

Sectoral Road Map: Agriculture and the Environment



Policy issues

Environmental issues are at the forefront of any vision for the future of farming. Environmental status measurement has improved in relation to water quality, biodiversity, greenhouse gas emissions and nutrient efficiency. There is also a better understanding of the links between farming activity and environmental outcomes. This has led to the enactment of legislation and the introduction of environmental schemes, which have had a significant impact on all farmers. Cross-Compliance standards, linked to the Single Farm Payment, will continue to increase. The focus of environmental schemes will be on achieving environmental standards over and above Cross-Compliance, especially in environmentally sensitive areas. Schemes will provide incentives to farmers on a competitive basis to achieve specific targets in relation to habitats, water quality and greenhouse gases (GHGs). Harvest 2020 highlights the importance of utilising our green image to promote our food exports. Ireland currently achieves high environmental standards. However, it is important that the agri-food industry meets environmental targets if the potential gains from the marketing of green sustainable food are to be achieved.

Nutrient efficiency

Improving nutrient efficiency is a key requirement for farmers if Ireland is to meet both output growth and environmental objectives. Managing soil fertility is the key to achieving high levels of production from grassland and crops. Improving nutrient efficiency requires that management practices be adopted that increase the proportion of nutrient recovered in farm output and reduce the amount that is lost to water and air. It also saves farmers money. Basing recommendations on soil test results is essential to achieving this. The focus of both

research and knowledge transfer is on ensuring that best practice models are developed and adopted by farmers. Maximising nutrient recycling and recovery from organic fertilisers and soil reserves are critical.

Actions

Teagasc will undertake a programme of research to facilitate the development of the revised 'Nutrient and Trace Element Advice for Grassland and Tillage Crops' by 2014. The Advisory Service will provide nutrient management advice to all client farmers and will focus on the adoption of practices that improve nutrient efficiency and reduce losses.

Targets 2018

- Increase farm-gate N efficiency by 10%.
- Increase the proportion of soils with optimum P and K levels in index 3 by 20%.
- Ensure that 80% of farmers are managing slurry to optimise nutrient recovery based on fertiliser budgeting.

Water quality

The guiding principle for policy and action on water quality is that Ireland achieves good or excellent status in 100% of ground and surface water. The timeline to achieve this has been reviewed in light of the 'time lag' between changes in practice and water quality outcomes. There is a comprehensive policy framework supporting the achievement of water quality targets. The Agricultural Catchments programme will provide a comprehensive knowledge base on the dynamics of nutrients in representative catchments and thereby provide the knowledge on which to base the continuation of profitable farming under the Nitrates Directive.

Actions

For farmers, following an effective nutrient management plan and eliminating point source pollution are the keys to improving water quality. Knowledge gaps remain in relation to the pathways for nutrient losses to water. Research will focus on building an understanding of these pathways and on developing technologies and practices that can increase the efficiency of nutrient use and minimise the loss to water. Advisors will incorporate new information and best practice into nutrient management advice.

Targets 2018

- 90% of water bodies achieving good status (Ag contribution).
- Proportion of soil P index 4 samples reduced to below 20%.
- Maintain Ireland's case for Nitrates derogation.

Gaseous emissions

Climate change targets represent the most significant risk to the achievement of the targets set out in Harvest 2020. Ireland has undertaken to reduce its CO₂ emissions by 20% by 2020. This target is likely to increase to 30%. While agriculture has contributed to lowering national emissions to date, farmers must continue to lower the emissions levels per unit of production to avoid significant penalties. Providing information and support in policy development will remain a key role for Teagasc in this domain. National ammonia emissions targets are currently being met up to 2010. Future targets are expected to be more challenging. By adopting cost-effective slurry application strategies based on timing, farmers can reduce ammonia losses.

Actions

There is considerable scope for farmers to reduce GHG emissions per unit of output by adopting a range of identified practices and improving productivity. For the most part these are win-win in that they lead to improved profitability. Teagasc will continue to investigate and promote a variety of technologies and practices to mitigate gaseous emissions on farms. Teagasc will develop and implement a carbon calculator, designed to estimate the emissions per unit of product and promote the adoption of low emissions technologies.

Targets 2018

- GHG emissions per unit of output reduced by 10% by 2018.
- Development of cost-effective ammonia emission reduction strategies.

Biodiversity

The European Union is strengthening its policy framework to halt the loss of biodiversity by 2020. Biodiversity targets will feature prominently among future CAP and environmental reforms. The National Biodiversity Plan 2010-2015 will target biodiversity conservation in protected areas as well as in the wider countryside.

Actions

The adoption by farmers of the most effective measures and schemes to support biodiversity will be essential if targets are to be met. However, significant knowledge gaps remain about the precise locations of important areas for biodiversity in the countryside. Research will focus on the design of cost-effective biodiversity measures for agri-environment schemes and on the development of high nature value (HNV) farming systems. The Advisory Service will support farmers in achieving the biodiversity requirements of Cross-Compliance and the implementation of targeted biodiversity measures.

Targets 2018

- Restoration of Annex 1 habitats and species to favourable conservation status by 2015 (including the freshwater pearl mussel).
- Recovery of farmland bird populations.
- Control of harmful invasive alien species.
- Identification of HNV farming systems.

Soil

Soil is the key resource of farming. The role of farmers in soil protection involves maintaining and improving the capability of soils to perform a multitude of functions including crop production, carbon storage, water purification and storage, and ecological habitat stability.

At EU level the Soils Framework Directive is being drafted with the objective to protect soils across the EU. Increased information on our soils is required in order to continue the development of agriculture, both in terms of production potential and environmental sustainability.

Actions

The completion of the Irish Soil Information System (ISIS) project is essential as a prerequisite for effective policy formulation and implementation. This increased knowledge of soil form and variability will be incorporated into research and advisory tools that are more soil specific. These will be essential to tackle issues of yield stabilisation and reduce the environmental pressures of farming systems.

Targets 2018

- Complete the ISIS project by 2015.
- Deliver soil-specific advice to improve nutrient efficiency and protect the environment.

Contact

Rogier Schulte at rogier.schulte@teagasc.ie,
Pat Murphy at pat.murphy@teagasc.ie,
or your local Teagasc adviser.

The road map for environment is available on www.teagasc.ie.