renewable energy

Diversification and innovation can yield new income streams

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hanks to COVID-19, Brexit and the new European agricultural policy we live in a sea of uncertainty. Diversification and innovation can help counter any downsides to these seismic events by generating new income streams, in particular from renewable energy, and should be considered by every farm business..

Farming causes around 33% of Ireland's greenhouse gas emissions and reaching "net zero" is now top priority, with a new range of incentives likely to feature heavily in future European agricultural policy. Farmers will play a significant part in the replacement of fossil-derived fuels with low-carbon or carbon-negative alternatives. Not only is this crucial for the environment, it's potentially profitable.

By facilitating carbon capture, we can create valuable negative emissions by actively removing carbon from the atmosphere to balance methane (CH₄) and nitrous oxide (N₀O) emissions from food production. Now is a key time for farmers to look at diversifying their income with a wide range of activities that contribute towards "net zero".

We can create more ways to remove CO, from the atmosphere within the context of the national Climate Action Plan. Then Minister Richard Bruton launched the Climate Action Plan on 17 June 2019 to give Irish people a cleaner, safer and more sustainable future.

The far-reaching plan sets out over 180 actions, together with hundreds of sub-actions, at a time when the warning signs are growing, and the time for taking action is rapidly reducing. This plan identifies how Ireland will achieve its 2030 targets for carbon emissions, and puts us on a trajectory to achieve "net zero" carbon emissions by 2050.

Types of renewables

We are seeing a resurgence of planning consents for solar PV, which will be supported through the Renewable Electricity Support Schemer (RESS) and the business case for roof-mounted solar is getting stronger.

Technology costs are falling and there are TAMS supports from the Department of Agriculture Food and Marine which support solar PV at 40%. A support rate of 60% is available for young trained farmers. Most solar installations come with battery storage and there are new opportunities to link this energy storage to electric vehicles.

The SSRH

The Support Scheme for Renewable Heat (SSRH) was introduced in June 2019 to encourage the installation of equipment such as biomass boilers and heat pumps in commercial properties. It will provide eligible claimants with payments for the renewable heat produced - provided it is all used - for 15 years from the date they enter the scheme.

Wood from coppiced energy crops, or other sustainable sources, will be a key renewable fuel source in the future alongside pulp wood from forestry and straw. The SSRH is very relevant to pig, poultry and horticultural units which generally have fairly large heat loads.

It's also relevant to farmers and landowners who want to supply biomass and assimilate it for end users. Instead of the oil depot we could see some farms becoming biomass depots or biomass trade centres.

New prospects are anticipated for biogas generated from anaerobic digestion (AD). Although current support for renewable heat does not cover bio-methane there is a growing expectation that the next Support Scheme for Renewable Heat phase will specifically support bio-methane

Support through the Biofuels Obligation Scheme for bio-methane used in road transport has been attracting interest and could offer a lifeline to projects that would have otherwise relied on Feed-in Tariffs and SSRH support.

Bioeconomy

At European level, there is ever greater emphasis on the production of renewable biological resources and the conversion of these resources and waste streams into value-added products, such as food, feed, bio-based products and bioenergy. Ways of doing this include linking crop production to carbon-negative power stations and anaerobic digestion (AD) plants that recycle or store their CO.

emissions. There's also scope to use non-food crops such as hemp and miscanthus as raw

materials for bio-fibres

and bioplastics, while the

renewable CO_o from AD plants could be captured as a feedstock and turned into synthetic fuels and chemicals. Farmers can be key drivers in this low-carbon transition.

Opportunities in diversification

No one knows what shape farming will take in the coming months and years. What we do know is that Brexit will have a significant impact on farming and all land-use enterprises. Diversification is, therefore, becoming increasingly important for all landowners, farmers and rural business owners. But that doesn't mean it's easy: there are no short cuts.

Attending a Teagasc options course can help you make the most of the opportunities and provides professional advice to steer you past potential pitfalls. To express an interest in a Teagasc options course go to www. opt-in.ie/options or contact your local Teagasc office.

The first stage is to make sure you are embarking on what will be a viable business. There's a good chance someone else has already done something similar and you will be able to learn from their experience during the course. It will all be valuable information for your business plan. which is an essential component in the process.

There are some key considerations that apply to every new business and the most important is to ensure you have a potential market and that you can make a profit from that market. There are so many opportunities: creating new uses for existing buildings, holiday lets and glamping, alternative crops, and many more. At this point, you are limited only by your imagination.

Energy in Agriculture 2020, incorporating a Rural Diversification Expo, will take place in Gurteen Agricultural www.energyinagriculture.ie