



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 CHANGED OUR
PLANS!

BRAKEN

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.



PEDESTRIAN EQUIPMENT

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.



HAYMAKING- CUTTING



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.

COSTS- DISC MOWER

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.

Disc Mower



Danelander have added the new Disc Mowers to our range available in 3 different sizes from 5ft 7ft and 8ft cutting widths offering quality strength and reliability in their design. Economical to operate with only a 34-50 horse power requirement th...

[view more details »](#)

5' Disc Mower DLDM002	£4427.00	1 ▼	Add
7' Disc Mower DLDM003	£5374.00	1 ▼	Add
8' Disc Mower DLDM004	£6678.00	1 ▼	Add
Disc Mower PTO shaft DM PTO	£187.00	1 ▼	Add
Fully shielding Disc Mower PTO shaft for all Disc Mowers			

Prices exclude VAT

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.

HAYMAKING- ROWING UP



Step 4 is to row up.

The windrow guard is in place and I make a row that's not wide for the baler.



COSTS- GYRO

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.

DANELANDER GYRO HAY/HAYLEDGE RAKE AND TEDDER £2631.00 1 Add

DSGR001

Danelander Gyro Rake spreads , rows up, wuffles, rakes and aligns swath. A superior product to any Hay Bob/ haymaker. Does not knock dirt into swath like haybobs.

Price excludes VAT

Apparently it even makes 'Wuffles'



Examples of second hand Haybobs on AutoTrader Farm



£975 + VAT

PZ 300 Haybob

Forage and Hay | Hay Bobs

PZ Haybob 300, 3 Pt Linkage, PTO Driven, 1 New Gate, Ready To Work.

Kent Tractors Ltd



£950 + VAT

GREENLAND HAYBOB 300

Forage and Hay | Hay Bobs

GREENLAND TWIN ROTOR HAYBOB 300 All in good order and runs well! Some headstock repair but been done well and will not stop it going straight into work! Serial Number: TH 211271. £950 + VAT

Oakfields-Ag

HAYMAKING- BALING



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.

COSTS- BALER

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.

MAXI ROUND BALER DANE 7901	£8440.00	1	Add
The Maxi Baler is best suited to 50 Hp Tractors and upwards. Bales are 1090 meters Length and .80 meters width. Bale weight is 40 to 90 kilos plus (adjustable) , IDEAL SIZE at around half the size or the very big round Bales normally seen on farms. Use with our Wrapper part number DBW700			
MIDI ECO ROUND HAY & HAYLAGE BALER DANE7801	£7980.00	1	Add
Most popular efficient Bales 30 to 66 kg mass average. (adjustable) Easy use and set up.. Used by Government, Environmental, Municipal & agencies at sites of Biological interest, ANOB SSSI to Bale all wild meadow . Ideal Tractor 35 hp upwards . Use with DWB700 wrapper.			
MINI ECO ROUND HAY BALER DANE7701	£5980.00	1	Add
Our ever popular Danelander Mini round Hay Baler. Hundreds sold over the last 17 years. Bale mass 15 to 29KG (adjustable) average. Size makes handling and storage really easy. Use withDWB500 wrapper. This is our smallest Baler with the price to match. Very easy to use at a great price			

Price excludes VAT

THE HAY

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!



QUESTIONS?

If you have any questions after the presentation, please contact your nearest Herefordshire Meadows Adviser:

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