The Burren LIFE Project

Farming for Conservation in the Burren

Final Report 2010

The Fertile Rock

The Burren is a very beautiful and unique place. Much of the Burren is composed of priority habitats for conservation under the EU Habitats Directive. These habitats are great repositories of wildlife and are valuable for farming, recreation and education. They need our respect and care.

Limestone pavement is the most striking element of the Burren landscape. It consists of blocks of limestone bedrock, known as clints, separated by fissures called grikes. Pavements are shaped by a range of forces, including the erosive action of glaciers and dissolution by rainwater. Though soil and vegetation are sparse, pavements are important habitats for a number of species such as the **dark red helleborine.**

Orchid-rich, dry calcareous grasslands are unimproved grasslands on thin, calcium-rich soils. They usually contain an abundance of classic 'Burren' species such as spring gentians, mountain avens and orchids such as the **Irish or dense-flowered orchid.** Low-input winter grazing is key to maintaining this species-richness.

Turloughs are areas where a depression in the limestone is intermittently flooded, generally in winter, then drying out in summer. They normally fill through underground springs and swallow holes. These unique habitats contain rare insects and plants such as the **shrubby cinquefoil.**

Limestone heaths are common in the Burren. They are characterised by dwarf shrubs having a cover of at least 25%, the most common shrub species being ling heather and **mountain avens.** In the Burren they contain a wonderful and unusual mixture of acid-loving and lime-loving plants. Bearberry and crowberry grow in the rare alpine heaths.

Restoring the Balance

The Burren, and its habitats, face a very uncertain future. This has a lot to do with the rapidly changing relationship between people and the land. The reasons behind it are complex and relate to political, economic, social and other factors. We can see the impact of these changes on the ground, the landscape, the wildlife, the archaeology and even on the farming community.

Threat: Loss of tradition and knowledge

The Burren is famous for outwintering livestock. Livestock, mainly suckler cows, are kept on the hills over winter where there is plenty to eat and drink, and the ground is warm and dry. These animals graze back the vegetation and clear the way for the Burren's special flowers to bloom in spring. Nowadays more farmers are feeding or housing their cattle over winter and the old traditions and knowledge of grazing levels and animal husbandry on the Burren winterages are slowly ebbing away.

Threat: Intensification

Farming is a difficult business, particularly on rough, rocky areas like the Burren. Many farmers can only survive by working off farm. To do this they must farm very efficiently. Along with other factors (agricultural and environmental policies and legislation, changing stock types and breeds etc) this has led to an increase in both the housing of animals and feeding them with silage on the winterages. This can lead to localized pollution in this highly-sensitive karst environment and also to undergrazing and eventual scrub encroachment.

Threat: Neglect and abandonment

As farm sizes increase and profit margins decline, many farmers opt instead to work-off farm and/or to focus their energies on more fertile parts of the farm. This often results in a reduction in the use (grazing) of winterages as it takes a lot of time and effort to manage stock on these areas. Over time this neglect results in a loss of species and in many cases the encroachment of hazel and blackthorn bushes.

Finding a solution - BurrenLIFE

Change can also lead to opportunity. We urgently need a new model for how best to farm the Burren in a way that helps protect its priority habitats while also helping local farmers to earn a decent living.

The BurrenLIFE project (BLP) has worked hand in hand with farmers, scientists and conservation experts for over five years (2004-2010) to develop such a model. The BLP has piloted a range of actions on 20 'project' farms (3,097ha) using individual farm plans developed by the BLP team and the farmer. A number of agreed actions were undertaken and the impact of these actions was monitored. Thus, as well as tackling conservation threats on the ground, the BLP also produced valuable information to inform the development of a tested, costed blueprint for Burren farming.

Methods

Farming for conservation is based on sound, traditional principles of managing the land with respect and care. It is not an approach which seeks to 'turn the clock back' to old ways of farming. Instead, this is a practical approach which seeks to blend the best aspects of existing farming systems with new innovations to develop more effective ways to feed and water livestock and to control scrub.

Issues	BLP Solutions *and Results*
 Housing livestock when winterages need to be grazed.	 Extend winter grazing season on winterages. *BLP helped increase grazing by 25% using a range of measures (below).*
 Livestock activity concentrated around feeding points, risk of pollution and undergrazing.	 Switch from silage to a specially formulated concentrate feed. *Using the BLP ration, silage use was reduced annually by 61% or 655,000kgs.*
 Limited water availability restricts grazing levels and impacts on welfare.	 Improve water facilities, e.g. installing nose pumps (left) and tanks. *BLP funded water works on 18 farms, incl. 26 new troughs, pumps etc.*
 Poor farm infrastructure makes husbandry difficult and less effective.	 Restore internal stone walls to better manage stock. *BLP restored 15,000m of internal stone walls using local skilled labour.*
 Restricted access impacts on grazing of winterages & stock herding.	 Create access paths. *Scrub was cut from 55km of paths and 5,000m of trackway (for vehicles) was installed.*
 Scrub encroachment on priority habitats reduces biodiversity.	 Clear encroaching scrub from targeted areas. *Scrub was removed from100ha of priority habitat.*

Threats to priority habitats in the Burren and measures adopted to address them.

Example of Project Actions

Removing Scrub

Farmers have always had to work hard to control scrub in the Burren. Scrub was cut for fuel, fencing, thatching and was used as a fodder source. Though a lot of these uses are no longer viable, there is still a need to control scrub particularly where it is blocking access and where it is beginning to encroach on to other valuable habitats. Scrub control is difficult, time-consuming and expensive; it should not be undertaken lightly. Methods successfully piloted under BLP included cutting scrub with chainsaws and treating the stumps, treating young bushes with a chemical wipe and using tractor-mounted flails.

Improving Grazing

Practical measures implemented under the BLP to encourage and support the grazing of winterages included enhancing water availability, improving access and restoring internal stone walls. Research was conducted into the carrying capacity of winterages to help farmers to better plan their conservation grazing regime. Target stocking rates were estimated at 0.14LU/ha (weak winterage), 0.28LU/ha (middling) and 0.56LU/ha (strong). Grazing at these levels is best for the habitats and for the farmer.

Getting the feeding right

The nutritional requirements of suckler cows in the last months of pregnancy can be up to 50% higher than those of the store animals that traditionally grazed Burren winterages. Between January and April, winterages do not provide adequate nutrition for suckler cows, and they are also low in important minerals such as copper, magnesium, selenium and phosphorous. The BLP developed a targeted ration which provides the extra nutrients and minerals that an outwintering cow needs: feeding this ration at recommended levels will support longer and more effective grazing

Monitoring Results

Monitoring was a core activity of the BLP. Monitoring is important to ensure that project actions are as effective and efficient as possible and to prove that farming for conservation really does work.

Impact on priority habitats

Over the course of the BLP there was an increase of 25.2% in overall grazing levels on project farm winterages. This led to a 31.9% increase (677.2ha) in the amount of land classed as 'well-grazed'. Where grazing levels increased, there was a decrease in the amount of dead vegetation that suppresses the growth of the flowers. The result – more of the Burren's famous flowers.

Impact on farmer income

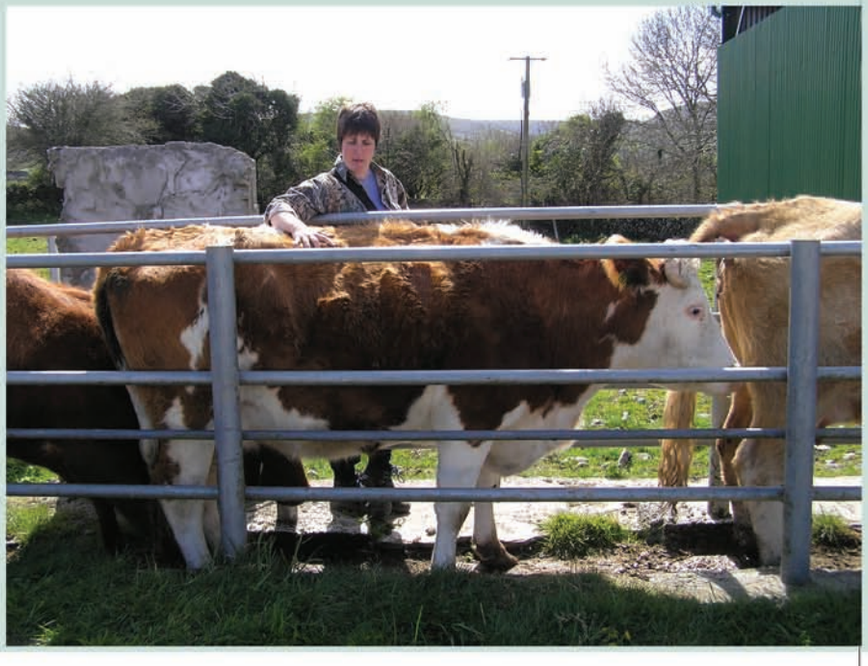
Though Burren farming systems have a relatively low cost base, thanks to their low over-wintering costs, the financial viability of farming in the Burren is poor. Market returns do not reflect production costs and most farmers rely on direct payments. Payments made to project farmers and farm contractors through the BLP helped enhance farm viability. Furthermore, research commissioned by the BLP showed that the public were willing to pay (an average of €842/ ha) farmers to maintain limestone pavements and orchid rich grasslands in the Burren.

Impact on water quality

The amount of silage fed on BLP farms was reduced by over 60% per annum. This means increased grazing and reduced point source pollution. A Nutrient Export Model created by the project confirmed the relative benefits of the BLP system in minimizing nutrient losses to highly-vulnerable wetland habitats such as turloughs and cladium fens.

Impact on animal health and welfare

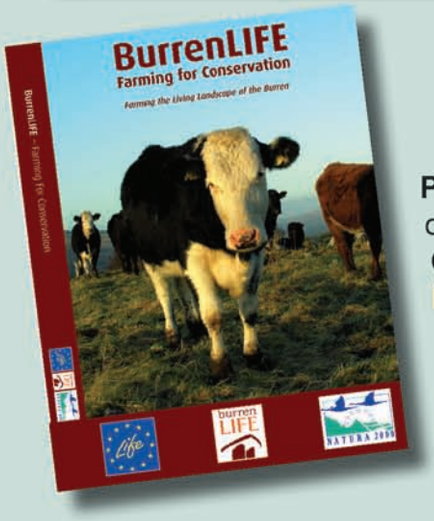
A detailed programme of animal health monitoring was undertaken by the BLP team. This included condition scoring of outwintering cattle, blood and faecal sampling, recording of information on animal health, calving etc. A workshop on animal health and another on animal nutrition confirmed what these results suggested: that the BLP system offers significant animal health benefits over conventional silage or housing based overwintering systems.



Raising Awareness

The BurrenLIFE website www.burrenlife.com continues to act as the main window for the BLP to the outside world. The site contains up to date information on all aspects of the BLP as well as a wide range of resources including useful contacts, information on the new BurrenLIFE Programme and research reports on ***The Management of Burren Feral Goats*** ***and*** ***Socio-economic value of Farming for Conservation.*** The website also contains a set of 5 downloadable **Farming for Conservation Best Practice Guides.**

Signage Four Interpretative panels outlining the work of the BLP have been erected - at the Burren National Park (2) and at Slieve Carron close to the National Nature Reserve (2).



Publications The work of the BLP has been featured in a wide variety of publications including British Wildlife and a new book on European Grasslands of High Nature Value. The BLP also produced a DVD on **Farming the Living Landscape of the Burren** - clips of which may be viewed on www.burrenlife.com

Geographical Information System The BLP have been developing a State-of-the-art GIS to assist with farm planning, data management, retrieval and analysis. This system will play an important role in the future operation of the BLP.

Heritage Education Programme The BLP worked with 24 primary schools and 6 post primary schools in the delivery of its heritage education programme, as well as organizing 62 public lectures, 12 guided walks, 16 Demonstration days and many other educational events. The BLP team contributed to a large number of workshops, conferences, seminars and publications and hosted a number of visitors to the project over its five year duration. Highlights included a presentation to an EC LIFE Nature Workshop in Brussels (2008) and a presentation to the Joint Oireachtas Committee on the Environment (2009)

The Future: looking ahead

A New Dawn On July 8th, 2009 The Minister of Agriculture Fisheries and Food (DAFF) announced an allocation of '€1m each year for three years to support high environmental value farming, with tourism spin-off, in the Burren, continuing and mainstreaming the pilot (BurrenLIFE) scheme'. The administration of this new scheme – the first of its kind in Ireland - will be managed by NPWS who will employ a project team at the old BLP offices in Carron. For more details please visit www.burrenlife.com

Farmer's response Burrenbeo Trust and Burren IFA conducted a survey of 245 people from 111 Burren farm families in 2009. 96% survey respondents agreed with the statement 'It is a privilege to farm in the Burren' and an impressive 72% of respondents planned to continue farming. When asked whether or not they agreed with the statement 'The BurrenLIFE project has had a positive impact on the conservation of the Burren' 88% of respondents said that they agreed.

Burren Beef and Lamb Producers Group (BBLPG) If you want to get local, high quality meat reared on the winterage pastures of the Burren, while also contributing to the support of conservation farming in the Burren, contact the BBLPG - burrenproducers@gmail.com, 087 9963477, Doctors Hill, Kilfenora, Co. Clare.

Partnership The BLP was co-ordinated by the National Parks and Wildlife Service (NPWS) of the Department of the Environment, Heritage and Local Government. It was a close partnership between the NPWS, Teagasc and the Burren IFA. The Project was part funded by the EU LIFE Nature Fund. We wish to acknowledge the strong support provided by NPWS, Teagasc and the Burren IFA. We wish to sincerely the 20 BLP farmers and their families, and all the farmers of the Burren for their support.

Thank you The BLP wish to acknowledge all those who have worked for the BLP over the past five years. Team members Brendan Dunford, Sharon Parr, Ruairi O'Conchuir, James Moran, Aisling Keane and Bryony Williams. Contractors Pamela Bartley, Grace O'Donovan, Tony Kirby, Joanne Brannigan, John O'Neill, Karma Farrell, Ray Werner, Tom van Rensburg, Lava Yadav and Hugh Kelley. All of our walk and talk leaders and all of the farm workers. And of course Bridie Hehir for all her help.

Contact Us:

The BurrenLIFE offices in Carron will remain as the centre for Farming for Conservation in the Burren. Old Schoolhouse, Carron, Ennis, Co. Clare. info@burrenlife.com 065-7089000

Comhshaol, Oidhreacht agus Rialtas Áitiúil
Environment, Heritage and Local Government

teagasc