

# Multi-species Sward Cards



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:



The cards and app are part of the Toolbox of Multi-species Swards project ([www.multispeciesward.co.uk](http://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](mailto:multispeciesward@cornwall.ac.uk) for more information. We gratefully acknowledge the contributions of farmers, collaborating business partners and experts.



The Agri-tech Cornwall & the Isles of Scilly Project supports businesses research and develop innovations for agriculture (agri-tech) across Cornwall and the Isles of Scilly ([www.agritechcornwall.co.uk](http://www.agritechcornwall.co.uk)). It is part-funded by the European Regional Development Fund, Cornwall Council and the Council for the Isles of Scilly.



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 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:** 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:** 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 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*



Image credit: Jonny Todd

**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:** 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:** 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 —————> 👍

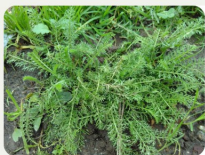
Drought tolerance —————> 👍

Frost tolerance —————> ?

Bloat safe —————> ?

# RIBWORT PLANTAIN

*Plantago lanceolata*



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



Image credit: Petar Milošević

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

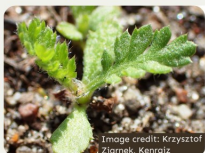


Image credit: Krzysztof Ziarnek, Kenraiz

**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

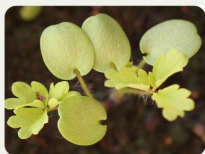
## *Achillea millefolium*



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



**Leaves:** Toothed, in pairs up the stem.  
**Flowers:** Knobbly 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 —————> ?

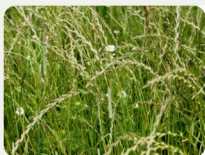
Drought tolerance —————> ?

Frost tolerance —————> ?

Bloat safe —————> ?

# SHEEP'S PARSLEY

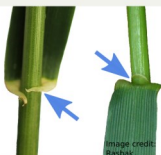
*Petroselinum crispum*



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



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



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

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*



**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*



**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.

Image credit: Resback

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*





Image credit:  
Cotswold Seeds

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



Image credit:  
Harry Rose

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



Image credit: Lavin

**Stem sheath:** Short  
ligule (2mm, hard to  
see). Narrow auricles  
with fine, wispy 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 —————> ?

# TALL FESCUE

## *Schedonorus arundinaceus*



Image credit:  
Cotswold Seeds

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



Image credit: T. Voekler

**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.

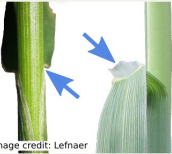


Image credit: Lefnaer

**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*