



Treoir Dea-Chleachtais: **RAITHNEACH A CHOINNEÁIL SIAR**

Best Practice Guide:
BRACKEN CONTROL



Togra AranLIFE

D'oibrigh togra AranLIFE le feilmearaí ar thrí Oileán Árann le cleachtas fheilmearachta traidisiúnta agus inbhuanaithe a rachadh chun tairbhe do thimpeallacht nádúrtha na nOileán a fhorbairt agus a chur chun cinn. Bhí sé i bhfeidhm ó 2014 go 2018 agus maoinithe trí Chiste LIFE Nature an AE (maoiniú 75% ó LIFE, 25% ó chomhpháirtithe an togra in Éirinn). Dhírigh an togra ar na cleachtas fheilmearachta as ar eascair tírdhreach speisialta Árann agus atá aitheanta in ainmniúchán shuíomh Natura 2000 na n-oileán (suímh a thugann cosaint do ghnáthóga agus do speicis a bhfuil tábhacht Eorpach leo). Baineadh leas as eolas agus as taithí na bhfeilmearaí áitiúla chomh maith le saineolas eolaíoch pháirtithe an togra chun na dúshlán a bhaineann le feilmearacht ar oileán a shárú agus le stádas caomhnaithe na suíomh Natura a fheabhsú.

LIFE+ Dúlra agus Bithéagsúlacht

Tá 'LIFE+ Dúlra agus Bithéagsúlacht' ar cheann de phríomhshnáithe chlár maoinithe an Aontais Eorpaigh don chomhshaol. Tacaíonn sé le tionscadail a chuidíonn le feidhmiú Threoracha an AE maidir le hÉin agus Gnáthóga, le líonra Natura 2000 agus le sprioc an AE maidir le stop a chur le cailleanas bithéagsúlachta.

AranLIFE Project

The AranLIFE project worked with farmers on the three Aran Islands to develop and promote traditional and sustainable farming practices to benefit the Islands' natural environment. It operated from 2014-2018 and was funded through the EU LIFE Nature Fund (75% LIFE funding; 25% Irish project partners). The project focused on the farming practices that created the iconic Aran landscape, and which is recognised in the designation of the Islands' Natura 2000 sites (sites to protect habitats and species of European importance). It harnessed local farming knowledge and experience with the scientific expertise of project partners to overcome the challenges of island farming and to improve the conservation condition of the Natura sites.

LIFE+ Nature and Biodiversity

LIFE+ Nature and Biodiversity is one of the main strands of the European Union's funding programme for the environment. It supports projects that contribute to the implementation of the EU Birds and Habitats Directives, the Natura 2000 network and that contribute to the EU's goal of halting the loss of biodiversity.

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Raithneach ar mhachair in Inis Meáin
Bracken in Machair on Inis Meáin

Céard é Raithneach?

Raithneach mhór a thugtar air (Bracken) agus bíonn riosóm leathan (gas faoin talamh) aige atá in ann go leor cothaitheach agus carbaihiodráití a stóráil. Chomh luath agus a osclaíonn an fronn (duilleog) tosaíonn sé ag stóráil bia breise sa riosóm. Feonn na froinn seo sa bhFómhar agus súitear na cothaithe uilig síos ar ais isteach sa gcóras stórála faoin talamh, mar sin níl aon mhaith raithneach a ghearradh sa ngeimhreadh mar ní fhaightear réidh ach leis an gcuid feoite de. Tá an scéal amhlaidh freisin i dtailte Féar Geimhridh na n-oileán, (tailte a itear go príomha sa nGeimhreadh) mar nach ndéanann trampáil na mbeithíoch dochar dá laghad don raithneach le linn an tsamhraidh tráth a mbíonn an raithneach fásta uilig. Tar éis don chéad chóireáil a bheith déanta, mura leantar á choinneáil siar tiocfaidh an raithneach aige féin arís, trína chóras stórála faoi thalamh, mar sin ní mór coinneáil leis an gcóireáil agus plean a leagan amach agus a fheidhmiú. Cuireann an sioc as don raithneach agus toisc nach mbíonn mórán seaca ar na hoileáin feileann siad an raithneach.

What is bracken?

Bracken is a large fern with an extensive rhizome (underground stem) system, which can store large amounts of nutrients and carbohydrates. Once the frond (leaf) has unfurled, it starts to send back reserves to the rhizome. In autumn, these fronds die back and all of the nutrients are re-absorbed back in to the underground storage system; therefore, cutting bracken during the winter has no effect as it is just removing dead material. Similarly, bracken in the Winterage areas of the islands, which are grazed during the winter, is not impacted by trampling of grazing livestock during the summer months when bracken is in full growth. If control is neglected, bracken's underground storage system allows it to recover after initial treatment, therefore appropriate follow up treatment and aftercare must be planned and implemented. Bracken is frost-sensitive so it is ideally suited to the islands which are predominantly frost free.

Cá bhfásann raithneach ar na hoileáin?

De ghnáth fásann an raithneach go tiubh ar ithreacha domhain agus, in Inis Meáin agus Inis Mór, ar Mhachair a mbíonn claí air. Fásann sé sa bhFéar Geimhridh freisin, in éineacht le scrobarnach eile san áit a mbíonn foscadh ó chlaíocha aige, ach ní bhíonn chomh tiubh anseo.

Where does bracken occur on the islands?

Bracken generally forms dense stands on deeper soils and on the walled Machair of Inis Meáin and Inis Mór. Less dense stands also occur in the Winterages, in the shelter of walls and in combination with scrub species.

Tuige a bhfuil raithneach níos fairsinge anois ar na hoileáin?

De bharr an chineáil feilméarachta atá ar na hoileáin – feirmeacha beaga, paistí talún thall is abhus atá deacair le bainistiú agus gan an iomarca teacht isteach astu - tá go leor píosaí talún fágtha gan úsáid agus faigheann raithneach agus scrobarnach greim iontu. Chomh maith leis sin, ghearrtaí raithneach roimhe seo le cur faoi ainmhithe agus mar líneáil ar phoill fataí. De réir mar tháinig deireadh leis na cleachtais seo stop gearradh agus smachtú na raithní chomh maith.

Why is bracken more prevalent now on the islands?

The nature of farming on the islands - small farm sizes, fragmented farms that are labour intensive to manage and offer low financial return - has left many parts of the land unfarmed, allowing encroachment of bracken and scrub. Additionally, in the past bracken was cut and used as bedding for animals, and also to line storage pits for potatoes. As these practices died out, so did the cutting and controlling of bracken.

A Shaolré

Atáirgeann raithneach trí phéacadh na spór a sholáthraíonn sé agus forbraíonn mar raithneach ar deireadh agus tá sé in ann atáirgeadh fásúil a dhéanamh trí scaipeadh go dlúth as na riosóim tiubha faoin talamh. Is trí scaipeadh fásúil is mó a scaipeann raithneach.

Bracken life cycle

Bracken can reproduce by producing spores which germinate and eventually develop in to the fern and it can reproduce vegetatively by spreading from the dense network of underground rhizomes. Vegetative spread is the most common form of bracken spread.



Raithneach sna píosaí de bhuaile a bhfuil ithir dhomhain ann - Inis Mór
Bracken in parts of field with deeper soils on Inis Mór

Cén tionchar a bhíonn ag raithneach ar thalamh féarach speiceas-shaibhir?

Scáthaíonn raithneach atá fásta go tiubh an fásra féir agus ní théann an solas ag na plandaí féir agus mar sin feonn siad agus ní bhíonn an oiread acu ann. D'fhéadfadh raithneach speicis eile a scáthú agus a phlúchadh agus cur as dá bpéacadh, bunú agus fás. Tarraingíonn an riosóm dlúth faoin talamh na cothaithigh as an ithir agus coinníonn siar speicis eile. D'fhéadfadh sé nach nglacfaí le talamh a mbíonn go leor raithní air i scéimeanna talmhaíochta a bhíonn á maoiniú ag an AE, (m.sh. An Scéim Íocaíochta Bunúsaí).

How does bracken impact on species-rich grassland?

Dense bracken growth overshadows the grassland vegetation preventing light from reaching the grassland plants causing them to die back and reduce in cover. Bracken can interfere with the germination, establishment and growth of other species through shading and smothering. The dense underground rhizome drains nutrients from the soil, and inhibits other species. Land covered in dense bracken may not be eligible for EU funded agricultural schemes, (e.g. Basic Payment Scheme).

An bhfuil dochar sa raithneach do bheostoc nó don duine?

Tá carcanaigin aitheanta sa raithneach (ábhar a bhíonn ina chúis ailse) agus d'fhéadfadh sé dochar a dhéanamh don duine agus do bheostoc má itheann siad é. Ní itheann beostoc raithneach ach nuair a bhíonn sé measctha le féar tirim nó nuair nach mbíonn aon fhoráiste eile acu. Tá an carcanaigin sna spóir freisin agus seans go bhfuil dochar freisin iontu má bhítear gar dóibh sách fada, cé go bhfuil sé deacair é seo a dhéanamh amach i gcás daoine de. Cruinníonn sceartáin freisin sa raithneach agus d'fhéadfadh duine an galar Lyme's a fháil agus beithigh an buine dearg a fháil dá bharr.

Is bracken harmful to livestock or humans?

Bracken contains a known carcinogen (cancer causing compound) and can be harmful to humans and livestock if eaten. Livestock tend to only eat bracken if it is mixed in hay or if there is no other forage available. The spores of bracken also contain the carcinogen and prolonged exposure to the spores is likely also to be hazardous, although this is difficult to verify in humans. Bracken also harbours ticks which are vectors for Lyme disease in humans and Redwater in livestock.

Ní scaipeann paistí beaga raithní a fhásann i scalpa beaga sna leaca aolchloiche.
Small patches of bracken contained in grykes in limestone pavement do not pose an encroachment threat



Cén chaoi le raithneach a choinneáil siar?

Is iad an dá bhealach is fiúntaí le raithneach a choinneáil siar ná é a ghearradh agus/nó luibhicíd a chur air. Cibé cé acu bealach a roghnaítear ní féidir raithneach a smachtú in aon bhabhta amháin, caithfear coinneáil leis le é a stopadh ag scaipeadh agus ag leathnú tuilleadh. Ní gá fáil réidh le chuile ruainne raithní as na buailte áfach, agus scaití ní scaipeann paistí beaga raithní a ghobann aníos i sean-spásanna agus scalpa sa bpábháil aolchloiche. Fásann meascán speiceas plandaí sa tsraith meánach d'áiteacha nach mbíonn an raithneach ró-thiubh iontu agus ní bhíonn gá é a smachtú má choinnítear tanaí é.

Ní smachtófar raithneach mura cuid lárnach den bhainistiú bliantúil feirme é agus go ndéantar é in éineacht le smachtú éifeachtach scrobarnaí, an innilt is fiúntaí agus soláthar neart áiseanna uisce.

Controlling bracken can only be achieved if it is an integral part of annual farm management and must go alongside effective scrub control, optimum grazing and provision of adequate water resources.

Gearradh

Gearrtar an raithneach le nach mbeidh aon chothaithigh ag an ngas faoi thalamh agus le nach mbeidh deis aige bia a stóráil. In imeacht ama tabharfaidh an raithneach uaidh go mór. Is é an t-am is fearr mar sin le é a ghearradh ná díreach sula mbíonn sé críochnaithe ag fás, ag deireadh na Bealtaine/tús an Mheithimh. Ba cheart nach mbeadh na froinn ar an raithneach ach díreach oscailte amach. Má ghearrtar ag an am seo é caithfidh sé na cothaithigh a fháil as na rútaí le tosaí ag fás arís ach ní loicfidh an méid seo é.

How to control bracken?

The two most effective methods of controlling bracken are cutting and/or herbicide application. Whichever method chosen, bracken control will not be achieved after one intervention, therefore constant management is necessary to prevent further encroachment or expansion. Not all bracken has to be removed from fields, however, and sometimes the growth of small patches of bracken, aligned to former grykes or gaps in the limestone pavement slabs, is not an encroachment threat. Areas of low density of bracken support a diversity of plant species in the understory and do not need to be controlled once this light density is maintained.

Cutting

The aim of cutting is to deprive the underground stem of nutrients and to prevent the bracken building up reserves. Over time this will greatly weaken the bracken. Therefore the best time to cut bracken is just before it has finished growing, in late May/early June. The bracken should have just about unfurled at the top of the frond. Cutting at this stage means the fern has to go back to its roots for more nutrients to allow regrowth, but the plant will still survive.

Ba cheart raithneach a ghearradh ag deireadh na Bealtaine/tús an Mheithimh nuair a bhíonn na froinn díreach oscailte amach agus ansin é a ghearradh arís 6 seachtainí ina dhiaidh sin nuair a bhíonn sé fásta arís go dtí an pointe céanna. Bracken should be cut in late May/early June when fronds have just unfurled, and then recut 6 weeks later when regrowth is at the same stage.



Má ghearrtar arís é 6 seachtainí ina dhiaidh sin, tar éis dó athfhás, cuirfidh sin ar gcúl é agus lagóidh sé go mór é. Is rogha amháin é an gearradh, agus is rogha eile é a tharraingt nó an gas a bhriseadh trí rolladh, ach ar ndóigh bíonn sé seo le déanamh arís 6 seachtainí ina dhiaidh sin nuair a bhíonn froinn nua ar an raithneach. Is é an rud is fearr le déanamh ná coinneáil leis an ngearradh rialta seo leis an raithneach a choinneáil ar gcúl.

In diaidh é a ghearradh ba cheart carnán a dhéanamh de agus é a dhó sa gcaoi nach gcuirfidh an t-ualach trom anuas ina mhullach as don fhásra féir a bhíonn faoi.

Beidh sé le gearradh arís sna blianta ina dhiaidh sin má cheaptar go bhfuil sé ag fás ar ais arís.

Repeat cutting 6 weeks later, after the bracken has regrown, will set the bracken back, weakening the overall structure. Whilst cutting is one option, damaging bracken by pulling or breaking the stalks by rolling, is also an effective alternative but again, needs to be repeated 6 weeks later when the fern has sent up new fronds. For best results, this schedule of cutting must be kept up for effective bracken control.

After cutting, the brash should be piled and burned so that a thick layer of dead fronds does not inhibit the underlying grassland vegetation.

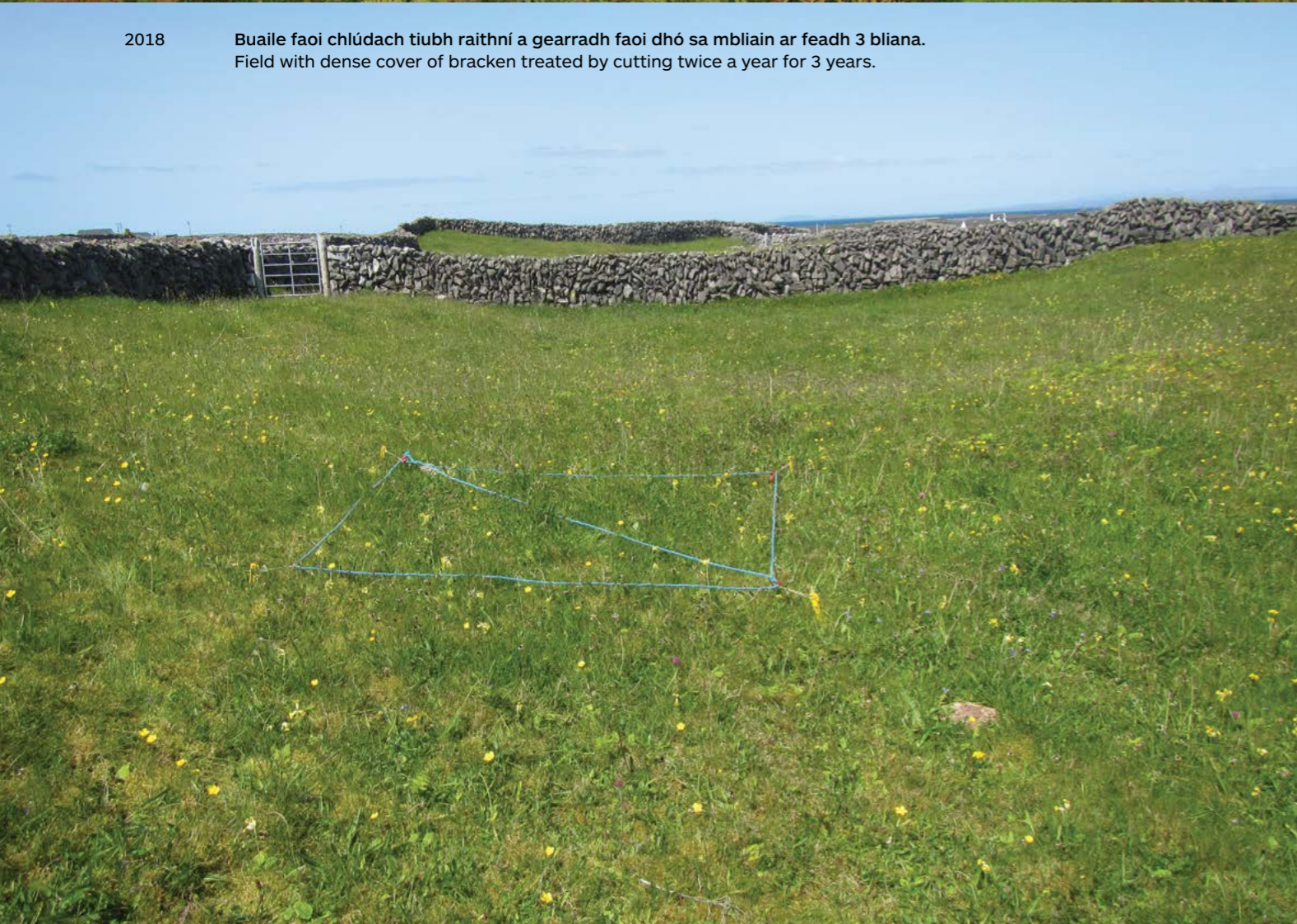
This work will need to be repeated in subsequent years if bracken shows signs of recovery.

2014



2018

Buaile faoi chlúdach tiubh raithní a gearradh faoi dhó sa mbliain ar feadh 3 bliana.
Field with dense cover of bracken treated by cutting twice a year for 3 years.



Meitheamh/June 2015



Iúil/July 2017



Bealtaine/May 2018



Bhí clúdach tiubh raithní sa mbuaile seo ar dtús, gearradh é faoi dhó sa mbliain i 2015, 2016 agus 2017. Caithfear coinneáil leis an gcóireáil sna blianta dár gcionn le é a choinneáil faoi smacht.
Originally with dense bracken cover, this field was cut twice yearly in 2015, 2016 and 2017. It is vital that bracken treatment is implemented in subsequent years to gain effective control.

Luibhicíd

Is ábhar contúirteach iad na luibhicídí uilig agus níor mhór a bheith cúramach leo. Mura n-úsáidtear luibhicídí i gceart, i dtimpeallacht ardíogair ar nós Oileán Árann, d'fhéadfadh deacrachtaí áirithe teacht astu, d'fhéadfadh gnáthóga a bheith millte, ceimiceáin dul isteach sa screamhuisce nó uisce dromchla agus, go fíorannamh, d'fhéadfaí dochar a dhéanamh do shláinte an duine. Mar sin ba cheart chuile bhealach smachta eile a thriail ar dtús sula n-úsáidtear luibhicídí.

I gcás clampaí dlúth, tá dhá luibhicíd gur féidir a úsáid leis an rathneach a choinneáil siar: Asulam agus Gliofosáit. Is luibhicíd sistéamach é an Gliofosáit agus maróidh sé an fásra uilig in éineacht leis an rathneach. Is luibhicíd roghnaitheach é an Asulam a dhéanann níos lú dochair d'fhásra a bheadh faoin rathneach, ach d'fhéadfadh sé dochar a dhéanamh do roinnt féara agus luibheanna. I measc na speiceas a mbeadh sé furasta dochar a dhéanamh dóibh bheadh féar an chinn bháin, tiomóid, garbhfhéar, feoranna, cuise bliantúil, nóinín, copóga, slánlusanna, mórán agus chuile rathneach eile. Is speicis coitianta iad seo uilig sna féara cailcreacha ar na hoileáin.

Is gá cead a fháil ón tSeirbhís Páirceanna Náisiúnta agus Fiadhúlra sular féidir luibhicíd a chur amach i Limistéar Caomhantais Speisialta mar gur Gníomhaíocht óna dTeastaíonn Toiliú é.

Le rathneach a smachtú ní mór tabhairt faoi cúpla babhta (gearradh nó luibhicíd).



Lus na Teanga agus Lus na Míosa (beagnach i mbaol in Éirinn): Is speicis raithní ar na hoileáin an péire acu agus dhéanfadh an luibhicíd Asulam dochar dóibh dá mbeifí á chur ar rathneach.

Adder's tongue and Moonwort (a near threatened species in Ireland): both are fern species recorded on the islands and would be affected by Asulam herbicide treatment of bracken.

Herbicide

All herbicides are hazardous materials and require careful management. In a highly sensitive environment like the Aran Islands, improper use of herbicides can lead to specific problems such as damage to the habitat, chemicals entering groundwater or surface water and in rare circumstances human health issues. Therefore herbicides should be the last choice of action, only after other control measures have been considered.

For particularly dense stands of bracken, two herbicides can be used to control bracken: Asulam and Glyphosate. Glyphosate is a systemic herbicide and will kill all vegetation alongside the bracken. Asulam is selective herbicide and has less of an effect on underlying vegetation, though some grasses and herbs may be also damaged by Asulam. The more sensitive species include yorkshire fog, timothy, cock's foot, bents, annual meadow grass, daisy, docks, plantains, saxifrage and all other ferns. All of these species are common components of the calcareous grasslands on the islands.

Use of herbicide within a SAC is an Activity Requiring Consent and permission must be sought from the NPWS before application.

Repeat treatment (cutting or herbicide) will be necessary for effective bracken control.

Go minic bíonn deacracht mhór le rathneach nuair a ghlantar scrobarnach eile ar nós driseacha. Cuireadh Asulam ar an bpíosa talún seo nuair a bhí scrobarnach tiubh driseacha, coll agus draighean gearrtha.

Frequently, bracken can become a major issue after other scrub species such as briars have been removed. Asulam treatment followed cutting of dense scrub composed of briars, hazel and blackthorn at this site.



Aibreán 2016: I ndiaidh scrobarnach tiubh a ghlannadh
April 2016: following clearing of dense scrub



Iúil 2016: rathneach i chuile áit sular cuireadh amach Asulam air.
July 2016: bracken dominates before treating with Asulam



Lúnasa/August 2017



Aibreán/April 2018

Achoimre

- Is minic go bhfásann raithneach go tiubh ar ithreacha domhain agus ar Mhachair a mbíonn claí ina thimpeall.
- D'fhéadfadh raithneach fás in éineacht le scrobarnach eile ar nós driseacha agus draighean agus nach mbeadh deacracht ar bith leis go dtí go nglanfaí as an scrobarnach.
- Ní mór raithneach a ghearradh faoi dhó sa mbliain le é a choinneáil siar.
- Ba cheart an chéad ghearradh a dhéanamh ag deireadh na Bealtaine/tús an Mheithimh nuair a osclaíonn na froinn.
- Ba cheart é a ghearradh arís 6 seachtainí ina dhiaidh sin nuair a bhíonn sé fásta arís go dtí an pointe céanna.
- Ní mór cead roimh ré a fháil ón tSeirbhís Páirceanna Náisiúnta agus Fiadhúlra le luibhicíd a chur amach i Limistéar Caomhantais Speisialta.
- Le raithneach a stopadh ag scaipeadh ní mór, sna blianta dár gcionn, tabhairt faoi arís.

Summary

- Bracken often occurs on deeper soils and on walled machair.
- Bracken may occur in combination with other scrub species such as briars and blackthorn and may only become an issue when the other scrub species are removed.
- Cut bracken twice a year to control it.
- First cut must take place in late May/early June when fronds first unfurl.
- Second cut must take place 6 weeks later when bracken regrowth is at the same stage.
- Herbicide application within SACs (Special Areas of Conservation) requires prior consent from the NPWS.
- Retreatment in subsequent years is necessary to control bracken spread.






www.aranlife.ie

aranlifeproject@gmail.com

 AranLIFE

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An Roinn Cultúir,
Oidhreacht agus Gaeltacht
Department of Culture,
Heritage and the Gaeltacht



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine



Fáilte Ireland
National Tourism Development Authority

An Chomhairle Oidhreacht
The Heritage Council



Comhairle Chontae na Gaillimhe
Galway County Council