NFU Cymru Briefing

Indicative economic assessment of the 170 kilograms of nitrogen per hectare per year limit of the Control of Agricultural Pollution Regulations

On 31 March 2025, Welsh Government published an ADAS report presenting indicative estimates of the number of Welsh farms potentially affected by the 170kg of nitrogen (N) per hectare per year limit prescribed under the Water Resources (Control of Agricultural Pollution) (Wales) Regulations. Indicative estimates of the aggregate farm-level and supply-chain costs of compliance were also presented with the findings potentially contributing to any future Regulatory Impact Assessment.

The approach offers indicative rather than definitive results, reflecting multiple uncertainties. Moreover, the report highlights that the analysis focuses solely on the 170 kg N limit yet farms are also subject to other related regulatory constraints.

The headline results of the analysis are that only a minority of farms overall are estimated to potentially be affected but farm-type strongly influences the likelihood of an individual farm being impacted, as expected poultry and dairy farms are more likely to be affected.

The results also show that whilst destocking is one way for an affected farm to comply with the 170kg N limit, it is more expensive than either renting in more land or exporting N to another farm and hence unlikely to be the first choice in most cases. Supply chain multipliers amplify the wider impacts of compliance measures, with destocking having the largest potential negative effect.

The estimates presented are sufficient to reveal likely impact patterns of complying with the 170kg N threshold. Refinement of impact estimates and / or a future Regulatory Impact Assessment would require additional and more robust data to be collected, particularly in relation to phosphate-related constraints since the soil P index scores for individual fields on each farm are a prerequisite for any country-wide quantitative analysis and these data have not been comprehensively gathered.

Number of farms affected

The estimates of farms potentially affected by the 170 kg/N/ha limit ranges from **812 to 1487 farms** (or circa 5-9% of all farms in receipt of support payments in 2019). There is considerable variation by farm type with **33-63% of dairy farms** and **12-51%% of poultry farms** being affected. The proportion of farms affected increases with farm size.

The differences between upper and lower bound estimates reflect the variation in assumptions made to accommodate various underlying uncertainties, for example, milk yield. It is also important to recognise that the results draw on official Welsh Government data, however, there are some gaps and possible errors. 2019 has been selected as a base year to allow for the estimation of potential effects relative to a position before mitigation measures would already have become widespread. There could have been changes to the livestock numbers and farm businesses in the intervening years. Moreover, COAP plus Environmental Permitting Regulations encompass multiple constraints on farming practices, yet the effects of the 170 kg N threshold are considered in isolation here. Information on formal and informal arrangements for moving livestock and manure between farm holdings are not currently well captured. Further the age and type categories for the June Agricultural Census do not align with the N coefficients per animal within the regulations.

Estimated compliance costs

Individual farms could seek to comply with the COAP 170kg N limit in different ways:

- Renting or purchasing more land, incurring additional land costs

- Exporting to other land owners
- Destocking

The report provides estimates of the lower and upper bound cost estimates for each of these three compliance options.

Export tankering is the cheapest, followed by renting additional land and then destocking is the most expensive option. The costs are estimated at **£1m-£3m for exporting**, **£9m-£22m** for renting additional land and **£46m-£114m** for destocking. The estimated compliance costs are borne most heavily by dairy farms.

Whilst destocking is an option, it is an expensive option (i.e. income foregone impacts arising from lower revenue throughput, even though some variable costs are saved). Moreover, it often interferes with established management systems and can undermine enterprise viability given fixed cost overheads. By contrast, exporting N or renting additional land require less drastic management systems and represent simpler additions to variable costs. However, this relative attractiveness does not disguise the fact that they do still represent an additional cost burden for affected businesses.

Based on Welsh Government figures for Total Income from Farming (TIFF) for 2023, exporting N or renting land would add circa 0.1% to 0.2% to variable costs and reduce agricultural GVA by 0.2% to 0.4%. By contrast, **destocking would reduce costs but lower GVA by circa 6.6% to 16% with the majority of such costs and GVA impacts falling on the dairy sector**.

Wider supply chain effects

Destocking – this is the most expensive compliance option for farms. This impact is amplified along the supply chain to become a larger circa **£64m to £156m** total reduction in GVA. Similarly, on-farm output reductions **of £95m to £538m are amplified along the supply chain to become circa £174m to £1,338m in total.** Of these totals the dairy sector accounts for over half of the lower-bound estimate rising to over 90% of the upper-bound estimate reflecting the shrinkage of national milk and dairy-beef production.

Destocking also leads to lower on-farm labour usage. This reduction is estimated as between **circa 1307 and 4541 SLR (Standard Labour Requirement) but multiplies across the supply-chain to circa 1560 to 5501.** (SLR are not directly interpretable as jobs since they assume an average time input for activities and a notional working year of 1900 hours).

Renting in land – less costly than destocking and the supply chain effects are also less significant and arise indirectly. Rented-in land may previously have been used for production by another farm and hence there is still potentially scope for a reduction in aggregate output. Estimation of indirect production displacement is speculative since the previous baseline use of land rented-in is unknown.

Exporting of excess N – this is the least costly option at the farm level and would remain so even if unit costs rose significantly to reflect longer haulage distances. No direct production-related negative supply-chain impacts are anticipated, indeed, additional expenditure on transport to haul slurry may have a modest positive multiplier effect through increased demand for fuel, machinery and servicing from upstream suppliers. Nonetheless, the cost for farms exporting excess N does represent additional expenditure which may influence on-farm production indirectly.

Collectively the results presented throughout this report confirm that meeting the 170kg N COAP requirement will impact upon Welsh agriculture and its associated supply chains.