

Method of feeding, dietary preferences and habitat effects of different species of large herbivore

Compiled from Armstrong (1996 and Mayle (1999)

Species	Biting method	Selective ability	Minimum sward height grazed	Particular preferences	Seasonal variation	Effects on habitat	General comments
Sheep	Biting/shearing. Have lower incisors only. Vegetation grasped between lower incisor and horny upper pad. Graze herbage close to ground.	Highly selective. Native and hardy breeds less selective. Generally grazers rather than browsers but will browse young trees, especially seedlings.	3 cm	Prefer high quality grasses and forbs. Heather and coarse grasses eaten if nothing better available. Mat-grass and purple moor grass only eaten in early spring, unless little else available or if mat-grass is an intimate part of a bent/fescue sward. Avoid rushes. Eat mosses only when these cannot be avoided. Castrated males (wethers) and Hebridean sheep are reputed to eat rough vegetation more readily than do ewes of other species. Young trees browsed particularly in winter (but broadleaved trees also in summer if little else	High Browse young broadleaves, including holly, all year but especially in summer. Will also browse conifers in winter. Very occasionally strip bark from the base of mature trees in winter	1. Short, tight sward, except where tussocky grass is present. 2. Coarse grasses, such as mat-grass, that are avoided, can spread. 3. Can reduce the density of young trees but significant damage to young trees is only likely when preferred forage i.e. grasses and herbs, is limiting. 4. Seek woodland shelter in inclement weather potentially causing high impacts on woodlands.	1. Especially suitable for grazing small areas or for small archaeological sites since sheep are relatively small and have can cause less disturbance to soil than do larger herbivores.

				available), especially during snow cover.			
Red deer	Biting/shearing. Have lower incisors only.	Selective	4 cm	More liable to eat heather and trees than are sheep.	High Young trees of deciduous species more likely to be browsed in summer and those of coniferous species in winter.	As for sheep	
Roe deer	Biting/shearing. Have lower incisors only	Highly selective	3 cm	More liable to eat trees and shrubs than are red deer or sheep.	High	May have a significant impact on the structure of woodland field layer vegetation, especially in the absence of grazing livestock. Bramble and honeysuckle will be browsed.	
Cattle	Bulk grazer i.e. require large amounts of forage but can digest relatively low quality forage. Wrap tongues around tall vegetation and	Slightly selective	> 6 cm	Prefer high quality grasses such as bents and fescues. Will eat low quality communities such as bog-rush fen, mat grass/ purple moor-grass and heather More likely to eat rough	Low Broadleaves bark stripped when forage availability low (winter), or in response to mineral deficiency	1. Uneven, tussocky sward, with tall vegetation around dung Patches. High grazing pressures produce a short sward but not less than 6 cm in height.	

	pull. Have lower incisors only. Grasp short vegetation between lower incisors and horny upper pad. Feed for around 60% of the day.			vegetation such as mat-grass and purple moor than are sheep, red deer or roe deer. Hardier breeds are more likely to eat coarse vegetation as are individual animals that have been reared on a similar diet. Avoid eating vegetation around dung patches.	(summer).	2. Summer (and possibly winter) grazing and trampling of mat or purple moor-grass breaks-up deep litter and increases quality of spring growth. 3. Summer grazing of heather and wavy-hair grass reduces coarse and woody material, encourages herb species and improves forage quality.	
Goats	Biting/shearing. Have lower incisors only.	Highly selective	> 6 cm	Will eat a very varied diet including high quality grasses, sedges, rushes (in spring), bog myrtle, mat-grass, dwarf shrubs and trees. Have a high propensity to eat trees and shrubs.	High Grasses, sedges and rushes eaten in summer, dwarf shrubs, gorse and browse in winter. Norway and Sitka spruce browsed in winter. Winter stripping of smooth barked broadleaf	1. Graze/browse tall vegetation leaving, uneven, tussocky swards. 2. Hardwood seedlings browsed more than by cattle and sheep, preventing natural regeneration. 3. Brambles, and other thorny species, may be controlled by browsing	

					species (40-35 cm girth) and conifers (5-15 cm girth)		
Horses and ponies	Biting. Have upper and lower incisors so can nip herbage very close to the ground. Bulk grazer i.e. require large amounts of forage but can digest relatively low quality forage. Non-ruminants. Feed for 75-88% of the day.	Selective	2 cm	Prefer vegetation with a high digestibility, even if the sward is very short. Native breeds will take coarser grasses. They prefer high quality grasses but will eat purple moor grass, heather, gorse, holly, sedges, rushes and ferns.	High Purple moor grass, sedges, rushes and ferns taken in late spring and summer. Will bark strip young and mature trees if there is little forage available.	1. Create a varied sward structure with patches of closely grazed and tussocky vegetation. 2. Native breeds are particularly useful at controlling coarse grasses and producing open, herb-rich swards.	
Mountain hares	Biting. Have upper and lower incisors.	Very highly selective	3 cm (but rarely graze grass-dominated swards)	Prefer heather on mineral rich soils to that growing on poorer soils. Select grasses from amongst heather when these are available.			
Rabbits	Biting. Have upper and lower incisors.	Very highly selective	1 cm	Avoid aromatic, prickly, hairy, fibrous, toxic or low digestibility plant species such as heath bedstraw (<i>Galium saxatile</i>), bracken (<i>Pteridium aquilinum</i>),		Can effectively suppress seedling regeneration and may ringbark saplings	

				nettles (<i>Urtica dioica</i>), Yorkshire fog (<i>Holcus lanatus</i>) and mosses.			
Pigs	Omnivorous Take invertebrates, tubers, fungi, fruits, seeds, grasses and carrion rooting much of which is obtained by rooting in the leaf litter	Un-selective	Not applicable .	Anything tasty	Low Fruits and seeds (particularly acorns) taken in autumn.	<ol style="list-style-type: none"> 1. Dense ground vegetation (bracken, couch grass, brambles, roses) reduced/cleared by rooting behaviour. 2. Seed beds created for natural regeneration 3. Seedlings, saplings and roots of larger trees may be uprooted or damaged unless pigs are ringed (4-5 rings in snout) and removed following pannage period (3-4 weeks). 4. Continual pig rooting prevents natural regeneration of trees. 	