

Grassland & Herbal Leys - Species Guide

This guide intends to highlight to farmers and crofters who are considering sowing a grassland herbal ley what species to consider. What is chosen will depend on individual circumstances, soil types and preferences.

Herbal leys provide a diverse range of grasses and species with benefits to soil structure, soil health and drainage.

Increasing the diversity between four functional groups (e.g. grasses, legumes, tall herbs and short herbs) has also been seen to increase biomass production.

Grasses	Rooting	Soil Type	Persistence	Benefits	Other Notes
Perennial Ryegrass	Shallow/medium	Grows well on light & heavy soils	Persistent (approx. 6+ yrs)	Highly productive grass (mainstay of most grass mixtures) bred for palatability & digestability. Good for grazing, silage & hay	Works well with White clover in forage mixtures. Can be susceptible to mildew. Tetraploids are higher yielding & suited to silage but are less persistent. Diploids are lower yielding, but tiller more and are suited to grazing & long term mixtures
Hybrid Ryegrass	Shallow/Medium	Grows well on light & heavy soils	Persistent (approx. 3-4yrs)	Highly Productive grass suitable for Silage production with good aftermath grazing & frost resistance	A Hybrid between Perennial & Italian Ryegrass. Very responsive to N Fertiliser
Italian Ryegrass	Shallow/medium	Grows well on light or heavy land	Not persistent (approx. 2yrs)	High yielding grass suitable for short term silage mix	Persistence reduced by droughts & hard frosts. Very responsive to N Fertiliser. Open growth habit with few tillers
Westerwold	Shallow/medium	Grows well on light or heavy land	Annual	Fast growing & high yielding grass producing a crop within 12wks of sowing	Annual version of Italian Ryegrass. Good N scavenger as winter cover crop. Grows well with Annual clovers for silage crops.

Cocksfoot	Deep	Grows well in dry free draining soil	Very persistent	Good yields Early spring growth Provides growth in droughty conditions	Can become clumpy and unpalatable
Timothy	Fine shallow roots	Grows well on light & heavy land	Very Persistent	Winter hardy Free of Disease Very flexible forage uses. Good for Hay	Good in long term pasture mixtures Good late season growth
Creeping Red Fescue	Shallow rooting system with rhizomes	Grows well on free draining low fertility soils	Very persistent	Provides a dense sward with good low ground cover due to vigorous creeping nature Good at colonising gaps in swards Tolerant of close grazing & mowing	Slow growing compared to ryegrass & care needed at establishment to avoid seedlings being out-competed.
Bent grass	Shallow	Acidic poorer quality soils, not very competitive with productive grasses	Very persistent	Good component in wild-flower/environmental seed mixtures Tolerates being cut low to produce a robust sward	Commonly used in amenity sector
Legumes					
White Clover	Medium, but also spreads using stolons	Grows well on light & heavy soils. Does not like low pH soils conditions	Persistence varies depending on leaf size: Small is longer lived than large.	Fixes Nitrogen to build soil fertility Increases protein & mineral content of forage Drought resistant Provides good ground cover. Frost tolerant	Small leaved types suited to grazing swards & large leaved ones to cutting systems
Red Clover	Deep tap-root	Grows well on light & heavy soils. Does not like low pH soils conditions	Lasts for approx. 3 years	High yielding clover Good fertility builder, fixing more N than white clover. Suited to 1 or 2 cut silage system	Growing point susceptible to damage if grazed hard. Forage can turn stemmy if not cut at suitable timings Contains oestrogens, so careful grazing with breeding stock required around conception

Alsike Clover	Medium	Grows well in heavy soils & can cope with more acidic conditions	Lasts for approx. 3 yrs	Low growing clover suitable for growing as undersown species. Grows in wetter and more acidic conditions than other clovers	Lower yielding than red clover Can be toxic to horses
Berseem (or Egyptian) Clover	Deep Tap-root	Grows well on light & heavy land	Annual	Fast growing legume with large biomass - good for green manures if sown in warm conditions. Decomposes fast due to low C:N ratio	Not suitable for grazing due to high growing point. Used as a companion crop with WOSR for pest control & fertility
Crimson Clover	Deep Tap-root	Suits well drained soils	Annual	Fast growing legume – good for green manures or as companion with Westerwolds for silage	Traditionally used as a winter keep for sheep
Persian Clover	Shallow/ Medium roots	Suits heavier neutral/ alkaline soils	Annual	Fast growing legume (faster than Crimson) Suitable for companion with Westerwolds for silage.	Needs warm conditions for good establishment Can cause bloat in cattle
Lucerne (Alfalfa)	Very Deep Taproot	Suits free draining Alkaline soils	Not very persistent Approx 2-4 years	Very drought tolerant High yielding forage (silage or Hay) Good soil improver due to very deep taproot Protein rich forage	Slow to grow in first year, and suits areas of high sunshine. Seed needs inoculated with rhizobia. Plant will not survive if field is waterlogged
Sainfoin	Very Deep Taproot	Suits thin or Limestone rich soils (high pH soils)	Lasts for approx. 3-5 years	Very Drought tolerant High Yielding Forage (but not as high as Lucerne) Natural Anthelmintic Frost tolerant Does not cause bloat Can be grown with little phosphate fertiliser Protein rich forage High level of Condensed Tannins	Best suited to spring sowing due to slow establishment. Hard grazing will damage plant and reduce persistence

Birds Foot Trefoil	Shallow	Suits poor, dry, free draining soil	Lasts approx. 3-4 yrs	Natural Anthelmintic High level of Condensed Tannins Protein rich forage Good in Herbal ley mixtures	Hard grazing will reduce persistence Suits rotational grazing system Suits mix with lower productivity grasses e.g. Timothy & Meadow fescue
Common Vetch (Tares)	Medium	Grows well on light & heavy land	Annual	High protein forage Extremely Competitive against weeds Works well in arable silage mixes producing large biomass Can be used as over winter green manure	Fixes large quantity of Nitrogen Can carry over diseases of pea family Frost tolerant but dies after flowering.
Herbs					
Chicory	Deep Tap-root	Grows well on light & heavy land	Lasts approx. 3-4 yrs	Natural anthelmintic High protein forage Good Soil Improver Good Source of Minerals	Good for finishing lambs Can get woody if not grazed or cut regularly
Ribwort Plantain	Deep Tap-root	Prefers light ground	Perennial. Will persist with good grazing management	High protein forage Good source of minerals & trace elements Good Soil Improver Drought tolerant Good in Herbal Leys	Low yielding forage
Yarrow	Deep Tap-root	Prefers poor, light free draining soil	Perennial. Will persist with good grazing management	Good source of Minerals Good Soil Improver Slightly stoloniferous Drought tolerant Good in Herbal Leys	Low yielding forage Small seeds
Burnet	Deep Tap-root	Prefers poor, light free draining soil	Perennial. Will persist with good grazing management	Good source of Minerals Good Soil Improver Drought tolerant Good in Herbal Leys Provides good early spring growth	Low yielding forage Slow to establish

Sheeps Parsley	Deep Tap-root	Prefers poor, light free draining soil	Perennial. Will persist with good grazing management	Good source of Vitamins & Minerals (Iron & Vit A & C) Good Soil Improver Drought tolerant Good in Herbal Leys	Low yielding Slow to establish
Selfheal	Shallow	Prefers damp fertile grassland	A creeping perennial	Good for pollinators Tolerant of moderate shade Good for Wildflower mixtures	Slow growing Suits mix with low productivity grasses
Devils bit Scabious	Shallow	Prefers poor, damp acidic soils	Perennial	Good for pollinators Good for wildflower mixes	Slow growing Suits mix with low productivity grasses
Autumn hawk-bit	Shallow	Grows on a range of soil types	Perennial	Good for pollinators Good for wildflower mixes	Slow growing Suits mix with low productivity grasses