

Management trials for natural regeneration

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Plantlife Scotland- Back from the Brink programme

FCS- Management Grants

SNH- approval to work on SSSIs

Tayside Biodiversity Action Fund

Juniper workshop: 4th September 2009, Glenmore.

Expansion by natural regeneration is important*

Guidance on best management practices is required

Fussy species:

shade intolerant- bare ground/short sward

but

susceptible to browsing/grazing when young

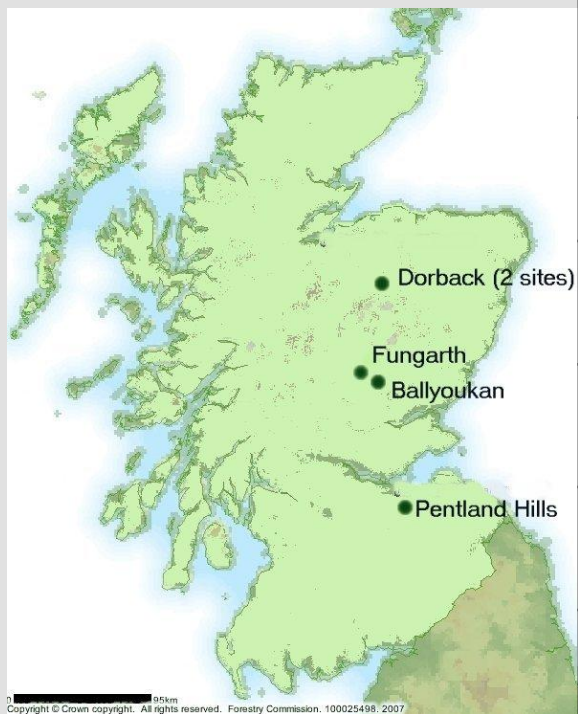
Useful management practices??

a) release from heavy grazing pressure,

b) ground disturbance in areas where there is little browsing/grazing

c) summer grazing by cattle.

***UKBAP Target: Achieve natural regeneration of juniper populations at sites under direct conservation management**



Site	Management	NVC
Dorback 4a	Scarification No herbivores	Improved U4
Dorback 13a	Scarification No herbivores	U4
Fungarth SSSI	Summer cattle grazing (May- Sept- 0.4LSU/ha)	U4/U20
Ballyoukan SSSI	Summer cattle grazing (May- Sept- 0.4LSU/ha)	U4/M25/ W11
Pentland Hills	Scarification plus and minus herbivores	U4/H10





**Stand of juniper bushes
next to where
management applied**



**Healthy bushes, mix of
male and females with
berries**

Assess:

- natural regeneration
- germination of sown seeds
- seed bed creation/retention
- condition of parent bushes



Trials and Monitoring-Assessments

1. Natural regeneration



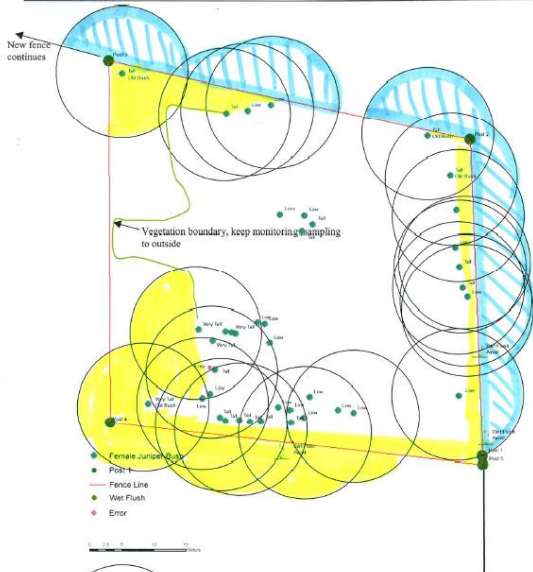
2. Germination of sown seeds



3. Seed bed retention/creation



in scarified and unscarified areas



where cattle do and don't have access

Natural regeneration/ sown seed germination*

		2005	2006	2007	2008	2009	2010
Scarified	Dorback 4a	X	X	X	X		
	Dorback 13a	X	X	X	X		
	Pentland Hills	X	X	germinate	X		
Cattle grazed	Fungarth	X	X	X	regenerate		
	Ballyoukan	X	X	X	X		

*seed collected, tested and sown in 2005. Approx 1000 seed sown per site.

Seed bed conditions for juniper regeneration during trial: summer cattle grazed sites

Conditions considered sub-optimal before start of trial-significant changes as a result of cattle grazing

	Vegetation height reduced	Bracken height reduced	Litter % cover reduced	Bare ground increase %cover
Fungarth	yes	yes	no	yes
Ballyoukan	yes	n/a	yes	yes

(2009 results)

- **Summer cattle grazing probably beneficial but need data from more years to be sure (trial ends 2010).**

Characteristics of the site where regeneration occurred:

- median sward height 4 to 8 cm
- bare ground covering 0-5%
- litter cover of 3-9 %

