

Farming for Conservation in the Burren

A Guide to Feeding Cattle on Burren Winterages

BURRENLIFE BEST PRACTICE GUIDE No. 4



The BurrenLIFE Project

The Burren, also known as *An Bhoireann* - the 'place of stone' - and described by Cistercian monks as the 'fertile rock', is a unique and very special place. It is one of Ireland's most outstanding landscapes: a place of great beauty and fascination, steeped in history, teeming with wildlife and blessed with a rich culture and strong sense of community.

For some the Burren is a home, for others a place to visit, to study or simply to enjoy. But the importance of the Burren extends far beyond its borders - its heritage is of outstanding universal value. This value has been recognized at European level by the designation of much of the area as Natura 2000 Sites, or Special Areas of Conservation (SACs), under the EU Habitats Directive. As such we are obliged to manage the Burren in such a way that future generations from near and far can continue to benefit from it.

To look after the Burren properly we must appreciate that the Burren has been shaped, not just by natural forces, but by countless generations of farmers as well. The BurrenLIFE Project has worked closely with Burren farmers and other experts to create a blueprint for farming in the Burren, through which farmers can earn a decent living from the land and continue their longstanding role as producers of quality food and custodians of a magnificent heritage and landscape.

The information contained in these guides is based on five years of applied research which took place on 20 farms across the Burren. The practical, locally-targeted solutions contained herein have been tried and tested by Burren farmers on their land and closely monitored by the project team.

The BurrenLIFE Project 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. NPWS wishes to acknowledge the strong support provided by Teagasc, the Burren IFA and the Burren farmers for this Project.

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The past four decades have brought many changes to the traditional winter grazing systems of the Burren. New market forces, a changing Common Agricultural Policy (CAP) and other factors led to farmers switching from grazing store cattle on winterages to grazing suckler cows and to the replacement of traditional breeds with continental crosses.

Suckler cows have higher nutritional requirements than store cattle. Most of the Burren winterages do not meet these nutritional needs between January and March when the cows are in late pregnancy. Many farmers have resorted to introducing silage feeding onto winterages or to housing the cows and feeding them indoors.

Silage feeding leads to animals foraging far less. This results in undergrazing and point source pollution around feeding sites. The housing of animals contributes to the abandonment of winter-grazed grasslands and the loss of important management traditions.

The low nutritional quality and low trace mineral status of Burren winterages necessitates mineral supplementation to maintain animal health.

Good farming practice standards require some level of supplementary/complementary feeding on Burren winterages. This must be balanced by the requirements of environmental standards and legislation to minimise nutrient losses to the environment and maintain priority habitats for conservation in good condition.

To meet this challenge, BurrenLIFE and Teagasc have developed a low cost concentrate feeding system. Following a pilot programme of concentrate supplementary feeding where animal health, feeding and nutrient inputs were monitored, a high quality feed in terms of energy, protein and mineral content was developed. The ration formulation achieves a balance between the nutrients required by the grazing animal with those supplied by the available forage on the winterage.

WHAT INGREDIENTS ARE INCLUDED IN THE BURRENLIFE RATION?

KEY FACTORS IN SOURCING INGREDIENTS FOR THE BURRENLIFE RATION ARE:

1. The need to keep food miles low (i.e. sourcing ingredients from within Ireland where possible)
2. The need to source non-GM ingredients due to some farmer's preference for a non-GM ration.
3. The need to provide a high-energy ration that will meet the needs of the in-calf suckler cow and promote better grazing - the BurrenLIFE ration has a crude protein value of 14% per kg fed (17% on a dry matter basis).

THE FULL LIST OF RECOMMENDED INGREDIENTS:

Barley	69.0%
Rapeseed meal	20.0%
Molasses cane	6.5%
Magnesium oxide	2.0%
Sodium chloride	1.0%
*Minerals	1.0%

* Recommended minerals: Magnesium (1.5 %), Copper (170 ppm), Cobalt (4 ppm), Iodine (25 ppm), Selenium (2.25 ppm), Manganese (218 ppm), Zinc (264 ppm) and Vitamins A (15,000 IU/kg), D₃ (6000 IU/kg) and E (250 IU/kg).
(note: ppm = parts per million, IU = International Unit).

RECOMMENDED FEEDING PRACTICES

COWS AND IN-CALF HEIFERS:

- Feed 2 kg of BurrenLIFE ration per cow per day
- Increase to 3 kg per cow per day in the last few weeks of pregnancy.
- The recommended period for supplementary feeding is mid-January to mid-April. The majority of cows are either in their final months of pregnancy or at the start of lactation during this time.
- Daily feeding rates of BurrenLIFE ration should not be exceeded due to the high amount of minerals in the ration. **Over-feeding of minerals can lead to poisoning.**

OTHER CATTLE:

- The BurrenLIFE ration should not be fed to other cattle due to the higher inclusion rate of minerals.
- A conventional beef ration may be fed to weanlings and store animals on winterages.
- Choose a high energy ration with a crude protein value of 12-14%.
- A feeding rate of 1 - 2 kg per animal per day from mid January to the end of April is recommended.
- On more productive winterages store cattle can be kept over the winter with minimal supplementary feeding.

IS SILAGE/HAY FEEDING REQUIRED WITH THIS SYSTEM?

The BurrenLIFE concentrate feeding system relies on the stocking rate on the winterage being set at a level that supplies sufficient roughage in the daily diet of the animal. In these cases no additional hay or silage should be needed. However in cases of severe weather conditions silage or hay will be required for short periods of time.

Feeding hay grown on the farm and scattered around the site is preferable to silage feeding using ring feeders. Where silage feeding is necessary, consideration should be given to removing the animals from the winterage during the silage

feeding period e.g. on to areas of improved agricultural grassland ('green fields'). However, this may only be possible where there are areas of improved agricultural grassland on well drained, deeper soils on the farm.

Supplementary feeding should not be used to facilitate overstocking winterages beyond their natural carrying capacity. Over time, this will lead to the degradation of the habitat, increased risk of nutrients being lost to water and then damaging the fragile wetlands of the Burren, and increased costs and possibly penalties for the farmer.

On sites where supplementary feeding takes place some localised poaching may be evident due to the congregation of animals. However, accumulation of dung around concentrate feeding sites is generally greatly reduced compared to silage feeding locations.



BENEFITS FOR THE BURREN AND THE FARMER

The BurrenLIFE concentrate-based supplementary feeding system has a number of benefits over the existing silage based supplementary feeding systems practiced on Burren winterages.

BENEFITS FOR THE FARMER

1. Animal health is improved through the introduction of minerals and vitamins in the feed.
2. Herding is easier particularly where animals are fed at a set time each day, preferably morning. Animals tend to become quickly accustomed to getting fed at the feeding location in the morning and then forage around the winterage for the rest of the day.
3. Lowest cost supplementary feeding system - this system is approximately half the cost of existing silage supplementary feeding systems practiced in the Burren.

BENEFITS FOR THE BURREN

1. Reduced risk of nutrient loss to groundwater.
2. Winterage areas are better grazed which can help increase biodiversity and reduce the rate of scrub encroachment.
3. The incidence of poached ring feeder sites and silage plastic litter is greatly reduced.

KEY POINTS

- 1 Get the stocking rate on the winterage right. Stocking rates must be at a level that will allow animals to have sufficient access to roughage during the ration feeding period. If an area is overstocked there won't be enough grass available on the winterage and concentrate supplementation will not maintain the animals' condition.
- 2 Concentrate feeding should be introduced gradually to limit digestibility problems.
- 3 Do not feed concentrate on 'new areas' - stick to old ring feeder sites.
- 4 Supplementary feeding must always be kept to a minimum in order to keep feed costs low and to minimise the risks of additional nutrient input to the environment. As a general guide BurrenLIFE monitoring has shown that a suckler cow can be kept on a winterage supplemented with approximately 150kg of BurrenLIFE concentrate ration.
- 5 Due to the fact that the BurrenLIFE ration is not milled in an organic mill it is not approved for use on an organic farm. A similar concentrate ration approved for use on organic farms should be sourced from your local supplier.
- 6 It is recommended that farmers consider the use of molasses-based mineral buckets outside the winter feeding period of mid-January to mid-April on Burren winterages. The research work of BurrenLIFE has shown that this helps maintain animal health. When concentrate feeding begins on your farm remove mineral buckets as the formulated concentrate (BurrenLIFE pre-calver) will contain the recommended daily allowances of minerals. On organic farms, organic approved seaweed meal is available as an alternative mineral supplement.



A general set up for a concentrate feeding site includes feeding troughs & ½ tonne feed bins which are used to transport feed to site.



Some farmers have successfully fed concentrate directly onto the ground during dry conditions.



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