

FIELD LAB: GRASS SEED MIXES

Field lab report – initial meeting

Growing grass in Scotland seems to be getting more difficult. We seem to have longer periods of wetter weather, making it more difficult to grow grass that performs, persists, and competes with weeds, particularly rushes. This field lab will try and find some solutions to this problem.

We are comparing different grass seed mixes on a sheep farm (Mouldyhill) on the eastern edge of Dumfries and Galloway. Mouldyhill has heavy soil and gets quite a bit of rainfall. It has recently had some very wet summers, including a challenging 2017. The soil type and climate here can lead to poaching, so sheep are housed over winter, and there are short weather windows to cut silage. The farm business has invested in drainage, lime, and soil nutrients, and has carried out some reseeds. The farm manager wants to try out different grass seed mixes, to see what does well here.

The group decided that a successful grass sward at Mouldyhill would:

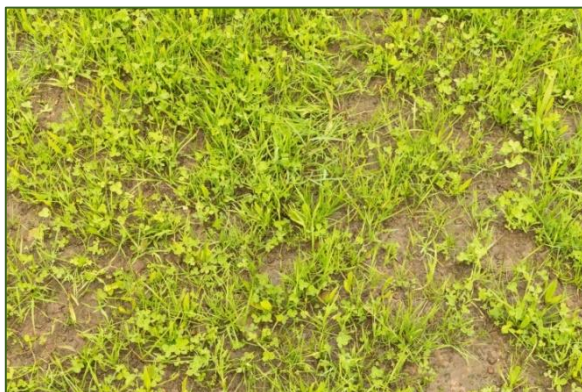
Reduce costs

- *Having a sward that doesn't poach as easily, or recovers well from light poaching, will allow sheep to be housed for shorter periods*
- *Making good quality silage will reduce the amount of concentrates that need to be bought in over the winter*

Improve productivity

- *By competing with grass weeds, particularly rushes*
- *By providing good quality grazing to improve lamb liveweight gain*

Different grass seed mixes were sown in summer 2017, and an initial meeting was held a couple of months after, to see how they were getting on. A group of local farmers, seed merchants, and farm staff looked at and discussed different mixes, and identified next steps for the field lab.



Sowing and seed mixes

Two fields were split into five 'plots'. These were sown in July 2017: the earliest that weather conditions allowed. After sowing the field flooded several times following continuous heavy rainfall. Despite this, all plots established well, and will benefit from a light grazing in the autumn, if it dries up. The mixes sown were:

- A. 14 species mix containing a diverse mix of forage legumes and herbs, as well as some grasses
- B. 13 species mix based on mix A, but amended to include species that should be suited to wetter, lower pH conditions
- C. A bespoke persistent mixture that contained fescue
- D. A Dundas mix with additional clover
- E. A mix that is sown by many farmers in the local area, that performs well in wetter conditions, and on heavier ground

Full details of these grass seed mixtures can be found in a separate field lab note (Grass Seed Mixture Components).

A HERBAL LEY	C WATSON SEEDS PERSISTENT MIXTURE
	D DUNDAS SPECIAL MIX
B MOULDYHILLS HERBAL LEY	E GREENAN MIX

How will we know which seed mix is best?

After some discussion, the group decided on which qualities should be measured. They made lots of suggestions, detailed in the table below.

MEASUREMENT	METHOD	WHO DOES THIS?
Yield (kg dry matter)	Plate meter measurements for Agrinet	Farm manager
Yield (number of stock carried)	Information entered into Agrinet	Farm manager
Quality – production	Forage analysis (digestibility, energy, protein) – fresh	Soil Association
Quality – production	Forage analysis (digestibility, energy, protein) – silage	Soil Association
Quality – health	Forage analysis (trace elements) – fresh	Soil Association
Poaching resilience	Scoring based on visual assessment	Farm manager
Grazing season length	Recording dates that stock enter and leave	Farm manager
Longevity	Assessment of sward quality over several years what's still there; what's gone; what weeds have come in?	Soil Association / seed merchant
Anthelmintic effect	Faecal egg counts (FECs), particularly in the herbal leys	Farm manager

What next?

This list will be discussed further, and some measurements will be taken next spring. The next meeting will ideally be held in late May / early June.

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