

James Small, The Mendips, North Somerset



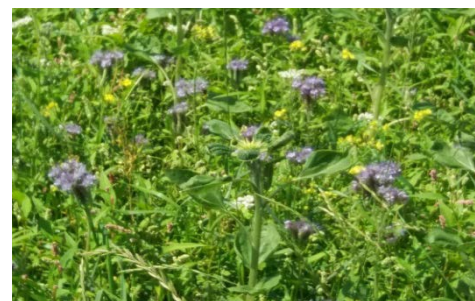
Two years on, we go back to visit James Small near the Cheddar gorge in Somerset. The farm's total area is 445 hectares. 242 ha is designated SSSI with all of the land in an Area of Outstanding Natural Beauty (AONB). 182 ha of the land is rotational farm land. James farms in partnership with his father and uncle.

Across this limestone area and gorge, there are sloping fields with varying soil depths. In some areas, the bed rock protrudes out of the ground. The soil is a clay loam with a red band that cuts across the farm. Overall, the land is porous, making the soil acidic. Additionally, there is a high led content which can pose a risk for cattle if not monitored and managed properly.



The legume and herb rich grass leys that James trialed with the Somerset Wildlife Trust and FWAG in the last case study are now five years old. The ley was made up of a range of different varieties that not only improved soil structure and chemical balance, supported insect pollinators but also drew up essential vitamins and minerals for the ruminant animal. The ingredients for one of the herbal leys can be seen below:

- Aberdart
- Orion
- Loke Cocksfoot
- Erecta Timothy
- Cosmolit Measow Fsc
- Alko Meadow Foxtail
- Altaswede Red Clover
- Merviot Red Clover
- Essex Red Clover
- Rivendel White Clover
- Aurora Alsike Clover
- Leo Birdsfoot Trefoil
- Chicory
- Sheeps Burnet
- Yarrow
- Oxeye Daisy



Each different plant in the mix has its unique input, for example; the red and white clover varieties compete well with weeds and are nitrogen fixing, reducing fertiliser costs for the next crop. James encourages clover in all of his herbal leys. Grasses like timothy are known for their winter hardiness and superb palatability. Chicory is a very deep rooting plant. The original plan was to keep the grass leys in for 6-8 years. However, now the trials are five years old, James has noticed that the variety of species in the ley has reduced considerably. The leading cause of this is due to the selective sheep grazing. Deep rooting plant chicory was one of the first plant's to go as it is very palatable. As the ley loses species it loses some of the beneficial properties it contributes to the soil and the nutrition available for his animals. In the future, James tells me, he will keep around 30-40ha of these leys in the rotation at any one time.

Two years ago, James had a suckler herd of 120 Whitebred shorthorn cattle; he is now changing the breeding by putting these to an Aberdeen Angus. This cross produces the breed, 'Blue Grey'. This hybrid breed has some

favorable traits which make it well suited to conservation grazing. A hardy breed with excellent calving ease and milking makes it ideal for James's 242ha of SSSI land.



As well as the cattle, the business still has his 1400 Beulah Speckled Face ewes on the farm. Although bigger than most upland breeds the Beulah is originally from the Welsh hills so are accustomed to harsh weather and rough terrain. Their beneficial characteristics of size, good mothering and milk make them manageable and desirable for sale to lowland farmers who would cross them with a continental ram to produce a quality carcass.

Unfortunately, the tenant who kept pigs on the farm has taken them off the land sooner than James would have liked to be able to see the potential benefits to the soil. If left on the ground a little longer we may have been able to see benefits of nitrogen input, increase in organic manure and unwanted weeds routed up and digested by the pigs.

James winters his cattle indoors so produces some of his own barley straw for housing. The barley is under sown with a clover based grass seed mix which significantly reduces soil erosion and naturally fixes nitrogen for the barley crop. When the barley is mowed for straw, the grass ley is ready for grazing. The root system of the grass ley provides additional protection against compaction when the barley is cut.

The land is mostly ploughed and sometimes rotavated or disked depending on the soil depth. In some areas of the farm, it is too shallow for ploughing. Contractors are used for all the cultivations on the farm.

Before a field has a new grass ley, it is tested. This equates to about 20ha to test each year. Typically the results show that the soil is low in phosphate and can quickly turn acidic due to its porous nature. A granulated calcium lime product called Calcifert is applied to slow the degradation of PH.

The farm is currently in ELS & HLS until 2020. Schemes like this are vital for farms where the level of potential production is limited by SSSI's. Some of James's options for HLS are six-meter buffer strips adjacent to SSSI land promoting plant biodiversity, enhanced wild bird seed mixes offering resources for wildlife, maintenance of species rich grass lands, maintenance of high environmental value hedges, cattle grazing, shepherding supplement and mixed grazing.

Farming on the ground at cheddar gorge has its challenges, with SSSI's restricting production, variable soil depth, steep slopes and high acidity levels. However, James has developed a farming system that works with his surrounding environment. The legume and herb rich grass leys have proven to be a valuable asset to the soil, livestock and the wildlife. From my visit, it was evident to see that this was a farm that delivers for the environment.

