



An introduction to Multi-species swards

What is a Multi-species Sward?

A multi-species sward is a mixture of three or more species whose growth characteristics complement each other resulting in improved productivity compared to when each species is grown on their own.

The species used typically come from three plant groups i.e., grasses, legumes, and herbs, with each species bringing different benefits to the sward.

Grasses such as perennial ryegrass and timothy provide strong early-season growth and quality, while legumes like white and red clover feed the sward with nitrogen fixed from the atmosphere and boost protein.



Multi-species swards have the potential to produce high yields of quality forage at greatly reduced rates of nitrogen fertiliser input.



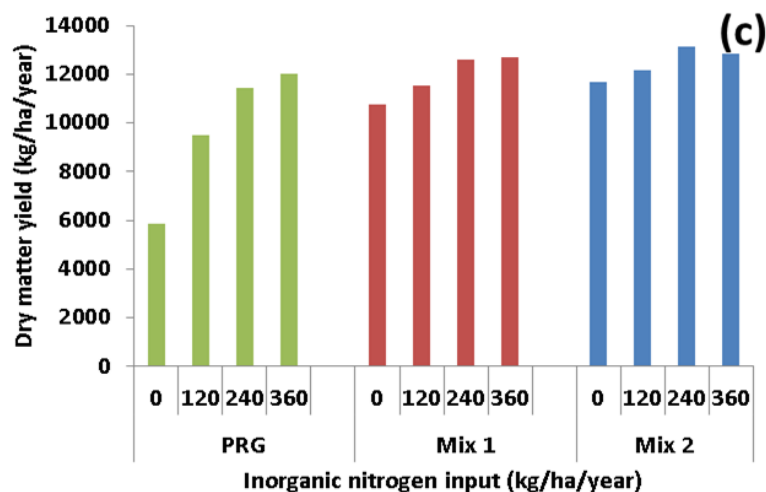
Why would I sow a multi-species sward?

Multi-species swards have the potential to produce high yields of quality forage at greatly reduced rates of nitrogen fertiliser input.

As well as providing excellent quality, mineral-rich forage in the summer months, deep-rooting herbs like ribwort plantain and chicory are extremely drought tolerant which is an increasing concern for many Irish farmers.

The benefits of multi-species swards

- Multi-species swards can produce similar DM yields to perennial ryegrass swards at significantly lower rates of inorganic N fertiliser. This could be worth up to 7 bags 18.6.12/acre or €120/acre per year.

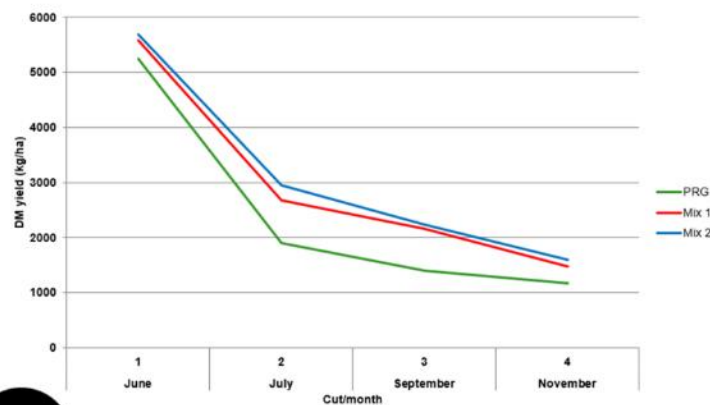




The benefits of multi-species swards

- The inclusion of warm-season species like chicory and plantain means multi-species swards have strong summer production compared to a grass sward. Furthermore, these deep-rooting species make the sward much more tolerant of drought than a grass sward

Distribution of DM yield



- The use of multi-species swards compared to grass-only swards in agriculture can also provide a wide range of environmental benefits including:
 - Reduced N₂O emissions and nitrate leaching associated with reduced fertiliser use
 - Higher rates of carbon sequestration due to deeper root-depths
 - Enhanced biodiversity, particularly pollinators feeding on the variety of flowering plants in multi-species swards



Choosing the right mixture

Multi-species swards are often thought only suitable for good quality, dry land. However, by selecting species that can better cope with wet or dry conditions, we can formulate different mixtures to suit different soil types.

A good starting point is a mixture of species that will perform on a range of soil types like perennial ryegrass, white clover, and ribwort plantain. Once we have this foundation, the mixture can be tailored towards dry or wet soils.

In particularly light, dry soils, adding species like festulolium, cocksfoot, lucerne and chicory will help keep the sward productive during prolonged dry periods.

On the other hand, in heavy, wet soils, species like timothy, meadow fescue and plantain are well equipped to cope with such challenging conditions.

A mixture like DLF's 6 Species Herbal Ley is an excellent all-round mixture that should produce large amounts of quality forage across a range of soil types.

For more information on selecting the right mixture for your farm, call Thomas Moloney, DLF 087 396 1265

DLF HERBAL LAY 6-SPECIES

GRAZING

FEATURES

- Offers vitamin and mineral intakes sometimes absent from grass alone
- Trials show higher live weight gains and significant reduction in the number of faecal parasitic egg counts
- Increased production in drought periods due to deep rooting nature
- Inclusion of red and white clover increases palatability and reduces N requirement

15%	Nifty	Intermediate Perennial Ryegrass
20%	Kerry	(T) Late Perennial Ryegrass
20%	Aspect	(T) Late Perennial Ryegrass
10%	Timothy	Timothy Blend
10%	Chicory	
10%	Plantain	
7%	Red Clover	
8%	White Clover	

Six species mixtures are currently being trialled by UCD with very positive preliminary results in terms of weight gain and reduction in worm count.

This mixture contains six species, with Ryegrass species providing the yield and quality to the sward, while Chicory and Plantain add vitamins and minerals which are sometimes devoid in grass.

Clover is also included at a high rate to ensure more palatable grazing and boost weight gain.

AVAILABLE IN 12KG PACKS

Research References

[Links here](#)

- [Link to PDF TM research](#)
- [Herbage nutritive value of binary- and multi-species swards relative to single-species swards in intensive silage systems – ScienceOpen](#)
- [Grazing multi-species swards improves ewe and lamb performance | animal | Cambridge Core](#)
- [Herb species inclusion in grazing swards for dairy cows—A systematic review and meta-analysis - ScienceDirect](#)
- [The-effect-of-grazing-multispecies-swards-on-lamb-performance-and-herbage-production.pdf \(researchgate.net\)](#)
- [A review of the use of chicory, plantain, red clover... - Google Scholar](#)
- [The use of legume and herb forage species to create high performance pastures for sheep and cattle grazing systems \(scielo.br\)](#)
- [Forage herbs improve mineral composition of grassland herbage - Pirhofer-Walzl - 2011 - Grass and Forage Science - Wiley Online Library](#)
- [Higher species richness enhances yield stability in intensively managed grasslands with experimental disturbance | Scientific Reports \(nature.com\)](#)
- [2018-ADSS-proceedings.pdf \(australasiandairyscience.com\)](#)

