



Volume I, No 1

Newsletter

Spring 2022



Welcome

Welcome to the first edition of the Irish Native Rare Breeds Society (INRBS) newsletter. We hope to keep you informed of developments with Irish Rare Breeds with posts existing and putative through the newsletter. Our role to be an advocate for these breeds and to assist the individual breed societies where possible through policy mechanisms and also with financial assistance where possible. As an Irish Moiled Pedigree breeder for many years, I have grown to understand the role that rare breeds play in conserving our genetic heritage.

Rare Breeds also provide much more, through the provision of eco system services, adaptation to harsh environmental conditions, as well as providing excellent and diverse food for citizens. The society welcomes members from all walks of life, who wish to support the work of the society, so we would welcome you to become a member and become involved with our work. Recently we have been delighted to have become involved with the Cladoir Sheep Preservation Committee helping them to prevent the loss of this important sheep breed in the Connemara area. We are also delighted to have supported the Native Irish Honey Bee Society in more recent times with their GLAS submission.

With the challenges which Climate Change is having on the natural world, the ability of species to adapt is critical. Native Breeds will have been exposed to these changes before, both pre and post domestication for livestock and the genes from these animals will be critical again in the era that is now described as the Anthropocene. We should view these animals as vital as essential of both protector and enhancer of biodiversity. We have many great extinctions under way on our planet, but in our small way we can ensure that Native Breeds can be saved through proper breeding programmes and an increased understanding of their behaviours.

John Brennan
Chairman INRBS

Become a Supporter

Individual Membership €20/yr

Ordinary membership is open to anyone with an interest in indigenous and rare breeds. The benefits of membership include becoming involved in an organization dedicated to ensuring the survival of indigenous breeds of livestock.

Society Affiliation Membership - €100/year

All societies representing officially recognized breeds with pedigree registers are entitled to affiliate to the INRBS on an equal basis, equal voting rights and representation at board level.

<http://inrbs.ie/memberships/>



About the Irish Native Rare Breed Society (INRBS)

Name Change

The INRBS was incorporated as a company limited by guarantee in 2019 as The Irish Rare Breed Society which had been in operation since the 1990's and following a vote at the 2019 AGM the name was changed to The Irish Native Rare Breed Society and this name change was put into effect by The Companies Registration Office in 2020.

What we do

The aim of the INRBS is to advocate for rare breeds in Ireland with a particular focus on indigenous breeds. We hope to reflect the positions and interests of affiliated breed societies. We also aim to assist those who seek to gain official recognition for currently unrecognised breeds where there is a reasonable basis for the belief that, on the basis of genetic analysis, there is sufficient genetic distinctiveness for the recognition of breeds adhering to a recognisable breed standard.

In addition to representing affiliated breed societies we welcome ordinary members to join and appreciate any advice and assistance that is offered and any assistance from members in various projects undertaken by the society is greatly appreciated. The current appreciation for the importance of biodiversity and areas such as social farming offer opportunities for indigenous breeds of grazing livestock and managed pollinators to make a valued contribution to maintaining and enhancing habitats.

The role of the INRBS as an umbrella organisation representing the interests of primarily indigenous as well as certain non-native traditional breeds where no native equivalents have survived depends on the co-operation of the relevant societies as well as sufficient engagement from ordinary members to make the society a vibrant one where we can work effectively in the interests of the individual breeds.

Our Logo

The artist Damaris Lysaght, who designed the IRBS logo has kindly consented to the logo being amended to reflect the name change of the society to the INRBS. Any mention of the IRBS/INRBS would be incomplete without grateful acknowledgement of the work of Ian Simpson who near single handed kept the IRBS alive over many years and we hope to repay the efforts of the founders of the IRBS by fulfilling their aim of advocating for the breeds that we cherish in a collective manner.

Note from the Editorial Team

The INRBS newsletter will be issued quarterly in digital format and while we welcome the financial contribution of members, in recognition of the financial assistance of The National Parks and Wildlife Service in putting our website together, the newsletter will be issued without charge to all subscribers, not only paid-up members. The newsletter seeks to continue the tradition of the Irish Rare Breeds Society newsletter which was issued in print format for a number of years in the 1990's.

It hardly needs stating that the last two years, with the restrictions occasioned by the Covid pandemic, have presented challenges in terms of organising and holding of meeting but hopefully with an easing of restrictions we will be able to reach out to all those interested in indigenous breeds as well as collaborating with other organisations for whom rare breeds can provide benefits. The content of the newsletter will deal with individual breeds, their applications in areas such as conservation grazing, pollination and social farming as well as the marketability of produce from rare breeds and the recreation value of horses and ponies while at the same time looking at what is achieved in other countries with traditional breeds and we hope that this, our first issue gives a flavour of content to come.

Anyone with suggestions for articles for future issues is free to contact us and all suggestions will be given due consideration. Our next submission deadline is April 30, 2020. Please send them to info@inrbs.ie. We wish to thank the contributors of the articles below, without whom this newsletter would not be possible and hope that readers will derive value and enjoyment from them.

Managing habitats for Butterflies: Objectives, Challenges and Rewards

In this article Jesmond Harding from Butterfly Conservation Ireland describes the Crabtree Reserve in Lullybeg, County Kildare, managed for the rich butterfly and moth populations, the management objectives and management used for certain habitats and species. Over the 12 years the site has been managed, no butterfly species has been lost and the only legally protected Irish butterfly, the Marsh Fritillary, is thriving.



The Crabtree Reserve in Lullybeg, Northwest Kildare is managed by Butterfly Conservation Ireland. Twenty-four butterfly species have been recorded on the Reserve. Key species of conservation concern are the Dingy Skipper, Dark Green Fritillary, Marsh Fritillary and Small Heath. A drain that is part of the Crabtree River divides the Reserve into northern and southern sections. Unsurprisingly given the range of butterfly species, several habitats exist on the Reserve. These include Bog woodland, scrub, wet grassland, dry-humid acid grassland, dry meadows, re-colonising bare ground, marsh, wet and dry heath, poor fen and flush. Important butterfly hostplants present include Sheep's Fescue, Purple

Moor-grass, Sweet Vernal Grass, Cock's-foot Grass, Devil's-bit Scabious, Common Knapweed, Rough Hawkbit, Sheep's Sorrel, Common Bird's-foot-trefoil, Common Dog-violet, Meadow Vetchling, Meadowsweet, Eared Willow, Grey Willow, Alder Buckthorn, Purging Buckthorn. A range of orchids are present, including Fragrant Orchid, Marsh Helleborine, Lesser Butterfly Orchid and Twayblade.

There are two main conservation challenges on the site. These are the development of tall, dense grassland and encroachment by scrub. These successional changes smother and shade breeding plants causing a deterioration in habitat quality and loss of butterfly and moth species.

The objective of management is to maintain a diverse-height, flower-rich sward and bare ground and bare ground with regenerating vegetation together with scattered scrub and climax woodland with clearings and scalloped edges which provides an intimate mosaic of woodland, scrub, grassland, and poor fen.

A Brimstone butterfly. This species requires flower-rich grassland for adult feeding, unshaded scrub for breeding and sheltered wooded areas for hibernation.

The Reserve is of sufficient area so that we do not have to prioritise the conservation of a small number of species but there are areas on the site that are of key importance to certain species so that their conservation needs are the focus of management in these areas. For example, an area dominated by Purple Moor-grass with a high density of Devil's-bit Scabious is a core breeding area for the endangered Marsh Fritillary butterfly. Left ungrazed, Purple Moor-grass develops into tall, dense tufts that crowds out herbs while the large volume of leaf litter adds to soil fertility. Its leaf litter produces a dense thatch that smothers other plants.



To deal with this challenge, we use mechanical disturbance using heavy machinery to disturb the surface, create scrapes and break up dense clumping grasses. Heavy poaching by cattle can create similar effects. The other advantage of this activity is that it exposes the soil, allowing seed access to the light it needs for germination. Scrub encroachment is prevented by flailing using farm machinery, uprooting, and cutting by hand.

Cattle grazing is the best way to manage grasslands for the Marsh Fritillary. Extensive grazing by cattle or ponies in spring and summer is ideal on wetter sites, although autumn/winter grazing or all-year grazing can also be suitable. We have found that late autumn grazing can cause problems because poached areas that receive birch seed produces masses of birch saplings the following year.

In general, a low stocking rate over a longer period is preferable. Stocking rates may also need to vary between different sites and between years. On most low productivity sites such as grasslands on this cutaway bog, stocking rates should not exceed 0.2-0.3 livestock units/ha/year. On seasonally grazed sites, roughly one cow every hectare (2.5 acres) for three months per year is recommended. Grazing animals should be removed if the drier areas become shorter than 8cm or if the ground is too wet.



Proven systems include hardy breeds of suckler cow, either pure bred or crossed with

continentals; Holstein Friesian dairy replacements or stores; hardier beef stores, such as Welsh Black or Belted Galloway; and ponies native to England, such as Exmoor or Dartmoor. Sheep grazing is generally unsuitable because they quickly remove large Devil's-bit Scabious plants used by the Marsh Fritillary for egg-laying. Cattle do not remove Devil's-bit Scabious; they nibble the leaves but otherwise leave the plants alone. Sheep also produce a short uniform-height sward unsuitable for most butterflies. Anyone who looks at The Curragh in Kildare and uplands in Wicklow will see how sheep grazing produces an area devoid of butterflies.

The overall aim of grazing on the area used by the Marsh Fritillary is to produce an uneven patchwork of short and long vegetation by the end of the grazing period, between 8 and 25 cm high.

Another approach that works very well to deal with heavy Purple Moor-grass infestation is using donkeys during the summer months. Donkeys appear to favour this tough grass and they leave Devil's-bit Scabious untouched. However, donkeys certainly eat Meadow Vetchling, so if trying to protect the rare moth, Narrow-bordered Five-spot Burnet, donkeys should be excluded from areas rich in this plant. Donkeys will graze close to the ground, so I recommend their use only on sites with rank vegetation.

About Butterfly Conservation Ireland

Butterfly Conservation Ireland (BCI) is a volunteer-run non-governmental conservation charity (Revenue Number 18161, Charities Regulator Number 20069131) founded in 2008 in response to the declines of our butterfly populations. We are dedicated to the conservation of butterfly habitats. We have a reserve in Lullybeg in County Kildare which we run with Bord an Móna where conservation is applied to protect the excellent habitats so that the extraordinary butterfly and moth populations continue to thrive. We manage a reserve in the Burren in conjunction with the Burren Conservation Volunteers to protect Ireland's rarest butterflies. Butterfly Conservation Ireland runs a recording scheme with the National Biodiversity Data Centre in a joint initiative. Butterfly Conservation Ireland holds events to showcase butterfly conservation and we provide regular educational content on our website and in our Annual Report. Butterfly Conservation Ireland advises on the conservation of butterfly habitats and advocates to urge the protection and correct management of our landscapes.

Our website is found at <https://butterflyconservation.ie/wp/>



For some butterflies, a patchily vegetated sward is important. The Dingy Skipper and Wall Brown like these conditions. Their breeding requirements are for areas of unshaded bare ground with their food plants abutting on the warm, bare surfaces. For the Dingy Skipper, plants used for breeding grow among sparse vegetation containing senescent material, often on a rise in the ground in full sun, cut often with warm, bare patches of ground nearby. The sward containing the foodplants was low, sometimes just 5cm high.

To maintain these two species, soil disturbance is crucial. Poaching and disturbance by machinery, including creating scrapes and spoil heaps will help.

Cattle tracks also create the right conditions.

An area grazed by donkeys showing uneaten Devil's-bit Scabious plants in a low sward. This was a rank sward before the grazing was applied.

On some sites, grazing should occur every year while on other areas, especially areas with poor soils and thin soils, sporadic grazing applied when needed, may be sufficient. This approach is used at Fahee North in the Burren, on a low-lying grassy heath on very thin soil. Every site is different. Each site must be evaluated before a decision on management is made. Good ways to judge the requirements are to check on the history of management and the species present, the species priorities as well as considering the weather conditions in any given year. At our reserve, we never manage the entire site in any given year. If we get it wrong, the butterflies have other breeding sites to use while any over-managed part of site recovers. Thus, there are areas of bare ground, regenerating vegetation, short vegetation, tall vegetation, and areas with a patchwork of shorter and taller vegetation. Variety is best!

The importance of active management for grassland butterflies and moths cannot be overstated. Abandoned sites lose species over time, as dense grassland, scrub and eventually woodland develops. Conservation of grasslands is an active process. Grazing plays a vital role in this process, and is the main reason that butterflies continue to exist in our habitats. Grazers must continue to play their part or much of our biodiversity will be lost.

Thank You

We want to thank the Agri-Ecology Unit of National Parks & Wildlife Service who funded and provided guidance on the establishment of our website.

Volunteers help make things happen. The INRBS wants to thank the members of the working group for our website. The working group was composed of:

- Garreth O'Doherty of Apex Digital Media
- Jim Martin of Botanical Environmental Consulting
- Victoria McArthur, Agricultural Consultant
- Seán Dundon, Ecologist
- Loretta Neary, Secretary of The Native Irish Honey Bee Society
- Eugene Curran, Forrester
- Catherine Seale, farmer and ecologist
- Tom Keane, INRBS Secretary

The Irish Moiled

In this article, Brian O'Kane, Chairman of The Irish Moiled Cattle Society gives an account of how the society has managed to bring this ancient breed back from the brink of extinction since the 1970's and has learnt to cope with challenges such as Brexit. Brian farms a herd of Irish Moiled Cattle in Co. Antrim.

The Irish Moiled is an ancient breed of Native Irish Cattle. They are a polled breed with a variety of Colour patterns but are most distinctive with a white back. They can be all Red or all white but must have red points.

Over the years the Irish "Moal" taken From the Irish Hornless cow has been anglicised in many ways: Moyle, Moiled, Moyley, Myleen but the official name is Irish Moiled.

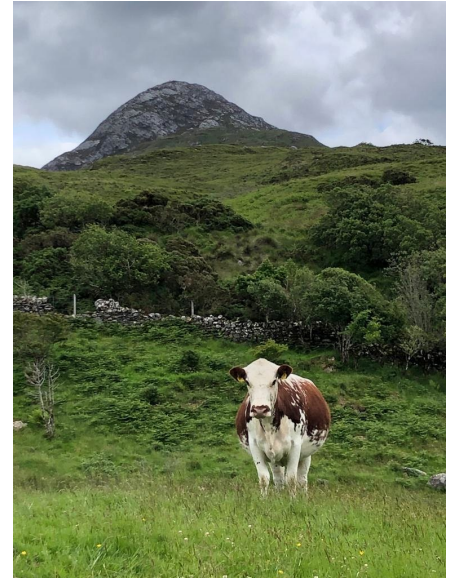
One of the first literary references comes from a paper Given by Dr William Wilde to the Royal Irish Academy in 1862. This was in reference to Skulls found through archaeological excavations.

These were found to clearly show that hornless cattle were present in Ireland as far back as 640 AD

It is believed that the Vikings Raided Irish Moiled Cattle from Ireland in around 1000 AD and to this day there are Hornless cattle with similar colour Markings to the Moilie called the East Finn in Scandinavia.

The breed was popular throughout Ireland in the 1800's and did well on a wide variety of Habitats.

Due to several Factors but mostly due to the introduction of more specialist dairy and Beef breeds the Irish Moiled began to decline.



The breed by the early seventies had reached a critical point with only thirty breeding females and two bulls. These were in the North of Ireland where the Breed Society was based, and numbers were slower to decline.

A small group of enthusiasts with the help of the rare breed survival trust based in England set about a plan to ensure the Irish Moiled remains part of our proud agricultural heritage.

There were several attempts to form a breed Society, the first one taking place in Dublin in 1914. Unfortunately,

these plans were scuppered by the Great War.

It was not until 1926 the original Society was set up under the Chairmanship of Mr F. H. McClean.

By this time Ireland had been Partitioned and the new Society based in Belfast was primarily confined to Northern Ireland. Without Leadership the concentration of interests being towards other breeds. The breeders south of the Border were left to their own devices.

Since its formation the Society has come through some difficult spells Having to be revived in 1948 after the second World War and again in the early 70's when the breed had reached a very critical point in its history.

Unfortunately in 2021 the breed has come up against another obstacle in its fight for survival in the form of BREXIT which has the potential of having a lasting effect on the progression of the breed.

The UK's decision to leave the European union on the 1st of January 2021 caused the Society to face a potential split. The breeders south of the border were faced with all their cattle registered in the existing Herd Book not to be recognised as pedigree animals, as the European Union does not recognise breeding programmes outside their jurisdiction.

This brought about a scenario similar to that of the 1920's, with great danger of the breeders south of the Border being left to their own devices and a third of the cattle lost from the Herd Book.

After many hours of thought and investigation a solution was proposed to the Board of the Society in November 2020. This would involve the establishment of the Irish Moiled Cattle Society and a breeding programme within the EU.

A Company formation in Donegal within the province of Ulster would also have to be established. The proposal was unanimously agreed by the board of Directors at a meeting on the 27th of October 2020. The Society without delay began what has been an exceedingly difficult process, further complicated by the pandemic. I am pleased to say that this process is near completion. Although Difficult the process has been made a lot easier by help offered by the relevant department within DAFM, who have been open and helpful when approached on all occasions.

The Irish Moiled Cattle Society has been at the forefront of DNA parent proving animals with a history dating back over 20 years. This coupled the Establishment of the breeding programme in the ROI and the agreement to use ICBF to provide Lab services. The Society has had to embark on a programme of switching the DNA technique used by the Society to a more modern and accurate technique. This offers greater potential to develop the breed through Genomic Evaluation.

This is a vast undertaking for the Society and involves significant costs. Thankfully DAFM through the Preservation of Genetic Resources Scheme has awarded the Society substantial funding which has allowed us to undertake this process with immediate effect.

This process safeguards the Genetic Purity of the breed and offers an extra level of authenticity to the breed which is especially important for marketing purposes.

The day to day running of the Society will change little from the perspective of the breeders.

I sincerely hope that these developments will result in a stronger Society with greater potential to develop and grow. I take some Solace from the fact that the decision was made for the benefit of the Irish Moiled and that no breeders have been left to their own devices.

Brian O'Kane
Chair IMCS

Re-introducing Cattle Grazing to the MacGillycuddy Reeks



Photo Text: Droimeann cattle grazing on purple moor-grass near Cronin's Yard at the foothills of Carrantoohil.

In this article, Patricia Deane of The MacGillycuddy Reeks EIP discusses the benefits of cattle grazing on the reeks.

The MacGillycuddy Reeks is an area of high nature value farmland and designated as a Special Area of Conservation for the rare and threatened habitats and species it supports including peatland habitats such as dry and wet heath and blanket bog. Today, visitors to the Reeks will see the mountainous landscape

dotted with sheep, which comprise the majority of the livestock on the mountain. Other wild grazers, such as deer and feral goats, may be spotted too. In the past summer grazing with cattle would have been a common, although they have been largely absent in recent times. The MacGillycuddy Reeks European Innovation Partnership Project (EIP), a locally led agri-environmental project, led by South Kerry Development Partnership, funded by the Department of Agriculture, Food and the Marine as part of Ireland's Rural Development Programme 2014-2020 is supporting participating landowners in re-introducing cattle to the upland areas in the Reeks.

Grazing animals play a crucial role in managing the vegetation. To have healthy heath and bog habitats it is important to get the balance of plant species right across the site. A good grazing regime will help prevent erosion of the peat, reduce or remove the need for burning, reduce opportunities of the spread of bracken and create peatlands with varied structure that allows biodiversity to flourish.

Traditionally sheep and cattle would have shared the mountain and eaten different things. Since cattle have been largely absent on the mountain in recent years, certain species such as purple moor-grass (*Molinia caerulea*) and gorse (*Ulex spp.*) which are less palatable to sheep have increased forming dense grassy tussocks and scrub. This vegetation can create fuel for wildfire or farmers may be tempted to burn the areas to regain grazing habitat. Cattle, being much heavier than sheep also play an important role in trampling bracken which is spreading in the uplands and threatening the natural habitats. Uncontrolled burning can have devastating impacts on these sensitive habitats resulting in the loss of the very important moss layer, including special group of mosses called sphagnum mosses that help to create the peat and are responsible for the formation of the heath and bogs.

The MacGillycuddy Reeks EIP Project are expecting that the re-introduction of cattle to the area will help to restore balance and improve the condition of heath and bog habitats by discouraging uncontrolled burning, reducing the frequency of wildfires and limiting the spread of bracken. Participating farmers have been given Habitat Awareness Training and the MacGillycuddy Reeks EIP Project Team have facilitated a cattle B&B system that enables farmers to bring cattle in to graze during summer months without the need to purchase them and house them for the remainder of the year. Farmers are encouraged to use traditional breeds such as Kerry or Droimeann cattle where possible as these are better suited to the uplands than the commercial breeds. Cattle were re-introduced to a number of sites last summer and initial feedback indicates that the farmers were both surprised and pleased with the results. Several farmers commented on what good condition the cattle were in coming off the mountain and effect they had in opening up the vegetation.

For more information please visit www.macgillycuddyreekskerry.com or contact the Project Team.

Dexter cattle

In this article, John O'Neill, Vice Chairman of The Dexter Cattle Society gives a historical outline of Dexter cattle along with an account of how the society has been incorporated in The Republic of Ireland.



Dexter cattle are a native Irish rare breed of dual purpose cattle. They are thought to be the smallest breed of cattle in Europe. Dexter's are excellent foragers and do very well on marginal land. They outwinter well and consume approximately two thirds of the food of a modern breed. They have a high level of disease and parasite resistance and are a bright intelligent breed. As a breed they have a very low rate of calving difficulties.

Dexter and Kerry cattle come from the same gene pool. Originally they were not kept in separate herds nor put to different bulls. At some point, thought to be towards the end of the 18th

century, a dwarfing gene entered the Kerry breed. Which breed it came in from is not known. The dwarfing gene in question is partially dominant. If the individual gets the dwarfing gene from both parents it will be non-viable and will be aborted. However if it gets the dwarfing gene from only one parent it will be a dwarf. The Dwarf Kerrys became known as Dexters and became quite sought after. Irish breeders worked out in the first half of the 19th century that the non viable calves could be avoided by ensuring that a dwarf was not bred to a dwarf. The early societies and herd books were for both Dexters and Kerrys and they were also considered to be a single breed from the showing point of view. In the second half of the 19th Century Dexters became very popular in Britain and commanded high prices. As a result most Dexters in Ireland were exported to Britain. In the early 20th century the Irish Kerry Society stopped accepting Dexters for registration. In Britain separate herd books were set up for Dexters and Kerrys and effectively they became separate breeds. From there the breeds diverged both by selection and introgression.

As a result of the Irish Kerry Society's decision not to register Dexters the dwarf Kerrys went into decline in Ireland. For a period of approximately fifty years no Dexters were registered in Ireland. In 1969 the UCD veterinary college bought a number of Dexters at the Shadwell herd dispersal in England and reintroduced them to Ireland.

A small number of other herds got going in Ireland in the Seventies, eighties and nineties with more interest in the six counties than in the rest of Ireland.

Most breeders currently exclude the dwarfing gene but it is the defining characteristic of the breed and is favoured in the show ring.

Support for Dexters came with REPS and subsequent schemes. These schemes made it viable to get into the breed and the breed has gone from strength to strength since then. The national herd is now approximately 5000 animals.

Up until the end of 2020 Irish breeders were registering their stock with the UK Dexter Cattle Society (UKDCS). However the DAFM contacted the Irish Dexter group in mid-2020 to say that in order to be eligible for any schemes supported by the DAFM or by the EU the animals would have to be registered with an EU based society. Brexit would mean that Irish breeders could no longer register their animals with the UKDCS. Furthermore DEFRA in the UK contacted the UKDCS to let them know they could no longer register animals in the EU and that they were required to remove any EU based animals from their herd book. As a result the Irish group had to set itself up as a society and create a herd book. As anyone who has been through this process knows it is not a trivial task.

Following discussions with the DAFM and ICBF it was decided to go fully down the genomic route. All animals will have to be genotyped before any stock can be registered from them. One big advantage of going this route is that the herd will be fully parent verified. ICBF estimate, based on their work with BDGP, that 5% of animals are not correctly parent recorded. That is a serious issue for the breed and the herd book. Being fully genotyped gives breeders the advantage of being able to guarantee the provenance of both their breeding stock and their meat.

In addition it simplified the breeding programme which is a requirement for all new societies and has to be approved by the DAFM. Without universal genotyping random genotyping is required. This requires a high level of administration, is less effective and is less accepted by breeders.

The fact that the cost of genotyping has come down significantly in recent years was also a consideration. The maximum cost per animal is €25 but it can cost as little as €19.50 if the breeder is registered for VAT and is in BDGP or Herd Plus. It was also felt that this is the direction all breed societies will go over the next few years.

The Dexter group applied for funds from DAFM, under the preservation of genetic resources scheme, to genotype the existing national herd of Dexters and the DAFM stepped forward with substantial funding.

Overall the DAFM have been very helpful in the entire process of setting up the new society.

The Irish Dexter Cattle Society (IDCS) was created in late 2020 and had its breeding programme and rules of procedure approved by DAFM in early 2021. ICBF are hosting the herdbook. This reduces admin significantly as data flows directly from the DAFM AIM system to ICBF and from there into the herd book. Approximately three quarters of breeders who had been registering their animals with the UKDCS had joined the IDCS by the end of the first quarter and members continue to join.

The society is now up and running and is starting to focus more on markets, marketing and helping breeders with sales and purchases of breeding stock. ABP have partnered with the group for a number of years and have bought a significant number of animals each year and given a premium price for the meat. In addition, a number of other outlets have been set up by breeders around the country. Some supply restaurants, some run box schemes others are partnering with butchers or other outlets and some are doing the farmers markets. It is a hive of activity and very promising. Covid has hit some markets quite hard but some of the direct sellers have seen an increase in demand.

Cider Orchard Silvopasture: An Experiment in Progress

by Matt Kaminsky

In this article Matt Kaminsky, co-owner of Meadowfed Lamb in Hadley, Massachusetts talks about his experience using sheep in an orchard. He and his partner are graduates of Hampshire College. His interest is in the preservation of apples and in the use of sheep in a silvopasture management system.



Since our college years, my partner Rachel and I have been stewing on the thought experiment of running livestock through apple orchards. We had run this thought experiment since before we knew there was actually a term for this: silvopasture. Shepherding and cider orcharding were two types of farming we had a keen interest in. At the time, I was an orchardist in training, and my partner was handling a local flock of sheep where we are based in Massachusetts, USA. We shared the common love of all these things; cider & apples, as well as fine meat & wool. During our undergraduate studies, lots of

literature had been coming out about the advantages of silvopasture. Often, we were led to believe it was an unrealistic goal because of the issues that we Americans seem to have with manure existing anywhere within one square mile of a food crop. For this reason, most of the silvopasture literature that was available had to do with grazing cattle in pine plantations in the American South, which were running at an industrial scale compared to the size of acreage and herd that we could dream of managing, at least to begin with.

The owners of the orchard (one of whom grew up in County Meath) that I'd been working at were on the cusp of some big changes to their farm. They were interested in using less diesel to mow the aiseways of the orchards, and wanted to avoid driving the tractor through some of the steeper and more dangerous terrain. They also had some issues with noxious invasive plant species, mostly poison ivy. There was a fertility problem in certain areas of the orchard that had the trees in irregular (biennial) fruit



bearing cycles, where the poison ivy was running amok. They wanted to plant new blocks of apple and nut trees where they had recently released fields from overgrown scrubland. Jonathan Carr, the head orchardist and property owner, had asked us if we'd ever thought about running sheep through the orchard to mow instead of relying on machinery. The added benefits of fertility would help the trees, and beginning to manage the orchards with rotational grazing could help with some of the novel weed pressure. It was a cosmic coalescence when they offered us the option to begin keeping sheep there, since that was a major interest of Rachel's at the time, and we'd been throwing around the idea of getting our own sheep for awhile. We decided that it would be a wise idea to start small with six ewes; there were enough pastures to support a half dozen sheep aside from any areas already planted in apple trees, so if our experiment failed and the sheep tore up the orchard, then they'd still have plenty of grazing space elsewhere, but if the experiment were successful, we'd have room to grow the size of the herd, stacking two agricultural functions on one another in symbiosis.



Flash forward to our third season at this orchard, and we finally have our feet under us with rotational grazing sheep through orchards. Our lovely flock of Finnsheep calls Preservation Orchard (home of Carr's Ciderhouse in Hadley, MA, USA). They graze between rows of cider apple, chestnut, and heartnut trees. We love Finns for many reasons, but the breed works particularly well in our system because they have a low interest in browsing twigs and bark of the trees, and they're a smaller-framed animal who isn't capable of reaching basal fruit and nut bearing limbs on most of our trees. They have a highly desirable wool for the craftspeople in our area, and their meat is of particular delicacy, making them easy to market. They're very personable, making them a joy to work with as we rotate them every day.

We have arrived at a strategy of "strip grazing," when running them through the orchards. This involves close-mowing between the trees so that a clean line of of electronet fence can be set up right to the trunks, allowing the sheep to graze the row middles and refusing them access to the trees. We use a scythe for cutting clean fencelines when building paddocks because string trimmers and other mowers can damage trees and trample too much of the forage. They're also much quieter and more pleasant! We favor

this method over installing "guards" on the trunks of individual trees enclosed within a wider rectangular paddock like you sometimes see with cattle grazing in orchards in Normandy. Those heavy-duty guards are expensive, cumbersome, and are incompatible with newly planted stock.

The sheep are often clever enough to outsmart the guards you might place on them, fiddling with or teasing off the guards away in curiosity. Strip grazing with electronet fencing allows us to quickly cordon off vulnerable trees and nimbly weave around obstacles like the odd curvy trunk here and there, making a paddock sized specifically to the needs of the situation, and preventing the sheep from showing any interest in the young trees. We have done this with a lighter stocking rate in blocks of dwarf trees (due to a thinner strip of grazeable area) and heavier stocking rate in blocks of full-sized trees, both with very favorable results.

Significant time spent pruning trees with both grazing and fruit production in mind must be done ahead of time in the orchards for this to be possible. This is necessary for the general health and maintenance of the trees, but also to allow for fencing to be set up without getting tangled on lower branches. Most of this is done in the Winter, but we have started carrying some tree pruning equipment with us as we build paddocks in case we need to address a snapped limb or a tree limb sagging with cropweight into the fenceline during midsummer. Most of the best grazing spaces we have are the



recently planted blocks of orchard, because these blocks of trees have been planned with silvopasture in mind. The apple trees are grafted onto full sized (standard) rootstock, thus have a larger aisleway between rows, and will eventually provide more windbreaking and shade for the sheep. These more vigorous trees can grow happily with no limbs below 4 feet from the ground and so they require less corrective tree pruning to make them compatible with our electronet fencing. Still, grazing the blocks of dwarf orchards has been great, just requires a different paddock size and stocking rate to get it just right.

Our goal is for the sheep to achieve the ideal level of grazing in a given area after 24 hrs spent in that space. We aim to arrange a strip paddock of the right size so that the sheep have to compete a bit with each other. That competition encourages them to gobble up problematic vine species that are common in our orchards like Virginia creeper, poison ivy, oriental bittersweet, and grape at the same rate as they eat the more desirable grasses, clovers and other forbs present as well. Whatever they trample counts as stable carbon which remains in the understory.

It's a very different workflow than the method of rotational grazing we originally began with in our first season at the orchard where we grazed more ordinary pastures than silvopastures. We aren't wasting valuable forage growth and space at the orchard by growing all this lovely greenery in the aisleways between trees and mowing it down. Now we're turning that extra vegetation which typically into meat and wool! It requires diligent care to make this system work properly but affords us a more diverse and bountiful harvest from the same piece of land. The sheep love being in the orchard. They feel safer with the trees around rather than being all out in the open, and the trees provide shade and windbreaks which provide comfort from the elements and encourages them to spend more time grazing rather than flocking to the shade of a lean-to or our mobile field shelter.



@gnarlypippinsand @brotherflax

I could go on about this for days. It's a topic we're fascinated with, and we still have years and years of learning ahead of on how rotational grazing in orchards should be conducted, and how it differs from grazing plain pastures. Plus, there is hardly a more pleasant place to be than an apple orchard filled with happy sheep. We love it!

Follow along our story and find our products by following @meadowfedlamb on Instagram, and by following



Have News You Want to Share?

Send us your news to info@inrbs.ie and we will share it on our website. It is then shared to Twitter, Instagram and Facebook.

Galway Wool: Uniquely Superior Irish Bio-Fibre

From Sheep to Shop

In this article Blatnaid Gallagher, one of the founding members of The Galway Wool Co-operative, discusses the progress, challenges and aims of the Co-operative in marketing the wool from pedigree Galway sheep. The formation of the Galway Wool Co-operative was spurred in part by Blatnaid's research for her MSc at NUIG.



A hardworking group of Irish Wool Growers has withdrawn their uniquely Irish produce from The World Wool Commodities Market. Dismayed at the sharply falling price of their wool, this innovative group decided to find a direct route to market for their superior Native Irish Wool.

The Galway is Ireland's Native breed of sheep. It is from her wool, that the Irish Aran Sweater was created. Before the introduction of European and British Breeds in the '70s, Irish Farmers were successful in earning a living

from this Native Irish Sheep Breed; happily producing beautiful crisp white wool from this placid, dual-purpose sheep.

As the demand for the faster meat-producing sheep breeds increased, sadly The Galway Sheep numbers started to decline. Simultaneously, our tourist industry was growing and so too was the cruel reality of Irish Crafts being produced with Australian and South African merino wool and subsequently being labeled as Irish Wool Product.

Many of the woolen products in our Irish Woolen Mills & Retail Shops are being produced from Imported Wool. Unfortunately, in a lot of our Tourist Shops, we are also churning out "Irish" Sweaters & Blankets made in China, India, Morocco, Turkey, and other apparel producing countries.

The production of these products outside of Ireland is diluting our Irish Brand, selling off our Heritage, and disenfranchising our Craft Culture. In Ireland and abroad, the Aran Sweater and other Woolen Craft Products are thriving, whilst Irish Wool Production is on its knees and Irish Sheep farmers are expected to dump their wool once again this year.

During a worldwide pandemic, an Innovative group of Irish Farmers could no longer watch their natural wool bio-fiber, which acts as a carbon sink and supports bio-diversity in the Irish landscape, being dumped and treated as waste.

These Irish Farmers worked tirelessly over Zoom calls and found a direct route to market for their beautiful Irish Wool.

Donegal Yarn, becoming The Galway Wool Co-ops first customer, recognized the superior quality of this crisp white wool, its provenance, and its importance as the cornerstone of the Irish Wool and Crafts Industry for almost 100yrs. In acknowledging the extraordinary qualities of our native Galway Wool, Donegal Yarn has agreed to a very fair and equitable price for this year's wool clip.



Crisp white wool, of a medium to fine texture, Galway Wool is set to become a premier quality bio-fiber, sought after by International Designers and Creators of Home Interiors and Slow Fashion Garments.

The Galway Wool Cooperative was busy in 2021! In June, they carefully harvested over 5400kgs of Purebred Native Irish Wool. In October the virtual Co-op went live. You can visit them at www.galwaywool.ie.



We gratefully received support funding from Galway Rural Development through the LEADER fund. Members of the Co-op also generously donated by way of a levy to the construction of our digital marketing platform. In doing so they have also taken the initiative to determine their own bright futures as Native Irish Wool Producers.

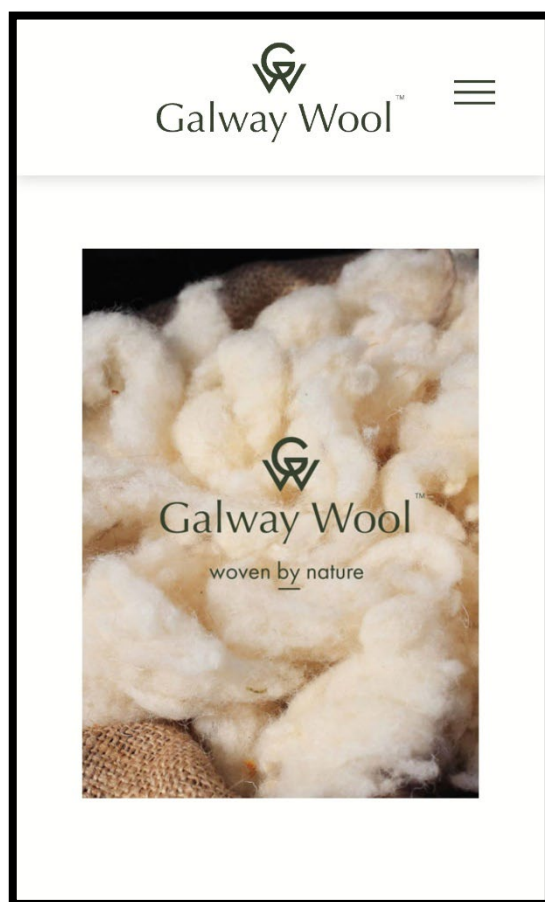
We promised Donegal Yarns that we were 100% committed to telling our story about Galway Wool. Finding Markets and educating the consumer is a big part of the role of The Galway Wool Co-op. Rhymestudio in New York City have already entered negotiations for the yarn spun from our wool! They create bespoke area rugs and tapestries for their Art Design House and have begun taking orders for The Galway, Native Irish Wool Rugs.

Our virtual Co-op also has two features we hope to release soon. Our virtual Showroom, which will be open for creators and makers to virtually display their creations using Galway Wool. Members of the co-op will also be able to advertise their stock for sale, we believe this advertising feature will work well for farmers who are interested in staring new flocks. Our Galway Sheep breeders know all to well the benefits of meeting and getting to know a buyer or indeed a seller of stock. We have started to introduce Breeders and a short bio about them in our meet the growers section.

Moving on the success of 2022, we are thrilled to partner with The National College of Art and Design. This week their 2nd year student will be taken on a virtual tour of one of our Galway Wool growers. These students will then be able to forge a greater understanding of how and where our Native Irish Wool grows.

Our aim, is to encourage more registered Galway Sheep breeders to join the Co-operative and drive home the message **Galway Wool is back!** We fulfilled our order in 2022 and given the demand we would like to make even more Galway Wool available for designers and crafters to work with. Our long term objective is to attain GI status for our beautiful Galway Wool and Lamb.

Last year we ran a short pilot scheme, supplying succulent, grass fed Galway Lamb to @suckvalleyfarm , this offering sold out week after week at local markets run by @MadYokeFarm and supplied to consumers by Suck Valley Farm Food. The journey for GI status is not for the faint hearted, so we would most definitely consider linking the Galway wool & grass fed lamb in the one application.



The Native Irish Honey Bee

In this article Jane Sellers, who has been working with native Irish honey bees for 20-years and is a keen supporter of the Native Irish Honey Bee Society, explains the differences between the indigenous and introduced species as well as giving an account of other pollinators and the All Ireland Pollinator Plan.

The Native Irish Honey Bee Society (NIHBS) was set up in 2012 to protect and conserve the native Irish honey bee - *Apis mellifera mellifera*.

Like all 99 species of Irish bees *A.m.m* is affected by habitat loss, pesticide use and climate change but *A.m.m* also faces extinction by hybridisation. Results of two recent surveys and show that the majority of beekeepers in Ireland work with *A.m.m*. One survey conducted by NUIG showed 90% preference for *A.m.m*. The other survey was carried out by the Irish Beekeepers Association (IBA) and found an 82% preference. Despite this, there are beekeepers who import honey bees from Europe - mostly for onward sale to beginners. These bees include *Apis mellifera ligustica*, the native Italian bee and *Apis mellifera carnica* which is native to eastern Europe. Unsurprisingly neither of these bees is better suited to Irish conditions than the native and given time will fizzle out. However, before that happens they can and do interbreed with native Irish bees. As a result the DNA of resulting generations is in flitters and is expressed in behaviours such as aggression and inappropriate swarming. Contrary to popular belief, importation does not increase diversity. Instead it whittles away at the total *A.m.m* diversity removing highly evolved, specialist ecotypes from the gene pool and replacing them with dysfunctional hybrids.



Figure 1 *Apis mellifera mellifera* worker

Another foreign bee is the 'Buckfast' bee. The Buckfast was a honey bee which was bred in England in the 1930s by Brother Adam. England in those times had suffered huge honey bee losses from a condition which became known as Isle of Wight disease and many, including Brother Adam, mistakenly thought that England's native bee had become extinct. Brother Adam set out to breed a honey bee to replace it and he travelled across Europe and North Africa in search of strains of bees to breed from.

What resulted was a hybrid bee which had many very good qualities, however it seems likely that many of these qualities were due to the hybrid vigour of first generation crosses which cannot therefore be reliably passed on to subsequent generations. As a result, users of Buckfast bees must rely on breeders to requeen their bees at regular intervals otherwise their Buckfasts will simply out-cross with native stocks resulting in bees which have, at best, mixed characteristics and are often very aggressive.

People are still charmed by the story of the patient German monk and his bee-breeding quest. But Brother Adam is long gone and nowadays there is no such thing as a Buckfast bee - only people who know a clever marketing ploy for bees which are neither *mellifera*, *ligustica* or *carnica* but are probably a mixture of all three.

Ireland's Other Bees.

In addition to *A.m.m*, Ireland currently has 21 bumblebees and 77 solitary bees. However, 6 species of bumble bee and 24 solitary bees species are threatened with extinction - that's 30%. If we include a further 3 bumble bees and 7 solitary bees which are categorised as 'near-threatened' that's 40%. There is a year-on-year decline of 4.8%.

Bumble Bees

The bumblebee life-cycle is as follows. Mated females overwinter underground and emerge on fine days in spring. These overwintered queens are the large bumblebees to be seen early in spring. Their first task is to seek a nesting site for the season ahead. Some species nest on the ground surface, for example, in tufts of rough grass, while others nest underground. A week or so after emerging, these queens can be observed gathering pollen in their pollen baskets which means a suitable nest site has been found and brood production has started. The first bumblebee workers appear about a month later. These have the same colour patterns as the queens, but they are smaller, and sometimes much smaller. The first males appear about mid-June. During the summer months males and young queens are produced. They fly from the nest and mate. The males die off but the queens overwinter underground and the cycle repeats.



Figure 2 Bumblebee queen

Solitary Bees

Different types of solitary bees have different ways of constructing their nests - there are clues in the names: mining bees, mason bees, plasterer bees and leaf cutter bees.



Figure 3 Gwynne's mining bee - *Andrena bicolor*

However, they all have similar life cycles. The males usually emerge first followed by the females some days later. Mating is the only function of the males. The mated females each construct a nest where they gather pollen into cells. One egg is laid into each of the cells, the cells are sealed then the females die off. Back in the nest, the eggs develop into larvae and eventually into pupae but they remain in the cells over the winter. Each species has a very well-defined flight period, when adults emerge - often just a few weeks each year.

A few species of "solitary" bees also show the beginnings of "social" behaviour – where females co-operate in building and providing food for the nests.

Cuckoo Bees

Bumble bees and solitary bees also have cuckoo bees. Cuckoo bees are parasitic in the same way that a cuckoo is parasitic - they invade the nests of their hosts and replace the eggs with their own eggs.

The All-Ireland Pollinator Plan

Einstein said, "*If the bee disappeared off the surface of the globe, man would have only four years left to live*". They now say he probably didn't say that at all but then they wouldn't they? Whether he said it or not - the bleak nugget of truth in that sentence seems to have registered with many people.

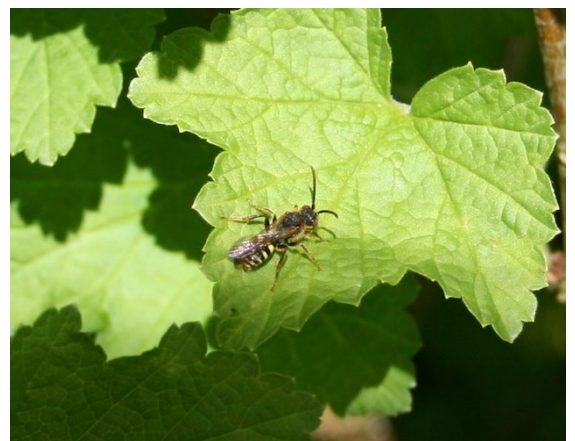


Figure 4 Cuckoo bee - *Nomada marshamella* (male)

In response to the shocking declines in Irish pollinator species the first All-Ireland Pollinator Plan was launched in 2015 by Dr Úna FitzPatrick (National Biodiversity Data Centre) and Prof. Jane Stout (Trinity College Dublin), with the aim of reversing these very worrying trends by restoring habitats and increasing the availability of flowering plants and trees.

There is now a new version, for 2021- 2025 with the following objectives:

- 1: Making farmland pollinator friendly.
- 2: Making public land pollinator friendly.
- 3: Making private land pollinator friendly.
- 4: All-Ireland Honeybee Strategy.
- 5: Conserving rare pollinators.

The following actions are encouraged.

Hedgerows

Planting new hedgerows with native species such as hawthorn, hazel, willow and blackberry etc. Old hedgerows should be maintained properly and cut less often. Vegetation at hedge bases should not be sprayed so wild flowers are conserved.

Native Wildflowers

Should be encouraged along hedges, lanes and field corners. Buffer strips containing native wild flowers should be planted along field margins and cut between September and April only. Further management practices can include grazing to conserve and improve these areas.

Nectar and Pollen rich shrubs and trees

Planting of willow, hazel, hawthorn, horse chestnut and blackthorn in hedges and field corners, parks, schools etc.

Nesting Areas

Tussocky grass and nettles provide nesting areas for bumble bees. Bare, uncultivated ground, sunny hedge banks for solitary bees.

The Other Bits



The photo above demonstrates just how much land is not hedgerow or hedge base. When fields are planted with single species rye grass swards or tillage they are about as useful to bees and other pollinating insects as these flooded fields.

Sources

All Ireland Pollinator Plan: <https://pollinators.ie/aipp-2021-2025/>

Breen, John (2020) *Bees of Ireland*. Booklet available from nihbs.org

Falk, Steven (2015) *Field Guide to Bees of Great Britain and Ireland*. London. Bloomsbury Wildlife Guides.

Photos: Jane Sellers



Figure 5 Ashy mining bee - *Andrena cineraria*

The Revival of the Old Cladóir Sheep Breed

In this article Sean Cadden gives an account of the efforts to revive The Cladoir breed of sheep. Sean is a retired Teagasc adviser with thirty five years experience in advising hill farmers in West Mayo and in 2001 he helped Tom King put together his flock of sheep believed at the time to contain residual Cladoir genetics.



In October 2020 a comparative DNA test was made on sixty five sheep in the Connemara National Park, fifty six of these had unique DNA, a very exciting result. An old breed of sheep existed in South Connemara called Cladagh or more recently Cladóir. The unique DNA belongs to the Cladóir breed. No purebreds Cladóir have not existed for at least fifty years. The challenge now is to breed up those sheep back to purity.

Twenty years ago, Tom King of Westport took an interest and he bought some Cladóir like sheep but he could find no purebreds. The Connemara National Park purchased Tom's flock in 2019, some more sheep were added to the flock in 2020, these sheep that were DNA

tested last autumn.

There are 30 females and 26 males in the 56 sheep with significant Cladóir DNA. It was just too late to put a proper breeding programme in place. The thirty ewes were bred to two rams and these have now lambed and are rearing 30 Lambs.

The Cladóir is believed to be the remnant of the old sheep breed from the Connemara Hills. These were small light boned, with the small head and a narrow face. A similar breed had existed on the Wicklow hills. The Congested Districts Board in 1893 published its Baseline Report for South Connemara found there were approx. 2500 sheep in south Connemara they were very dismissive of the stock they did not even suggest they should be improved by crossing with the Scotch Blackface or another breed. That probably saved the Cladoir breed.

After the Famine, the better hills in north Connemara were cleared of tenants, let as large hill farms, and stocked with Scotch Blackface sheep. The Cladóir breed survived in very small flocks on the very long shoreline in South Connemara. Some of those flocks were "improved" by crossing with the Scotch Blackface or Cheviot but the breed continued to survive. In the 1970s it was believed that no purebred Cladóir's existed but sheep in some flocks did have Cladóir characteristics. The breed was regarded as extinct in the 1970's.

The sheep in the National Park do not have a uniform appearance some have very close resemblance to Scotch Blackface. The common breeds of sheep have got uniformity of appearance by breeding for that type for maybe twenty generations. The Cladóiri will be assessed for type (appearance) this summer. The wool will also be graded and assessed. It is hoped to purchase some more Cladóir like sheep this year and those that test positive will be added to the flock. As the numbers of positive sheep is very low at present the National Park will retain ownership for a few years. It is intended that flocks of 5 to 6-year-olds and a ram will be let to local farmers. In a few



years time, the sheep will be sold to the participating farmers and the breeding up will continue. The Cladóiri were never bred to produce a sheep with a particular appearance, it is likely there will continue to be a wide variation in appearance. Sheep with a strong resemblance to Scotch Blackface or Cheviot or other improved breed will be culled.

The lands on which these existed originally are now to a great extent have some environmental designation, the suitability of those sheep for controlled grazing on designated lands will be assessed. It is very likely the breed will have an important role in managing the vegetation on some of the designated sites.

The Cladóir Sheep Preservation Committee has been formed and tasked itself with the preservation and development of the remaining Cladóir Sheep as their own distinct breed. The committee consists of persons interested in the preservation and promotion of the Cladóir Sheep, and includes representatives from the rare breeds societies, Sheep Ireland, the National Parks and Wildlife Service, the farming community, and other interested parties. The committee is jointly chaired by Tom King and Sean Cadden, who are primarily responsible for this initiative. The objective of the committee is the long-term preservation of the Cladóir Sheep, by regenerating the breed through a breeding programme and eventually having these sheep formally recognised as Cladoir Sheep.

It is a very exciting project, no breed has ever before in Ireland been brought back from virtual extinction without the introduction of DNA from another breed.

It will take many generations of planned breeding, of the crossbreds or conversion stock we now have, until e again have saleable purebred Cladóiri.

Have you had a chance to look at our website yet?

<http://inrbs.ie>



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