

Carnog Working Horses
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Bracken Rolling Using Horses

I have been using horses to roll bracken every year since 2009. In that time I have learnt a lot about where a horse can go, how much they can do in a day but most importantly how to get the most effective results. I often read information about bracken rolling with horses which has not been confirmed in my experience and feel like the process needs to be explained in an evidence-based way to give people a realistic idea if it is a method for them. I wanted to write this article to mention a few different sites and how the results had been quite variable due to a number of factors. I hope that it will give people an idea of what to expect and also what other work they may need to do to help with their bracken problem.



Site 1 – 2018 Bracken lying flat after the roll

I am focussing on three sites in particular. Site One is a site that recovered really quickly in just three years and further rolling has enabled the areas covered to be extended. Site Two is a site which has responded really slowly, but surely, and Site Three has been tackled with extra management tools that has really worked well combined with the initial roll being done with the horses.

Site 1: Three years dramatic results

One of the most successful projects I have worked on is at an area of parkland/wood pasture near Shrewsbury. Part of the site used to be wooded but for many years has had more of a pasture feel to the area we were asked to tackle. The bracken on the site was easily 6ft tall and in one area this was also dense with 6ft high bramble.

Some of the site was quite flat so there was a bit of light at the end of the tunnel as I took it on. In the first year (2017), I recall having to put on my full waterproofs on a humid July day to force my way through ahead of the horses. My horses are pretty bold and have learnt to trust me and they will go into bracken 'blind' as it were to make the first cut, but there is a bit of a limit if they are also being met with 6ft

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high bramble. Even with all the gentle persuasion I could manage they just would not do it in some of the worst areas. So I went first, we made the first cut and then we were off and could work off that. In the first year we covered a huge area, more than I had expected, this was partly due to the fact about 1/3 of it was quite flat and open. The site is a slight sloping platform at the top with a few scrubby trees to navigate, down a steep cliff section to a flat platform at the bottom.



Site 1 – Slightly reduced bracken in 2018, then cattle come in to help

The land managers then had the foresight to plan grazing with native breed cattle and they were introduced just before we rolled in 2018. When we arrived the bracken was a bit less dense and lower than the year before but had closed up much of the site to the cattle. It is important at this stage not to lose heart and trust in the method. As we rolled and opened up this area, that had otherwise been closed to them

for the summer, much to the horses horror, the cows (Dexters) followed us and started eating the brambles.

They continued like this after we had gone and will have considerably added to the speed in which the bracken litter broke down. After this first year the bracken did come back but it was reduced in vigour and more sparse and the bramble was more manageable, thanks to the cows. This site was lucky as there was still a lot of grass and other vegetation under the bracken and so, when it got a chance to grow again, it was able to compete a bit more with the reduced vigour of the bracken. The cows were still grazing at various points through the year.

In 2019, the bracken was again much reduced and when we went back in 2020 the change was remarkable, some areas that had been the wall of bramble were reduced to masses of grass, some thistles and nettles and barely any bracken at all (see photo below). Now we had made progress on these areas we could access the steeper bits so we continued to make our way through areas I had originally deemed too steep, but now we could get closer we were actually nearly able to join up the top and bottom

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Site 1 - 2020 View from almost the same spot as picture 1

halves of the site. The steep section is partly visible in the picture below showing the 'bottom section' of the site where the worst bramble wall had been. In 2020 and 2021 we were able to complete a considerable amount of this very steep ground too.

Methodology

Unfortunately there was bit of a change in the management on the site and it was decided to help the progress to get someone to come

and cut the bracken in June as well. No one told me about this until I arrived in late July to roll. Cutting is a different methodology and works in a different way. It actually stimulates growth so then needs to be done as many times in a season as possible, at least three to have an effect. The effect it did have was to cut any flowering plants on the site in their prime, including yellow rattle, which can be an important plant in helping to return grassland to more mixed hay meadow land. It also meant that when I came to roll the bracken had grown back but was all bouncy and soft. The bracken roller works to kill bracken when it is at its peak of growth by bruising the stiff stem and knocking it flat. So even though I ended up rolling nearly everything twice, it really didn't work and I knew this would set us back.

Working out the peak

When we take on a bracken site it is hard to know exactly when this peak will be and it can vary quite a lot each year and for each location. If we have a manager who knows their site intimately this can help but, otherwise, we have to make our best guess in the first year based on our knowledge and experience of other sites. The peak will change on some sites as the bracken gets weaker, so we are constantly adapting and learning. Hitting the bracken at its peak is one of the most important factors in getting results using this method. If we hit the peak it also means that the work can be achieved with just one roll in a year making it more cost effective

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than the method of cutting, and often it is cheaper than the cost of the chemicals and their application too.

Each year improving

In 2021 the bracken did come back similar to in 2020, probably a little bit worse really due to the change the year before. However, as we knew the site better and the overall progress was good we were able to roll for a full extra day in other areas of the site on top of the amount we had usually rolled. Sometimes it is possible that we can do this, in other areas when the bracken gets sparse it can still take as long as we still have to cover all the ground, even if the bracken is lower, but usually we will increase our area or do it more quickly as the years go on. Another thing that would really speed us up on this site and improve the recovery would be to remove scrub trees. If we have to spend time weaving round and round numerous trees and ducking under branches it is much more tiring work than if we have a big open area. Usually, on sites infested with bracken, people do not want trees to grow and the careful removal of certain ones can help to open up the area and make it easier for us to roll. We like to carry out this process, if possible, to ensure the stumps are left low and all brash is removed too as otherwise it can be hazardous to the horses.

Site 2: In comparison

We have rolled Site 2 for 10 years now and the results have been less than dramatic. The site is small and the work only takes a day, but it is very steep and awkward. The enlightened owner is very interested in nature friendly farming and was also interested to see the results over the years. Even though there has been limited success, it has been a useful and interesting study. This site had solid, 6 ft high bracken with more than 2/3 of the site with extremely dense



Site 2 - 2011 dense bracken and dense litter

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leaf litter and was barren underneath. The areas that had some other growth was mostly Yorkshire fog and foxgloves. I do not think we have always managed to hit the bracken at its peak on this site, but each year there were very gradual signs that it was being knocked back. It became lower and less dense and gradually more grass and foxgloves appeared. Unlike many sites at this stage of recovery, no brambles came in. We do find on some sites as we get on top of the bracken problem, we are then faced with an increasing bramble problem. The roller will knock it back to a degree but to be more effective it needs to be done at a different time in its growth and, as mentioned above, it is very challenging for the horses.

On this slow site there was no additional method used. The only additional thing we could have done was to do a second roll, if we got regrowth in the same season, to speed things up a bit. Although there are a few sheep on the site they rarely go to



Site 2 - 2020 bracken less dense and more growth of grass underneath but bracken still very dominant

the bracken area and sheep have minimal benefit to helping anyway. It has been hard to work out why this site has been so slow to recover. It is also one part of a larger section of bracken which is far too steep to even attempt and as bracken is all one plant really, even though we knock one corner back it may be getting its energy back from the rest of the plant. I think because there was literally nothing else growing under the bracken, and it would have been like this for many years, this will have made a huge difference. Sites

that have recovered best are ones which still have some other vegetation growing under the bracken. If livestock are not available to help with this, we have begun to develop other methods to remove bracken litter to aid the process.

Site 3: Raking it up

On another site, where we have very committed managers, they recognised that having no other management method available on the site was going to limit our progress. I have found as I roll round and round the same sites you really get to

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know them intimately and you do notice things other might not and have plenty of time to think about how things could be improved. So we devised a plan to find other ways to replicate the effects of these management tools. This site is a sandy heathland and a lot of the problems stem from the lack of grazing and the encroachment of trees. Grazing would not be possible as it would be very poor grazing, there is no water source and it is very public, with horses, dogs and cyclists and no fences. The bracken and the trees are all adding into the sand and turning it into soil and increasing the fertility, which will only benefit them and not the acid grassland and heathland plants that would thrive in the sand. Heather also grows so slowly it struggles to outcompete a 6ft high chunk of bracken.

We had a few years of progress with the bracken reducing and things heading in the right direction. For the last few years we have been experimenting with going back to the site a while after the summer roll, and harrowing and raking off the bracken litter and removing it from the site. We have also been felling and removing some of



Removing whole trees from Site 3

the smaller birch trees which have been encroaching weed-like across the open areas. The raking of the litter is quite labour intensive. The horses harrow the litter into rolls and then they are removed by volunteers to a trailer to be taken off the site. Volunteers have also used rakes after the horses have loosened the bracken to remove as much as possible. This opening up and removal of the litter has helped greatly in allowing other grasses and heather to re-establish.

I would really like to find funding to design and build a more effective rake as I am sure this can be done more efficiently. Removing the trees has given the site more light, less leaf litter and opens up the space so we can work more quickly and get into all the edges and corners and really get every last bit of bracken rolled. The whole trees were removed brush and all and charcoal making sessions were held with local volunteers, with a bag to take home for helpers. The site has been improved greatly in the areas in which we have been doing this extra work.

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In summary

- Bracken rolling using horses can be achieved using just one roll in a year if timed correctly to hit the bracken at its peak of growth, usually mid-June/Mid-August for the areas I cover which is Shropshire and the Welsh borders and mid-/north Wales.
- The condition of the site at the start will dramatically affect the outcome
- Where the ground beneath the bracken has years of litter and is barren of other plants, the job will be slower unless other management tools are brought in.
- Grazing with cattle or native ponies at key times can really speed up the process
- Removing the dead leaf litter will help the process.
- Removing scrub and controlling brambles will help the process.
- 5 years is the recommended time to see good results.

Various sites

I work with a variety of people to manage multiple bracken sites. They all have different objectives, resources and their bracken problems can vary dramatically. Our results have varied depending on a number of factors, some of which I have mentioned here. I am keen to work with people to get the most success and will give my honest opinion if I think they should have a go with this method. I would always recommend an initial five-year stint hopefully to get on top of the problem. Future low-level management may then be needed afterwards forever, depending on what other management practices are available.

If anyone would like any more information, please take a look at my website or send me an email or phone me. I am always happy to give advice.

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