A Smallholder’s Experience of Machinery for Flower Rich Meadows.

By Tim Daniels
HOW DID THIS HAPPEN??

A little history...

We moved to our 5.5-acre smallholding in 2016. With almost no knowledge of wildflowers, we didn’t realise the importance of the meadows surrounding us!

Within hours of moving in, we met Peter Tierney, who was eager to harvest some green hay for restoration projects and over the following weeks, we realised we needed to change our smallholding plans!
THE MEADOWS WERE SO BEAUTIFUL...
We cut braken that creeps in around the edges of the meadows.

- I cut twice: May and about 6-8 weeks later.
- I hope to weaken it while it’s using stored reserves to grow.

Whilst you could mow it, that would cut some of the flowers that are managing to grow amongst the braken, so I use a strimmer with a bramble blade.
HOGWEED

With late haymaking, Hogweed has a chance to seed.

We hand pull hogweed from our meadows during May and June. By July, it doesn’t have sufficient time to seed before we make hay. Every year sees less returning.

- Beware of Hogweed sap – It removes protection of skin to U.V from the sun, so you get nasty burns. We wear gloves, long sleeves and trousers and work early or late so we don’t overheat.

I do not use chemical weed control, although there is certainly a place for ‘spot treatment’ on invasive weeds if carried out responsibly.
Peter uses pedestrian equipment. There are advantages/disadvantages to consider.

- It allows you to access small meadows.
- You can work on banks, and steeper slopes than a compact tractor.
- You can go around trees (e.g. in an orchard) more easily.
- For larger meadows, it can take a long time and be tiring on your legs walking behind the equipment.
- It’s quite specialist and can be costly.

Due to the size of our meadows, and needing a compact tractor for other work around our smallholding, I purchased equipment that could be used with my tractor:

- A Disc Mower
- A Gyro (for turning the and rowing)
- A Mini Baler.
Step 1 is to cut the meadow.

I use a disc mower. Two rotating disks with blades on the edge.

Blades blunt easily if you hit soil. Mole hills can shorten the life of the blades significantly.

Note how short the sward is.

Some meadows I have cut have been very long and this is a struggle for small equipment, especially when it’s green/wet.

It takes about 2 hours to cut an acre, since the cutter is only 1.2M wide.
I bought my equipment from Danelander who specialise in equipment for smallholders. I’m using examples from their website to illustrate costs, but there are other suppliers or you could find second-hand equipment. I have no association with Danelander!

I needed a Mower and PTO Shaft. Consumables are sets of blades, grease and gear oil.
HAYMAKING - SPREADING & TEDDING

Step 2 on the second day is to spread the green hay to dry.

I use a Gyro. This has tines that spin around in a circle, collecting and releasing the hay at different points depending on the setting.

This can be set to spreading, tedding (turning) and rowing up with a windrow guard in place.

Step 3 is tedding on Days 2 & 3 and usually turn the hay about 4 times before it’s ready to row up for baling.
Step 4 is to row up.

The windrow guard is in place and I make a row that’s not wide for the baler.
You could also look for a Hay-Bob. These are easier to find secondhand.

If you don’t buy a mower and baler, but have a tractor, getting a hay-bob or gyro to spread, turn and row up your hay is a good investment.

• Even an old tractor or small compact tractor can be used.

• It takes the longest time for a contractor or farmer (back and forth to your property, multiple times to turn the hay).

• Other than replacing tines, greasing and low level maintenance, there’s not much to go wrong.

Apparently it even makes ‘Wuffles’

Examples of second hand Haybobs on AutoTrader Farm

COSTS-

GYRO

Price excludes VAT
Step 4 is to bale.

I use hemp twine which is more friendly to the environment.

The baling takes a long time. One bale is approximately 25Kg and there are 80 or 90 bales from our smallholding.

- Changing the twine.
- Balers have a habit of breaking. Expensive if you can’t fix it yourself.
- Long, tough grasses, jam the baler.
- Balers are expensive to buy and run.
This is by far the most costly equipment to purchase and run.

The size of the bale is important if you need to lift bales by hand but a small bale means you’ll spend a long time baling a large field.

My baler is the Mini Eco Round Baler and my bales are about 25Kg each.

With any baler, repairs can be costly.
We have to collect it... so I need a reasonable size trailer.

I can fit 18 bales on this trailer

Hay must be dry... or can catch fire in the barn!

Some years, it doesn’t sell easily and we still have hay here in the spring but I do have some regular customers coming back now.
HAYMAKING- CONSIDERING EQUIPMENT

There are some things to keep in mind before purchasing your own equipment:

• The size of the meadow.
• The access.
• What else is in the meadow - trees, orchard, ponds, streams and ditches.
• Hazards - Things you might not see tree stumps, mole traps, rocks etc.
• The slope of the land for safe working.
• The size and age of the tractor – The baler needs the most power to run.
• Storage of the equipment when not in use and security.
• The cost....
HAYMAKING- MACHINERY SHARE

When sharing equipment with other meadow owners, there are a few issues that would need to be considered in advance.

• Fair division of costs according to use.
• Equipment is always needed during good weather and during specific months.
• Who pays maintenance bills if it breaks.
  • For example. A mole trap went into my baler and I spent £300 to repair it myself. I have heard of balers having rollers bent that cost the owner thousands to fix.
• Maintained annually.
• Where is it stored?
• Will it be insured?
HAYMAKING- USING A FARMER OR CONTRACTOR

Providing they have a small size baler and can access your meadow, a farmer or contractor might make hay for you.

- You pay a rate for haymaking and that’s it!
- Machinery can be large, damage trees, compact the ground.
- Mowers are bigger, balers are faster, overall, the job is quicker and more cost effective.
HAYMAKING- FINAL THOUGHTS

You’ve seen some example costs of owning equipment to use once per season.... I haven’t discussed tractors, insurance, servicing, fuel costs etc.

- Can you use a farmer/contractor? Hold on to them for as long as you can!
  - £35 to £60 per hour depending on the size of equipment.

- If you have a tractor, you could buy a Haybob / Gyro and spread, turn and row your own hay. A farmer is more likely to work with you if you only need them to mow and bale.
  - £1000 to £3000 depending on the equipment plus a tractor, plus the hourly rate above.

- If you can get together with others nearby, you could use a farmer to mow and bale a few meadows at the same time. One person with a tractor and haybob works on the groups meadows.

- Buying equipment is costly, so if you have enough time, you could offset this slightly by haymaking for others in the local area?
AFTERMATH GRAZING

Natural England say:

“Hay meadow management by cutting alone can very quickly result in a less species-rich community. Aftermath grazing is essential, partly to control competitive coarse grasses, and partly, via trampling which creates gaps in the sward for germinating seedlings to exploit.”

We use our small flock of Kerry Hill sheep for aftermath grazing:

- We move them around meadows with electric fences to keep them in.
- It’s labour intensive moving sheep, feeding in winter and setting up electric fences...
- A farmer or ‘flying flock’ like mine visiting is ideal, but a lot of farmers don’t want to put a few sheep on a small meadow for a short time.

If you are local, I am often looking for meadows in the local area for my flock to visit for a short stay!
If you have any questions after the presentation, please contact your nearest Herefordshire Meadows Adviser:

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