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Ymchwiliad: Prosesu Bwyd
Cyf: FP01
Ymateb gan: Dr Amanda J Lloyd a Dr Alina Warren Walker, Adran Gwyddorau Bywyd, Prifysgol Aberystwyth

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Welsh Parliament
Economy, Trade, and Rural Affairs Committee
Inquiry: Food Processing
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Evidence from: Dr Amanda J Lloyd and Dr Alina Warren Walker, Department of Life Sciences, Aberystwyth University

Written evidence submission to the economy, trade and rural affairs committee inquiry into food processing

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Date: 27-05-2025
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Executive summary
This submission highlights the Welsh Government's progress in supporting science-led food innovation, identifies opportunities to scale functional food processing, and recommends actions to enhance value addition and public procurement of Welsh-processed foods. Drawing on research at Aberystwyth University and insights from global industry events, we propose strategic updates to the Vision and practical steps to future-proof the Welsh food industry.

Welsh Government's performance in delivering the vision for the Food and Drink industry

The Welsh Government has made great progress in supporting innovation and sustainability in the Food and Drink (F&D) sector. Our research at Aberystwyth University, funded by Welsh Government and Innovate UK, demonstrates how investment in science-led food processing can yield high-value functional ingredients from Welsh-grown and UK crops such as mushrooms, ginger, green tea, and cucumber.

Projects such as the development of community grown lionmane mushrooms (dried and powdered), Q-actin™ (a cucumber extract with anti-inflammatory properties), spray-dried ginger powders, and green tea extracts with glycosidase-inhibitory and anti-inflammatory effects, exemplify how Wales is building a reputation for science-backed, health-oriented food innovation.

However, we do think more could be done to scale these innovations into commercial processing infrastructure and to integrate them into public procurement and even export strategies.

Are the vision's objectives still fit for purpose?

The Vision remains broadly relevant but possibly could benefit from the following updates:

- Inclusion of functional foods and nutraceuticals (even novel foods) as a strategic growth area.
- Recognition of advanced analytics such as metabolomics (the study of small molecules in food that affect health) and bioactive quantification as tools for validating health associations (possibly even claims) and enhancing product value and endorsement.
- Support for non-traditional processing methods (e.g., juicing, spray drying, clean-label formulation, valorising F&D byproducts) that align with consumer trends and sustainability goals.

Impact of decreasing livestock numbers on value addition

The decline in livestock numbers presents a challenge for traditional red meat processors but also an opportunity to diversify. Our research shows that:

- Horticultural crops can be processed into high-value functional ingredients, offering new revenue streams for rural producers.
- Plant-based extracts (e.g., gingerols, catechins, iminosugars from botanicals) can be used in supplements, beverages, and health foods, reducing reliance on livestock-derived products.

This diversification supports resilience in the Welsh food economy and aligns with climate and health policy goals.

Supporting value addition in red meat, dairy, and horticulture

To further support value addition, the Welsh Government should:

- Invest in regional processing hubs equipped for processing and clean-label formulation.
- Provide innovation grants for SMEs to develop innovative functional products from Welsh produce.
- Facilitate partnerships between academia, growers, and processors to accelerate commercialisation- the whole chain!
- Support training or even upskilling, in advanced food processing and bioactive validation, ensuring a skilled and knowledgeable workforce.

We recently attended Vitafoods Europe 2025 in Barcelona (representing Aberystwyth University), one of the leading global events for functional food, nutraceuticals, and health ingredients. The event highlighted the growing demand for clean-label, science-backed functional ingredients, and the importance of traceability, sustainability, and advanced processing technologies. These insights reinforce the relevance of our research and underscore the opportunity for Wales to position itself as a leader in this rapidly evolving sector.

Barriers to public procurement of Welsh-processed foods

(In response to ToR point 3 on barriers to public procurement)

We believe key barriers include:

- Lack of awareness of innovative Welsh-processed ingredients among procurement officers.
- Perceived risk and cost of adopting new products in public sector catering.
- Insufficient processing scale to meet consistent supply demands.

Recommendations:

- Pilot public sector trials using Welsh-grown functional ingredients (e.g., mushrooms, ginger teas, green tea powders).
- Develop procurement frameworks that reward innovation, health outcomes, and local sourcing.
- Support certification and traceability systems to build trust in new Welsh-processed products.

To end

We believe that Wales has huge scientific expertise, as well as the agricultural base, and policy ambition to lead in functional food innovation. By aligning food processing support with health, sustainability, and rural development goals, the Welsh Government can unlock new value chains and future-proof its food industry.

In conclusion, we urge the Committee to support policies that scale up functional food innovation, integrate it into public procurement, and position Wales as a global leader in sustainable, health-oriented food processing.