



UNIVERSITY OF
LIVERPOOL

The Use of Alternative Grazing Systems in the UK

January 2021

A research project conducted in collaboration led by the University of Liverpool, in collaboration with the British Equine Vet Association (BEVA), the Horse Trust, Redwings Horse Sanctuary, the British Horse Society (BHS), World Horse Welfare, the Blue Cross and The Donkey Sanctuary.



Alternative grazing systems: challenging traditional practices

Owning a horse nowadays is very different to how it used to be. As our lifestyles have changed, so too has our knowledge about equine health and wellbeing. Where, fifty years ago, horses might have been owned predominantly for sport, they are now commonly viewed as companion animals; instead of their functionality, now they are appreciated for their personalities, their individuality, their innate horse-ness. Traditionally, hard-working sporting animals were kept stabled in order to provide comfortable places to rest and recuperate, then turned out for several months at a time when they were not needed.

Today's leisure equines have very different lives. Many horses do very little ridden exercise – certainly not enough to necessitate hours of rest in a stable - and it is not at all uncommon for horses to be kept purely for companionship, whether due to age, injury, or simply because the owner does not wish to ride. Developments in equine medicine have prolonged the lives of our friends, despite conditions which might have previously necessitated end of life. Additionally, our understanding of horses has improved; we now have a good understanding of how they behave in the wild, how we can best train and communicate with them, and improved awareness of what might cause them stress or pain.

However, typical equine management has perhaps not caught up as quickly as it might with the changing demands of the leisure horse. It is still common for horses to be kept in traditional set-ups which were originally intended for hard working horses; spending many hours in stables, and when turned out, being kept in small, green fields. Unfortunately, the lack of changing management is partially to blame for the increase in preventable welfare issues which are a major concern for today's leisure equines; issues such as obesity, laminitis, unrecognised stress and delayed euthanasia are extremely common. In trying to do the best for our companion animals, we have unwittingly caused health issues to proliferate.

However, as our understanding of equine behavioural and physiological needs has moved on, some new approaches to management have been proposed which purport to better support our horses, avoiding some of the issues we might commonly see in traditional set-ups. The past decade has seen an increase in the popularity of alternative management systems which follow the “three Fs” of horse needs: Friends, Forage, Freedom. These set ups are not, of course, the *only* way to give horses a good life and meet those needs. However, their increasing popularity in balancing equine management with equine welfare, land management, the environment and the owner's needs, warrant attention.

The aim of this study, therefore, is to find out more about the use of these “alternative” systems. What are they? Who uses them, and why? When are they useful, and what are their limitations? We hope by sharing this information, we can help more horse owners to find creative ways of managing their horses, to promote good welfare for our four legged friends.

We would like to thank all the owners who took the time to take part in this study – we hope we have done justice to your experiences.



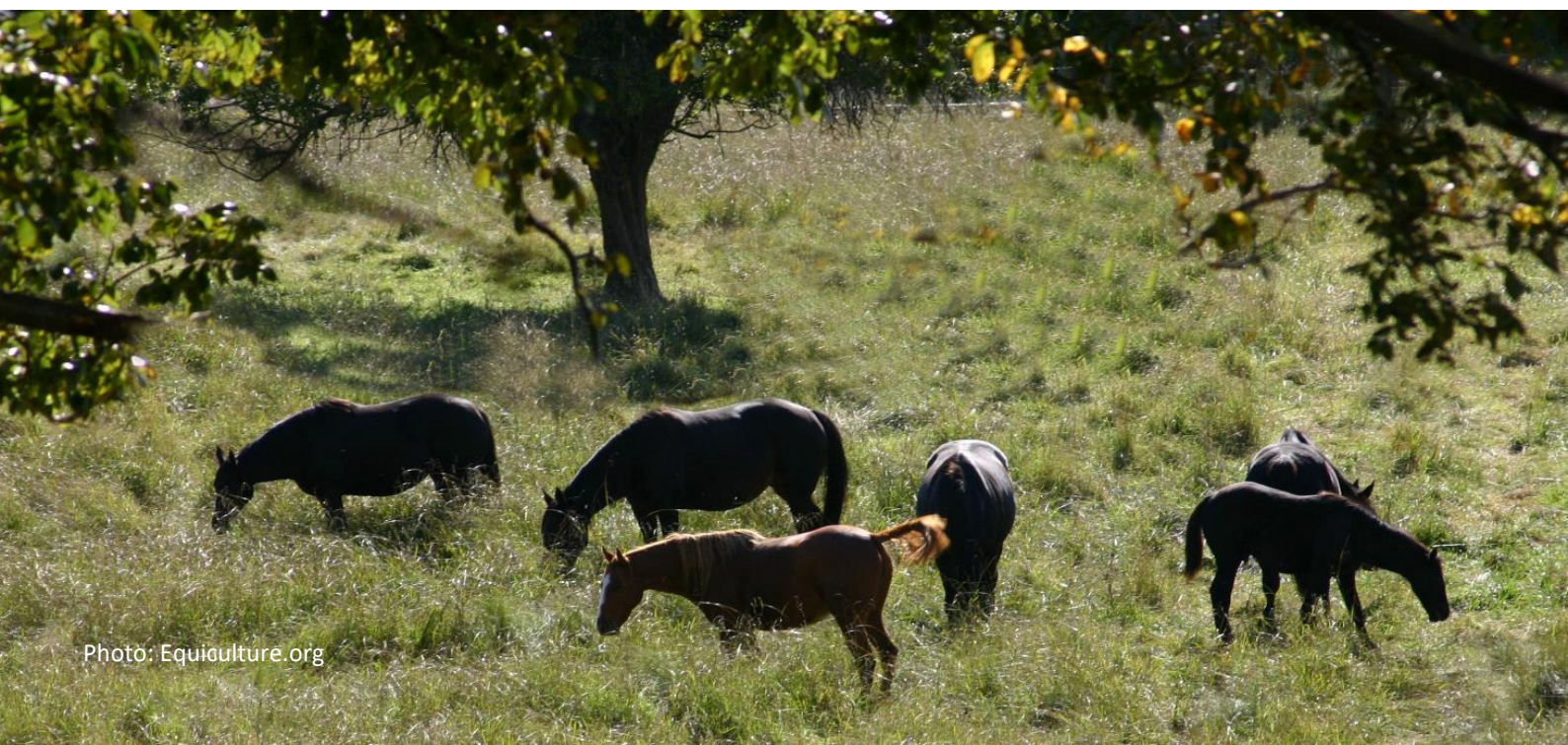
Methodology

How was this study carried out?

We wanted to hear from as many horse owners as possible who considered themselves to use an “alternative” set up for their horses. Therefore, we used a simple survey design, completed online. The survey was firstly about the mechanics of the system – how much land, how many horses, the design – and secondly about the management on the system – whether it was used all year, whether supplementary forage was used, and so on. The survey was open between July 10th and August 31st 2020, and shared on many social media and equine sites. We were delighted to receive 758 responses in that time.

The survey was then closed, and the results downloaded onto secure computers for analysis. We performed simple descriptive statistical analysis on anything involving numbers, and thematic analysis (an analysis method involving seeking out commonly mentioned themes) on anything involving words. We also engaged with qualified nutritionists, behaviourists, and other equine professionals for their views on some of the issues raised. The results were then combined to create this report, which has been edited by the working group before being distributed to the horse-owning community, starting with the participants who took part in it.

Important note: *the results in this study are owner-reported. In some situations, for example with body condition scoring and recognising laminitis, scientific studies have shown that owners are not always as adept as they could be (often underreporting body condition (Furtado, 2020) and not recognising laminitis (Pollard, 2017), for example). Therefore, these results should be interpreted with caution.*



Overall results

Who took part?

A total of 758 respondents from across the UK completed the survey. Predominantly those respondents used track systems (56%), followed by Equicentral systems (19%). Respondents had predominantly been involved with horses for over 20 years (76%), and were usually in charge of the land (for example, owned or rented their own patch of land).

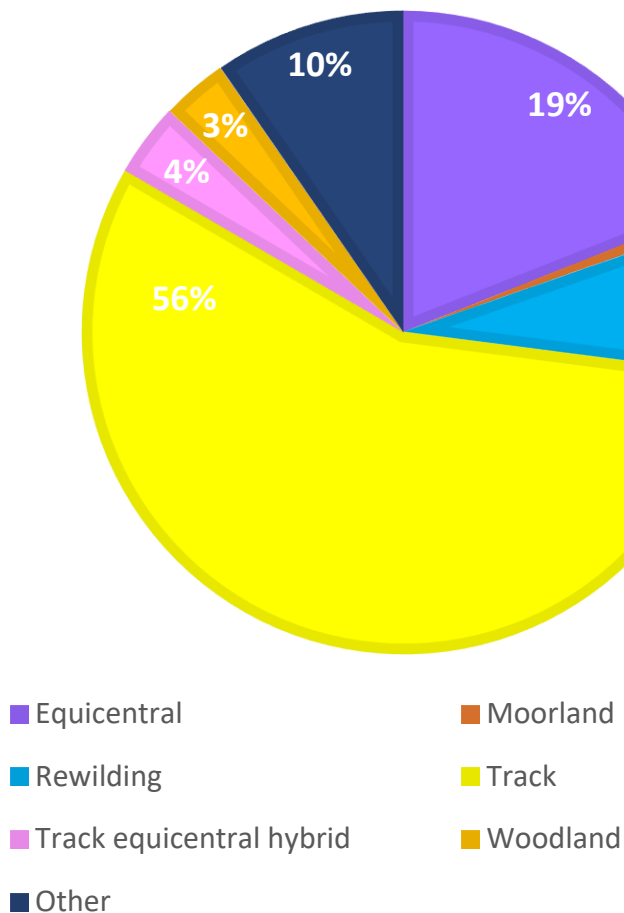


Figure 1. The distribution of each type of alternative grazing system used as a percentage of all responses.

Why do people go alternative?

Most commonly, respondents suggested they started using their alternative system because of a health condition (usually laminitis or EMS), as well as a general feeling of unease about standard horse keeping practices. Typically, respondents described feeling that their horses were both happier and healthier as a result of the new system, and owners also benefitted from enjoyment as a result of the new ways of caring for their horses; for example they spoke about enjoying watching the horse's natural and social behaviour.

The Three Fs: Forage, Friends and Freedom

Most systems were based on the concept of providing horses with three main resources which would form part of horse's lives in a "natural" setting: friends, forage, and freedom (see MacLeod 2000, Fraser 2012).

It was not uncommon for respondents to have to compromise on some of these factors (e.g. sometimes horses had to be kept alone for a specific reason, or freedom was inhibited by stabling in winter), but the principles of providing these features to the best of the owners' ability was seen as important.



Friends:

Whichever alternative set-up was used, it was seen as ideal for all horses to be kept in a group scenario so that they could experience herd dynamics and ideally form close bonds with some animals. Often the alternative system lent itself to treating the animals as one herd – for example, feeding them as a group rather than individually. Many owners discussed enjoying being able to watch horses interact and behave as a herd; for example resting and playing together.

Owners frequently mentioned the need to ensure cohesion between these groups; for example by carefully staging the introduction of new animals, and minimising disruption (horses coming and going, for example). Horses who were unable to be kept in a herd setting for some reason were usually kept within sight of other horses, and ideally allowed to sniff and groom one another over the fence.

Forage:

Across all types of system, owners placed great emphasis on the need to ensure a type of forage which would mimic that found in a natural setting, such as low calorie grasses and soaked hay. Additionally, this forage was often provided in such a way that horses had to work for it; for example, it might be placed in small-holed haynets, distributed across a wide area, hidden in hedgerows, or fed in feeders such as “hayballs” which had to be manipulated to access it. Owners also strove to give choice such as different types of forage, and access to browsing areas such as hedges, trees, and even man-made herb gardens.

Feeding low calorie forage in a way that encouraged foraging behaviour had the benefits of both providing the horses with an activity which would keep them busy for longer periods of the day, and allowing them more intake without more calories, hence limiting the chances of laminitis, gastric ulcers, and other concerns.

Freedom:

Central to every system was the concept of the horse having some sort of spacious, species-appropriate environment which would allow horses to choose where and how to spend their time (though each set-up managed this in very different ways). Many owners specifically shunned traditional horse keeping in traditional square paddock grazing areas and stables, which they said they considered to limit freedom and be inappropriate for a free-roaming herd animal.

It was clear that the ultimate aim for most owners would be to provide the horses with free choice throughout the year about whether to access shelter and other resources, for example by simply having free-access stable or barn areas. This was not possible in all set-ups (to be discussed more later), but most owners tried to offer as much freedom of choice as possible.

Monitoring and adapting

Behaviourists advocated careful, ongoing monitoring of horses on any one of these systems: while meeting the “friends, forage and freedom” needs is ideal, simply having any of these systems did not necessarily mean that the horse would have ideal health or welfare. For example, anecdotally some horses found some track systems stressful, while they might have been an ideal environment for others; similarly some horses are reported to relish living in a rewilding environment; others might struggle if they have been used to a very different lifestyle. Indeed, livery yards which offered these systems commercially described very careful ongoing monitoring of each individual in terms of both health and behaviour, with adjustments when necessary. Therefore, whichever system is used, it is important to try to be as objective as possible about the individual horse and land, and adapt when needed.



Managing health and wellbeing using alternative systems

Most owners had begun using the systems in response to health issues experienced by their horse, forcing them to rethink its management. Most usually, this related to the need to manage laminitis, equine metabolic syndrome, arthritis, and breathing issues, closely followed by behavioural issues and gastric ulcers.

The alternative systems were considered to help with these issues because their set up proposed to maximise movement and minimise calorie intake, while simultaneously allowing horses to live in a way that partly mimicked a natural lifestyle (outdoors, varied environment, herd living).

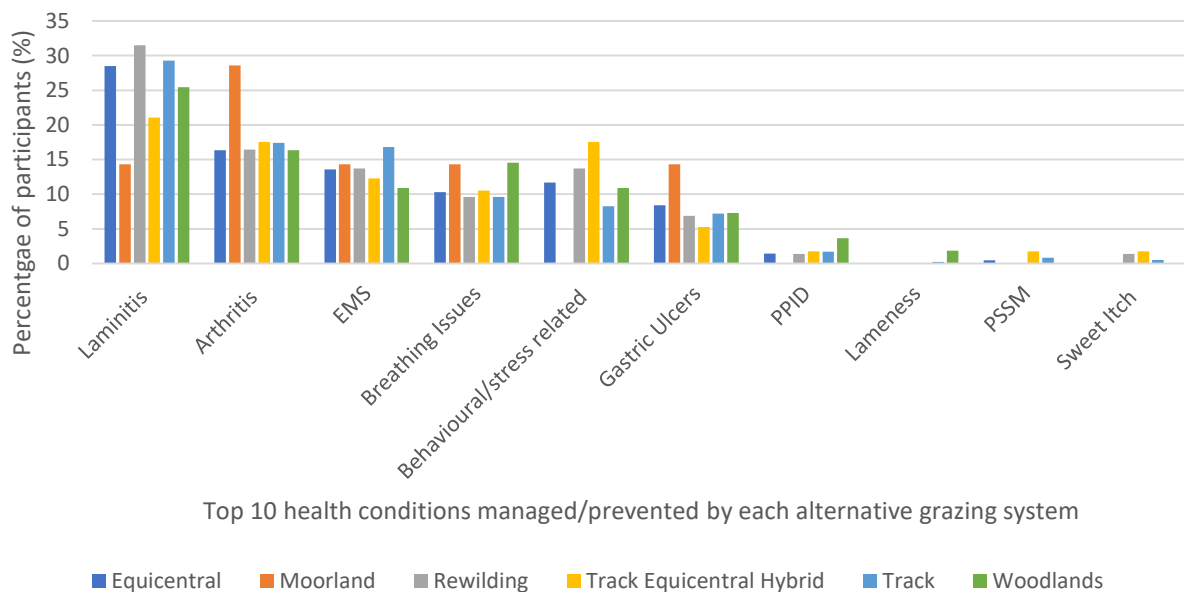
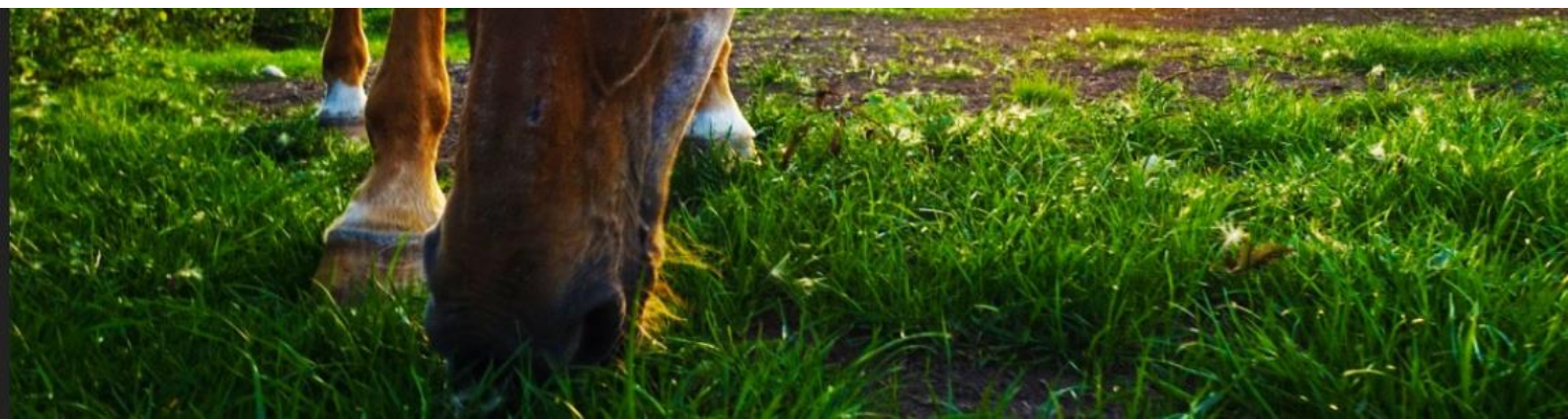


Figure 3. Top 10 health conditions that participants manage/prevent using the alternative grazing systems

Importantly for the management of many of these conditions, owners suggested that excess weight could be effectively managed on all systems. Again this related to the increased movement and decreased forage compared to traditional management, but also because owners embraced more “natural” management principles such as using fewer rugs (or no rugs at all), and allowing horses to lose weight in winter, ready for spring.



Managing weight

Overall, track systems, track-Equicentral hybrid, and woodland systems fared best in terms of owner-reported equine weight reduction. However, just the use of such a system was not a fail-safe for ensuring weight reduction; even within any one system, some horses might lose weight while others gained. Even totally grass free systems (usually totally grass free systems involved the use of tracks or woodlands) could still provide the means for horses to become overweight, and owners needed to be vigilant and use additional methods to reduce weight if necessary. For example, many users of grass tracks had to strip-graze those tracks each spring, so that horses did not have too much to eat.

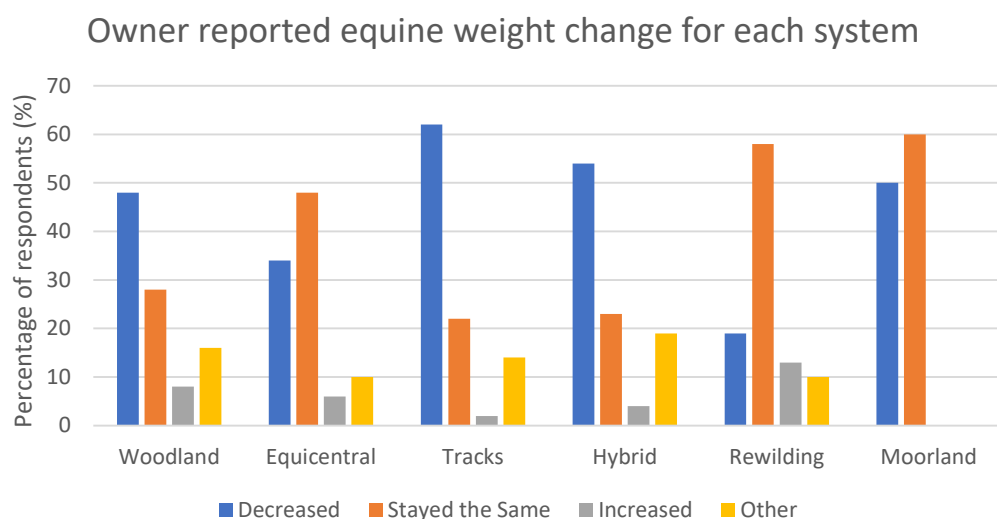


Figure 4: graph showing reported change in equine weight depending on the type of system used (typical comments in “other” category related to respondents saying some horses had lost and others gained, or that condition score had remained the same but the horse had more muscle than previously)

In order to manage weight on set-ups with access to grass (notably rewilding, grass tracks, Equicentral and moorland), horses ideally needed to learn to self-regulate their intake of grass. This created a division in respondents, some of whom believed this was possible for any horse if the conditions and lifestyle were correct, while others had not found it to work for their horse. Some scientific studies have shown that horses who have previously had little access to grazing did not self-regulate when on improved pastures (Hampson); that ponies can eat up to 5% of their daily requirements in a single day - more than double the maintenance requirement (Rendle et al, 2018); and that systems which allow “binge eating” could contribute to the risk of laminitis (Pollard et al, 2019).

This is a good example of the need to balance the individual and manage accordingly: for some, self-regulation on low calorie forage was possible, while for others this could potentially lead to dangerous weight gain. As with all things, the individual horse, owner, and land are going to be key in whether or not the system works for each horse, and constant monitoring should be carried out. However, the take home message is that it is important for owners to be extremely cautious if aiming to use ad-lib feeding with horses who are prone to weight gain.



Photo: Abbotts View Track Livery

Managing horses while supporting the environment using alternative systems

One very positive finding of this study was the extent to which participants discussed embedding support for wildlife, soil health, insects, and local flora into their horse-care practices. Of course, the most extreme example of this was the “rewilders”, who had usually given over large areas of acreage to the environment, and whose horses were usually seen as an integral part of an intricate ecosystem. However, within many systems some areas were given over to supporting the environment. Equicentral principles are based on improving soil health, with the idea that without healthy, unstressed soil, we cannot have healthy pasture, and without that we won’t have healthy horses. Track systems necessitated central ungrazed areas, which were often left as standing hay, then grazed through the winter (known as *foggage*). The standing hay proved, according to respondents, to be a haven for wildlife.

Across all systems, respondents valued a diversity of plant life, and thus often cultivated or planted hedgerows and trees. Some respondents specifically designated areas of their land as “wild” areas which could be left for all or most of the year.

As such, many respondents across all system types discussed their increased awareness and enjoyment of the wild plant, insect and animal life around them.

Co-grazers and alternative systems

A surprise finding was the extent to which co-grazers were mentioned by users of all systems. Sheep, cattle, alpacas, chickens, and pigs were mentioned across all system types.

For those who were simply keen to keep grass levels at their lowest, sheep, cattle and alpaca were often used as grazing companions, even if only for part of the year. This was also viewed as reducing parasite burden on the land. For those who wished their horses to be part of a balanced ecosystem, other animals such as pigs and chickens were also employed in order to help “plough” areas of soil.



Comparing Systems

The next sections of the report will focus on the differences between the systems, suggesting what respondents liked about each system, and what key aspects were needed in order to make each type of system work in practice, to optimise horse health.

Systems needed for:	Example options:
Managing larger numbers of horses on a smaller amount of land	Track systems were an economical use of land, with many respondents saying they were able to keep more horses on the land than they would otherwise be able.
Those who want to avoid mud	Equicentral principles see mud as not just an annoyance, but as a visual indicator of poorly kept soil. Combining surfaced areas with careful pasture use, Equicentral systems were said to have less mud than others.
Those whose horses need to avoid grass completely	Surfaced track systems and woodland systems provided the most suitable means for avoiding grass completely; some respondents also used an Equicentral but kept horses who needed to avoid grass, only within the central hard-standing areas.
Those who have a lot of land	Rewilding required a higher amount of land than other set-ups, but was also relatively low maintenance after the initial set-up.
Managing horses with very different needs	Equicentral users frequently mentioned how the set-up of their system meant that herds could very easily be split so that some were kept in the yard or on low-grass areas, while others were let onto rested paddocks. This made the system ideal for managing diverse herds. Tracks could also offer a similar option, with poorer doers allowed grazing time in the centre of the track.
Those who want their horses to live as “naturally” as possible	Rewilding offered the most “natural” lifestyle for horses, giving them the chance to live in a wide open area, within a diverse ecosystem; following this, moorland and woodland turnouts also offered a wide range of natural resources, with horses doing as they pleased.
Managing laminitis, metabolic syndrome or weight	Weight management seemed to depend entirely on the set-up of the individual system, and the study results must be taken cautiously because every horse, owner and set-up is different. However, track systems and woodland turnout were reportedly the systems with the highest level of horses who decreased in weight. For all systems, careful monitoring and management was required to ensure that the set up suited the individual.
Those who want to care for the environment as well as their horses	While rewilding set-ups could be said to be best for the environment, respondents found ways of supporting the environment within each system. Equicentral principles support good soil health, and a wealth of training materials about this topic. Track systems could allow areas for growing wild flora. Both systems rely on “sacrifice” areas which keep the horses off those protected areas for as much time as possible.



Track system

What is it?

Track systems involve the horses living on a long track, usually around the perimeter of a field or several fields. Ideally, this track has low levels of grass or no grass at all, and resources such as hay, water, shelter, and enrichment are distributed around the track area. This purportedly encourages horses to move more than they would in a standard square field environment. The central area is usually left to grow as standing hay. This crop is sometimes kept as “standing hay” for winter use, or sometimes made into hay.

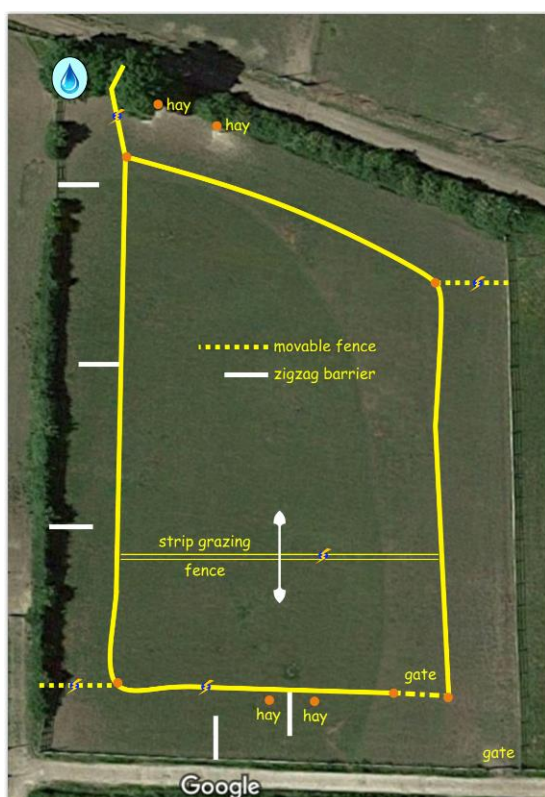
The idea of a track system is predominantly based on the book “Paddock Paradise” by Jaime Jackson, who advocates grass-free, surfaced tracks which will help to support hoof structure and health.

Some track users suggested that they created complicated shapes such as spirals and zig zags to encourage movement. However, this was a concern for behaviourist experts, who clarified that horses, as plain-dwelling animals, are notoriously poor at maze-like tasks, and easily get “lost” in very simple spatial awareness tasks (for example, horses who have a feed bucket placed on the other side of a fence, are unable to understand that they must go around to the gate to get to the bucket). Therefore behaviourists suggested that horses might find complex set-ups such as spirals to be stressful. Further, one study found that a spiral set-up actually decreased movement compared to a small field (Hampson, 2010).

Proponents of tracks recommend that some areas of the track are wider (e.g. corner areas, areas of shelter) to ensure that there is adequate space for horses to move away from one another. Because of the risks to horses from close confinement, it is important to ensure that tracks are not too narrow; however wider tracks obviously mean even more grass, which could be problematic for those using tracks to manage weight. On average, track users had their tracks at around 4m in width, but this varied even within one single system.

Many respondents removed the track in winter, replacing it in spring, due to concerns about mud in winter. Track users who did not do this were generally able to use surfaced tracks rather than grass or dirt.

Track system users generally preferred their horses to eat high fibre, low energy forage, and hence removed grass as much as possible (either by using surfaces such as gravel, by strip grazing, or through co-grazers such as sheep) and instead feeding low energy forage (e.g. soaked hay), which could be placed at different points on the track. 65% of track users fed supplementary forage all year round, with 17% feeding part of the year.



“The track runs round the outside of an L shaped field. There are wider corners and a 'layby' on one of the straight sections which form the feeding areas, and one larger rectangular loading area that incorporates a large feeder, the field shelter and the scratching post. The water is located in another corner. Both on the inside and outside of the track, there are browsable hedgerows planted for shade, wind shelter, food and wildlife value. There are logs of varying sizes and shapes in different parts of the track. The middle is an established area of chalk grassland habitat which supports a lot of wildlife and wildflowers.”

- Example of a track from one respondent (not the track pictured)

Left: diagram of a track system sent in by one respondent

Who uses it?



Tracks were considered an economical use of land, and used markedly fewer acres than other systems. They worked best when the person had control of the land: other respondents mentioned trying to make track systems work when at livery, for example, and that they found this frustrating because they had to curtail some of their plans. For example, livery owners did not understand why the track might appear “bald” (grass-free) or why there was a need for surfacing. However, livery clients did still use track systems within a livery set up, compromising where necessary.

What do people like about track systems?

Extra movement: Track system proponents suggested that horses moved more each day due to the design of the track. Many owners commented on their horse’s increased muscle tone, and how the extra movement while seeking out food also helped keep their horses occupied for more of the day, and hence more relaxed.

Herd living: Track systems also allowed horses to live in herd environments

Enrichment: Track systems provided ample scope for owners to provide environmental enrichment for their horses; numerous examples were provided, ranging from sand pits to herb gardens, paddling pools, logs, steps, hills, puzzle feeders, hedgerows, scratching posts, flavoured waters, and many more.

Flexibility: The systems were relatively flexible, with owners being able to open up areas for more grass when necessary, or shut some horses (e.g. those who required less grass, or those who did not get on well with one another) into certain areas.

Good use of space: Many respondents also mentioned the good use of space made by a track system, allowing them to manage relatively small areas for horses. The central grass could be saved for winter, was therefore never over-grazed. This area was also said to encourage biodiversity in terms of insects, wildlife and plant life.



What are the key things supporters say are needed to make a track system work in practice?

- **Good fencing:** Tracks rely on horses remaining within the tracked area, so good fencing was extremely important. Electric fencing provided the most cost effective and flexible fencing solution, but owners frequently mentioned horses (and sheep!) who were unafraid of the fencing and would regularly break it. Wooden fence posts provided a more solid frame for electric fence, but could not be easily moved. Where possible, owners mentioned trying to grow hedges and trees to support fencing.
- **A plan for winter:** because of heavy footfall on the tracks, they were prone to get very muddy unless surfaced. Therefore, few track users had tracks which could be used all year round: those who used the tracks all year had often either surfaced most of the track, or were able to frequently move the area that the track was on in order to limit mud. Most respondents simply removed the track in winter, replacing it in spring.
- **A plan for grass management:** Track proponents were very keen to reduce grass access, so it was important for track users to find ways to minimise grass on the system. Commonly, the new track was gradually strip-grazed, or co-grazers such as sheep, cows or alpaca were employed to reduce grass before horses moved onto it. Grass management was also important in terms of managing the central space; because of the reliance on hay for most of the summer, horses were often gradually moved onto the central grass area in order to limit the risk of laminitis or colic.
- **A sympathetic land owner/sharer:** Respondents on rented land often mentioned frustration with the person who owned the land (e.g. livery yard manager), or people with whom they shared their field. Track systems inevitably mean some areas will be worn to dirt; this is very unusual management for many, who are used to equating green grass with good management. Further, the more effective tracks involved multiple surfaces, which again required the consent and approval of land owners.
- **Weight and health monitoring:** tracks were commonly used in order to manage excess weight, but owners mentioned the importance of balancing adequate forage (e.g. hay), with enough grass that the horses were motivated to move around and forage for it, and the need to keep the horse's weight down. Constant monitoring of weight and adjusting the system appropriately was important.

What health conditions is it used for?

Laminitis
(29.5%)

Arthritis
(17.4%)

Equine
Metabolic
Syndrome
(EMS) 16.8%

Tracks were purported to help in managing these conditions because of the provision of a low calorie environment which also encouraged maximum movement. Tracks were the system on which respondents said their horses were most likely to lose weight; 62% reported that their horses lost weight on tracks (though this very much depends on the set-up of the track).



What are the main concerns/limitations of the system?

Workload: Some owners suggested that tracks required a relatively high workload in terms of needing to poo-pick a wide area on a daily basis, refill hay feeders, etc.

Careful nutrition: depending on the track set-up, some horses were limited to predominantly eating soaked hay (though others had incredibly varied diets, including herb gardens!). As with all types of equine dieting, careful attention to nutrition was necessary to ensure that the horses' nutritional needs were met.

The need to be in control of the land: Setting up a track system was difficult for those who rented land, because land owners purportedly found it hard to understand the reason for the bare ground caused by the track.

Horses for courses: as with all set-ups, there were instances where respondents mentioned difficulties for some horses, so the use of this system required careful monitoring. For example, some horses struggled with the concept of needing to go "around" to get to a resource; horses are plain-dwelling animals who naturally live in open spaces, and are notoriously poor at understanding the need to travel around something to reach a destination. While most were said to cope well with and even enjoy being on the track, some individuals were said to find track life stressful.

For other horses, owners reported that the track did not seem to encourage movement for that individual; rather the horse could simply wait at the hay feeder (especially if hay was fed ad-lib).

Finally, herd dynamics needed careful consideration and new horses needed very careful introduction, because of the lack of space (relative to an open field). Some horses, perhaps those who had had poor early socialisation, found it difficult to adapt, and particular issues were mentioned with resource guarding, e.g. at feeding areas or gates.

Cost: the costs of fencing, feeding hay, and surfacing meant that the investment in tracks could be high, although it was easy to set up a simple track to begin with.

Environment/soil management: Although opinions were split on this one, there was some concern from respondents who felt that tracks were problematic for the land: the area that the track is on is essentially sacrificed, with heavy footfall and close grazing. This could lead to poor soil quality and increase in weeds. However, the central area tended to be little grazed and therefore encourage biodiversity and soil health, so this seemed to be down to individual opinion and dependent on the way the track was set up.

"Happy, healthy horses. They are out and have what they need so no pressure to get up early to let them out or hang a new haynet. Enough hay can be put out to last several days at a time and then replenished when running low. This system enables me to manage my small acreage to provide the healthiest and most enriching environment for my horses but also to manage the land in a way that is beneficial to wildlife- no overgrazed, poached land rife with weeds. Instead we have grassland that is immensely beneficial to wildlife, and ponies that are healthy."

– example of track system benefits from one respondent



Equicentral Systems (part of Equiculture)

What is it?

Equicentral is an idea pioneered by Stuart and Jayne Myers (read more at www.equiculture.net), which aims to balance the need to look after the land and support soil health, in order to better cater for the behavioural and health needs of the horses. It is similar to modern farming methods of “mob grazing” which let animals on pasture for short amounts of time, allowing the pasture and soil ample time for regrowth.

The system works by dividing the land into interlinked paddocks, which are rested frequently to ensure optimum grass and soil health. The heart of the Equicentral is a “loafing area”; an enclosed area which is usually surfaced, where the horses can rest, shelter, interact and eat hay. Some Equicentral supporters open up existing stable yards for this purpose, while others create surfaced areas around a field shelter. The surfaced area then acts as a “holding area”, where horses can be kept off the grass for a period of time each day (or as the owner wishes). Gates are then opened at time periods (for example, for a few hours each day) to allow the horses to graze in well-rested paddocks.

Proponents of this system place great importance on maintaining the soil and grass health, by resting the fields appropriately; they suggest that horses should not be turned out on grass less than 5cm in height. Therefore, paddocks are usually split into several (some users reported having up to 20 different areas). Sometimes these were arranged as “pizza slices” from the yard, while others had tracks which allowed horses to access different areas, or simply used electric fencing to move the area which the horses could access.

“Whilst my horses have access to the [yard area and] track 24/7 in spring and summer, I then give them further daily access to an area about the size of a tennis court that I call their grazing cell. The cell moves every day so the horses are grazing long stalky and well rested grass - I remove them from the cell before they overgraze it and that way it is able to recover between grazing bouts. It took me 8 weeks to move the cell around all the rested grass I have available and this week I have just started to graze them back onto areas that have been grazed before. So I'm using my horses to 'mow' my paddock for me. I kick them off the grazing cells overnight and put soaked hay out for them on the yard and the track.

Although there is a risk that the horses could overfill themselves whilst on the grazing cell, that is not what I've observed. They loaf, sleep and rest in the grazing cell when it is open and certainly my pony that is inclined to put too much weight on is doing better with this system than he did last year, when they had the whole field to graze all the time, which meant that everything they were eating was short/overgrazed.”

Example of Equicentral system use



Who uses it?

Most common number of acres:
2-3
(30.3% of respondents)

Most common number of equids:
3-5
(51% of respondents)

77% were in control of their own land (e.g. owned/rented)

Equicentral was another economical use of land; again, users found it difficult to apply this set-up when at livery, so predominantly Equicentral users owned or rented their own land.

What do people like about Equicentral?

- **Looking after the land and environment:** Equicentral places great importance on land stewardship, and encouraging biodiversity and soil health. Grass is never over-grazed or allowed to become “horse sick”. Proponents say that they see more wild plants and wildlife around their land as a result.
- **Herd living, but with flexibility:** proponents suggest that it is very easy to be flexible with different types of horses, while still maintaining herd life. For example, if one horse is getting too fat, it can easily be kept in the loafing area while the others have access to the grass.
- **Lack of mud:** if maintained in the way Equicentral suggests, the poaching of land is limited because horses do not spend time hanging around in gateways; they go out into the fields, eat, then come back to the non-grass loafing area.

What health conditions is it used for?

Laminitis
(28.5%)

Arthritis
(16.3%)

Equine Metabolic Syndrome
(EMS) 13.5%

Behaviour/
Stress
11%

Most commonly respondents reported that horses maintained their weight on an Equicentral system (48%); however, one of the comments frequently made by respondents was the flexibility of the system – horses who needed to lose weight could be kept in the yard area when needed.



What are the key things needed to make an Equicentral work?

- **A good loafing area:** Equicentral enthusiasts suggest that the surfaced loafing area is the heart of the system, and therefore it is important to ensure that this area is comfortable and well-designed, so that horses are happy to spend their resting time here, eating hay/haylage.
- **Creativity:** although the traditional idea of an Equicentral is to have a loafing area with paddocks leading from it like “pizza slices”, the data showed that owners were extremely creative in their management: for example, some combined existing stable yards with Equicentral, by simply opening up their stables to create a loafing area, and then having surfaced tracks with a series of gates through to paddocks which could be open and closed according to grass health, meaning their horses could take themselves to grazing areas when they were opened. Many owners also talked about their creativity in terms of creating optimum environments for the horses, e.g. planting hedges for browsing, sand pits for rolling, and making use of woodland areas or orchards for shelter, browsing and added interest.
- **Flexibility:** Many respondents discussed the need to be vigilant, and monitor their horses and the land, changing things as required. Some respondents described how they mixed Equicentral principles with other management strategies when necessary, either for horse health or to manage the land. For example, some stabled their horses at night in the winter. Some had a system of grass-free tracks between fields, which not only allowed horses extra movement to get between fields, but also allowed the owner to keep overweight horses to the tracks. Others strip-grazed access to new paddocks, because of concern over gorging behaviour. It was also important to adjust for winter; the hard-standing loafing area meant that horses could be comfortably provided for, but some owners suggested they still allowed grass turnout, while others turned out on “sacrifice areas” in order to further protect their land.
- **Good planning:** Equicentral proponents emphasized the importance of careful planning when putting in the system, to ensure that they made the most of the land they have, as well as the behaviour of their horses. For example, they suggested watching to see where horses like to rest and where they made footfall tracks across the fields, as well as seeing where natural features (rocks, trees etc) might be utilised in the design of the Equicentral system.
- **Mud-planning:** for Equicentral users, mud is not only seen as problematic for horse health, but also a visible measure of how much damage has been done to the land by hooves. Therefore, it is important to carefully plan and use tools such as shingle, mud mats etc to reduce mud in some spaces, therefore leaving as much land as possible to be “clean”. In order to limit footfall at gates, many users suggested putting multiple gates at different places so that the same areas are not over-used.
- **Co-grazing:** in order to maintain good land and plant health, many Equicentral enthusiasts utilised sheep, cows, poultry or goats to assist in grass maintenance and health.



What are the main concerns/limitations of the system?

- **Workload:** Some owners suggested that Equicentral required a relatively high level of intervention on their part; for example to be available at least twice daily (sometimes more) to open/close paddocks, muck out the loafing area, and restock hay and enrichment.
- **The need to be in control of the land:** Setting up a full Equicentral system could be difficult for those who do not have control of the land (e.g. not necessarily suitable for livery clients), and several respondents suggested that they had difficulties because they shared their land with someone who had different ideas about equine management.
- **Weight management:** respondents were split on this topic. One concern from those new to Equicentral, is that horses might binge-eat when allowed on the grass; particularly because Equicentral enthusiasts prefer grass to be over 5cm. Indeed, binge-eating behaviours was shown in some research to contribute to laminitis (Pollard et al, 2018). Therefore, some respondents felt that the system was difficult to use with overweight horses. However, others found that their horses were calmer and less stressed generally on this system because of its careful set-up, and because they ate plenty of hay in the loafing area, did not seem to binge eat when they were turned out. Also, the use of the loafing area meant that it was very easy for some respondents to keep horses on non-grass turnout, if needed. All respondents mentioned the need to carefully monitor the health of individual horses to ensure flexibility in their care.
- **Cost:** the emphasis on non-grass areas inevitably meant that many respondents needed to invest in mud control mats, shingle, pea gravel, limestone, or other means of hand-standing, unless they were lucky enough to have an existing yard to use. This, and the cost of extra fencing and hay were quoted by many as limitations of the system, although most commented that these costs were outweighed by its benefits.

“Our horses use the 'holding area' all year round and they are contained in here (it is roughly the area of 3 40x20 arenas in a T shape), and this is where the water is and hay is fed. In the summer they access the farthest field via a choice of 2 tracks which go round another (autumn) field. The grass is strip grazed as they are good doers but the walk to and from the grazing to the shelter/water area is beneficial (plus it is slightly uphill). After summer they will have access to 3 other fields in rotation. Again if weight is an issue these fields will be strip grazed, though larger sections will be opened up this time to avoid poaching. If the weather is really bad, as last winter, I also have 2 stables which can be used to save the ground and their feet, so 2 will come in overnight.”

– example of an Equicentral system, though some strip grazing has been incorporated



Track and Equicentral Hybrid

What is it?

Some owners chose to combine the concepts of Equicentral and tracks, creating a hybrid. This system made use of three interlinked elements: the tracks, a loafing area, and grazing managed with Equicentral principles (see Equicentral section). Tracks are usually surfaced for hybrid users, because Equicentral principles avoid short, stressed grass. This set up could then be managed in different ways: the surfaced tracks could form a part of the loafing area, with horses spending time off grass here, and let into grazing intermittently, as per Equicentral principles. This had the benefit of meaning that some horses (for example those who were overweight) could be kept to the track/loafing area while others were let into the grazing.

Some horse keepers used only a track system in summer, and then reverted to Equicentral principles in winter when their horses could be allowed more access to grass. The centre of the track formed the rested area which could be grazed and rested section by section.

Hybrid users reported a high proportion of horses who lost weight while being on the system (54%), making it a useful choice for managing herds with different needs, or managing laminitis and EMS.

“Horses are grouped and managed according to both metabolic /health need and emotional ties. All horses spend the majority of time on the track system and then those that can cope with grass are allowed access to grazing. All horses get time out in an open field to run and play when it is safe to do so. Grazing paddocks are rotated depending on grass length, then harrowed, topped and rested for at least six weeks (Summer, monthly winter). The land is split summer and winter and each section is rested for six months.”

Example of a respondent using a combination of track and Equicentral



Rewilding/Wilding systems

What is it?

“Rewilding” is part of a philosophy which considers that human management of land often takes away more than it gives back to the environment, but that nature has its own holistic ecosystems whereby soil, plant life, insect life, and wildlife can flourish without human intervention. Because horses survive very well in “wild” conditions (feral, in the UK), rewilders suggest that horses can be kept as part of this holistic system. The quintessential example of rewilding is described in the popular book “Wilding”, about the Knepp Estate in Sussex; this estate supports herds of Exmoor ponies as part of its project (see references).

Essentially, rewilding involves letting the land recover from human intervention, and supporting the growth of local flora and fauna. Over time, the diversity of wildlife and plants will increase dramatically. Traditionally, horse keeping involves intensive grazing of monocultures, which is detrimental to soil health and local ecosystems. Rewilding projects therefore reverse this trend by allowing the land to return to a more “natural” state with greater diversity.

Participants in this study showed two schools of thought around how to combine rewilding with horse care. Full rewilders generally had a large amount of acreage per horse and discussed creating entire ecosystems which went far further than just providing a place for horses to live; instead the horses were an integral part of a wider ecosystem involving the land, wildlife, insect life and plants. Partial rewilders often had less space per horse (though still more space than for other systems). Because intensive horse footfall damages the land, people therefore incorporated *aspects* of rewilding into their horse care. For example, they kept the horses off land all summer and allowed the land to rewild itself in the meantime, or alternatively they had sections of their land which were dedicated to rewilding, and the horses were allowed only infrequent access to these areas so as not to damage them.

For all respondents, the aim of rewilding was to balance care of the land with the care of their horses. Generally, horses were allowed access to large, open spaces (sometimes 15-20 acres or more) with diverse plants, rough grazing, and relatively little intervention compared to other systems. If needed, some respondents also utilised hard standing or partial stabling to minimise impact on the land.

To support the land, rewilders often also utilised co-grazers such as pigs and cows, who could help “plough” the land, and whose droppings could help fertilise. Some respondents did not poo pick their horses’ droppings, but this was dependent on the amount of space. Aside from removing poisonous plants, most rewilders allowed the land to care for itself – however, some preferred to remove the more pervasive, acidic-loving plants such as dock leaves and buttercups.



Who uses it?

Most common number of acres:

7-10

(25% of respondents)

Most common number of equids:

3-5

(48% of respondents)

75% were in control of their own land (e.g. owned/rented)

The amount of land required for rewilding was markedly higher than for other set-ups.

“28 acres previously divided with wire fencing into 8 lots, along established tree and hedge lines. Took all fences down, so everything is fully open, no barb or any wire left. Added 3 highland cattle, 3 Mangalitsa pigs to the 6 horses. Water trough system plus open water, a stream running through one corner and ditches with water collection areas, one lake and a pond in various places. Access to barn and hard used places strengthened with hardcore material and pea gravel surface. We try NOT TO MANAGE in a traditional sense. There is no stabling, no internal fences. We let them do what horses do and since they came here they have all developed very good condition. This is a longer term project with different grazers to slowly change the land from being overgrazed for years to a natural habitat and have enough land to also allow wildlife to thrive” – Example of Rewilding system

What health conditions is it used for?

Laminitis
(31.5%)

Arthritis
(16.4%)

Equine Metabolic Syndrome
(EMS) 13.7%

Behaviour/
Stress
13.7%

The “full” rewilding systems promoted very natural living conditions where equines would have to forage over large distances to seek their food, and of course use of rugs and shelters was more unusual – hence equines would lose weight in winter and regain in summer, as in the wild. However, close attention needed to be paid to ensure that too much weight was not gained in summer.



What do people like about rewilding?

- **Enjoyment of the environment:** Rewilding horse care offered the chance for owners to engage with the entire ecosystem of environmental wellbeing, and many owners mentioned their enjoyment of watching unusual flora and fauna thrive in the environments they had allowed to grow.
- **A natural life for horses:** While all the systems in this project suggested that they have some elements of being “natural”, the rewilders surely win the prize for creating an environment as close as possible to feral/wild life for a horse. Horses were often completely unrestricted, and could choose whether or not to seek resources such as shelter, additional hay and so forth.
- **Horse health:** Users of these systems often had native ponies (e.g. those mentioned included Shetlands, Exmoor, New Forest and Icelandic ponies), who were considered prone to laminitis and weight gain. However, most rewilding users suggested that their ponies were thriving on the diverse forage provided by this system, and losing weight in winter as they would if they were living in the wild. Of course, this would depend very much on the individual ponies and the land itself, so monitoring health was also important.
- **A comparatively low workload:** because rewilding systems rely on *lack* of human intervention, in an ideal world the land and horses could co-exist without too much effort for the owner – for example, some owners did not have to poo-pick, manage fencing to any great extent, harrow or roll land etc. This only worked with larger systems; when less acreage was available, owners still had to conduct some pasture management such as poo picking, confining horses to hard standing and feeding hay, etc.

What are the main concerns/limitations of the system?

- **The need for ample land:** rewilding will only work in areas where the land is not overburdened by horses; many yards could simply not manage this system based on the horse:land ratio.
- **Weight management:** because of being relatively unrestricted, horses could put on excess weight on this system. Several respondents suggested that their native breeds self-regulated, but this is very dependent on the individuals and environment. Other horse owners needed to keep their horses off the wild areas during spring and summer, in order to manage their weight.
- **Monitoring for dangerous plants or areas:** it is important to avoid the proliferation of dangerous, poisonous or invasive plants and watch out for potentially hazardous areas.
- **Mud:** depending on the land and management, mud could be an issue; many relied on areas of hard standing to help manage this.



What are the key things supporters say are needed to make rewilding work?

- **A relatively high land:horse ratio:** Rewilding system users generally had higher land:horse ratios than other set-ups (i.e. fewer horses). This was important because horses can be very damaging to land, if kept in the relative confinement that we are all used to seeing. The lower the horses to the amount of land, the more complete the rewilding ecosystem could become, and the lower the workload for the owner.
- **Learning:** this is very different to the way most of us have learnt about land management, and from the responses it was clear that there is no one way of rewilding that will suit all situations. So, learning about what makes a healthy environment, how to identify flora and fauna, and about how different rewilding projects have been managed is key. Also, new rewilders will need to work out how to take the theory and apply it to their own space and land: for example, some rewilding users needed to remove the horses for a period of time each year, and some needed to remove unwanted plants. For others, that is entirely unnecessary because of the land, horses and their understanding of rewilding.
- **Need to monitor land and horses:** this could be said for any system, but for rewilding systems it is important to monitor the land and horse health, in case intervention is needed. For example, monitoring for dangerous plants, or tracking the development of invasive plants (such as docks) is important; similarly monitoring horse health to ensure that the system is working for them and they are not losing or gaining too much weight.
- **Co-grazing:** in order to maintain good land and plant health, many rewilding enthusiasts utilised sheep, cows, poultry or goats to assist in grass maintenance and health.
- **Investment:** for this system to work well, good outer fencing is important, as well as potentially electric fencing over a long distance. Some respondents felt that their rewilded areas would not have functioned successfully without hard standing.

“Half the paddocks are summer grazing and half winter. This allows nature to have free rein in about 4 acres in the Spring and Summer to encourage wild flowers, insects and birds. The other paddocks are then rested through the Winter. Paddocks are opened up and closed depending on how much grass the ponies need. In the Autumn and early winter they are happy to graze the long grass in the rested paddocks and hay is only needed usually January to March depending on how much rain we have and how muddy the ground becomes (we are on clay).

I do not poo pick. The ponies have established poo patches which are managed by the wildlife. The pheasants harrow it. Beetles thrive there. The ponies eat off the rich grass when first turned out after resting the paddock and then resume using it for poo. I feel I am in a unique position to be able to look after the insects, birds and small mammals who are driven out of the surrounding intensively farmed land. My grazing, would be described as poor, as it is not uniform lush grass and I let the nettles and thistles grow. I remove poisonous plants but the rest provide a good diet, not too rich in sugar, for ponies, one of whom has Cushings”

– an example of rewilding with separate summer/winter areas



Woodland and moorland turnout

What is it?

Woodland or moorland turnout involves using natural areas of rougher grazing such as in woods or on moors, to provide areas of low-grass but highly enriched areas for horses. These areas are non-traditional areas for horses, but proponents suggest that they provide shade, shelter, browsing opportunities on different plants, different surfaces. This was thought to lead to a more “natural” lifestyle, keeping horses occupied with the need to forage across different areas, usually in a herd.

Use of these areas varied dramatically. Some owners had their horses turned out 24/7 on large wood or moorland, while others combined areas of woods and moors as a part of another system; for example, they might have a track system opening on to an area of woodland. Owners whose horses were turned out entirely within woodlands in particular often provided supplementary hay (56% fed hay all year round), as most dense woodlands have relatively little forage. Comparatively, moorlands generally provided adequate forage, and horses sometimes had to be removed from these areas at times when grasses would be fast-growing (e.g. in spring); moorland turnout users were the least likely system to use hay year-round.

Example moorland system:

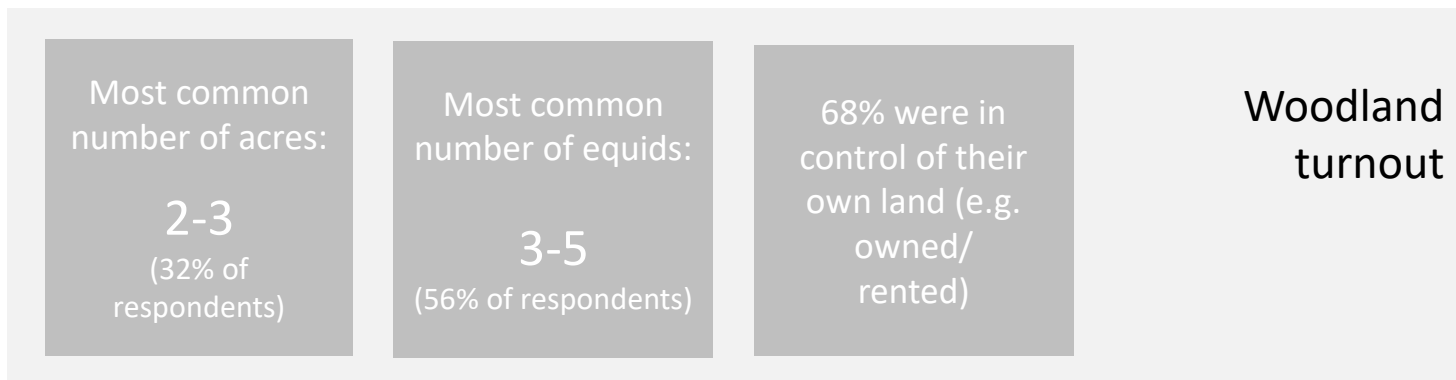
“Access to 11 Acres of Moorland Grazing with gravel track leading down to hard standing area and stables with door left open and access to hay 24/7. In spring/summer we limit them to a four acre field with continued open access to hard standing, stables and hay 24/7. In winter we open up so they have full access to the 11 acres of moorland grazing.”

Example woodland system

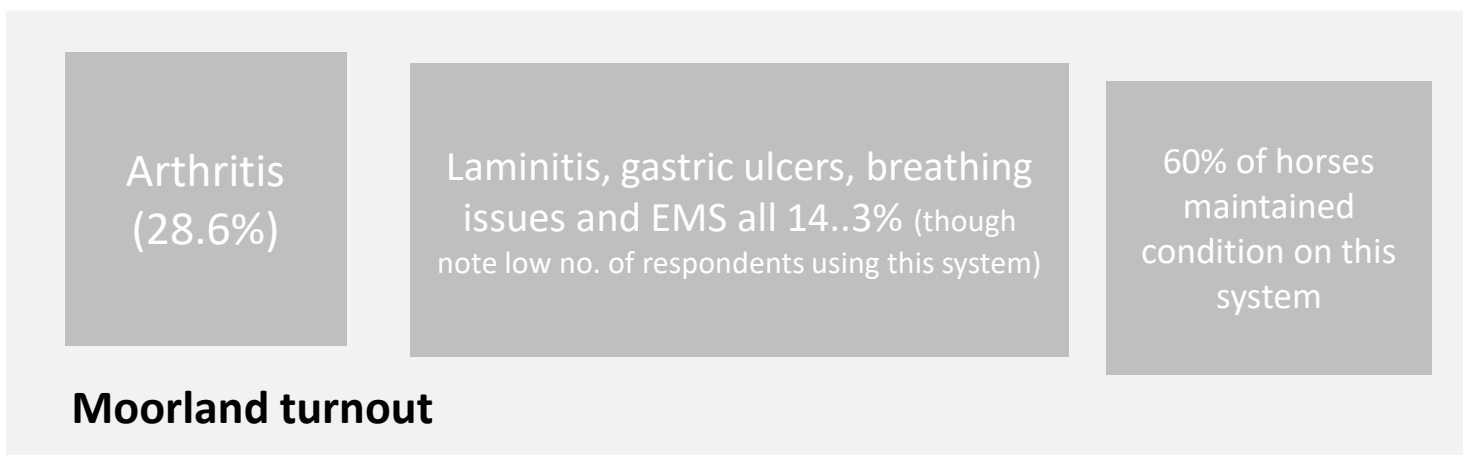
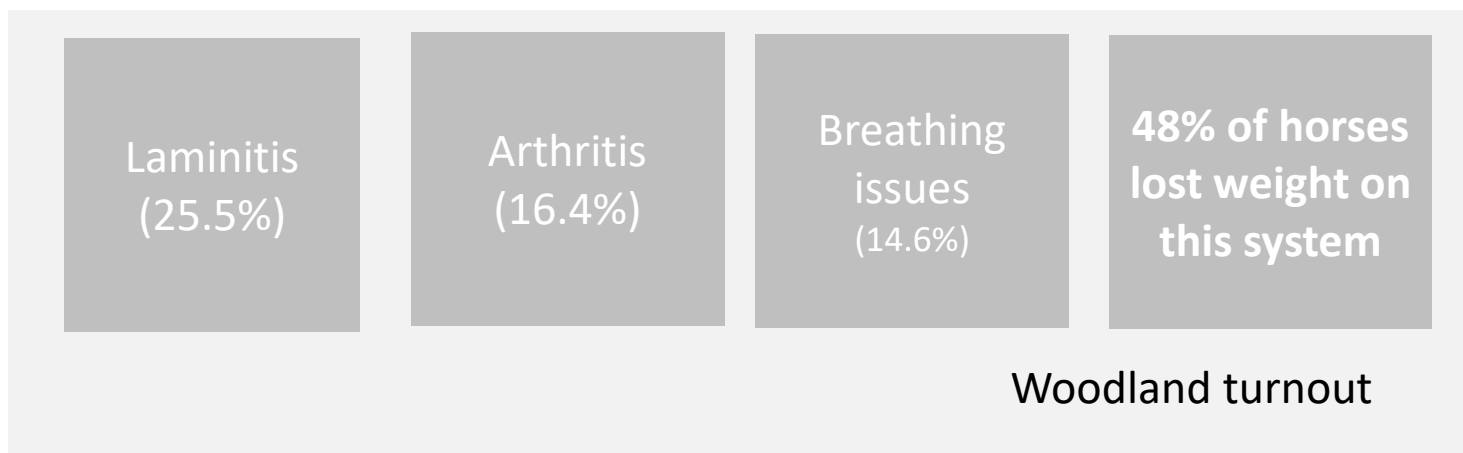
“The woodland has been semi cleared so that there are trees for shelter and for hanging nets from. The field has rushes and also a hilly bit that's always very dry. It is split in half. In shape its a trapezium with the gateway being at the shortest side. I muck out the woodland every other day and ensure that I'm collecting broken branches and large stones which have been thrown up. If an area is too wet then I section that off. I pick out any poisonous plants, seedlings as they appear. The landowner sprays areas that are sectioned off for buttercups and cuts back rushes. I rake up hay/haylage that has been trampled in. Areas that can be harrowed with the quad bike gets done once or twice a year. Drainage paths are cleared as needed.”



Who uses it?



What conditions is it used for?



What do people like about this turnout?

- **General physical and emotional health:** supporters of these systems suggested that these areas provided interesting areas where their horses could spend time as a herd, and that the lack of dense forage meant that horses had to seek out food, thus encouraging movement. As a result, physical and emotional wellbeing were the most frequently mentioned positives of using these systems.
- **Diversity:** woods and moors yielded a diverse range of plants, surfaces, terrain, and different areas for horses to explore; as a result, owners valued the opportunities and choice that their horses experienced.
- **Low-grass environment:** many owners mentioned the use of woodland areas in particular for horses whose grass access needed to be limited, whether for weight or other health issues. Because of the lack of grass, horses browsed the gorse, thistles, hawthorn, shrubs and trees. This not only limited overall food intake, but owners suggested they thought movement had also increased.
- **Low maintenance:** obviously this depends on the set-up and land, but several owners mentioned the low maintenance requirements of woods and moors compared to grassland. However, these areas did still need poo-picking, and care had to be taken to remove potentially dangerous items (e.g. fallen branches), and seek out/remove any harmful plants.

What are the main concerns and limitations of the system?

- **Mud:** respondents frequently mentioned the issue of mud on woodland areas; depending on the amount of land available to the horses, they sometimes had to restrict access to summer-only, or used stables to limit turnout time. Other owners made use of surfaced areas to provide horses with mud-free options during winter.
- **Safety:** several owners mentioned concerns about safety, for example the need to monitor woodlands for harmful plants, or the potential hazards provided by trees (e.g. when introducing a new horse).
- **Careful monitoring of equine health:** monitoring was important, to ensure that horses remained at optimum weight (especially, did not become overweight on moorland systems) and that horses on low-forage turnout such as woodland systems had adequate nutrition.



What are the key things supporters say are needed to make this turnout work?

- **Mud control:** woodland and moorland users frequently mentioned needing to adjust their turnout times to avoid and limit mud. Moorlands were generally wet areas already, and woodlands did not cope well with excessive footfall from horses. While many simply used stables, others limited access to these turnout areas completely in winter, rotated the parts horses could access, or fenced off areas which were becoming poached. Surfaced tracks or surfaced areas were also popular.
- **Supplementary feeding:** the lack of grass on woodlands meant that feeding supplementary forage (e.g. hay) and some level of hard feed was often necessary for woodland turnout users, particularly in winter, but for some this was required throughout the year. Many owners used the trees to hang haynets for their horses.
- **Good planning:** Woodland and moorland system users suggested that good planning of how to use the land was essential; they advocated watching how horses made use of different resources, where the horses chose to make tracks through, and to consider which areas would be prone to poaching. Some owners suggested they had visited other systems before creating theirs, and were constantly adjusting and altering the way that they used their own land.
- **Vigilance:** while it is easy to scan a field for potential hazards, woodland areas in particular required a little more care; some owners described frequently needing to collect broken branches, and remove any harmful plants which had arisen.



Other types of system

73 respondents described other types of systems that they used for their horses, usually with the same aims as the alternative systems; providing as much movement as possible with low calorie forage, and access to friends and space. These other types of systems ranged from entirely grass-free areas (wood chip areas, sand pits, or arena turnout for example), to combining the other options such as combining rewilding areas with track and Equicentral grazing all in one system.

While it would be impossible for us to summarise the diverse systems described, the interesting factor here was the breadth of options that owners required to make their land work in an optimum way for their horses. For example, some respondents resorted to using a muzzle or strip grazing when necessary in addition to the grazing management system, while others made use of the “loafing area” idea as a holding place for their horses to keep them off the grass when needed.

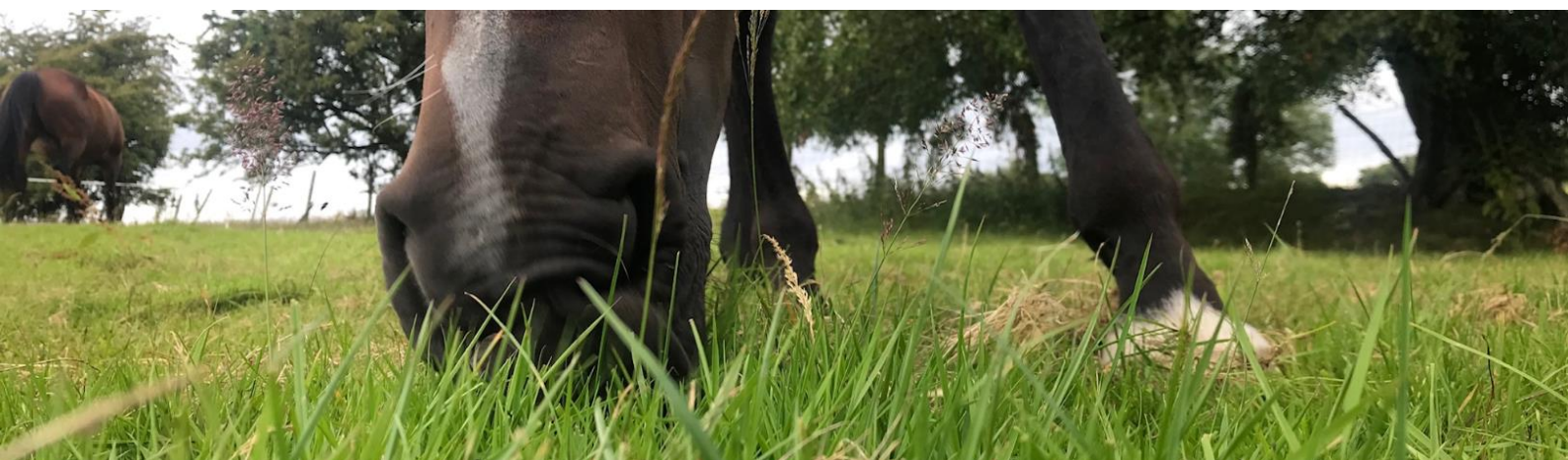
This creativity highlighted the need for all owners to carefully monitor the wellbeing of their horses on the land, and react accordingly – particularly in relation to managing health and wellbeing.

“Some of all the above systems. I have temporary tracks, a non grass loafing area, some areas are allowed to grow wild, it’s on the edge of Dartmoor and some is wooded. Change tracks around in different years so each of the three interconnected pastures has a rest for at least 6 months. The horses gradually graze the ‘standing hay’ through autumn and into early winter. There are fold back gates in the barn that can swing out if necessary to make separate enclosure for an individual horse. One horse has a grass free track through the woods in spring and summer. The tracks are all removed in early winter as the land is very wet in places”

- Example of a mixed system

“[I have a] dry lot due to grass affected horse (headshaking). Important are ad lib hay, space to run around if they want/somewhere to roll. Hardest thing is controlling the mud. Without spending a lot of money, it’s a constant battle. If I didn’t have a horse that can’t have any grass at all, I would have a track going around the field with some grass on it and let them have time daily on longer grass in the middle / rotate small paddocks.”

– example of alternative system without access to grass



Take-away points

“It's a balance of equine needs and land needs, neither can take priority without ultimately affecting the other”

- respondent, on the use of balancing horse care and land management

Although all the systems of course varied dramatically, the overwhelming message was that owners were seeking alternative ways of managing their horse, donkey or mule in a way that was appropriate for the needs of a herd-dwelling grazing animal who would ideally roam large areas. In this way, owners prioritised the three Fs: ensuring that their horses had cohesive, stable groups of friends, access to suitable low-calorie forage, and freedom both in terms of space and in terms of choice.

Owners described a strong desire to find new ways of managing the land, which would also support the environment, providing the space for wildlife and wild plants, and encouraging soil health. This is an important finding, and we propose to provide resources for owners who wish to combine environmental support with their horse owning practices.

Finally, the diversity of the systems and horse owners who reported in this project showed that no one system provided a panacea for all problems. Every horse, every owner, and every field was different, and hence different approaches suited each. Most systems had lots of supporters, but also people who had found that it didn't suit them for various reasons. The important take-away therefore is the need to be vigilant and monitor the horse's health and behaviour in an open-minded way, making changes whenever necessary to ensure the ongoing health and wellbeing of all horses in these systems.

Read more at:

- **Equicentral:** more information and eLearning courses at www.equiculture.net
- **Track systems:** Paddock Paradise (Jaime Jackson, 2007)
- **Rewilding:** read more about some example projects at www.rewildingeurope.com/rewilding-in-action
- **Weight management and monitoring:** <https://www.liverpool.ac.uk/media/livacuk/equine/documents/Equine,Weight,Management.pdf>

We would like to thank all the participants who took the time to take part in this study and share their experiences.

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