulfuron 75%	40-60 g	Controls both broad leaf and curled docks. No effect on clover. Should not be used in very dry weather. Costs €36 to €54/ha
Asulox ..... Prospect	**Asulam** ..... Thifensulfuron-Methyl	**N/A** ..... 15g sachet	**PCS have confirmed that Asulam will be cleared for bracken control in 2015 under emergency use rules.** Does not affect Clover but may retard grass growth in certain conditions. Allow 7 days after application of Prospect before cutting or grazing. Price €29/ha
Forefront T	Triclopyr Aminopyralid	2.0 L	Apply at rosette stage. Also controls a wide range of weeds incl. thistles, nettles, ragwort etc. €75/ha. Should be applied on grazing ground only.
Doxstar Pro	Triclopyr + Fluroxypyr	2.0 L or 1.0 x 2 apps. (300-400 L water)	Good spectrum of weeds. Apply four weeks pre-cutting silage. Affects Clover. Good suppression at reduced rate. Costing €32/ha at half rate, two applications of half rate, spring and autumn more practical.
PastorPro	Triclopyr + Fluroxypyr + Clopyralid	3.0-4.0 L (300-400 L water	Pastor also contains clopyralid. It is recommended at 3L/ha for nettles and 4L/ha for Docks and thistles. Costs €88/ha at the 4L/ha rate for docks.
Starane2 & various	Fluroxypyr	2.0 L	Controls Dandelions, Nettles and established Docks. Cost €25+/ha at 2 L rate
Foundation Hiload Mircam Hygrass	Dicamba + CMPP-P	1.25 L 5.0 L Hygrass	Controls broadleaf and curled Docks, Chickweed, thistles and Nettles etc. Price range €30 +/ha
Lupo	2,4-D + MCPA	4.0 L	Controls Ragwort, Rushes, Thistle, Buttercup, Nettle, and a broad range of weeds with suppression of broadleaf and curled Docks €30/Ha
Thrust	Dicamba + 2,4-D	3.5 L	Includes high rate of Dicamba and 2,4-D. Excellent control of Ragwort, broadleaf and curled Docks and a wide range of weeds incl. Buttercup,Nettle, Thistle etc €55/ha

Prices exclude VAT and are a guide only

Other Grassland Weeds

It is difficult to assess accurately the damage weeds do to pasture output except where death is the result of plant poisoning from bracken, ragwort or hemlock. Other weeds such as thistles, nettles, rushes and dandelions can also interfere with grass and animal production and should be eliminated as soon as possible.

Bracken is poisonous in the green state and the young green shoots are particularly so. Over the years many herbicides have been used on this weed but Asulox* or Roundup are the most effective. The optimum time of application is end of June to mid-July when the expanded fronds are tender and actively growing.

Prepared by Tim O' Donovan, Teagasc Kildalton College, Summer 2015

Ragwort is poisonous in the green and preserved state and has been responsible for many animal fatalities. Normally it is not eaten in pasture where it takes up to 12 % of the animal's body weight to cause problems but where present in finely chopped silage it becomes far more potent and the natural animal selectivity is reduced so serious fatalities can occur. It becomes more palatable to animals when cut or sprayed, as it releases sugars. Any control strategy should be based on the fact that Ragwort is a biennial (lives for 2 years) and also that just because you killed it with a spray does not mean it cannot harm livestock. Small numbers of ragwort can be effectively pulled or dug up and safely removed. For larger numbers, sprays such as MCPA, 2, 4-D, Dicamba, Thrust and Forefront provide good control but measures must be taken to avoid stock eating any dying or dead ragwort present.

Hemlock is one of the most poisonous grassland weeds. Its poisonous alkaloid is coniine and is very virulent while also being dangerous to man and animals. It can be controlled with fluroxypyr or Aminopyralid or any of the dicamba based sprays.

Creeping Thistle is a perennial plant and grows mainly from an underground stem or rhizome and this makes total control difficult with one spray. Yield losses of up to 15% have been recorded but they cause most damage by preventing animals grazing around them. Frequent topping can reduce the root reserves but will seldom eradicate the problem as root fragments can lay viable and dormant for years. This weed is best sprayed with Thisltlex, Forefront, MCPA or 2, 4-D in June before flowering and may need a second treatment later in the season to control any late shooting thistles. In a reseed, both root fragments and seed can cause an explosion of creeping thistles.

Spear Thistle only spreads by seed. Each plant lives for 2 years (like ragwort) producing a flatted rosette of leaves in year one and then the familiar 'tree-like' structure in year two. Once controlled in the re-seed, it is rarely a problem in grazed fields except after poaching or other sward damage. Topping is not effective to control the growth in year one but can be carried out on the second year growth before seed is set. Chemical control options are the same as for Creeping Thistle.

Perennial nettle tends to grow in clumps in pasture and can prevent grazing. The growth pattern of this weed makes it an ideal target for spot treatment with some of the dicamba/triclopyr/Fluroxypyr/aminopyralid based products. If the clumps are small and not too dense some of the dicamba /CMPP based products will also contain them if sprayed on a regular basis. High water volumes (400 l/ha) are essential when spot treating. Treat before seed production for best effects.

Soft rush is the most common of the many rush species in this country. Draining of such infested areas is essential if any herbicide programme is to be successful. Soft rush can be controlled with MCPA or 2, 4-D applied in June or July when growth conditions are good. Cutting and removal of the rush about three weeks before spraying will give the best results. A wetting agent can improve the spray sticking to the slender rush 'target'.

Dandelions are a perennial weed with a deep taproot. They primarily spread by seed and can reduce the overall value of the pasture if allowed to establish. In small amounts, MCPA or 2, 4-D will keep them at bay but where long term control is required the aminopyralid/Fluroxypyr/dicamba based sprays are best if applied in the summer or early autumn.

Common chickweed is an annual weed (lives for one year) and only spreads by seed. However, it can germinate and set seed throughout the year making it seem a perennial weed (lives for many years). It is a low ground hugging weed and its fast growth allows it to become established especially after re-seeding. It has been shown to reduce silage yields and quality in trials. The key to its effective management is to get the grass sward established rapidly to smother out the chickweed (and other annuals). Late sown and poorly established re-seeds are likely to have chickweed problems. In old pastures there are many excellent chemical options available but the 'holes' left after killing the chickweed are ideal for more seeds to germinate, continuing the problem. Fluroxypyr/CMPP/Dicamba/Aminopyralid offer very good control but dense patches may need a second spray due to coverage issues.

Table 31: Herbicides for Grassland Weeds

Weed	Herbicide	Dose	Remarks
Ragwort	2,4-D MCPA Lupo Thrust Forefront/Forefront T	3.3 L/ha 3.3 L/ha 4.0 L/ha 3.5 L/ha 2.0 L/ha	Keep stock off until all ragwort is decayed and animals cant graze it
Thistles	MCPA Lupo Pastor Thistlex Forefront	3.3 L/ha 4.0 L/ha 4.0 L/ha 1.0 L/ha 2.0 L/ha	Apply in warm weather. Apply when thistles at 25cm tall or across.
Nettles	Nettle Ban etc. Fluroxypyr (Starane) Forefront/Forefront T	2.0 to 3.0 L/ha 2.0 L/ha 2.0 L/ha	Spray in good conditions. Use 400 l/ha water.
Rushes & Buttercups	MCPA or 2,4-D Lupo	1.0 to 7.0 L/ha 4.0 L/ha	Cut and remove rushes before spraying re-growth. An adjuvant will improve control of rushes.

Note on Forefront & its use on grassland:
Whelehan Crop Protection is recommending the use of Forefront in grazing ground only. A farmer leaflet is attached to the collar of all Forefront cans
FYM and slurry from livestock fed silage/hay made from treated grass (sprayed with aminopyralid) should only be spread on land intended for grass, cereals or maize.

Seedling Creeping Thistles

Left: Creeping Thistle re-growth from old roots
Right: Creeping Thistle from seed
Note difference in leaf shape and also in root system

Mature Creeping Thistle

Creeping Thistles connected by their underground root system (rhizomes).
Glyphosate & Clorpyralid translocate down into the root system. MCPA/Dicamba/CMPP do not translocate into the roots

Common Chickweed

Spear (Scotch) Thistle

Left: year 1 spear thistle (will not flower)
Right: year 2 spear thistle (will die after flowering)

Prepared by Tim O' Donovan, Teagasc Kildalton College, Summer 2015

Broad-leaved Dock

Photo taken 5 weeks after re-seeding

Creeping Buttercup

Photo taken 5 weeks after re-seeding

Creeping Buttercup

Mature Creeping Buttercup spreading by stolons

Dandelion

Left: Untreated field (70 % grass yield of treated field)
Right: 2.0 l/ha Starane applied mid March

Prepared by Tim O' Donovan, Teagasc Kildalton College, Summer 2015