

These cards are a guide to grassland ley species, and complement the Multi-species Sward App.

Please note that the 'thumb symbols' only compare species of the same group (legumes/herbs/grasses).

The cards are coloured as follows:

-  Legumes
-  Herbs
-  Grasses

The cards and app are part of the Toolbox of Multi-species Swards project (www.multispeciesward.co.uk) funded by the Agri-tech Cornwall and the Isles of Scilly project, led by Duchy College Rural Business School and Rothamsted Research North Wyke. Email multispeciesward@cornwall.ac.uk for more information. We gratefully acknowledge the contributions of farmers, collaborating business partners and experts.



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The cards and app were designed and made in Cornwall by FoAM Kernow. All photos taken by Bethan Stagg except where stated otherwise. Version 1.1.
















Plant: Upright and no stolons (rooting stems).



Leaves: 3 leaflets, hairless, no crescent.
Flowers: Pale pink or white, spherical head.



Seedling: First true leaves visible at 2 weeks.

- Protein 
- Minerals 
- Digestibility 
- Persistence (grazed) 
- Relative yield (cut) 
- Relative yield (grazed) 
- Intensive cut/graze tolerance 
- Anthelmintic properties 
- Waterlogging tolerance 
- Marginal soils tolerance 
- Drought tolerance 
- Frost tolerance 
- Bloat safe 

ALSIKE CLOVER
Trifolium hybridum
















Plant: Upright and sprawling habit.



Leaves: 5 leaflets (3 clover-shaped, 2 clasping stem).
Flowers: Yellow.



Seedling: First true leaf has 5 leaflets (3 weeks).

- Protein 
- Minerals 
- Digestibility 
- Persistence (grazed) 
- Relative yield (cut) 
- Relative yield (grazed) 
- Intensive cut/graze tolerance 
- Anthelmintic properties 
- Waterlogging tolerance 
- Marginal soils tolerance 
- Drought tolerance 
- Frost tolerance 
- Bloat safe 

BIRD'S-FOOT-TREFOIL
Lotus corniculatus



Plant: Upright and bushy.



Leaves: 3 leaflets, joined with short stalk.
Flowers: White, purple, or yellow clusters.



Seedling: First true leaf is heart or kidney-shaped (2 weeks).

- Protein —————> 👍
- Minerals —————> ?
- Digestibility —————> 👍
- Persistence (grazed) —————> 👍
- Relative yield (cut) —————> 👍
- Relative yield (grazed) —————> 👍
- Intensive cut/graze tolerance —————> 👎
- Anthelmintic properties —————> 👎
- Waterlogging tolerance —————> 👎
- Marginal soils tolerance —————> 👎
- Drought tolerance —————> 👍
- Frost tolerance —————> 👎
- Bloat safe —————> 👎

LUCERNE
Medicago sativa



Plant: Upright or sprawling habit.



Leaves: 3 leaflets, hairy, often crescent marks.
Flowers: Reddish-pink.



Seedling: Hairs on leaf already visible (2 weeks).

- Protein —————> 👍
- Minerals —————> 👍
- Digestibility —————> 👍
- Persistence (grazed) —————> 👎
- Relative yield (cut) —————> 👍
- Relative yield (grazed) —————> 👍
- Intensive cut/graze tolerance —————> 👎
- Anthelmintic properties —————> ?
- Waterlogging tolerance —————> 👎
- Marginal soils tolerance —————> 👎
- Drought tolerance —————> 👎
- Frost tolerance —————> ?
- Bloat safe —————> 👎

RED CLOVER
Trifolium pratense



Plant: Upright and bushy.



Leaves: Rows of oval leaflets up the stem.
Flowers: Pink, purple veins, cone shaped.



Seedling: First true leaf at 2 weeks has 1-3 long, oval leaflets.

- Protein —————> 👎
- Minerals —————> ?
- Digestibility —————> 👍
- Persistence (grazed) —————> 👎
- Relative yield (cut) —————> 👎
- Relative yield (grazed) —————> ?
- Intensive cut/graze tolerance —————> 👎
- Anthelmintic properties —————> 👍
- Waterlogging tolerance —————> 👎
- Marginal soils tolerance —————> 👎
- Drought tolerance —————> 👍
- Frost tolerance —————> 👍
- Bloat safe —————> 👍

SAINFOIN
Onobrychis viciifolia



Plant: Creeping, with stolons (rooting stems).



Leaves: 3 leaflets, hairless, crescents.
Flowers: Cream or pinkish white.



Seedling: White crescents visible at 2 weeks.

- Protein —————> 👍
- Minerals —————> 👍
- Digestibility —————> 👍
- Persistence (grazed) —————> 👍
- Relative yield (cut) —————> 👎
- Relative yield (grazed) —————> 👍
- Intensive cut/graze tolerance —————> 👍
- Anthelmintic properties —————> 👎
- Waterlogging tolerance —————> 👍
- Marginal soils tolerance —————> 👎
- Drought tolerance —————> 👎
- Frost tolerance —————> ?
- Bloat safe —————> 👎

WHITE CLOVER *Trifolium repens*



Plant: Rosette form, with leaves sprouting from the base.



Leaves: Narrow oval, often hairy, toothed, or pale green.
Flowers: Bright blue.



Seedling: Pale oval leaves (2 weeks).

- Protein —————> 👍
- Minerals —————> 👍
- Digestibility —————> 👍
- Persistence (grazed) —————> 👎
- Relative yield (cut) —————> 👎
- Relative yield (grazed) —————> 👍
- Intensive cut/graze tolerance —————> 👎
- Anthelmintic properties —————> 👍
- Waterlogging tolerance —————> ?
- Marginal soils tolerance —————> ?
- Drought tolerance —————> 👍
- Frost tolerance —————> 👍
- Bloat safe —————> ?

CHICORY *Cichorium intybus*



Plant: Rosette form, with leaves sprouting from the base.



Leaves: Narrow, ribbed, oval.
Flowers: Brown, cylindrical shape.



Seedling: Grass-like leaves (2 weeks).

- Protein —————> 👍
- Minerals —————> 👍
- Digestibility —————> 👎
- Persistence (grazed) —————> 👎
- Relative yield (cut) —————> 👍
- Relative yield (grazed) —————> 👍
- Intensive cut/graze tolerance —————> 👎
- Anthelmintic properties —————> 👍
- Waterlogging tolerance —————> 👍
- Marginal soils tolerance —————> 👍
- Drought tolerance —————> 👍
- Frost tolerance —————> ?
- Bloat safe —————> ?

RIBWORT PLANTAIN *Plantago lanceolata*



Plant: Rosette form, with leaves sprouting from the base.



Leaves: Toothed, in pairs up the stem.
Flowers: Knobby green-red clusters.



Seedling: First true leaves are pale and toothed (2 weeks).

- Protein → 🖐️
- Minerals → ?
- Digestibility → ?
- Persistence (grazed) → 🖐️
- Relative yield (cut) → 🖐️
- Relative yield (grazed) → ?
- Intensive cut/graze tolerance → 🖐️
- Anthelmintic properties → ?
- Waterlogging tolerance → ?
- Marginal soils tolerance → ?
- Drought tolerance → 👍
- Frost tolerance → ?
- Bloat safe → ?

SHEEP'S BURNET *Sanguisorba minor*



Plant: Rosette form, with leaves sprouting from the base.



Leaves: Feathery, garden parsley-like.
Flowers: Rare; tiny yellow clusters.



Seedling: Closely resembles the mature plant.

- Protein → ?
- Minerals → ?
- Digestibility → ?
- Persistence (grazed) → ?
- Relative yield (cut) → ?
- Relative yield (grazed) → ?
- Intensive cut/graze tolerance → 🖐️
- Anthelmintic properties → ?
- Waterlogging tolerance → ?
- Marginal soils tolerance → ?
- Drought tolerance → ?
- Frost tolerance → ?
- Bloat safe → ?

SHEEP'S PARSLEY *Petroselinum crispum*



Plant: Rosette form, with leaves sprouting from the base.



Leaves: Feathery, dark green.
Flowers: Flat-topped, cream-white clusters.



Seedling: First true leaves are feathery (3 weeks).

- Protein → ?
- Minerals → 👍
- Digestibility → ?
- Persistence (grazed) → ?
- Relative yield (cut) → ?
- Relative yield (grazed) → ?
- Intensive cut/graze tolerance → 🖐️
- Anthelmintic properties → 👍
- Waterlogging tolerance → 🖐️
- Marginal soils tolerance → ?
- Drought tolerance → ?
- Frost tolerance → ?
- Bloat safe → ?

YARROW *Achillea millefolium*



Plant: Up to 150cm, dark bluish-green, dense tufts.



Flower: One-sided, clumped flower head.



Stem sheath: No auricles, ligule often long (2-12mm), ligule has jagged edges.

- Protein → 👍
- Minerals → 👍
- Digestibility → 🤖
- Persistence (grazed) → 👍
- Relative yield (cut) → 🤖
- Relative yield (grazed) → 👍
- Intensive cut/graze tolerance → 🤖
- Anthelmintic properties → 🤖
- Waterlogging tolerance → 🤖
- Marginal soils tolerance → 🤖
- Drought tolerance → 👍
- Frost tolerance → ?
- Bloat safe → ?

COCK'S-FOOT *Dactylis glomerata*



Image credit: Cotswold Seeds

Plant: Up to 80cm, loose tufts, sometimes forms clumps, variable green colour.



Image credit: T. Voelker

Flower: Tinged reddish/brown.

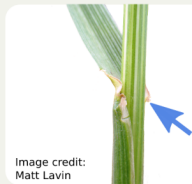


Image credit: Matt Lavin

Stem sheath: Short, stubby ligule – barely visible (1mm). Small auricles with no hairs.

- Protein → 🤖
- Minerals → ?
- Digestibility → 🤖
- Persistence (grazed) → 🤖
- Relative yield (cut) → 🤖
- Relative yield (grazed) → 👍
- Intensive cut/graze tolerance → 🤖
- Anthelmintic properties → 🤖
- Waterlogging tolerance → ?
- Marginal soils tolerance → ?
- Drought tolerance → 🤖
- Frost tolerance → 👍
- Bloat safe → ?

MEADOW FESCUE *Schedonorus pratensis*



Image credit: Cotswold Seeds

Plant: Up to 120cm, whitish-green, erect tufts.



Image credit: Fir

Flower: Tassel-like, cylindrical, up to 13cm long, yellow-green, covered in silver hairs.

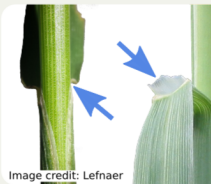


Image credit: Lefnaer

Stem sheath: No auricles, ligule typically short (1-4mm) and tatty.

- Protein → 🤖
- Minerals → ?
- Digestibility → 🤖
- Persistence (grazed) → ?
- Relative yield (cut) → 🤖
- Relative yield (grazed) → ?
- Intensive cut/graze tolerance → 🤖
- Anthelmintic properties → 🤖
- Waterlogging tolerance → 👍
- Marginal soils tolerance → ?
- Drought tolerance → 🤖
- Frost tolerance → ?
- Bloat safe → ?

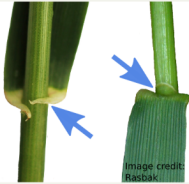
MEADOW FOXTAIL *Alopecurus pratensis*



Plant: Up to 100cm, dark green and glossy, dense tufts.



Flower: Simple 'florets' in alternating pattern; no awns (bristle-like hairs).



Stem sheath: Long auricles claspings the stem. Short ligule (1-2mm, hard to see).



Plant: Up to 200cm, loose tufts, dark green.



Flower: Open, multi-branched flower head. Looks more like a spike before flowering.



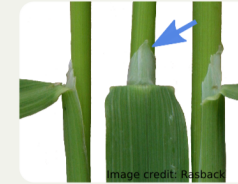
Stem sheath: Short ligule (2mm, hard to see). Narrow auricles with fine, wispy hairs.



Plant: Up to 150cm, light grey-green, upright tufts.



Flower: Tassel-like, cylindrical, up to 15cm long, green to grey-purple, no silver hairs.



Stem sheath: No auricles. Ligule up to 6mm long, notched edges and pointed tip.

- Protein → 👍
- Minerals → ?
- Digestibility → 👍
- Persistence (grazed) → 👍
- Relative yield (cut) → 🖐️
- Relative yield (grazed) → 👍
- Intensive cut/graze tolerance → 👍
- Anthelmintic properties → 🖐️
- Waterlogging tolerance → ?
- Marginal soils tolerance → 🖐️
- Drought tolerance → 🖐️
- Frost tolerance → 🖐️
- Bloat safe → ?

PERENNIAL RYE-GRASS *Lolium perenne*

- Protein → 🖐️
- Minerals → ?
- Digestibility → 🖐️
- Persistence (grazed) → 👍
- Relative yield (cut) → 👍
- Relative yield (grazed) → 👍
- Intensive cut/graze tolerance → 🖐️
- Anthelmintic properties → 🖐️
- Waterlogging tolerance → 🖐️
- Marginal soils tolerance → ?
- Drought tolerance → 👍
- Frost tolerance → 🖐️
- Bloat safe → ?

TALL FESCUE *Schedonorus arundinaceus*

- Protein → 🖐️
- Minerals → ?
- Digestibility → 🖐️
- Persistence (grazed) → 🖐️
- Relative yield (cut) → 🖐️
- Relative yield (grazed) → 🖐️
- Intensive cut/graze tolerance → 🖐️
- Anthelmintic properties → 🖐️
- Waterlogging tolerance → 🖐️
- Marginal soils tolerance → 🖐️
- Drought tolerance → 🖐️
- Frost tolerance → 🖐️
- Bloat safe → ?

TIMOTHY *Phleum pratense*