

A Comparison of the Use of Koniks Compared to Other Native Breeds In Extensive Conservation Grazing Systems.

Shaun Walters

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Abstract

The project looks into comparing Konik Ponies with Native British Breeds for use in conservation grazing systems. Site visits, questionnaires and phone interviews were done to collect a wide variety of data from other nature reserves.

A questionnaire was devised and sent out to conservation sites to gather data on the breeds, whether they were a good choice of pony to use on those reserves and whether the site managers are obtaining the prescribed results from grazing with this breed.

The Project investigates their attributes and possible weaknesses for grazing in extensive programmes, for example does it have the desired abilities to live in certain habitats, is it hardy enough to fight off diseases and infection, and finally what other characteristics does it hold? Adding to this, what is the cost of buying the horse, keeping it and disposing of it? All of this was compared to the current Konik which is being used for extensive conservation grazing programs not just at Wicken but on other nature reserves too.

The Konik, Exmoor, Dartmoor and Section A Welsh Mountain Pony were looked at in closer detail, gaining a better understanding of their attributes for making good conservation graziers.

The overall conclusion from this report shows that there are a variety of different pony breeds that can be successfully used for conservation grazing on a variety of different sites. It depends on many factors; one being the management plan for that site and the desired outcomes from the ponies grazing the site, the other is on the breed of pony chosen to give the absolute best for the habitat conditions it will be living on. Wicken Fen chose Koniks due to their adaptability to cope in the wetter peaty conditions. There have been many challenges to overcome during the period of this project, most significantly was the lack of questionnaires returned ending up in a poor pool sample and a lack of statistical analysis. Ways in which this could have been improved have been looked at and evaluated above.

Introduction

This project considered why Wicken Fen chose to use Konik Ponies on the wider nature reserve and expanding wet grassland nature reserve to graze and control vegetation succession. On the basis of the results collected the reasons behind Wicken Fen's decision to use Koniks instead of other native breeds of pony such as Exmoor will be explained.

Site visits, questionnaires and phone interviews were done to collect a wide variety of data from other nature reserves, to find out why they decided to use either the Exmoor or Welsh Mountain. From the evidence and research collected a discussion of whether either of the two breeds of horse would do just as good a job as the Koniks at Wicken Fen is given.

Conservation grazing is a system to manage landscapes in a low intensive way, to encourage wildlife and plants that inhabit these areas. Sites need grazing to remove scrub and rough grasses (The Moorland Mousie Trust, Not Dated).

Grazing unimproved pasture for conservation purposes and improving the habitat for flora and fauna has become very popular over the last decade (BHIC, 2006). Making sure the stock is suitable for the site is a key point for the conservation grazing plan to be successful. It is also at the landowner's discretion as to what livestock they want to graze the site and the results derived from grazing it. Conservation grazing systems are a very good way to give a diverse habitat to an area and are giving some rare breeds in Britain a revival. Conservationists have realized that these rare breeds are hardy and have adapted to their climate over thousands of years.

Native pony breeds are able to deal with bulkier, rough, poor quality forage and will not only graze grasses but in winter time browse scrub such as Birch and Willow (UK Agriculture, 2001-2012). Many conservation sites will use a variety of different animals to graze their site to achieve a good mosaic pattern of varying habitats which cater to a wider species.

Ponies have been roaming the UK and European continent for thousands of years, but have been used for conservation purposes more recently. Wicken Fen has been using ponies for conservation grazing for about 10 years. In parts of Wales and more rugged upland areas native breeds such as the Dartmoor and Welsh Mountain have been grazing the vegetation for hundreds of years. But in more recent times conservation bodies have been funded to use these animals for conservation grazing purposes.

Using ponies that are local to the area can prove to be better than non native breeds or other pony breeds from elsewhere in the UK. Ponies local to the area are more adapted to the vegetation and have roamed the area for many generations. By

choosing the right breed, land managers can manipulate the vegetation to what they feel is right for the area. Making sure the animal is healthy is paramount. Meeting the five freedoms is critical when keeping any livestock, these are;

1. Freedom from thirst and hunger
2. Freedom from discomfort
3. Freedom from pain, injury and disease
4. Freedom to express normal behavior
5. Freedom from fear and distress

(Grazing Animals Project, 2009)

If these freedoms are met then a good job of grazing the specified area will be done. Also making sure the genetics are strong and ponies are not susceptible to certain illnesses and genetic deformities. Will keep them stronger and more efficient to graze and cope in the harsh conditions.

Conservation organizations that use ponies for grazing must pay attention to the animals welfare needs and make sure they stay healthy, it is easy to set up a grazing regime where ecological requirements have been considered but the requirements of the livestock have been under-estimated (GAP, 2001). It is essential that animals grazing on conservation sites are well managed (GAP, 2001).

Aim

The aim of this study was to compare a variety of native pony breeds in the United Kingdom to the Konik Polski (*Equus ferus*) that is currently used for grazing at Wicken Fen National Nature Reserve (NNR).

Materials and Methods

The following breeds of pony are compared for their value within an extensive grazing programme at Wicken Fen. The ponies selected are; the Section A Welsh Mountain currently being used for conservation grazing on the Norfolk Broads and the Exmoor pony, currently being grazed at RSPB Minsmere Reserve. The current system at Wicken Fen was reviewed, and the evidence collected used to determine whether or not one or more native breed(s) would be as good, or better, suited to this system compared to the current Konik. A questionnaire was devised and sent out to these conservation sites to gather data on the breeds, whether they were a good

choice of pony to use on those reserves and whether the site managers are obtaining the prescribed results from grazing with this breed.

The Project investigates their attributes and possible weaknesses for grazing in extensive programmes, for example does it have the desired abilities to live in certain habitats, is it hardy enough to fight off diseases and infection, and finally what other characteristics does it hold? Adding to this, what is the cost of buying the horse, keeping it and disposing of it? All of this was compared to the current Konik which is being used for extensive conservation grazing programs not just at Wicken but on other nature reserves too.

Koniks on the Fen

Wicken Fen currently has 64 free-roaming Koniks. The first group of ponies were brought over from a nature reserve on the Norfolk Broads and some from the Netherlands. These ponies were deemed by the National Trust Wicken Fen to be ideal for grazing a wetland site. (Wicken Fen, Not Dated).

Konik Polski (*Equus ferus*) derives from the Polish word for 'little horse' (Wildwood Trust, 2006). The Konik is a descendant of the Wild Tarpan Horse that roamed most of Britain and Europe thousands of years ago, as with many of our native breeds. The Tarpan was mixed with a domestic horse in parts of Poland, as scientists were hoping to maintain the Tarpans wild and hardy characteristics, thus resulting in the Konik we have today. The Tarpan became extinct in Britain due to deforestation and being hunted by man (GlobalHorseCulture, 2008). Development of the Konik was halted during the Second World War, but continued soon after and the Konik can now be found in Belgium and the Netherlands.

The Konik is known as a keystone breed, as it has the ability to modify its environment to suit its needs (Wildwood Trust, 2006). This can benefit plant and animal species, as the environment will otherwise succeed to woody scrub affecting certain plants and animals that previously inhabited this area. So a keystone species can have a potential positive impact on an ecosystem.

The Konik is very resilient to harsh terrain and severe weather, as well as a variety of different forages. It is highly adaptable and will lose condition over winter foraging on reeds and stripping bark from willow (*Salix sp*) and silver birch (*Betula pendula*). They will then improve their condition in the summer when grasses improve and there is more for them to eat (Tolhurst & Oates, 2001).

Exmoors

It is believed wild ponies came to Britain from Alaska about 130 thousand years ago. They successfully distributed themselves around Britain and lived well alongside

other animals of that time. This was until Man came along, ponies were then hunted for their meat, fat and skins (The Exmoor Pony Society, Not Dated).

The Exmoor is a hardy native breed of pony, a popular rare breed with high aesthetic appeal. It is becoming a more numerous breed due to its use for conservation grazing purposes.

It is able to maintain good condition.

Can withstand extreme weathers.

Will graze and browse pretty much anything at different times of year

Mostly keep themselves to themselves will generally be oblivious to members of the public and dogs.

(Tolhurst & Oates, 2001)

Open grazing became difficult for ponies in later years due to the 1750's Parliamentary Enclosure Act (Parliament UK, Not Dated). For this reason ponies moved to the moorland and mountains to find grazing. It was then that the Exmoor Pony became known as the 'British Hill Pony' (The Exmoor Pony Society, Not Dated).

In 1818 the crown sold the Royal forest of Exmoor. Sir Thomas Ackland who was the warden at the time took 30 ponies and founded the Ackland Herd, (Red Stag Safari, 2010) still existing today.

The Exmoor Pony Society was set up in the 1920's as it was feared that the breed could be lost in time. The stud book was formed and the pure bred Exmoors were registered as well as a good way to promote their breeding.

Unhandled ponies living in the hills and moorland were still in breeding herds and continued to graze the commons.

The 1940's saw the demise of the Exmoor Pony as its owners left for war (Red Stag Safari, 2010).

Today the Exmoor Pony works well alongside man in leisure pursuits. There are still a small number of free-living herds which make up part of the natural fauna of Britain (The Exmoor Pony Society, Not Dated).

Welsh Mountain

The Welsh uplands have been grazed for generations. Unfortunately a lot of upland Sites of Special Scientific Interest (SSSI's) have been overgrazed in Wales due to

the Common Agricultural Policy (CAP). This in turn has had a negative impact on biodiversity (Welsh Mountain Report, 2006).

A lot of Welsh SSSI land is privately owned and the Countryside Council for Wales (CCW) cannot tell the land owner what livestock to graze, as the stock used has to be financially viable. Therefore cattle and sheep are the favoured animals, but ponies would work best on this land offering the best all round biodiversity; unfortunately they are not commercially viable.

There are a number of different conservation charities in Wales that use Welsh Mountain Ponies to graze their land and improve flora and fauna. For example there are ponies on nature reserves, grazing heath land, calcareous grassland, moorland and salt marsh. Conservation bodies that use Welsh Mountains are the Countryside Council for Wales (CCW), National Trust, and the Royal Society for the Protection of Birds (RSPB).

Some of the ponies used by the National Trust are described as 'lowland' ponies as they graze between sea level and 200m. The Trust try to use geldings as they can be easier to deal with. More ponies are needed in the summer to graze rough pasture, the ponies will eat a range of different vegetation and push through to open up new areas (Welsh Mountain Report, 2006).

Dartmoor Ponies

Dartmoor Ponies are used for leisure and for conservation purposes. In 2005 there was a realization that if no action was taken the true bloodline of the Dartmoor Pony could be lost, so the Dartmoor Pony Heritage Trust was created to conserve this hardy breed.

The pony is a small hardy breed with a good temperament which makes it ideal as a young person's riding horse and good to use for conservation purposes where public may have access to the land. (DPHT, Not Dated)

They are selective grazers and can switch to less palatable forage if necessary.

Results

Table 1. The Positives of Conservation grazing with these Native and Non-Native breeds

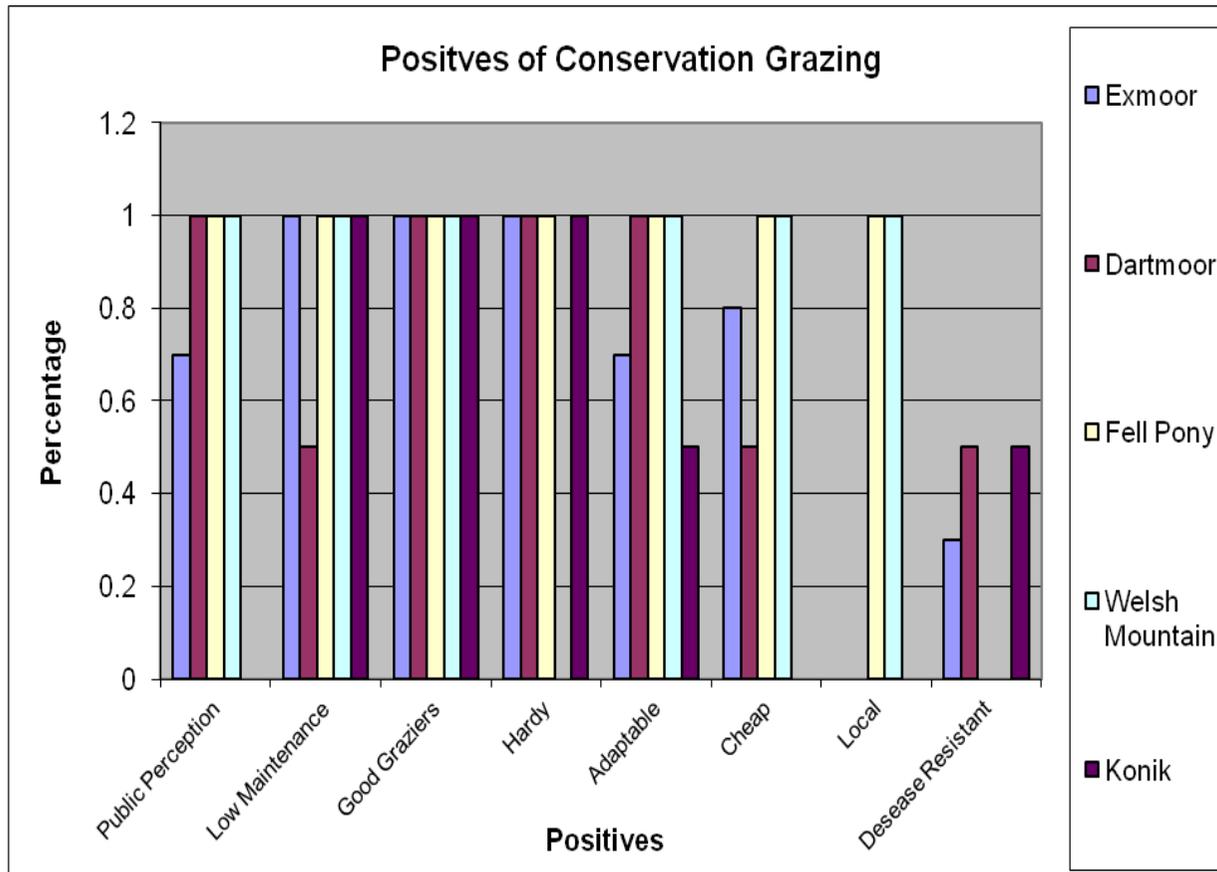
	Public Perception	Low Maintenance	Good Graziers	Hardy	Adaptable	Cheap	Local	Disease Resistant	Total Positives
Exmoor	0.7	1.0	1.0	1.0	0.7	0.8	0.0	0.3	5.5
Dartmoor	1.0	0.5	1.0	1.0	1.0	0.5	0.0	0.5	5.5
Fell Pony	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	7.0
Welsh Mountain	1.0	1.0	1.0	0.0	1.0	1.0	1.0	0.0	6.0
Konik	0.0	1.0	1.0	1.0	0.5	0.0	0.0	0.5	4.0

The table above shows the positive points of Conservation Grazing with both Native and Non-Native ponies found throughout the United Kingdom. The numbers in the table represent percentages (e.g. 1.0 means that 100% of the people who returned questionnaires said that the pony chosen was hardy. But only 70% or 0.7 said they had purchased them for their good public perception) From the Questionnaires sent out (See Appendix) it is clear to see that ponies used for conservation purposes can be found on a wide variety of habitats.

A question was asked for peoples opinion on the various positive out comes they had experienced with their ponies. These outcomes have been sorted into percentages to make them easier to understand. If the breed and positive have been selected on each of the returned questionnaires then there was a 100% positive feed back and so it has the score of 1.0.

10 Unfortunately these results are slightly skewed as there were an uneven number of replies. As there were only three replies from people who kept Koniks, but six replies from those who had Exmoors grazing.

Figure 1. Positives of Conservation Grazing



This graph clearly shows a relationship between the breeds and various positive outcomes for choosing the particular breed. It is clear from this graph that most organizations have chosen their particular breed because of its hardiness and ability to be a good grazer, that meaning they will graze and browse a variety of different vegetation types, therefore creating a mosaic of vegetation types and broad habitats particular to the landscape.

There is still the same lack of results which sway the results slightly but they do show an overall trend that people are using these breeds because they are good at grazing rough areas of pasture, cost relatively little to keep as they are hardy individuals.

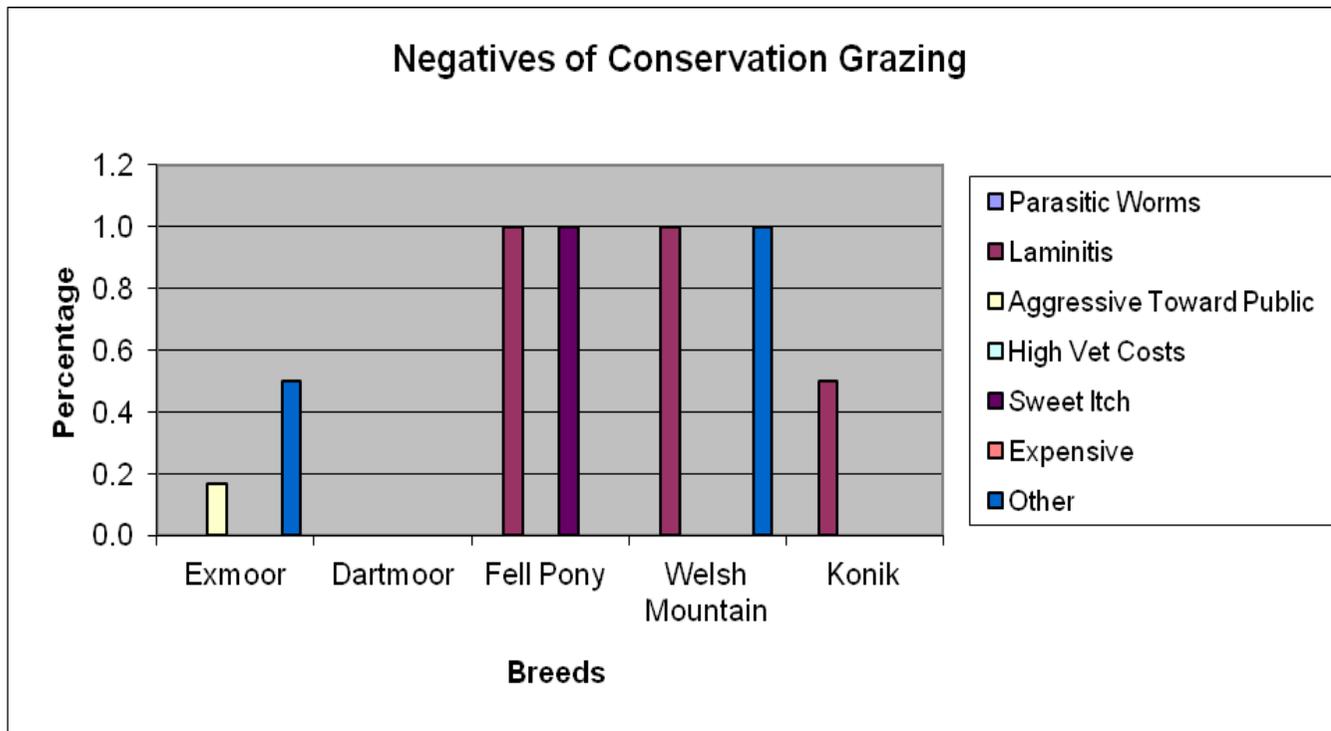
It is interesting to see that being local was not something that more people commented on. The Fell Pony and Welsh Mountain came up in response to location being important to the property and a reason for purchasing them and using them for grazing.

Table 2. The Negatives of Conservation grazing with these Native and Non-Native breeds

	Parasitic Worms	Laminitis	Aggressive Toward Public	High Vet Costs	Sweet Itch	Expensive	Other	Total Negatives
Exmoor	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.7
Dartmoor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fell Pony	0.0	1.0	0.0	0.0	1.0	0.0	0.0	2.0
Welsh Mountain	0.0	1.0	0.0	0.0	0.0	0.0	1.0	2.0
Konik	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5

This is a table of the Negative points for keeping either native or non-native breeds. There was a range of negative points that came from the responses to the questionnaire. But as you can see from this table and the graph below there are no outstanding negative points. A reason for this could be because the breeds used on these properties are hardy and are very well accustomed to the harsh climates of the British Isle. They are also very good at eating a variety of different vegetation types and browsing more woody vegetation. For this reason they may not pick up as many illnesses or diseases as the more pedicured pet ponies that have short well maintained grasses.

Figure 2. Negatives of Conservation Grazing



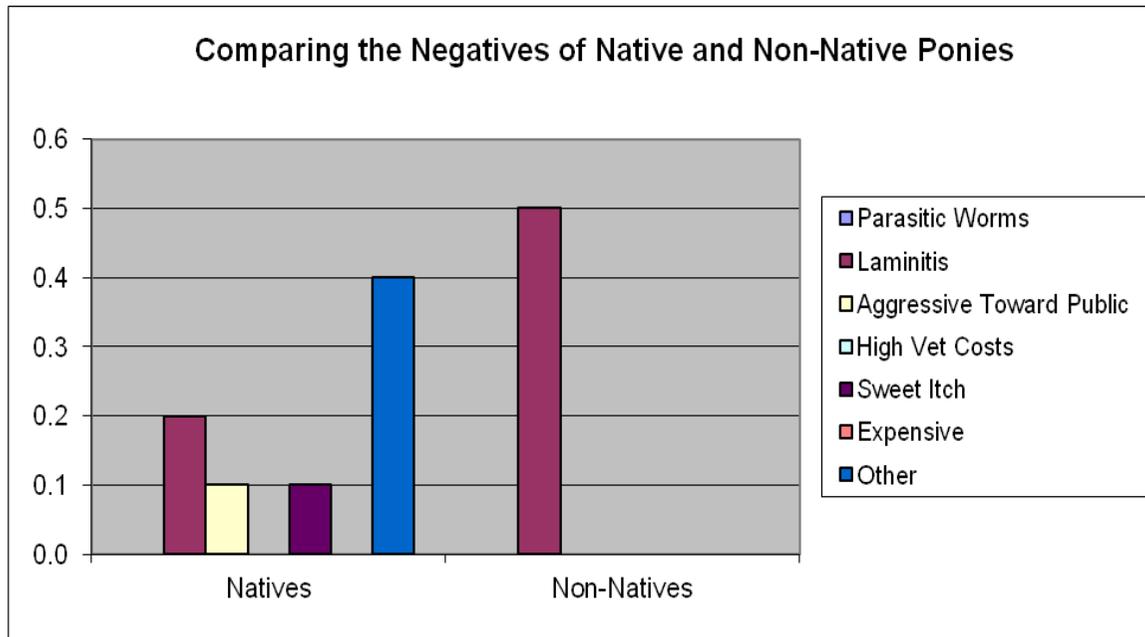
This graph shows that Fell Pony might be the most affected by various negative points, but from the wider results and response from questionnaires we know that there was only one response from a property that were using Fell Ponies for grazing, so although a higher percentage of negatives compared to other breeds around it. These are inconsistent results as not enough data has been collected to prove it to be note worthy or not.

If we look at and compare both the positive and negative tables, then it becomes clear to see that the positive aspects of these pony breeds out ways the negative points and in many cases when the questionnaires are looked at in more depth the disease or negative point has happened once to a particular pony. This may be because that pony was weak or just susceptible to that disease. This problem can be overcome in the future by selecting not to breed from that horse as it is possible that weakness could be transferred into future generations.

Table 3. Comparing Negatives of Native and Non Native in Conservation Grazing Systems

	Parasitic Worms	Laminitis	Aggressive Toward Public	High Vet Costs	Sweet Itch	Expensive	Other	Total	Average
Natives	0.0	0.2	0.1	0.0	0.1	0.0	0.4	0.8	0.08
Non-Natives	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.25

Figure 3.



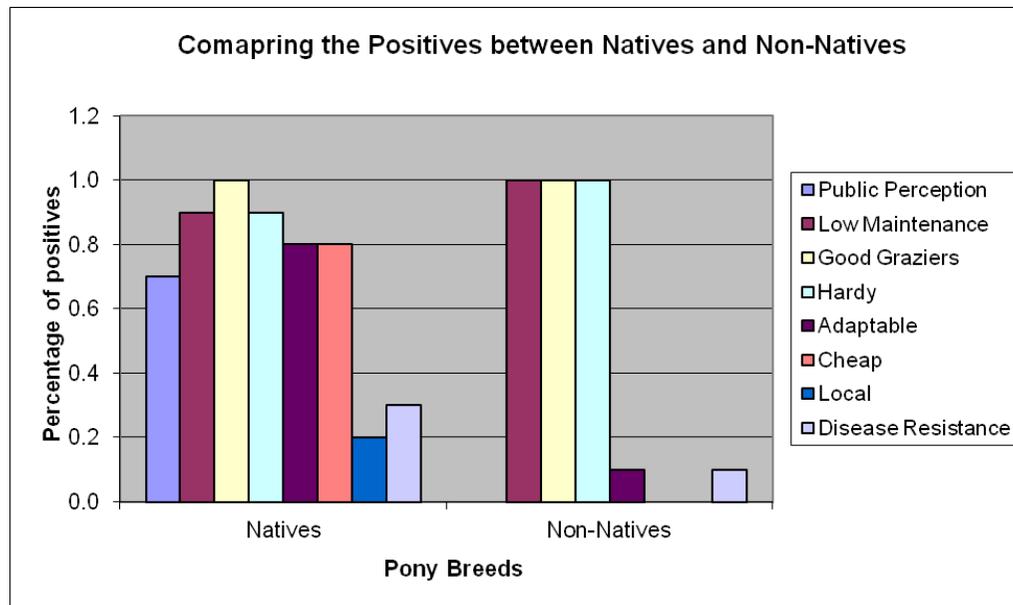
The table and graph show a direct comparison between native ponies and non-native. As the title of this project entails it is looking for a comparison between native and non-native ponies used in conservation grazing programme's.

The graph on the left clearly shows that there have been more negative results associated with native breeds than non natives. However it is difficult to make a direct comparison as there were not an equal number of results relating to both breeds. Konik ponies were the only non native breed returned also there were only three of these compared to ten from owners of native breeds. If more time were available and a larger pool of results then it would give a better result as the exact negatives of both Native and Non-native pony breeds.

Table 4. Comparing Positives of Native and Non Native in Conservation Grazing Systems

	Public Perception	Low Maintenance	Good Graziers	Hardy	Adaptable	Cheap	Local	Disease Resistance	Total	Average
Natives	0.7	0.9	1.0	0.9	0.8	0.8	0.2	0.3	5.6	0.56
Non-Natives	0.0	1.0	1.0	1.0	0.1	0.0	0.0	0.1	3.2	1.6

Figure 4.



This table compares the positives of both Native ponies and non-natives. Both these tables and graphs are good to compare, as it answers the question of this project. As the graph shows there are a wider range of positives associated with native breeds compared with the non-native breeds. These are expected values as we already know that native breeds are hardy and adaptable.

A reason for the lack of data can be explained by two reasons, one; because the country does not have many non-native species and two; because of the insufficient evidence obtained.

Conclusion

The basis for this project was to compare native and non-native breeds of pony that are used for conservation grazing.

The data collected from the questionnaires returned show that there is a lot of positive feedback for native ponies compared to non-native breeds. From the information read, the project has shown that there are different pony breeds for various different habitats. Conservation organizations who wish to use ponies for conservation grazing will need to have a management plan in place which describes what the habitat is currently like, and a clear direction of where the project will end through grazing it with ponies. Different habitat types will suit different pony breeds. It seems that from information read and collected that breeds such as the Exmoor, Dartmoor and Welsh Mountain are used mostly on upland sites or more health land habitats. Whereas Konik ponies seem to be used more on wetland sites. This is consistent with the information found in the Breed Profiles Handbook published by GAP.

My data is limited due to many factors;

Cost; there were cost restrictions with this project as I was unable to travel to many different sites to obtain further information. And ask follow up questions.

There were significant time restraints with this project, eight months was not enough time to collate and evaluate results to compile a worthy scientific report. As well as time the word limit was a restriction as there was a rough limit of 4000 words. If time and word limit were not factors in this project then a more thorough and analytical report could have been constructed.

My own knowledge of pony breeds and statistical analysis restricted what was possible for this project. Background reading and notes were taken for the various breeds spoken about in this report but to get a good statistical analysis with the results accounted for was not possible.

If more time were available it would have allowed me to collect a bigger pool of data which in turn would have meant that I could have got some interesting statistical analysis relating to different breeds and the habitats which they graze.

A further question that has been raised during this project has been why Koniks seem to be used more on wetland sites, and referring back to the breeds handbook it states that Koniks cope well in wetter conditions. Why are they preferred over our native breeds? Is there something in their genetic makeup which allows them to cope better in the wetter habitats, and be able to control their hoof length and condition? Our native breeds do live and graze in wet areas of Dartmoor and Exmoor

but then do have higher ground to move to and coarse granite to wear their hooves down.

If time and money were not a factor in this project then further research could have been done and a broader set of results compiled giving a much more significant project, contributing both to conservation organizations and the Rare Breeds Survival Trust.

The overall conclusion from this report shows that there are a variety of different pony breeds that can be successfully used for conservation grazing on a variety of different sites. It depends on many factors; one being the management plan for that site and the desired outcomes from the ponies grazing the site, the other is on the breed of pony chosen to give the absolute best for the habitat conditions it will be living on. Wicken Fen chose Koniks due to their adaptability to cope in the wetter peaty conditions. There have been many challenges to overcome during the period of this project, most significantly was the lack of questionnaires returned ending up in a poor pool sample and a lack of statistical analysis. Ways in which this could have been improved have been looked at and evaluated above.

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