

# ALG-AD

## Recycling agricultural and food waste

ALG-AD brings academics, industry and policy makers together to develop global solutions to re-use agricultural and food waste and to generate sustainable products.

Research project: [ALG-AD](#)

Funding: [Interreg North-West Europe Programme](#), [European Regional Development Fund](#)



Dr Carole Llewellyn, Swansea University

together scientists and engineers from across North West Europe to develop solutions that use algae to turn excess digestate into feed for livestock.

The project is funded through the European Union's (EU) Interreg programme, which is part of the European Regional Development Fund, and while its current focus is on North West Europe, the processes Carole's team are developing could have global impact.

**"There are two main impacts," explains Carole, "The prevention of pollution in terms of excess run-off in waterways, and providing new feed sources, which is vital as populations grow. Ours is a Northwest Europe project where the issue is particularly acute, but for sure this problem is worldwide and we are developing projects outside the EU where there is a desperate need to find new animal feed solutions."**

## Combining expertise to cultivate success

The ALG-AD project has received funding of around €3.33 million from the EU and has a total budget of €5.55 million. The project brings together scientists and engineers from 11 academic, industry and agency partners in four countries across North West Europe. The project is developing three pilot facilities alongside anaerobic digestate plants. **For Carole, the multidisciplinary, multi-partner collaboration is essential to the project's success.**

Europe is a densely populated agricultural area and produces a significant amount of food and farm waste. This waste is increasingly being broken down using anaerobic digestors. This process produces a biogas that can be used as renewable energy source. Anaerobic digestion also produces a digestate by-product, rich in nutrients, which can be spread back onto the land to improve the quality of the soil. However, the amount of digestate that farms are allowed to spread is heavily regulated, as applying too much can lead to pollution problems due to run-off. The increasing amounts of nutrient rich digestate being produced is an issue and solutions are required.

Dr Carole Llewellyn from Swansea University, leads a project called ALG-AD that brings

"The Interreg programme is fundamentally different from Horizon 2020 in that it's less about basic research and much more about using science and socio-economic development together.

"Swansea University have a lot of algal expertise whereas our partners in Belgium have strong expertise in the properties of the digestate we will be using. The partners are actually very varied, which is typical of Interreg projects. Communication with stakeholders is very important so you will see that **our work is heavily engaged in long-term planning and communication to farmers, anaerobic digestive businesses, policymakers and regulators. It's bringing all those aspects together to make a complete solution.**

**"We couldn't work without the EU partners. There is no way the UK could be developing this sort of project without their input."**

### **Brexit fears**

While funding for ALG-AD has been guaranteed until the end of the project, Carole feels Brexit negotiations have had a more subtle impact on relationships between UK and EU scientists.

"Brexit really concerned me when I was initially applying as the project was being led by the UK and I felt the people that were assessing it would not approve it because we were the leads. I was very reassured that the funding was guaranteed until the end of the project, however the other thing that really concerns me is how we are viewed by other EU partners. **I am starting to see other EU countries view us as outsiders and that is very sad. I am aware many of my colleagues feel the same and I fear it will have an impact on scientists from the UK not wanting to lead on projects for that reason.**

"As for my project, we do have an excellent partnership and long may it continue. **For me, it's just great working with people in other EU countries. There is always something to learn, whether it's culture or the way they work, and for me it is a real privilege to share expertise on that level."**

Algae in action: transforming waste to value

