

## Native Cattle Breeds on Rough Grazing Extracts from Nibblers online discussion group

Greetings to all of you out there, I'm after some advice/ thoughts/comments.

I'm the Site Manager for Goss Moor NNR in Mid-Cornwall, a 500 hectare heathland / scrub / wetland complex, much of which is registered common land. We currently have one active commoner who has been running a suckler herd of c.20 continental crosses with calves on the site for at least 25 years. Whilst the animals do OK, they are generally inclined to avoid the prickly bits & eat the nice green bits in between & we have always wanted to run different beasts on the site. The site is part of a project that recently became the recipient of LIFE Nature funding From Brussels: Restoration of 'Mid Cornwall Moors for the Marsh Fritillary butterfly' where the intention is to re-instate grazing across 9 heathland/wetland sites in Mid Cornwall to manage the metapopulation of endangered Marsh Frits. at a landscape scale.

LIFE Project staff & myself have been considering most appropriate livestock to run on the site(s). Ideally we want to see cattle & a few ponies in the long run but, initially, as we have some LIFE money to buy a starter herd we are currently inclined to go for pedigree Belties on Goss & any old Belties on some of the other sites.

· Q. Why Belties?

· A. They should do OK on the sites. They are easily recognisable as a LIFE Project 'badge', they might be easier to see in scrub when counting stock & might be easier for motorists to see on roads crossing the site plus, I quite like them!.

· Q. Why pedigree Belties on Goss?

· A. They should have more economic value to the grazier. The aim is for the active commoner to lease the animals from English Nature & build a herd up on the site slowly to reduce losses from Red Water Fever, initially running over the grazing season with his continental crosses which will be wound down over several years. EN will lease the other commoners' grazing rights for a 10 year period so that our grazier will have some security to build the herd.

I would very much like to canvas views on the above from people with experience of Belties before we put our 'head in the noose' particularly the following:

1. Red Water Fever - is it OK to buy cows in calf/with calf or better to just buy in heifers until they have acclimatised to the site(s)?

2. Does anyone know of any pedigree Belties currently grazing conservation sites that are up for sale?

3. Does anyone know of any other Belties available from similar sites to the above that are surplus to requirements?

Thanks in anticipation.

Martin Davey

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I have had a couple of clients run Galloways (not belted) and although they are excellent grazers in rough country their view, I think, would be they are quite difficult to make any money from. Now this may not be an issue for you? In which case fine. On our biggest Dorset heath site the cattle are principally North Devon (with some Heinz) and the ponies Exmoor with some New Forest types. This seems to work OK for everyone.

Martin -

Belties (and various crosses) are widely used on the New Forest and seem to do very well. You are right about the white showing up on the roads -- one reason we have British Whites. Galloways seem tough, and appear to eat everything our cattle do, if they can reach it. I suspect their thicker fur helps them in winter, and the small size ought to help with handling.

In the "against" corner, pedigree belties seem very expensive (though of course this is good when selling).

They are very small -- a consideration if they are to browse (some of our cattle can reach a 2 m browse-line, and will pull or push down stems up to 10 cm thick). The carcasses must also be very small -- but people do seem to sell these (as well as Dexters and Kerries), so there must be someone who wants them.

Galloways have a bit of a reputation for wildness, though I don't know how true this is. Those on the Forest seem OK.

Long fur is not so good in summer. We have one (BW) cow who's rather more furry than the others, and she's often a noticeably yellower colour in the summer, because she sweats a lot more and picks up dust. Have you noticed that in postcards Highlands are often seen standing in the water? Desperately trying to keep cool, I reckon... I'd consider clipping Highlands or Galloways in the summer.

I do know of someone who grazes belties on chalk downland and the Forest -- I'll find a contact for you. Don't know if they have any spare.

Other suitable breeds with a good pedigree market and a larger carcass might be White Park, Longhorn or Irish Moiled. Or of course British Whites, which not much more to buy than "ordinary" cattle.

Redwater, or babesiosis (*Babesia bovis* and perhaps other species). We have it in our area too. It's a protozoan parasite a little like malaria, spread by ticks. It can be very localised -- in one field but not the next. Apparently what kills them is an immune reaction in which the body attacks the red blood cells, releasing haemoglobin into the blood serum, whence it is excreted to the urine. Urine becomes eponymously pink (and very frothy), later brown as the haemoglobin degrades. Animals die of anaemia. In practice it seems that only a few animals do develop disease, with most becoming resistant invisibly. Stressed animals seem more susceptible -- a farmer I know of in the North Kent marshes who bought in a large number of cull dairy cows (for whom stress is of course a way of life) lost a lot of them.

You can't control the ticks significantly, and the only practical solution is to have resistant animals, which have the parasite but don't have disease. I believe they become carriers and can spread the parasite to new sites. Deer are supposed to carry it too -- folklore in this area holds that "deer redwater" is worse, so perhaps it is a different species (in other parts of the world there are dog and horse species of *Babesia*). Humans apparently don't get it, I think unless immuno-compromised.

Younger animals don't have the very strong immune reaction and so develop resistance without disease. For this reason we don't worry about the calves.

For imported animals we take two approaches, depending upon the value of the animal. If we feel we can risk the animal, we let it take its chance developing resistance -- and so far, so good...

For more valuable animals (or those on loan) we inject them with a drug (can't remember the name of it). This lasts for two or three months. It doesn't prevent infection, but does prevent the disease developing. If the animal is infected in this time it should become resistant -- but of course, if not challenged it remains vulnerable after the drug has worn off. Generally we give them a couple of goes and then assume they are resistant. The drug is quite expensive, and the injection seems painful (it's subcutaneous, and they react very strongly if the muscle beneath the skin is nicked). Injection results in a large, soft swelling, lasting for a couple of weeks.

We've only had one actual case of redwater, several years ago. This was a cow from an area believed to be infected, so she ought to have been resistant. She'd just had a calf, so was under some stress; we think she was challenged with very large numbers of infected ticks, having somehow not encountered it before. Our vet said at first that it was the mildest case he'd seen (I think because she was still on her feet...). He gave the drug -- but she died anyway the next day. He says he will now give a transfusion to every case he encounters, however mild. He says he encounters a few cases each year in our area -- which sounds like a pretty low casualty rate to me.

The main problem for acute treatment is, I think, noticing the pink froth before it's too late -- we can't be checking their water every day, like George III's physicians! By the time the urine is brown, disease is well developed.

Good luck!

Richard

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Richard

Thanks very much for your advice. I'm amazed at the price Belties are fetching. Your suggestion of British Whites sounds like a distinct possibility. They're a breed I know nothing about other than that are a very old breed. Are they related to White Park in anyway. Presumably they are pretty hardy or you wouldn't have them. My sites in Cornwall are a mixture of heathland, wetland & scrub. We have mild winters with high rainfall & infrequent frosts. How do BWs out-winter & what's their marketability. Also do they qualify as a Rare breed?

Best wishes

Martin

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Martin

I can answer some of your questions.

British Whites and White Parks are distinctly separate breeds, although it is likely that the former were descended from the latter about 300 years ago. White Parks go back at least 1200 years.

Their status also differs. White Parks are a rare breed; British Whites a minority breed.

If you go for British Whites, you need to be sure to select animals which are free from recent up-grading with continental blood, which has been quite common and changes their characteristics and adaptability.

I have to declare an interest in White Parks. We run the herd (100+) on SSSI on Salisbury Plain, with sub-groups on conservation grazing in Savernake Forest and on wetland. They run out throughout the year without shelter or

supplementary feeding. Non-breeding animals are sold through specialist outlets as high quality beef.  
Lawrence

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Hi -

Sorry, missed this for a few days while the Smartgroups website was down...  
Hardiness of British Whites in your wet winters. I think they'd be OK, though it would depend on what they are doing and what food they're getting. If they had enough grass, or straw and hay or silage, and somewhere dryish to lie, I think they'd outwinter fine with minimal shelter even in Celtic weather. We keep most of ours out on dry heathland in winter, eating heather with a little supplementary feeding and no more shelter than some pine trees. For mothers with calves or growing youngsters, this is pushing them pretty hard, but we've had sucklers gaining weight on this -- and non-breeders don't really need the supplements. What does strip condition off is wet, windy weather combined with not enough to eat, especially if condition is a bit low to start with. I suspect this would apply to any breed (depending a bit on how furry they are) -- the energy to keep warm has to come from somewhere. However we have found that even when ours have lost condition they pick up quickly once they get enough food to cover their needs.

(Lawrence - what do your White Parks eat in winter, if they get no supplementary feeding?)

We do find that the milkier mothers tend to favour their calf over themselves somewhat. This is fine if they have plenty of food (and of course the calf grows well), but if not they can lose condition. We therefore tend to favour "beefier" types -- though it's not at all clear before calving how milky a heifer will turn out to be. I suppose this may be a plus point for breeds without the dual-purpose past which British Whites share with Red Polls, Moilies, Dexters and quite a few others.

We find that we can produce a good carcass in 30 months, though longer would be better as they don't grow too much in winter (roll on a change in the OTM rules!). We keep the steers on unimproved river-valley grassland in summer, and they fatten well even though not quite full-grown. BWs kept in more intensive systems can grow all the time and easily hit 30 months. There's a reasonably good trade in heifers.

British White is, as Lawrence says, now a minority breed, though they were once rarer. It counts for Traditional Breed Incentive and the Rare Breed Meat Marketing Scheme. Like all old breeds, the origin is vague. Many old park herds of white cattle had some or all polled animals, and these must have formed the basis for the modern BW. Other breeds have contributed -- these are thought to include Whitebred Shorthorn, White Galloway (similarly coloured with black points), White Park and Chillingham (not as far as I know any continental breeds). Don't know what proportion these make up overall, but however you look at it they are a pretty solid traditional type. My feeling is that the at-least-partial parkland history may give them an edge over some other traditional breeds in terms of thriftiness.

1200 years for White Parks, though an attractive idea, might be a little of a stretch... Some people (including me) would like to think they are direct descendents of the aurochs. However, early records (and are there really any quite as old as 200 BC?) just tend to say "white cattle", which could cover a multitude of sins -- and even the distinctive WP and BW pattern of white, colour-pointed cattle occurs independently in many unrelated breeds all over the world. Proving a connection between early records and modern herds is always going to be tricky. Earliest documentary evidence of known modern WP or BW herds seems to be as late as the seventeenth century, though there are other records going back much further (eg "wild cattle" at Windsor in 1277). It's even suggested that White Parks may have more than one origin, and the Chillingham and Vaynol herds are anyway recognised nowadays as separate breeds. WPs do seem to be genetically distinct from other European cattle, though they do apparently include some Highland, Longhorn, BW and perhaps Welsh.

More generally on "upgrading", there was an interesting set of articles not so long ago in the Ark, which to my mind showed that it has little effect in the long run, at least when done the way it usually is nowadays.

In the case of pedigree British Whites you can only upgrade the female line (and first-cross upgrades have not been allowed recently). This means you have to breed back to a full pedigree bull in each generation, diluting the other breed by half each time -- and they are not accepted onto the pedigree register until the fifth generation. Such an animal therefore has only one thirty-second (around 3%) of the outbred genes, and of course this is diluted even further in later generations. Overall, it will not have much effect except where the crossbreds are selected for particular obvious genes, such as those for polling or colour. "Invisible" genes (which I suspect cover most of the important characteristics of traditional breeds) can be affected very little. Personally I think it's rather pointless, except where particular genes are desired for commercial reasons (such as to create polled strains of horned breeds) or where there are not enough males or females left to allow pure breeding -- this happened for example with the Norfolk Horn, which at one time got down to a handful of ewes and no rams (which is better, extinction or upgrading..?)

However for British Whites, "upgrade" animals include not only cross-breds but also non-pedigree females thought to be pure-bred -- for example, animals from unregistered pure herds. These are treated as three-quarter-breds. The upgrade route therefore provides a way of including more of the breed in the herd-book, thus protecting a greater proportion of its genetic diversity (arguably this ought to be allowed for the male line too, but it isn't).

I do accept that all this ceases to apply where "upgrading" forms a greater proportion of the breed -- as of course as have happened in the past with almost all breeds if you go back to the 18th century or so. But back then, all cattle were traditional...

Regards,

Richard

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Richard

Many thanks for this. Just one more question - what's the going rate for pedigree animals?

Martin

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There are various points in Richard's message to which I should respond, but it is a lengthy treatise on one breed, and I do not intend to go into great detail.

First, the question of supplementary feeding. In winter the White Park cattle on the Plain graze as they do during the rest of the year, except that the quality of the herbage is very poor. They overwinter without problems and still calve down with plenty of milk.

Second, Richard questions their historical provenance. 1200 years takes us back to 800 AD (not 200 BC), and there are plenty of records, and there is a published breed history. Their genetic distance from other breeds confirms the level of purity in the breed.

Third, I need to correct a common misunderstanding that some breeds are descended from aurochs. All breeds are descended from aurochs. Fourth, I agree with Richard that upgrading usually is an unnecessary and undesirable process in most cases. Its effect is deeper and more long-lasting than might be calculated from pedigree.

Fifth, I reiterate the point in my previous message, that the British White has had considerable introgression (upgrading) from continental breeds (take a look at the Herd Books) and you should avoid animals which contain this introgression.

This is a fascinating thread and we are learning much from it. Without wanting to divert the flow, I just thought it might be worth broadening it to include discussion of other aspects of breed/type/system, based on my experiences.

I winter my cattle in very similar conditions to both Richard and Lawrence and find it works just as well. However mine are mostly hybrids, Devon crosses, out of Angus x and Hereford x Friesians with some Red Polls and the odd pure Devon. They all sustain themselves v well on an exposed limestone plateau overlooking Morecambe Bay on a diet of senescent Blue-moor Grass, a very unpalatable species that is pretty much a food of last resort. So well in fact that I am confident that when the 30 month rule goes we could return to a finishing system if we wanted; they all manage to keep a condition score of 3-4 throughout the winter, which is spot-on for slaughtering. But for now we just produce in-calf heifers for sale at 4 years old.

It is becoming increasingly obvious to me that there is much more scope for doing this 'extreme' grazing than we maybe had thought previously and that probably age is a much more important factor than breed. I have found that animals under 2 yo are at a distinct disadvantage when placed in a 'get out there and get on with it' wintering system, seldom managing to keep condition much above 2 (any less than this and I would be forced to take them away). I also keep Blue-greys (on lease from English Nature), a much hardier and thriftier cross (Galloway x White-bred Shorthorn). However this reputation isn't always reflected in their condition score which is often less than the cross-breds, comparing age for age.

Which leads on to my questions:

- a.. Who else is out there operating similarly self-sufficient grazing systems,
- b.. what breeds/crosses are they using,
- c.. how well are their animals doing. - Any hard data on performance would be very useful; condition score (see above), weights for age (mine reach full adult size by 3-4 years), growth rates (c 0.5 kg/hd/day in summer for mine; probably less than half this in winter), mortalities (? who wants to tempt fate!); other health problems (type and frequency)
- d.. What is it costing/generating? - any financial information that sheds light on how the system is maintained. Sales: finished vs stores vs breeding stock; added value outlets; agri-environment scheme payments; headage payments vs new Single Payments starting from 2005. Costs: rents, transport and mileage, vet and med, time. (Richard and Lawrence; I hope you might have some useful data on these financial issues that we could use to begin assembling some kind of picture of how the system can be sustained economically). (GAP is trying to develop a 'bench marking' system for conservation grazing in conjunction with EBLEX. Any one interested in participating please contact me)

Lastly I would point out one very crucial issue that Richard referred to previously. Whilst it is one thing to keep in-calf heifers and dry cows or older stores on rough grazing it is a completely different situation once they have calved. Suckler cows need a good diet to perform adequately and without it either they or their calves will quickly become hat-racks. My feeling is that very few breeds are capable of rearing calves, even in the summer, on true hill-type grazing, although it can be quite difficult to characterize this precisely (but more Nardus and Deschampsia than Festuca and Agrostis). I have never been tempted to think of keeping my cross-bred cows and calves on the rougher hill ground, even in summer, because I feel it would compromise their welfare unduly. I would expect the same to be true in principle for British Whites and White Parks, both essentially lowland breeds. Highlands and Galloways, the true hill breeds would be more likely to succeed because they have a 25% higher feed intake for their size compared with other breeds.

best wishes

Bill

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800 AD, of course! Dear me. "Sums" was never my strong point -- sorry. Only a millennium out...

Lawrence's WPs in the winter... Are they on land which is also grazed in summer, or is the grass kept back for the winter? What is the overall density? (We run at about 1 LU to 10 ha overall, including the heathland and Forest, but at about 1 to 1 on grass in summer).

WP provenance... I didn't mean to doubt their uniqueness, just point out that historical records of that kind are always vague and difficult to prove, especially where a strong desire for romantic origins may have coloured them in the past.

Nor did I mean to imply that only WPs are descended from aurochs. The suggestion I have read is that that WPs have perhaps not been through a fully domesticated stage, and so their descent is more direct. (By the way: aurochsen/ur-oxen... Is the plural in English not the same as the singular, like most other quarry animals? Pigs are descended from wild boar, goats from ibex etc.)

I wonder if WPs are just relatively untouched survivors of earlier domestic "breeds", insulated from imported blood by their unique lifestyle? Other breeds could be descended from the same earlier cattle, but with much other admixture -- like a typical dairy herd, which may descend directly from Shorthorns in the female line but now looks Holstein. Perhaps I'd better read the WP breed history...

BW introgression... I'm looking into this further with the breed society.. However, there can't have been too much recently. Pedigrees for our own animals give us quite a good look at the last twenty or thirty years -- first-cross upgrade blood appears only once, and later crosses only a few times. This implies that few lines can be anywhere near the theoretical maximum of one thirty-second of other blood.

Richard

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Just a quick reply in response to Bill's comments about keeping cows and calves on rough grazing even during the summer. The majority of Suckler herds in the West Highlands (and I would imagine the same in many Hill/Upland areas) calve in spring with the cows and calves summered out on the open hill, calves then weaned in September/October/November and sold as suckled calves. In general these are not, however, conservation sites, but very extensive open hill areas with plenty of summer keep. The vast majority of the suckler cows are then either in-wintered, or as is becoming more common again, out-wintered but with large inputs of supplementary feeding both, fodder and concentrates. However, I think at lower stocking levels, and in woodlands providing much needed shelter, these cows could be over-wintered on a much more extensive "extreme" grazing regime. Something to be looked in to further?

Just on an additional note we are about to produce the proceedings for the Woodland Grazing Workshop held in Argyll on Feb 26th 2004. If any of the nibblers subscribers would like to receive an electronic version of the proceedings please contact me and I will email it out. Also available in electronic format is the Grazing Woods News Update that we produced for the workshop and soon to be available will be a Grazing Woods Newsletter - again if anyone is interested in receiving these two publications please contact me.

Regards

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