Teagasc Advisory Newsletter

ENVIRONMENT

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Best practice burning

Uncontrolled wildfires are unequivocally devastating for all uplands, but it is important not to throw out the baby with the bathwater. Restrictions in timing of when burning is allowed tend to be foremost in all burning discussions, giving a perception that any burning between September and February is ok, but that is not the case. An understanding of the fundamental difference between controlled and prescribed burning is needed in order to utilise potential benefits from this powerful land management tool appropriately.

Grazing

Grazing is the most sustainable long-term management practice to maintain uplands in good agricultural and environmental condition for biodiversity, carbon and water. Prescribed burning is a land management practice to rejuvenate abandoned or undergrazed dry heaths with overgrown heather, in order to make the area suitable for sustainable grazing. The practice of

Best practice burning includes right time, right way and right place.

repeated burning every few years as a management plan is not sustainable. Prescribed burning is recommended, only if part of a habitat management plan where there are no practical alternatives, and only if carried out according to best practice.

Dates for your diary

Tuesday, February 28 – Last date for hedge cutting and prescribed burning until Friday, September 1.

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Right way to burn:

- burning is undertaken with necessary permissions and notifications, including: actions requiring consent (ARC) from the National Parks & Wildlife Service (NPWS) for NATURA areas; local authority waste management; fire service; neighbours; and, local forestry owners;
- multiple small blocks of less than one hectare are burned to create a mosaic of vegetation structure, reducing the risk of subsequent overgrazing of the new growth on rejuvenated areas; and,
- moderate heat used to not burn the underlying peat – keep the flame below 1.5m.

Right place to burn

Blanket bog, wet heath, dry heath and upland grasslands are habitats that are interspersed in a mosaic pattern on uplands. The only habitat which can benefit from prescribed burning is dry heath containing strong heather. Prescribed burning (which is always controlled) targets areas where burning will improve the habitat for biodiversity and climate change. Controlled burning is a safe burn of vegetation, but may or may not be the appropriate management of that vegetation in the long term. Blanket bog, wet heath or upland grassland should not be burned.

On blanket bogs and wet heaths, burning alters habitats irrevocably, damaging bog vegetation such as sphagnum mosses and lichen. On upland grassland burning favours aggressive species, decreasing the diversity of flora and leading to the loss of associated fauna biodiversity.

Wild Atlantic Nature knowledge exchange groups

Background

Farmer discussion groups have been a key component of the Agricultural Knowledge and Innovation Systems (AKIS) programme for many years. Research has found that discussion group members are more likely to adopt technology and that groups are an effective mechanism in the delivery of advice. Discussion groups are impacting on management and efficiency. The AKIS model specifically recognises the existence and importance of multiple stakeholders and patterns of information flow with respect to issues relating to sustainable land resource management. Multidisciplinary approaches are recommended. Innovations in current farming practices that could enhance the environment

Chris Hanrahan, Teagasc advisor, facilitating the Mayo KE WAN group.

should be disseminated through existing social networks. Environmental awareness is associated with behaviour change, and while information and education were rarely sufficient in themselves to achieve preferred environmental outcomes, they are a necessary underpinning of any other strategy. Sustainable agriculture emphasises the fundamental role of the human component in a production system, as opposed to conventional agriculture, which centres on technologies.

Prof. Helen Sheridan (left) and Dr Gaia Scalabrino from Trinity College Dublin, who are interested in bogland plants that may offer valuable natural products.

Mayo KE WAN group

Lowland farmers discuss grassland management at their monthly meetings using grass measurement and budgeting tools as decision-making aids. A similar focus on upland management was proposed by Teagasc through the pilot knowledge exchange (KE) groups in the Wild Atlantic Nature (WAN) project. Sustainable upland farming is necessary for biodiversity and other benefits delivered by these important habitats, and farmers are key to the delivery of that. Scoring of uplands is used to assess their condition and aid decision-making. Mayo farmers are participating in the first KE WAN group, facilitated by the local Teagasc advisor. The group includes clients of Teagasc and private consultants. Meetings were held in 2022 on the farms of group members, which involved assessing vegetation, scoring habitats and discussing management practices. Guest speakers led discussion on the potential of upland discussion groups, pollinators, water, and the value of bogland plants.

MESSAGE FROM SIGNPOST

Lowering your fertiliser bill

Where do I start to reduce emissions?

Step one on any farm should be to reduce the reliance on chemical nitrogen (N) in grassland and cropping systems.

How does reducing chemical N reduce greenhouse gas (GHG) emissions?

Chemical N releases nitrous oxide into the atmosphere when applied to land. Nitrous oxide is one of the three main GHGs we need to reduce. If you reduce the amount of chemical N used on the farm you reduce the amount of nitrous oxide emitted.

How can I reduce chemical N use?

1. Get soil fertility correct. Moving from pH

5.5 to 6.3 can make between 50kg and 70kg N per ha per year available to the crop.
2. Apply slurry using low-emission slurry spreading (LESS) methods between February and May.
3. Use clover or multi-species swards. Clover can fix between 80kg and 120kg N per ha per year.
4. Include legumes such as beans in a tillage rotation.

What chemical fertiliser should I use?

If chemical fertiliser must be applied, then switching from CAN and straight urea to protected urea will directly reduce both GHG and ammonia emissions, while also being cheaper.

MESSAGE FROM ASSAP

Careful application of slurry

As chemical fertiliser prices have increased significantly in the past 12 months and remain high, it is worth noting that the value of organic fertilisers has also increased. Now 1,000 gallons of slurry is worth approximately €50. Here are some slurry application tips.

1. Ensure the capacity of organic manure stores, at a minimum, is sufficient to meet the storage requirements for your county.
2. Prepare and implement a nutrient management plan to ensure the nutrients in slurry are targeted to where they are most needed (consult your advisor).
3. Apply slurry in spring where ground conditions are suitable and soil temperature is consistently greater than 6º Celsius.
4. Do not apply slurry where heavy rainfall is forecast within 48 hours. Heavy rainfall on soils that are saturated or close to saturation will result in nutrient losses through overland flow and leaching.
5. Organic manure application rates must match grass growth rates to maximise nutrient uptake.
6. Apply a 10m buffer zone for two weeks after the closed period ends, and a 5m buffer zone thereafter, from drains and watercourses when spreading organic fertilisers.
7. Ensure the tractor driver is aware of the location of drains, watercourses, wells, karst features, etc., when spreading organic fertilisers and observes the relevant buffer zones.

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