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Introduction

1. In addition to points about measuring and implementing specific aspects of the proposed Suckler Beef Climate Scheme, a number of broader issues also arise in relation to how the scheme fits into overarching policy frameworks and timelines. These are summarised briefly below.

Inventory accuracy

2. Commitments to emission reductions are expressed in terms of aggregate figures reported in the National Inventory. However, Inventory figures are necessarily based on average production relationships and a limited number of production categories (e.g. farming systems, management practices). Hence, although more refined emission modelling and greater granularity have been introduced in recent years, Inventory figures do not reflect the full heterogeneity of current emissions or actual potential to improve across Scottish farms.

3. This means that unless underlying production relationships are adjusted, actual on-farm improvements may not be captured in the aggregate Inventory figures to contribute towards achieving targets. For example, if methane inhibitors reduce emissions by (say) 20%, accounting for this in the Inventory would (effectively) require a lower emission factor to be applied to cattle receiving the feed additive. If such adjustments are not possible, the only way for targets to be met (regardless of what has actually been achieved on-the-ground) will effectively be to reduce cattle numbers.

4. In addition, it should be noted that carbon calculators (such as AgreCalc) do not represent emission production in the same way as the National Inventory. Moreover, just as the National Inventory methodology has evolved over time, so has the basis for carbon calculator estimates. This means that not only does care have to be exercised in comparing carbon calculator results with National Inventory figures, but care also has to be exercised in comparing estimates derived apparently the same calculator at different points in time – results ideally need to be presented with a clear statement of which version generated them.

Rebound and backfire effects

5. Reducing the emissions intensity of beef production will lower aggregate emissions for a given volume of output. However, if output increases (because production costs will fall) it is possible that aggregate emissions will not decline by as much as expected (the rebound effect) or even increase (the backfire effect).

6. It is possible that (post-Brexit) lower beef prices will force contraction of the national herd. However, guaranteeing avoidance of rebound effects may require accompanying policy measures to counter the potential for aggregate production to expand. In principle, this could be via curbs on consumption (e.g. carbon taxes, personal carbon quotas or bans) or inclusion of farming within emissions trading schemes. In practice, it would be more likely to be via production quotas and/or supporting some farmers to exit (e.g. ala fisheries scrappage schemes or the EU dairy outgoers scheme). However, the former could raise categorisation issues under WTO rules whilst the latter would require revisiting unresolved debates about the relative merits of preserving different farm segments.

7. Account also needs to be taken of the potential for emission savings in one sector (e.g. beef production) to lead to increases in another. For example, if farmers exiting from beef production enter into sheep production, thereby at least partially cancelling-out the savings from lower beef output.

Slippage

8. Scheme participants will (depending on payment rates) be incentivised to reduce their carbon intensity. However, not all farms will have equal potential for improvement and farms that are already relatively carbon-efficient can contribute less to aggregate emission reductions than farms which are currently performing badly. This means that some slippage against expected aggregate gains may be encountered, with existing good practice as well as improvements being rewarded. This may mean that, by offering gains across-the-board, the adoption of new technologies, such as methane inhibitors, may offer greater potential than promotion of current best practice.

9. It also possible that slippage will arise from participants gaming-the-system by diverting poorer quality animals and/or management onto non-participating businesses (either their own or third-party owned). This might be countered by (as with some previous schemes) rules around artificial restructuring of enterprises, but a more general approach (to also catch all non-participating farms) would be to set minimum regulatory standards for key metrics. For example, very low calving rates or high on-farm mortality rates could trigger automatic inspections and obligations for improvements to some minimum standard. Or perhaps all farms could be required to submit carbon audits, again with obligations for improvement.

Pace of change

10. Some best management practices can potentially be adopted rapidly, subject to capacity and willingness to change. For example, compiling and implementing management plans. However, even if adopted, other changes require a longer period to take effect. For example, given the longevity of some breeding animals, improvements to herd genetics can take several years to achieve. Similarly, the management and herd adjustments necessary to significantly reduce slaughter ages cannot be achieved quickly and, moreover, will likely require changes at the abattoir level as well (e.g. to target slaughter weights). Consequently, enthusiasm for the technical potential of mitigation measures needs to be tempered by consideration of practical impediments to the pace of change.

Other instruments

11. Extending the last points above, whilst incentivising scheme participation through some form of (yet-to-be-decided) targeted support payments has merit, the policy toolkit contains other instruments that also merit consideration. This includes the use of conditionality attached to direct area payments or simply regulatory requirements (e.g. mandatory carbon audits and/or plans) that could be applicable to all farms, not just scheme participants. Such approaches offer possibilities for financial penalties for poor performance rather than simply rewards for good performance.

12. In addition, support to increase capacities are widely acknowledged as important. This includes grant-aid for capital investments but also the provision of advice and training. Hence any scheme-specific design elements need to fit with broader policy measures, as part of a co-ordinated mix of instruments.

Other sectors

13. Whilst an initial focus on suckler beef is understandable, developing the scheme in isolation from others parts of agriculture may cause some problems. For example, beef production involves finishers as well as store producers, and crucially also involves calves from the dairy sector. Reducing overall emissions from beef production thus has to encompass more than simply suckler herds.

14. Beyond this, consideration also needs to be given to other commodity sectors, such as sheep and arable, as well as High Nature Farming. Given that individual farms may have more than one enterprise, administrative complexity (both on-farm and centrally) may increase unless there is some commonality across schemes.

15. However, different sectors may require different metrics (e.g. data on lambing and sheep mortality rates are less robust than calving and cattle mortality rates). This may constrain commonalities across different schemes and/or imply higher administration costs for schemes targeting other sectors. For example, arable and HNV schemes may unavoidably require greater on-farm monitoring of management actions – although there may be opportunities for greater self-reporting my farmers and/or remote sensing.

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