

Future Agricultural Policy Decisions for Northern Ireland



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FUTURE AGRICULTURAL POLICY DECISIONS FOR NORTHERN IRELAND

Farm Sustainability Payment

1. A Farm Sustainability Payment, set at an appropriate level, is introduced. This will provide a basic safety net, but will be set at a level which does not blunt innovation or productivity. Initially, this measure will have the majority of the budget allocated to it (as it follows on from the current direct support payment arrangements). However, over time, and in line with the capacity for delivery and uptake of new measures discussed below, its budget will reduce to a much lower level as funding is released to the other measures.

2. The payment will be area based, use entitlements and all land based agriculture and horticulture businesses which meet the eligibility conditions will be able to apply. Current Basic Payment Scheme entitlements will be carried forward into the new regime (i.e. there will be no rebasing of entitlements, which was last carried out in 2015 under the last reform of the CAP). Current arrangements will continue to enable entitlements to be leased, transferred or sold.

Active Farmer – grass selling businesses

3. Farm businesses that solely produced grass/grass silage and/or maintained land suitable for grazing or cultivation but undertook no further agricultural activity during the entire two year historic reference period (2020 and 2021) will not be eligible to claim the Farm Sustainability Payment. In summary, to remain eligible farm business will need to have in 2020 or 2021:
 - a. Cattle or sheep registered on APHIS; or
 - b. Pigs or poultry (i.e. no cattle and sheep) combined with grass selling only;
or
 - c. At least 3 ha of a determined area on either the 2020 or 2021 single application of an arable or horticultural crop (grass excluded).

Grazing horses will not fulfil the eligibility requirements as a horse is not an agricultural animal.

Capping of Payments

4. A progressive capping of the Farm Sustainability Payment is introduced above £60,000 from 1 January 2024 (assuming this is the agreed timeline for the beginning of the Farm Sustainability Payment) using the model in Table 1.

Table 1. Recommended payment bands and percentage reductions for progressive capping

Payment Band	Percentage reduction (%)
£150,000-£190,000	80
£100,000-£150,000	60
£80,000-£100,000	40
£60,000-£80,000	20
£0-£60,000	0

Minimum Claim Size

5. A minimum claim size threshold of 5 ha is introduced.

Conditionality

6. The following become conditions of the Farm Sustainability Payment:
- (i) Compliance with the new Farm Sustainability Standards;
 - (ii) Participation in the Soil Nutrient Health Scheme;
 - (iii) Development of a Nutrient Management Plan moving forward (timeframe to be decided); and
 - (iv) Recording of sire identity on APHIS/NIFAIS for all dairy and beef herds.

Crisis Framework Measure

7. The Department now proceeds to develop a Crisis Framework in line with the principles of threshold, targeting and temporary.

Beef Sustainability Package

8. To be eligible for support under the Beef Sustainability Package, claimants must also be in receipt of Farm Sustainability Payment. This will ensure that those in receipt of the Beef Sustainability Package adhere to the Farm Sustainability Measure conditionality which includes compliance with the new Farm Sustainability Standards and the environmental actions of participation in the Soil Nutrient Health Scheme, over time preparation of a nutrient management plan and the recording of sire identity on APHIS/NIFAIS of all calves born for both dairy and beef herds.

Suckler cows - Age at First Calving

9. This measure will have a revised phased implementation as set out below:

Year of Scheme	Maximum age at first calving
1	34 months
2	32 months
3	30 months
4	29 months

Scoping and developing knowledge interventions to support farmers achieve the targets is undertaken.

Suckler cows - Calving Interval

10. Payment will be made in respect of individual cows that meet the calving interval targets. A revised phased implementation for this measure is set out below:

Year of Scheme	Maximum calving interval
1	415 days
2	405 days
3	395 days
4	385 days

Payment on live calves only

11. Full payment is only made on animals that give birth to live calves that are registered.

Payment Quotas

12. Quantitative limits are established at individual farm level. Further work will be undertaken to develop an appropriate system and operating rules.

Retention Period

13. No decision on retention periods is announced at this stage. Further engagement will take place with stakeholders.

Stocking Density

14. A stocking density is not introduced at this stage. The impact of this decision will be kept under careful review to ensure that there are no emerging negative environmental consequences.

Provision of Data to the Ruminant Genetics Programme

15. Future claimants under this Measure will be required to provide data to support the Ruminant Genetics Programme to drive performance. Further details on the data to be collected and the potential timescales will be made available as soon as possible as the Ruminant Genetics Programme is developed.

Beef Carbon Reduction Measure

16. The Beef Carbon Reduction measure is limited to clean beef animals born and bred in Northern Ireland and registered on APHIS.

Age at Slaughter

17. Proceed with the proposal to reduce the age at slaughter for clean beef animals through measured steps to 26 months. A revised phased implementation for this measure is set out below:

Year of Scheme	Maximum Age at Slaughter
1	30 months
2	28 months
3	27 months
4	26 months

18. A quantitative limit of 352,000 animals is set at a Northern Ireland level to ensure the measure is compliant with WTO Blue Box requirements (production limiting scheme).

Minimum Age at Slaughter

19. No minimum slaughter age for cattle but that this matter is reviewed in 2/3 years to confirm that this approach is not causing unforeseen problems.

Different slaughter ages for Bulls, Steers and Heifers

20. Different slaughter ages for cattle are not introduced at this stage. The immediate focus needs to be on reducing the age at slaughter closer to 24 months.

Tiered Approach to Maximum Age of Slaughter

21. A tiered approach to payments is not introduced at this stage and that the matter is kept under review.

Negative Subsidy

22. A negative subsidy is not introduced at this stage and that the matter is kept under review.

Additional design principles

23. The design principles outlined in the consultation form part of scheme development as the measure is further developed and implemented.

Other specific suggestions for the beef sector

24. No further proposals for support of the beef sector are brought forward at this stage and that the issue is kept under review as the other proposed measures are implemented and the Ruminant Genetics Programme is developed.

Sheep

25. No further proposals for support to incentivise productivity in breeding ewes are brought forward at this stage. However, work will be undertaken to explore options for support that will improve the overall performance and resilience of the sheep sector. This will include work to explore how the sheep sector could be incentivised to provide baseline performance data to inform future sector support measures and to engage in a future Ruminant Genetics Programme.

Farming with Nature Package

26. The Department proceeds to develop the Farming with Nature Package through co-design with stakeholders and in line with the principles stated in the consultation document.

Eligibility and minimum land area

27. All land managers with 3 ha or more of eligible agricultural land who meet the scheme requirements will be eligible to participate in the Farming with Nature Package. This includes land under conacre and common land. The following will become conditions of schemes under the Farming with Nature Package:

- (i) Compliance with the new Farm Sustainability Standards; and

(ii) Participation in the Soil Nutrient Health Scheme.

Payment Cap

28. In principle, a cap on the level of payment available under the Farming with Nature Package will be applied. Work to progress on the detail of a cap, including the appropriate level, as elements of scheme design, such as agreement length, are developed.

Outcome based approach

29. Stakeholder suggestions to support delivery of an outcome based approach are evaluated and proposals worked up and incorporated into future Test and Learn pilots/schemes as appropriate.

Initial Focus on Habitats

30. Actions to reverse the trends in nature decline by creating and restoring habitats that are important for species diversity are prioritised and that proposals are worked up for a Test and Learn pilot/scheme.

31. A shortlist of initial habitat management actions are prioritised and design proposals worked up to incorporate them into a Test and Learn pilot/scheme.

32. Specific stakeholder suggestions for other quick win management actions will also be considered, and their potential for inclusion as future management actions within a Farming with Nature Package evaluated.

Test and Learn Pilots

33. Test and Learn pilots are progressed and that specific stakeholder suggestions on the pilot components are considered and incorporated as appropriate.

34. Partnership delivery models aimed at encouraging collaborative working are considered and, as appropriate, incorporated into a future Test and Learn pilot.

Transition from EFS

35. The Department will ensure an orderly transition from the Environmental Farming Scheme to Farming with Nature.

Farming for Carbon Measures

36. Low Carbon Emission Farming Practices are developed as follows:

- Reductions in the numbers of older cattle for slaughter and improved suckler cow productivity to be progressed through the suckler cow and beef carbon reduction measures within the Beef Sustainability Package and that further options to reduce the age at first calving and replacement rates within the dairy sector are co-designed with stakeholders;
- The use of feed additives to reduce enteric methane emissions, nitrogen and phosphorus outputs to be progressed by collaborative industry research through a Research Challenge Fund;
- Breeding of more environmentally efficient cattle to be progressed through the Ruminant Genetics Programme;
- The use of urease inhibitor fertilisers, the optimal timing of fertiliser and slurry applications and the establishment of grassland swards with legumes and herbs to reduce fertiliser nitrogen use is progressed through applied research and knowledge transfer initiatives;
- Peatland Rewetting and sustainable management is progressed under the umbrella of the Northern Ireland Peatland Strategy;
- Biomethane and hydrogen production from agricultural waste is developed through the Green Growth Strategy employing technologies to capture and recycle nutrients post digestion that would otherwise be land spread as farm animal slurries; and

- Forestry, agroforestry, new and taller, wider hedgerows, soil carbon and removal of methane from the atmosphere over time through reductions in agricultural methane emissions.

37. The Department undertakes the development of a future land use policy during the next mandate.

38. The principle of encouraging Farming for Carbon as a Business Enterprise is developed through co-design with stakeholders in line with the carbon sequestration and methane emission reduction principles outlined in the consultation document. Detailed monitoring, reporting and verification procedures for agricultural carbon emission reductions and sequestration need to be developed at both a national and a business level through the application of farm carbon calculators to ensure transparency and confidence in the Farming of Carbon.

Investment Measure

39. Proceed with the development of the Investment Measure on the basis of the guidelines and design principles set out in the consultation, including further engagement with stakeholders to gather evidence on the market failures affecting investment in the agriculture and horticulture sectors.

Knowledge and Innovation Measures

40. A suite of knowledge transfer and innovation programmes that build on the success of the current programmes delivered through the Northern Ireland Rural Development Programme are developed and expanded to include an agri-food development programme for professionals interacting with farmers and growers.

Generational Renewal

41. To encourage longer term planning for farm businesses that a Generational Renewal programme is developed which is based on a three phased approach to include planning for succession, development of the successor and maintaining support for both generations. This will include knowledge and skills development

and explore the provision of appropriate incentives. The future of the current Young Farmers' Payment will be considered in the context of this Programme.

42. DAERA will engage with professional bodies in Northern Ireland dealing with land letting to seek to address some of the misunderstandings that exist around the relative merits of conacre versus long term lets.

Supply Chain Measures

43. To proceed with the development of the Supply Chain Measures on the basis of the future approach and policy proposals set out in the consultation, including further engagement with stakeholders as we review existing measures and systems and explore opportunities to make improvements to meet the specific needs of Northern Ireland supply chains. In any areas where supply chain matters in Northern Ireland intersect with reserved matters within the UK, DAERA will be fully engaged in the process to ensure that Northern Ireland's interests are fully recognised.

Soil Nutrient Health Scheme

44. In order to secure future support payments, applicants must have nutrient management plans. Details on how and when this may be implemented will be taken forward during the design of future schemes (when agreed), particularly the Farm Sustainability Payment.

Ruminant Genetics Programme

45. DAERA invests in the initiation of an industry led Ruminant Genetics Programme.
46. Farmers will be required to provide data for the Ruminant Genetics Programme as an eligibility condition of future support payments.
47. Knowledge transfer and innovation programmes are developed to support farmers to adopt genetic improvement programmes.

Controls and Assurance

48. The current Cross Compliance SMR/GAECs are replaced with a simplified system of Farm Sustainability Standards. The current verifiable standards will be re-written as a set of underlying requirements to better meet local needs and a compliance regime and penalty system for non-compliance devised for the Farm Sustainability Standards which is effective but fair. To support this, remote sensing and administrative controls will be used by default (where appropriate) and educational and communication resources developed to better inform farmers and improve their understanding of their responsibilities and the sanctions they may face if they do not meet those responsibilities.
49. All agricultural land is made eligible for payment except for hard features (e.g. buildings, yards, laneways, etc.) under future area based schemes. The Department will revise its land eligibility documentation effective from 1 January 2024.

Metrics, Monitoring and Evaluation

50. Further work is undertaken to fully develop the seven high level metrics proposed in the consultation document.
51. The suggested inclusion of a social indicator will not be taken forward as this is not directly relevant to any of the four high level strategic outcomes for the policy framework.
52. The suggestions put forward for supporting metrics are given further consideration particularly in relation to including metrics on specific sectors, farm type/size and ecological outcomes.
53. The proposed high-level metrics and any further metrics to be included should be simple to use and understand without any 'gold-plating'. In addition, that continued stakeholder engagement should take place as further metrics are developed.

Horticulture

54. The horticulture policy proposals are further developed through a pilot programme (or programmes) working in consultation with relevant sub-sectors of the industry and focusing on the production of crops with good economic potential.

FUTURE AGRICULTURAL POLICY DECISIONS - DETAIL

1. FARM SUSTAINABILITY MEASURE

Resilience in agriculture is important as the sector is particularly prone to uncertainty, which can arise from issues such as fluctuating input costs and farm gate prices, extreme weather events, animal and crop diseases, changes in international trading patterns, geopolitical shocks, etc. A farm business, therefore, needs to be resilient to persist over the long term in the face of unpredictability and change.

Resilience can be defined as the ability to 'bounce back' (return to a previous state) in response to temporary shocks; and also to 'bounce forward' (transform to a new state) in response to system shifts. Planning to mitigate the impact of market disturbances and other setbacks must become a more prominent feature of the business of farming. Therefore, moving forward, farm businesses will need to have a much greater focus on business planning and risk mitigation strategies.

Consultation Suggestions

In the consultation document, DAERA proposed the introduction of a relatively simple area based Farm Sustainability Payment to provide a basic safety net, whilst also delivering foundation environmental outcomes. This would form the 'gateway' support platform for most of the future agricultural support framework. In other words, those wishing to apply to many of the other farm support measures must first meet the criteria and be accepted into this Scheme.

The Department proposed that this Scheme should be available to all land based agriculture and horticulture businesses and continue to be area based with entitlements.

Stakeholder views

92% of respondents to this question in the consultation exercise agreed with this proposal. The main themes were:

Good agreement

- Must be set at an appropriate level to give protection, but not an incentive for inactivity;
- Farm businesses unsustainable without payment - low incomes/volatility/rising input costs/cheaper imports;
- Clear timeframe setting out a defined transition period needed; and
- Ensures the supply of affordable quality food and protects environmental and animal health standards.

No agreement

- Farmers should be encouraged to transition to running a financially sustainable business;
- Move straight to a 3 year transition to divert funds from this to other support measures;
- A move away from subsidies is needed to a system of public money for public goods; and
- The Resilience budget must be increased and ring fenced.

Department's analysis

The Department has considered the level of reliance of Northern Ireland farms on direct payments.

At an industry level, total income from farming (TIFF) is a measure of the return to farmers, partners and directors, their spouses and other family workers for their labour, management input and own capital invested. In 2021, the Northern Ireland agriculture sector produced a TIFF of £501 million which included a total direct payment value of £322 million. This suggests that farms in Northern Ireland had an average income of £19,222 with the inclusion of direct payments and £5,186 when direct payments were deducted. Over the period 2014-2019 TIFF ranged between £223 million to £506 million. The importance of direct payments was illustrated by the fact that in their absence, on average farms would have been loss-making in 2015. The presence of direct payments provided a cushion with average farm income ranging from £8,953 to £20,295 over the 5 year period.

In summary, the Department's analysis showed that:

- In general, farms in Northern Ireland obtained a large proportion of their income from direct payments. This exceeded 100% in years of low market prices.
- Cattle and sheep farms were very dependent on direct payments and on average did not generate a positive farm business income (FBI) in their absence.
- In years of particularly low prices, dairy farms also struggled to generate a positive FBI without direct payments. In most years, FBI was negative on cereal farms without direct payments.
- On average over the 2014/15 – 2017/18 period, FBI was negative for specified farm types under the following reductions to direct payments:
 - Cattle and sheep Less Favoured Area (LFA) – 60% reduction;
 - Cattle and sheep lowland – 70% reduction;
 - Cereals – 80% reduction; and
 - All farm types – 100% reduction.
- Small farms were more dependent on direct payments than larger farms.

The analysis also showed that, in general, farms in Northern Ireland obtain a large proportion of their net income from direct payments. This analysis was based on average farm performance and the position on the best performing farms will be considerably better, with much less reliance on direct payments. It is recognised that the beef and sheep sectors face particular challenges in terms of their economic resilience, viability and exposure to volatility. Therefore, sitting alongside the (reducing) area based payment, there will be a Beef Sustainability Package. However, these payments will seek to deliver more than a safety net - they will encourage and incentivise improvements in productivity and environmental performance in keeping with the broader policy agenda and so will have their own set of conditions (see later). It is also clear that a balance must be struck between providing a safety net which helps a farm business withstand those shocks that are beyond the ability of the

business to manage effectively, and dampening the incentive to be efficient, competitive and to manage risk proactively.

There is no reason or evidence to suggest that current Basic Payment Scheme entitlements need to be altered. The policy rationale of the Farm Sustainability Measure is to provide a safety net to farm businesses which will progress down to a level which does not blunt innovation or productivity. The level of funding to the Farm Sustainability Measure will be lower than under the current BPS, both to mitigate the negative consequences of blunting innovation and productivity and to enable funding to be diverted to other measures. After the initial transfer of funding to the Beef Sustainability Package, transfer to other measures will be phased over time and timed to match the capacity of other measures to absorb and spend monies.

Prior to the commencement of the transition towards a flat rate in 2015, it was estimated that a move towards a single region flat rate would see a redistribution of 30% of total payments. Completing the transition from the position at present would redistribute 4.87% of total payments, which would appear to suggest that the transition in terms of impact on payment redistribution is 84% complete. This is higher than what may have been anticipated given that payments have only moved 71.4% of the way towards a flat rate. However, there has been considerable change in the population receiving payments from prior to 2015, predominantly as a result of the active farmer requirement which has impacted on the redistribution. In particular, farmers have established entitlements on land taken under conacre arrangements, previously claimed by a non-farming landowner. Furthermore, non-farming landowners who could stand to gain from a flat rate payment did not hold entitlements from 2015 onwards.

Given the well-established systems in place to enable entitlements to be leased, transferred or sold, this should continue.

Final Decisions

A Farm Sustainability Payment, set at an appropriate level, is introduced. This will provide a basic safety net, but set at a level which does not blunt innovation or

productivity. Initially, this measure will have the majority of the budget allocated to it (as it follows on from the current direct support payment arrangements). However, over time, and in line with the capacity for delivery and uptake of new measures discussed below, its budget will reduce to a much lower level as funding is released to the other measures.

The payment will be area based, use entitlements and all land based agriculture and horticulture businesses which meet the eligibility conditions will be able to apply. Current Basic Payment Scheme entitlements will be carried forward into the new regime (i.e. there will be no rebasing of entitlements, which was last carried out in 2015 under the last reform of the CAP). Current arrangements will continue to enable entitlements to be leased, transferred or sold.

2. ELIGIBLE LAND

This is discussed later in the Controls and Assurance section. The consultation document proposed that all farmland, except for hard features, will be eligible. This will extend the area of eligible land by approximately 40,000 ha or 4% compared with the current position.

3. ACTIVE FARMER

EU law was changed in 2015 to clarify that in order to receive BPS entitlements, applicants had to have the decision making powers, benefits and financial risks of the agricultural activity being undertaken on the land concerned. The impact of this change was that non-farming landowners who rented out all their land under conacre arrangements were no longer eligible for direct payments (unless there were exceptional circumstances). Hence, the claimant population fell from around 38,000 in 2013 to approximately 25,500 in 2015 and now stands at approximately 24,000.

In order to be eligible for payments, businesses must be undertaking agricultural activity, but the definition of agricultural activity does not require any specific production or indeed any production at all. Keeping land in a state suitable for grazing and cultivation can suffice. The reason for this definition is to satisfy the criteria for the current BPS to be classified under the WTO Green Box (non- or minimally trade-

distorting subsidy) of which one of the requirements is that there must be no production requirement after a fixed reference period. Given that the Farm Sustainability Payment will have to meet WTO Green Box requirements, this limits the scope for changes to the definition of agricultural activity and year-on-year eligibility requirements will have to continue to allow an option for businesses to qualify without having to undertake agricultural production. However, the ability to set production requirements in a historic reference period does provide some opportunity to tighten requirements for businesses to receive entitlements under the proposed new Farm Sustainability Payment Scheme.

At present, businesses that solely produce grass silage (including those that only produce grass silage for use in anaerobic digesters), or only maintain land in a state suitable for grazing or cultivation (in that they undertake no actual agricultural activity and have no measurable agricultural output), can qualify for BPS. Agricultural support is not put in place to assist such businesses where the main aim is in most cases to be classified as a farmer (for perceived benefits outside agriculture) or to qualify for the payment, as opposed to an agricultural production aim. Given that the purpose of the Farm Sustainability Payment is to enable otherwise viable farm businesses to withstand market and other shocks, the inclusion of businesses that do not undertake agricultural production or produce only grass silage is difficult to justify.

Consultation suggestions

In the consultation document, DAERA proposed restricting the allocation of entitlements for Farm Sustainability Payment to farm businesses which met the following criteria during a historic reference period:

- Had cattle or sheep registered on APHIS; and/or
- Had at least 3 ha of an arable or horticultural crop.

Stakeholder views

There were three questions in the consultation document relating to the active farmer issue.

47% of respondents supported the proposal that farm businesses that solely produced grass/grass silage for sale during a historic reference period should not be eligible to claim the Farm Sustainability Payment.

52% of respondents supported the proposal that businesses that maintained land in a state suitable for grazing or cultivation but undertook no further agricultural activity during a historic reference period should not be eligible to claim the Farm Sustainability Payment.

45% of respondents supported the proposal that a historic year or years should be used to restrict the allocation of entitlements for the Farm Sustainability Payment to farm businesses which met the following criteria: (i) had cattle or sheep registered on APHIS; and/or (ii) had at least 3 ha of an arable or horticultural crop during the reference period in an historic year or years.

The main themes were:

Good agreement

- Grass growers/sellers are not active farmers. Only livestock or crop producers should get payment. No tangible output, therefore not commercial businesses;
- Not the type of activity that will move the agricultural industry forward;
- Grass growing/selling is low risk and therefore does not require a safety net; and
- The Farm Sustainability Payment should be targeted at those at greatest need.

No agreement

- Allowed as part of last CAP funding, previous policies encouraged farmers to keep land in good agricultural and environmental condition;
- Could exclude farms delivering environmental benefits (peatland restoration/managing priority grassland);
- A three year historic reference period would be fairer; and
- Will exclude genuine farm businesses.

Department's analysis

Analysis of 2020 claimants indicated that 1,384 farm businesses (5.8% of the total) may not meet the proposed requirement. These businesses received £6.5 million in payments (2.2% of the total). Given the minimal amount of agricultural activity carried out by these businesses, no impact on the agricultural industry is anticipated. Further analysis using the data held on APHIS of records of crops grown on the farm over a historic reference period suggested that approximately 1000 of these businesses would not meet the criteria as they mainly produce grass/grass silage/graze horses etc.

It is recognised, however, that the approach set out above has limitations as it will not exclude businesses with very small numbers of livestock relative to land area and may not prevent existing eligible applicants reverting to grass/grass silage only businesses in future years. Furthermore, it could be possible for the businesses excluded to transfer in entitlements and claim payments in future years. The number of businesses doing so is anticipated to be minimal given the cost of acquiring entitlements.

Consideration has also been given to what this historic base period should be. After careful consideration, it is suggested that using an historic base period over the 2 years, of 2020 and 2021 would be appropriate as it minimises where keeping animals or growing arable or horticulture crops was prevented due to temporary factors outside the control of businesses. A number of stakeholder responses supported the principle of using more than one historic year.

Final Decisions

Farm businesses that solely produced grass/grass silage and/or maintained land suitable for grazing or cultivation but undertook no further agricultural activity during the minimum two year historic reference period (2020 and 2021) will not be eligible to claim the Farm Sustainability Payment.

In summary, to remain eligible, a farm business will need to have in 2020 or 2021:

- Cattle or sheep registered on APHIS; or

- Pigs or poultry (i.e. no cattle and sheep) combined with grass selling only; or
- At least 3 ha of a determined area on either the 2020 or 2021 single application of an arable or horticultural crop (grass excluded).

Grazing horses will not fulfil the eligibility requirements as a horse is not an agricultural animal.

4. CAPPING OF PAYMENTS

Large farms can receive very large amounts of direct payments. It can be argued that this is not justified given that such farms can utilise economies of scale and have high levels of income. In response to this criticism, the Department introduced a cap of €150,000 on the Basic Payment Scheme (BPS) in 2015 which was the maximum permitted under EU rules. This was modified to a cap of £190,000 in 2021 to take account of the incorporation of the Greening Payment into BPS and the conversion to sterling. This level of capping impacted less than 10 farm businesses in Northern Ireland. In deciding to implement a cap, care needs to be taken that capping does not prevent farm businesses from becoming more efficient by expanding or encouraging farm businesses to split (artificially or otherwise) in order to avoid the impact of the payment limit as such actions could impact the competitiveness of the industry.

Consultation suggestions

In the consultation document, DAERA proposed that progressive capping of Farm Sustainability Payments should apply above £60,000.

Stakeholder views

73% of respondents to this question in the consultation exercise agreed with this proposal.

The main themes were:

Good agreement

- Fair/more level playing field;
- £60,000 more than sufficient safety net – businesses requiring more income support are not viable; and
- Progressive capping will allow time to adapt.

No agreement

- Will dis-incentivise growth;
- £60,000 is still too high;
- Not enough analysis presented to justify reducing the cap;
- Larger farms can incur higher running costs and need higher payments to make them resilient;
- May result in splitting of farm businesses; and
- Penalises larger farmers who support rural areas and employs multiple people.

Department's analysis

Large farms can receive very large amounts of direct payments which, it is argued, are not justified given that such farms can utilise economies of scale and have high levels of income. In response to this criticism, the Department introduced a cap of €150,000 on BPS in 2015 which was the maximum permitted under EU rules (and did not encompass the Greening Payment). This was modified to a cap of £190,000 in 2021 to take account of the incorporation of the Greening Payment into BPS and the conversion to sterling. This level of capping impacted fewer than 10 farm businesses in Northern Ireland. In deciding to implement a cap, care needs to be exercised to avoid discouraging farm businesses from becoming more efficient by expanding, or encouraging farm businesses to split (artificially or otherwise) in order to avoid the impact of the payment limit. Such actions could impact the competitiveness of the industry.

There are 2 broad approaches to capping. An absolute limit can be set on payments that any farm business can receive, or a progressive cap can be applied. Under a progressive cap, payments falling within a particular payment band would be subject

to a set percentage reduction. The Department consulted on a progressive/tiered capping proposal.

Table 1 was produced using 2020 data on total payments for the Basic Payment Scheme scaled up to £243,190,000 (17% reduction which is the maximum that can be removed for the Beef Sustainability Package from a total of £293 million).

Table 1. Value of payments falling within specified payment bands and the number of farms receiving a total payment within the band

Bands of total payments £	Number of Farms	Value of payments £ (‘000)
1 – 60,000	23,596	236,752
60,000 – 80,000	152	3,496
80,000 – 100,000	59	1,565
100,000 – 150,000	45	1,070
150,000 – 190,000	7	174
190,000+	2	133
All	23,861	243,190

There are numerous payment bands and percentage reductions that could be applied to each band. As an example, in the consultation document the Department showed the reductions to payments set as follows:

- £60,000 - £80,000 – 20%;
- £80,000 - £100,000 – 40%;
- £100,000 - £150,000 - 60%;
- £150,000 - £190,000 – 80%; and
- £190,000+ - 100%.

Table 2 shows the impact of applying the above progressive capping approach on 2020 total payments for the Basic Payment Scheme scaled up to £243,190,000 (17% reduction which is the maximum that can be removed for the Beef Sustainability

Package from a total of £293 million). Using this approach the total value of the reduction is £2.24 million.

Table 2. Deductions under progressive capping scenario

Capping Level £	Rate of Reduction within band (%)	Payment falling within band £ ('000)	Amount deducted within band £ ('000)
190,000+	100	133	133
150,000-190,000	80	174	139
100,000-150,000	60	1,070	642
80,000-100,000	40	1,565	626
60,000-80,000	20	3,496	699
Total value of reduction			2,240
Percentage of total payments			1%

A progressive approach to capping along with the percentage reduction within each band increasing gradually over a period of time rather than an absolute cut off imposed with little lead-in time could reduce the incentive for businesses to split to minimise the impact of the cap, although given the analysis shown in Table 2 the risk of this appears relatively low. A progressive tiered approach also allows a farm business time to prepare to adjust to a reduced payment.

Final Decision

A progressive capping of the Farm Sustainability Payment is introduced above £60,000 from 1 January 2024 (assuming this is the agreed timeline for the beginning of the Farm Sustainability Payment) using the model in Table 3.

Table 3. Recommended payment bands and percentage reductions for progressive capping

Payment Band	Percentage reduction (%)
£150,000-£190,000	80
£100,000-£150,000	60
£80,000-£100,000	40
£60,000-£80,000	20
£0-£60,000	0

5. MINIMUM CLAIM SIZE

Farms which are farming small areas of land are likely to have very low levels of agricultural activity. Their level of outlay on agricultural activity, and exposure to risk is likely to be low and, therefore, the rationale for providing a Farm Sustainability Payment safety net for such farms is weak. For the small number of farm business that have a high turnover on a small area of land (such as horticulture businesses), the contribution of the Farm Sustainability Payment to overall revenue would be very modest, again pointing to a weak justification for providing a Farm Sustainability Payment. The current minimum claim size for BPS is 3 ha.

Consultation suggestion

In the consultation document, DAERA proposed increasing the minimum claim size to 10 ha.

Stakeholder views

92% of respondents did not agree with this proposal. The main themes were:

Agreement

- Mostly part-time (hobby) farmers who have small holdings; and
- Levels of production or risk and effort taken by those sized farms is minimal and they are risk averse.

No agreement

- 10 ha is too high;
- Not all small farmers have other sources of income;
- Will put many small farms out of business;
- Can support it for grassland/livestock farms but not for the horticulture sector;
- Support for all active farmers who are productive;
- Difficult for new entrants/young farmers to obtain land;
- Smaller farms have less carbon footprint/more high nature value (HNV) areas;
- Small holders can be most innovative producers/niche sectors;
- Unfair to pig, poultry and horticultural businesses; and
- Negative impact on rural communities.

Department's analysis

The Department has considered the impact of increasing the minimum claim size from the current 3 ha to 5 ha, 7.5 ha and 10 ha. Table 4 shows the number of farm businesses excluded from receiving the proposed Farm Sustainability Payment increases when the minimum claim size is increased, particularly for 7.5 ha and 10 ha with over 20% of current farm businesses no longer eligible if a 10 ha requirement was applied. Numerically, cattle and sheep farms account for the largest number of businesses no longer eligible due to an increase in the minimum claim size.

Analysis was provided showing a breakdown by land type of the area of activated land that would no longer receive payments if the decision was taken to increase the minimum claim size to 10ha, 7.5ha or 5ha. If the minimum claim size increased to 10 ha, 10,589 ha, 11,829 ha and 10,293 ha of SDA, DA and lowland respectively would be excluded from support.

In summary, increasing the minimum claim size to 10 ha excludes a number of farm businesses, mostly very small farms in the cattle and sheep sector from receiving the Farm Sustainability Payment.

Table 4. Increasing the minimum claim size data

Minimum claim size (ha)	5 ha	7.5 ha	10 ha
Number of farms affected (% of population)	1,463 (6%)	3,219 (13%)	4,880 (20%)
Value of payments affected (£ million)	2.3 (<1%)	6.1 (2%)	11.2 (3%)
Number of cattle and sheep farms (% of population)	979 (5.4%)	2,329 (12.8%)	3,707 (20.5%)
Number of cattle (% of population)	8,488 (0.5%)	24,433 (1.5%)	46,958 (3%)
Number of sheep (% of population)	22,640 (1.2%)	64,085 (3.3%)	107,679 (5.6%)

The rationale for raising the minimum claim threshold is sound in the context of the policy objective for the Farm Sustainability Payment. Very small holdings face much less exposure to risk and these farm households generally have other sources of income, reducing their reliance on agriculture and the need for a safety net. These holdings also produce only a small proportion of overall agricultural output. However, it needs to be recognised that the proposal to increase the threshold to 10 ha has generated a significant degree of stakeholder concern and resistance and whilst the rationale for making small safety net payments is weak, the associated budget commitment is very small. Therefore, on balance a threshold of 5 ha would seem to be a reasonable balance (and reflective of the position of the UFU and other key stakeholders).

Final Decision

A minimum claim size threshold of 5 ha is introduced.

6. CONDITIONALITY

To be eligible for the Farm Sustainability Payment, the consultation document proposed that a farm will need to meet certain standards and undertake certain basic environmental management actions. The standards are referred to as Farm Sustainability Standards (see relevant section) and environmental management actions. These latter actions were proposed as:

- a) Farms will need to meet certain standards and undertake certain basic environmental management actions. The standards are referred to as Farm Sustainability Standards and are a revised version of current Statutory Management Requirements (SMRs) and Good Agricultural and Environmental Condition Requirements (GAEC) that make up Cross Compliance.
- b) The environmental management actions proposed at this stage, which will contribute to air and water quality and carbon sequestration and identify those areas on individuals land parcels most at risk of creating nutrient leakage to waterways, include:
 - Participation in soil testing, including Light Detection and Ranging (LiDAR) to be updated on a regular basis;
 - Over time, preparing a nutrient management plan based on the Soil Testing and LiDAR information; and
 - Recording of sire identity on APHIS/NIFAIS of all calves born for both dairy and beef herds (to assist the implementation of the planned Ruminant Genetics Programme).

Stakeholder views

66% of respondents agreed with the proposal that participation in soil testing, including Light Detection and Ranging (LiDAR) to be updated on a regular basis be included as a condition for receipt of the Farm Sustainability Payment. The main themes were:

Good agreement

- Soil sampling makes environmental and economic sense;
- Northern Ireland-wide LiDAR survey an invaluable asset;
- A graduated roll-out should be considered; and
- Education and knowledge on how a farmer makes best use of this information is needed.

No agreement

- Too burdensome on smaller farmers;
- Alienates hill and LFA farmer, also older farmers; and
- Could not support if results used in DAERA 'enforcement programme'.

54% of respondents agreed with the proposal that the preparation of a Nutrient Management Plan based on soil testing and LiDAR be included as a condition for receipt of the Farm Sustainability Payment. The main themes were:

Good agreement:

- Having a nutrient management plan will make a farmer more efficient in his use of resources;
- Due to importance of this measure, other farmers not eligible for resilience but eligible for other measure should also have this as a condition;
- Nutrient management calculator on DAERA site a great tool;
- This should be a focus for the proposed Knowledge Transfer Workstream (training for farmers); and
- Better for environment and water quality.

No agreement

- Try not to increase paperwork burden... you are just increasing costs to farmers;
- Too complicated for many farmers (av. age around 58), need grace period; and
- Generally regarded as 'paper exercise'.

60% of respondents agreed with the proposal that the recording of sire data on APHIS/NIFAIS for all calves born on both dairy and beef herds be included as a condition for receipt of the Farm Sustainability Payment. The main themes were:

Good agreement:

- Excellent measure to improve suckler herd genetics;
- Improve quality of stock... reaching a sustainable profitable business without support; and
- Enables better management and not much hassle to click a button.

No agreement:

- It will not be done accurately;
- Difficult to identify sire data if a cow is purchased that is already in-calf; and
- Issue of artificial insemination with mixed semen could complicate this.

Use of artificial insemination with mixed semen can be given further consideration and accommodated within rules. In the longer term, a switch to DNA tagging and animal ID would overcome this problem and ensure the recording of correct parentage. DNA testing would also assist the implementation of the planned Ruminant Genetics Programme.

Final Decisions

The following become conditions of the Farm Sustainability Payment:

1. Compliance with the new Farm Sustainability Standards;
2. Participation in the Soil Nutrient Health Scheme;
3. Development of a Nutrient Management Plan moving forward (timeframe to be decided); and
4. Recording of sire identity on APHIS/NIFAIS for all dairy and beef herds.

7. CRISIS FRAMEWORK MEASURE

Currently there are no principles applied consistently to crisis situations to guide any Departmental response (i.e. a crisis framework). As we look to the future, there will inevitably be those more extreme events which may require the government to step in to help stabilise the industry.

A key objective of DAERA's approach moving forward is to encourage farm businesses to better manage risk within their own businesses. This will require new knowledge in many instances and the proposed Knowledge Measures included in the consultation will seek to ensure farm businesses will have an awareness of the need to manage risk appropriately. Consideration will also be given in due course to require farm businesses to have a risk management plan as a conditionality for a Farm Sustainability Payment.

A new Crisis Framework will enable the Department to assess potential risks and determine both when intervention is necessary and the most appropriate form of intervention for a specific crisis. This would involve setting out trigger points (such as scale of impact or market price reductions).

Consultation suggestions

In the consultation document, the Department proposed the development of a crisis framework to enable it to assess potential risks and determine the most appropriate intervention for a specific crisis. A number of principles were also proposed:

- **Threshold** – Farmers will be required to do as much as they can to build resilience into business practices. Government action will only be considered at a certain trigger point/threshold and when there is no immediate prospect for the market to recover or adapt without intervention, i.e. failure to achieve a defined price threshold over a defined period of time;
- **Targeted** – If action is required, this must be in a targeted way with consideration given to the extent to which the whole or only part of the sector is impacted; and

- **Temporary** – Any action must be temporary; if it goes beyond a certain period of time, it is then considered market realignment rather than disturbance and intervention should cease.

Stakeholder views

70% of respondents to this question in the consultation exercise agreed with this proposal. The main themes were:

Good agreement

- Risk Management is important/farmers need to build resilience into their business;
- Crisis should be assessed individually;
- Only for catastrophic events/exceptional circumstances;
- There should be industry involvement to agree thresholds/targeted sectors;
- Quick decisions required in crisis situations/policy must ensure that, in a crisis, payments are responsive, easily accessible with minimal bureaucracy;
- Support through Knowledge Measure is vital; and
- Yes, but budget should not come from top slicing existing funding.

No agreement

- More information is required.

Department's analysis

Prior to government action in response to a future crisis, the following criteria could be considered:

- (i) The sector is facing significant negative impacts due to market disruption (inputs and/or outputs) and/or natural events such as weather or disease. These negative impacts would be an economic shock large enough to threaten the viability of (otherwise viable) businesses or an event that significantly reduces the available output of the sector to the detriment of consumers and businesses in the supply chain over a reasonable timeframe.

- (ii) All other options for the affected businesses to 'ride out' the temporary market upheaval have been exhausted. For example:
 - a. Business' own internal resources;
 - b. Commercial bank loans/finance;
 - c. Other UK level HM Government/public sector schemes;
 - d. Regulatory easements/other easements; and
 - e. Internal sector flexibilities (i.e. contractual revision/storage).

- (iii) Targeted support is the most appropriate and effective way for government to respond.
 - a. Are there significant sector-wide implications?
 - b. Does the proposed intervention align with the long-term vision and economic fundamentals of the sector?
 - c. Will support be temporary, avoiding on-going support dependency for business continuity?

- (iv) There will be disproportionate harm to the economy or society if the sector is not supported. Will/can intervention provide value for money and be effectively targeted?

Final Decision

The Department now proceeds to develop a Crisis Framework in line with the principles of threshold, targeting and temporary.

8. BEEF SUSTAINABILITY PACKAGE

The Department is seeking to explore how a future support regime could support suckler cow producers (and potentially breeding ewe producers if a need is identified) and the earlier slaughter of beef-bred and dairy-bred animals through a Beef Sustainability Package. A Beef Sustainability Package would aim to ensure the future viability of the beef sector, help the sector to keep pace with, or surpass, the productivity growth of its competitors, and improve profitability, resilience and environmental sustainability. In particular, it would seek to reduce emissions and the carbon footprint by calving cows more regularly, calving heifers at a younger age and by slaughtering animals at an earlier age. Specific attention will be paid to avoiding risks of over grazing sensitive areas that was a criticism of coupled payments under old CAP schemes.

Intervention measures in the suckler cow sector, designed to drive productivity and performance efficiency, can help address sector vulnerabilities by increasing profitability and thus underpin viability and sustainability for an efficient cattle breeder. Good breeding management and herd fertility are a key profit driver. Reducing the amount of time animals spend on-farm in an unproductive state will also reduce emissions and the carbon footprint of the whole farm.

Research evidence has examined the carbon savings that can be realised through multiple management changes. It has been shown that significant savings are easily and quickly achievable by improving a number of areas incrementally and enable reductions in carbon across the entire life cycle.

Consultation Suggestions

The Beef Sustainability Package (BSP) proposed providing support under two measures aimed at increasing productivity and reducing the carbon footprint of the beef sector.

To receive support, applicants must be in receipt of the Farm Sustainability Payment.

Stakeholder views

48% of respondents supported this proposal. The main themes were:

Good agreement

- Ensures those in receipt of payment under the Beef Sustainability Package adhere to Farm Sustainability Measures conditionality;
- Those who meet Farm Sustainability criteria more likely to support improvement through genetics;

No agreement

- If farm is sustainable, it should be eligible for payment under the Beef Sustainability Package irrespective of size;
- Concerns raised about the minimum claim size under the Farm Sustainability Measure was too high and could exclude small farms;
- Disagree with Beef Sustainability Package as a Measure – viewed as a regressive step; and
- Concerns on the impact of a Beef Sustainability Package in uplands and high nature value farms.

Department's analysis

It is reasonable to expect an active farmer business with suckler cows and beef cattle to also be in receipt of the Farm Sustainability Payment. If they were not, there is significant risk that there could be added bureaucracy/administration in terms of the conditions that these farm businesses would be required to adhere to. In addition, there could be unintended consequences as the complete programme of measures could be disjointed.

Final Decisions

To be eligible for support under the Beef Sustainability Package, claimants must also be in receipt of Farm Sustainability Payment. This will ensure that those in receipt of the Beef Sustainability Package adhere to the Farm Sustainability Measure conditionality which includes compliance with the new Farm Sustainability Standards and the environmental actions of participation in the Soil Nutrient Health Scheme, over

time preparation of a nutrient management plan and the recording of sire identity on APHIS/NIFAIS of all calves born for both dairy and beef herds.

9. SUCKLER COW MEASURE

There are some 245,000 suckler cows in Northern Ireland. Prior to 2005, direct payments under the CAP were linked (coupled) to production for the suckler cow sector. Coupled support, at that stage, was defined as the provision of payment to a sector involved in agricultural production that required support to maintain those levels of production. The Department is now seeking to introduce measures aimed at driving better economic and environmental performance across the suckler cow sector. It must be noted that this is not just another way of allocating payments to farmers nor is it being explored for the purpose of increasing production.

Consultation suggestions

In its consultation, DAERA suggested that this Measure would be open to all farm businesses with suckler cows. Initially, two separate actions were proposed:

- (1) Reducing the age of first calving towards the ideal of 24-26 months through a series of management steps. A phased pace of implementation has been proposed as set out below.

Year of Scheme	Maximum age at first calving
1	30 months
2	29 months
3	28 months
4	27 months

- (2) Reducing the calving interval towards the ideal of 365 days through a series of management steps. A phased pace of implementation has been proposed as set out overleaf.

Year of Scheme	Maximum calving interval
1	400 days
2	390 days
3	380 days
4	370 days

Full payment would only be made on suckler animals that give birth to live calves that are registered with DAERA and meet either the target for first calving or calving interval.

To ensure that the measure is WTO Blue Box compliant, the support payment must be limited to a certain number of animals. This could be achieved either as an individual business limit on payment (a payment quota), or a limit applied at Northern Ireland level (with payments scaled back if necessary to ensure this limit is respected). It was proposed that individual payment quotas would be applied, calculated on an individual farm level based on a historic reference period (to be determined). This will ensure that there is no incentive for individual producers to increase their number of animals in order to secure a larger share of the overall budget, and to lessen the risk of any negative environmental impact from over stocking. Both of these negative consequences could arise from a limit administered at a Northern Ireland level.

In addition, a retention period was proposed. Suckler cows subject to claim must be present in that herd for at least 6 months of the year, both to ensure that payment can only be claimed once for each cow and to direct the support payment towards the good management practice that enabled the suckler cow to meet the eligibility requirements described above.

10. AGE AT FIRST CALVING

Cows that first calve at an earlier age are more productive over their lifetime compared with those first calved at an older age. In addition, reducing the first calving age can act as a helpful management tool to reduce mature cow size, which in turn can improve profitability as less feed is required to maintain a smaller cow. Smaller cows can also provide environmental benefits through GHG emission reductions.

Research has also shown that a reduction in first calving age from 36 to 24 months can reduce GHG emissions intensity by up to 6.9%.

Stakeholder views

37% of respondents supported this proposal. The main themes were:

Good agreement

- Appropriate training and knowledge interventions will need to be provided; and
- Efficiency measure that should help reduce costs and decrease emissions.

No agreement

- Some breeds including native breeds are not sufficiently mature to meet targets;
- 27 months is too young for first calving and difficult to get heifer back in calf if she has her first calf too soon;
- Animal welfare concerns if heifer is put into calf too early;
- Difficult for hill farmers to meet targets; and
- Pace of implementation too fast.

Department's analysis

DAERA analysis of data on age at first calving for all dams registered on APHIS as at the 1 June 2020 shows that 48% of the suckler herd would have met the Year 1 target of 30 months proposed in the consultation (see Table 5). The list of animals categorised by beef, dairy and native breed is attached at Annex 1.

Table 5. Age at first calving for Beef, Dairy and Native breeds in the suckler herd in 2020^{1,2}

	<=24 months %	24-27 months %	27-28 months %	28-29 months %	29 - 30 months %	30-32 months %	Over 32 months %	Total Number
Beef Breeds	11	19	5	5	5	10	45	166,790
Dairy Breeds*	20	35	7	6	5	7	20	20,841
Native Breeds	13	21	6	5	5	10	41	72,002
Total	12	21	5	5	5	10	42	259,313

* suckler herds with less than 5 dairy cows are counted as part of the suckler herd

However, this means that based on 2020 data 52% would have not have been eligible for payment in Year 1. For Year 4 of the proposed scheme, the number that would have been eligible in 2020 is 33%. Of course, it must be remembered that the introduction of an incentive payment to lower the age at first calving should alter management behaviour and increase the proportion of animals that would meet the stipulated target.

Table 6 includes a further breakdown of the age at first calving for a range of breeds. The figures have been broken down to show the numbers and percentages of animals that in 2020 would have met the proposed steps to reduce the age at first calving through the phased implementation outlined in the consultation document.

¹ Percentages may not sum to 100 due to rounding

² Animals that have calved from 471 days or older

Table 6. Age at first calving for certain beef, dairy and native breeds held on APHIS in 2020³

	<=24 months %	24-27 months %	27-28 months %	28-29 months %	29 - 30 months %	30-32 months %	Over 32 months %	Total Number
Limousin	9	17	5	5	5	10	49	78,676
Charolais	14	20	5	5	4	9	44	30,445
Simmental	12	22	6	6	5	10	38	31,106
Belgian Blue	11	15	6	6	6	12	44	14,159
Friesian	14	20	5	6	5	10	40	1,719
Holstein	22	38	7	6	4	7	16	17,509
Aberdeen Angus	14	22	5	5	5	9	40	30,663
Hereford	9	20	7	6	6	11	40	19,746
Shorthorn/ Shorthorn Beef	11	21	6	6	5	10	41	12,772
Stabiliser	28	35	3	3	2	5	23	2,845
Belted Galloway	8	11	3	3	4	8	64	1,480
Galloway	6	7	3	2	3	5	74	717
White Galloway	3	10	0	0	0	3	83	29
Irish Moiled	16	15	3	5	5	9	48	1,085

For Year 1, the target maximum age at first calving was 30 months, for Year 2, 29 months, for Year 3, 28 months and for Year 4, 27 months. Table 6 also includes information on animals that had their first calf below 27 months, between 30 and 32

³ Percentages may not sum to 100 due to rounding

months and over 32 months. The breeds shown are the late maturing, early maturing and native beef breeds as well as two dairy breeds.

From Table 6, for early maturing native breeds in 2020 such as Aberdeen Angus/Hereford/Shorthorn, between 48 and 51% had their first calf at 30 months or earlier so would have met the proposed Year 1 target step. For late maturing breeds such as Limousin, 41% had their first calf at 30 months or earlier so would have met the proposed Year 1 target step. For Charolais, the figure was higher at 48%.

Table 6 also shows that for Aberdeen Angus/Hereford/Shorthorn, in 2020 between 29% and 36% had their first calf at earlier than 27 months so would have met the proposed Year 4 target step. For Limousin and Charolais, 26% and 34% respectively had their first calf earlier than 27 months so would have met the proposed Year 4 target step.

For a traditional native breed, such as Irish Moiled, in 2020 44% had their first calf at 30 months or earlier so would have met the proposed Year 1 target step. 31% would have met the proposed Year 4 target step of first calving at 27 months or earlier.

In 2020, 49% of Aberdeen Angus and 51% of Hereford had their first calf at over 30 months and would not have met the proposed Year 1 target step of 30 months. For Limousin, the figure was 59% and Charolais 53%. For Irish Moiled, the figure was 57%.

In order to drive productivity and environmental sustainability, it is important to encourage as many farm business as possible to change behaviour. Having considered the additional analysis presented above and the concerns raised in the consultation, it is recommended that the target calving dates be relaxed slightly to make them attainable for a larger proportion of the population, but still driving towards better performance. It hoped that this would bring a larger number of producers on the journey. Therefore, the recommended Year 1 starting point has been revised from 30 months to 34 months, allowing at least 58% of farm businesses (based on 2020 data) to be eligible to receive the payment in this first year.

The end point of transition has been adjusted from 27 months to 29 months. This will still be a challenging target for many but may be viewed by the industry as a more achievable target and should encourage farm businesses to change behaviour.

The recommended rate of transition has not been changed and remains over a four year period. This is because it is felt that with the assistance of suitable advisory input (which is planned), a four year transition from 34 to 29 months is achievable. Moreover, if this measure is not introduced until 2025, businesses will have over two years of advance notice and will have time to prepare and make the necessary management changes to maximise their ability to qualify for the payment.

The proposed targets will be subject to regular review.

Final Decisions

This measure will have a revised phased implementation as set out below:

Year of Scheme	Maximum age at first calving
1	34 months
2	32 months
3	30 months
4	29 months

Scoping and developing knowledge interventions to support farmers achieve the targets is undertaken.

11. CALVING INTERVAL

A reduced calving interval means less time spent on farm by 'empty cows' which will improve profits by reducing feeding costs. Both earlier first calving and shorter calving intervals will highlight fertility issues to farmers at an earlier stage and enable those less fertile cows to be replaced sooner rather than later. For farms that sell calves as weanlings, those born within 365 day cycle will be consistently older at the time of sale, have a higher liveweight and, therefore, more likely to achieve a higher sale price and margin. A shorter calving interval also delivers environmental benefits and lowers the carbon footprint as it reduces the time spent as unproductive animals.

Stakeholder views

41% of respondents supported this proposal. The main themes were:

Good agreement

- Efficiency measure that should help reduce costs and decrease emissions;
- Can lead to better economic outturn and environmental benefits but might require contingency arrangements; and
- Appropriate training and knowledge interventions will need to be provided

No agreement

- Practical reality will be very challenging for many farmers;
- Timescales are too tight – more time needed;
- Animal health and welfare concerns need to be considered; and
- Need to have contingency measures.

Department's analysis

From the consultation responses, three issues were identified as potentially problematic:

1. The overall proportion of animals meeting the target calving interval would be too low:
2. Native breeds would struggle more to meet the calving interval target than other beef breeds;
3. Second calving animals would struggle more to meet the target (especially those that had calved for the first time at a younger age).

Therefore, further interrogation of the APHIS database was undertaken to test the validity of these concerns.

Analysis of the calving history of suckler cows registered on APHIS on 1 June 2020 looked at their first five calving intervals. Two further sets of analysis were carried out, one on the most recent calving interval for all dams on APHIS at the 1 June 2020 and the other on those who had their last calf in 2019.

For the first calving interval event (i.e. their second calf) of all dams on APHIS, the analysis (Table 7) showed that 55% of animals would have met the proposed Year 1 calving interval in the consultation document of 400 days. Only 35% of these animals would have met the proposed target of 370 days or less (in the fourth year of the scheme). This analysis also noted that, out of a population of just over 200,000 suckler cows with a first calving interval, just under 71,000 had a calving interval event under Year 4 target of 370 days.

Table 7. First calving interval and most recent calving interval events of all dams registered on APHIS as at 1 June 2020, broken down by stepped measure

	291-370 days Year 4 %	371-380 days Year 3 %	381-390 days Year 2 %	391-400 days Year 1 %	≥401 days Not eligible %	≥416 days Not eligible %	Total Number
First calving interval for all dams on APHIS	35	8	7	6	45	38	200,080
Most recent calving interval for all dams on APHIS	44	9	7	5	36	30	199,827

The analysis of the most recent calving interval data (Table 7) showed that 65% of animals would have met the proposed Year 1 target of 400 days or less with 36% not eligible for payment in Year 1. Around 44% of animals would have met the year 4 target of 370 days or less.

The additional column in Table 7, shows if the proposed Year 1 calving interval of 400 days or less changes to 415 days or less, the numbers for the most recent calving interval event that would not be eligible for payment in Year 1 reduces to 30%.

Analysis of the first and fifth calving interval events broken down by beef, dairy and native breeds (Table 8) showed that for beef breeds, 54% met the proposed target for Year 1 of 400 days or less on their first calving interval and this increased to 74% by their fifth calving interval. For native breeds, there was a similar pattern, with 58% meeting the proposed target for Year 1 of 400 days or less and 75% by their fifth calving interval.

Table 8. First and fifth calving interval events (C11 and C15) for Beef, Dairy and Native breeds registered on APHIS as at 1 June 2020, broken down by stepped measures⁴

		291-370 days Year 4 %	371-380 days Year 3 %	381-390 days Year 2 %	391-400 days Year 1 %	≥401 days Not eligible %	≥416 days Not eligible %	Total Number
Beef	C11	34	8	7	6	46	39	131,980
	C15	50	10	8	6	26	21	45,965
Dairy*	C11	41	7	6	5	41	35	14,161
	C15	41	7	6	5	42	35	1,704
Native	C11	38	8	7	6	42	36	53,939
	C15	52	10	7	6	25	20	15,248
Total	C11	35	8	7	6	45	38	200,080
	C15	50	10	7	5	27	21	62,917

**suckler herds with less than 5 dairy cows are counted as part of the suckler herd*

⁴ Percentages may not sum to 100 due to rounding

The additional column in Table 8 shows that if the proposed Year 1 calving interval of 400 days or less changes to 415 days or less, 61% of beef breeds would meet the proposed target for Year 1 on their first calving interval. 39% would not be eligible for payment if this changed, compared with 46% if the Year 1 stays at 400 days or less. For their fifth calving interval, 21% would not be eligible for payment if the Year 1 target changes to 415 days or less.

Analysis of the percentage number of animals achieving the proposed targets is lower for their first calving event, (which is the time between their first and second calves) and improves for their next calving event is shown in Table 9. For all breeds, for their first calving event, 35% would have met the Year 4 target of 370 days or less. Those who would have met the Year 4 target increases to 45% and 50% at their second and third calving events respectively.

Table 9. Calving Interval events (CI1 to CI5) for all dams registered on APHIS as at 1 June 2020, broken down by stepped measures

	Calving Interval Numbers and % - All dams						
	291-370 days Year 4 %	371-380 days Year 3 %	381-390 days Year 2 %	391-400 days Year 1 %	≥401 days Not eligible %	≥416 days Not eligible %	Total Number
CI1	35	8	7	6	45	38	200,080
CI2	45	9	7	5	34	28	155,439
CI3	50	9	7	5	29	23	118,247
CI4	51	10	7	5	27	22	87,407
CI5	50	10	7	5	27	21	62,917

Table 10 examines the calving interval for three breeds, Aberdeen Angus, Limousin and Irish Moiled. It shows the age at first calving, that is the age at which a cow had her first calf as a heifer at 27 months or earlier, between 27 -30 months or later than

30 months. The average number of days for each of the next 3 calving intervals, that is the number of days between her first and second, second and third, and third and fourth calving events, are also shown for each breed.

Looking at an Aberdeen Angus specifically, for those animals that had their first calf at 27 months or earlier, it was an average of 423 days before they give birth to their next calf, an average of 398 days before they had their third calf and 389 days before they gave birth to their fourth calf.

For those that had their first calf at over 30 months, it was an average of 434 days before they gave birth to their second calf, 415 days before they had their third calf and 407 days before they gave birth to their fourth calf.

Finally, for those that had their first calf over 30 months, they had their second calf on average 11 days later than animals that had their first calf at 27 months or earlier.

Table 10. Ages at First Calving & Consecutive Calving Intervals held on APHIS in 2020

	Aberdeen Angus (14,450 dams)			Limousin (41,458 dams)			Irish Moiled (448 dams)		
	Calving Intervals (CI) 1, 2, & 3 (days between birthing events 1-2, 2-3, 3-4)								
Age at First Calving	CI 1	CI 2	CI 3	CI 1	CI 2	CI 3	CI 1	CI 2	CI 3
≤27 months	423	398	389	427	404	394	449	404	394
>27-30 months	424	406	398	436	408	397	405	402	410
>30 months	434	415	407	436	416	409	465	427	418

The trend is similar for both Limousin and Irish Moiled breeds and suggests that second calving animals do not struggle more to meet the target calving interval (especially those that had calved for the first time at a younger age).

It is important to encourage as many farm business to aim to meet the eligibility requirements as of any future scheme and receive payment. Based on the consultation responses and the resulting analysis presented above, there is a case to relax both the initial Year 1 and the final Year 4 calving interval targets. The proposed steps have been revised as follows:

Year of Scheme	Maximum calving interval
1	415 days
2	405 days
3	395 days
4	385 days

The revised targets will allow farmers to have sufficient management scope to be able to meet them while still incentivising change. Analysis of the most recent calving intervals of calves born in 2019 indicates that 69 % of animals would meet the revised Year 1 target of 415 days compared to 63% of animals that would have met the previous Year 1 target of 400 days.

There is no strong evidence to suggest that native breeds will find it more difficult to meet these targets, nor is there sufficient evidence to suggest that well managed second calvers will similarly struggle with the target calving intervals, especially at these raised levels. Therefore, no differentiation of approach is proposed for native breeds or second calving animals.

It is also proposed to maintain the transition period unchanged at 4 years as this should be attainable, especially with the benefit of the planned advisory package and the fact that producers will have more than a two year lead-in time before this measure is implemented and can thus start implementing management changes in advance.

The question has been raised as to whether the qualification for the payment should be assessed for each individual animal or for the herd as a whole. An assessment for each animal would allow some animals in the herd to secure the payment and others to fail, and provide a clear indication to farmers of the animals that are thus the most

profitable, and the least profitable (incentivising change). A payment based on the average calving interval of the breeding herd would be more complex to administer, would result in all animals in the herd either receiving the payment or not, regardless of their individual performance, and could give rise to situations where particularly poor performance from a single animal could trigger the entire breeding herd out of the payment. Therefore, it is recommended that eligibility for the payment will be assessed for each animal in the breeding herd.

Failure to meet the calving interval target in a particular year will not exclude that animal from securing the payment in the following year providing it meets that year's calving interval target.

Final Decisions

Payment will be made in respect of individual cows that meet the calving interval targets. A revised phased implementation for this measure is set out below:

Year of Scheme	Maximum calving interval
1	415 days
2	405 days
3	395 days
4	385 days

12. PAYMENT ON LIVE CALVES ONLY

Consultation proposal

Full payment would only be made on suckler animals that give birth to live calves that are registered with DAERA and meet the targets for first calving or calving interval.

Stakeholder views

59% of respondents supported this proposal. The main themes were:

Good agreement

- Traceability an important aspect of support and calves should be properly registered.

No agreement

- Many reasons for calves born dead which are outside of good management practices;
- Dead calves should be registered (and BVD tissue sampled) to qualify for support;
- May lead to healthy animals being culled if they lose a calf; and
- Loss of a calf is a direct loss to the farmer.

Department's analysis

The purpose of the Measure is to drive productivity and environmental sustainability through incentivising good management and decreasing carbon footprint. Making payments in respect of live calves will signal the need for good breeding and management practices for increased efficiencies and avoid rewarding poor management decisions /practices. Allowing cows to qualify for the payment if they produced a dead calf would introduce significant scheme control issues (e.g. claims could be registered against heifers that had never actually calved).

Final Decision

Full payment is only made on animals that give birth to live calves that are registered.

13. PAYMENT QUOTAS

To ensure that the measure is WTO Blue Box compliant, the support payment must be limited to a certain number of animals. This could be achieved either as an individual business limit on payment (a payment quota), or a limit applied at Northern Ireland level (with payments scaled back if necessary to ensure this limit is respected).

Consultation suggestions

Payment quotas would be calculated on an individual farm level based on a historic reference period (to be determined).

Stakeholder views

51% of respondents supported this proposal. The main themes were:

Good agreement

- Reference year will ensure that farmers cannot artificially increase herd numbers;
- Any system will need to accommodate new entrants / those adjusting their enterprises/those facing exceptional circumstances; and
- Should prevent overstocking.

No agreement

- Concern that the reference year maintains status quo rather than encouraging change;
- Concern that there could be an increase in cow numbers or could have negative environmental impacts; and
- Insufficient detail on reference year.

On trading of payment quotas and usage rules, 58% of respondents supported this proposal. The main themes were:

Good agreement

- Need to be able to trade to facilitate farmers entering / leaving the industry;

- Usage rules are unclear in the consultation document but trading needs to be controlled and reviewed;
- Should not lead to overstocking of land; and
- Trading in quota is an administrative necessity but should not have any financial value.

No agreement

- Incentivises manipulation;
- Individuals should not be able to buy quota off smaller farms;
- Should be no unintended consequences; and
- Trading in quotas is artificial and leads to market distortion.

Department's analysis

Support such as that under the Suckler Cow Measure falls under World Trading Organisation Blue Box requirements as it is considered to have the potential to distort production and trade. Quantitative limits to production are therefore needed.

Quotas on payments impose limits on production at either individual or regional level. If quotas are set at a regional level, there is an incentive for individual farmers to increase their production in order to maximise their allocation of quota. Quotas set at an individual level, particularly when based on an historic reference year, avoid unnecessary increases in production.

Further work is needed to develop a potential system setting quantitative limits at individual farm level and fully consider any unintended consequences.

Work is also needed to develop any associated operating rules.

Final Decision

Quantitative limits are established at individual farm level. Further work will be undertaken to develop an appropriate system and operating rules.

14. RETENTION PERIOD

Consultation suggestions

There should be a retention period for suckler cows subject to claim, that they must be present in that herd for at least 6 months of the year. This proposal was to ensure that payment could be claimed only once for each cow and to direct the support payment towards good management practice that enables the suckler cow to meet the proposed eligibility requirements.

Stakeholder views

64% of respondents supported this proposal. The main themes were:

Good agreement

- Allows for better control and promotes good practice;
- Ensures the farmer that has incurred most costs gets paid;
- Helps reduce unnecessary movements of animals and prevents disease spread; and
- Need some flexibility in specific circumstances.

No agreement

- Recognise principle but more detail is needed;
- Should be a shorter period;
- Need to consider replacement animals; and
- Some flexibility needed.

Department's analysis

There is broad agreement that retention periods are necessary. More work is needed to explore with stakeholders to explore further the merits of retention periods and how they might operate in practice before a final decision is taken.

Final Decision

No decision on retention periods is announced at this stage. Further engagement will take place with stakeholders.

15. STOCKING DENSITY

In the past, coupled support schemes for livestock were accompanied with stocking density restrictions. These were applied at the overall holding level and this failed to protect sensitive habitats within the farm. They also often led to perverse behaviours, such as seeking additional land at inflated prices for the sole purposes of meeting the stocking density test (hence circumventing the objective of the stocking density restriction).

Consultation suggestions

It was proposed that a stocking density limit would not be introduced at this stage but the issue will be kept under continuous review.

Stakeholder views

The consultation did not specifically ask whether respondents agreed that there would be a stocking density. A number of organisations commented that the introduction of quotas would go some way to control cattle numbers. Environmental organisations voiced concern that the Suckler Cow Measure ran the risk of over-stocking, particularly in marginal areas. There was also the possibility of farmers seeking additional land for the purpose of circumventing the stocking density restriction.

Department's analysis

It will be important that the stocking density issue is kept under review to monitor any potential negative environmental consequences that might emerge, for example, increases in stocking levels which could impact on overall environmental objectives.

Final Decision

A stocking density is not introduced at this stage. The impact of this decision will be kept under careful review to ensure that there are no emerging negative environmental consequences.

16. PROVISION OF DATA TO THE RUMINANT GENETICS PROGRAMME

Consultation suggestions

In the future, claimants under this Measure will be required to provide data [to be determined] to support a genetics programme.

Stakeholder views

48% of respondents supported this proposal. The main themes were:

Good agreement

- Fundamental management tool to help drive improvements in productivity and better environmental performance;
- Northern Ireland needs a much better developed livestock database;
- Proposal incentivises farmers to participate in a genetics programme; and
- Needs to be simple for farmers to record data/participate.

No agreement

- Insufficient details; and
- Too much paperwork for farmers.

Department's analysis

A similar question was asked in relation to the Ruminant Genetics Programme. The benefits/outcomes to be derived from driving the uptake of the Ruminant Genetics Programme are significant (see relevant section). It is, therefore, appropriate that a condition of future support under this measure is to provide data to the Ruminant Genetics Programme when it comes on stream.

Final Decision

Future claimants under this Measure will be required to provide data to support the Ruminant Genetics Programme to drive performance. Further details on the data to be collected and the potential timescales will be made available as soon as possible as the Ruminant Genetics Programme is developed.

17. BEEF CARBON REDUCTION MEASURE

Outside of dairy and beef cows and breeding bulls, 2020 data indicates that there were approximately 150,000 fattening cattle over 24 months of age present on Northern Ireland farms at the June census. This amounts to almost 10% of total cattle numbers. The presence of cattle of this age is unnecessary and unproductive and they could be finished at an earlier age through improved breeding, health interventions and herd management without impacting on the output of beef.

18. ELIGIBLE ANIMALS

Consultation suggestions

The Measure proposed support to finished clean beef animals born and bred in Northern Ireland and registered on APHIS.

Stakeholder views

63% of respondents supported this proposal. The main themes raised were:

- Generally supported the principle that support should be limited to Northern Ireland producers; and
- One organisation did not support and indicated a potential to disrupt trade from RoI and undermine longstanding trade patterns.

Department's analysis

There is no clear rationale why support should not be limited to clean beef animals born and bred in Northern Ireland and registered on APHIS. It is highly desirable to limit the payment to animals born and bred in Northern Ireland. This will prevent trade distortions across the UK and with RoI and also avoid the Northern Ireland support budget being dissipated to calf producers located outside the region.

Final Decision

The Beef Carbon Reduction measure is limited to clean beef animals born and bred in Northern Ireland and registered on APHIS.

19. AGE AT SLAUGHTER

Cattle which are finished at an earlier age to reach their slaughter weight by no later than 24 months can help drive both improved productivity and environmental performance. Earlier finished cattle use a higher percentage of their lifetime diet for growth rather than maintenance, which, therefore, increases overall efficiency of production. In addition, cattle that are kept beyond their target slaughter weight or take longer to reach slaughter weight can lead to unnecessary GHG emissions.

Research has shown that reducing the finishing time for steers from 23 months to 18 months can create a carbon saving of 10%. This means that, broadly speaking, every month reduction of age at slaughter results in a 2% carbon saving.

Consultation suggestions

Reducing the age at slaughter for clean beef animals through measured steps to 24 months. The pace of phased implementation proposed is set out below.

Year of Scheme	Maximum Age at Slaughter
1	30 months
2	28 months
3	26 months
4	24 months

Stakeholder views

39% of respondents supported this proposal. The main themes were:

Good agreement

- Allows time for farmers to adjust particularly for slow maturing breeds;
- Finishing cattle early should not have negative environmental consequences;
and
- Appropriate training and knowledge interventions will need to be provided.

No agreement

- Potential disruption to supply chain re supply/demand and carcass conformation;
- Proposed targets difficult to achieve for native breeds which mature more slowly; and
- Risk of increasing emissions if concentrate replaces grass.

Department's analysis

DAERA analysis has shown that 82% of steers, young bulls and heifers slaughtered in 2020 were slaughtered at 30 months or earlier Table 11.

Table 11. % of finished clean beef cattle slaughtered in 2020 by age and sex (APHIS)⁵

Age at slaughter (Months)	Males (Steers + Young Bulls) %	Females (Heifers) %	Total Number Clean
12 - ≤24	47	36	148,742
>24 - 26	14	15	50,430
>26 - 28	13	14	47,530
>28 - 30	13	13	45,342
>30	13	23	60,783
Total	100	100	352,827

A total of 352,827 steers, heifers and young bulls were slaughtered that year. 42% of these were slaughtered between 12 and 24 months of age which is the lowest proposed step in the Beef Carbon Reduction Measure. 13-14% met the 26, 28 and 30 month stepped measures. Of the remaining animals, 17% were slaughtered above the proposed maximum age at slaughter at greater than 30 months of age.

⁵ Table is inclusive of TB reactors. Also included are direct imports (males - approx. 11k (5%), females - approx. 12k (8%))

Table 12 presents information for a range of the top breeds slaughtered in 2020. It is broken down to show the numbers and percentages of animals that in 2020 would have met the proposed steps to reduce the age of slaughter through the phased implementation outlined in the consultation. For Year 1 the maximum age of slaughter which would be eligible for payment is 30 months, Year 2, 28 months, Year 3, 26 months and Year 4, 24 months. The breeds shown are the late maturing, early maturing and native beef breeds as well as two dairy breeds.

From Table 12 for the Year 1 target of slaughter at 30 months or earlier, for Aberdeen Angus/Hereford/Shorthorn, between 78 – 91% were slaughtered at 30 months or earlier so would have met the Year 1 target step. For late maturing breeds Limousin/Charolais, between 78 - 84% would have met the Year 1 target step.

From Table 12 for an early maturing breed such as Aberdeen Angus/Hereford/Shorthorn between 40 - 50% were slaughtered at 24 months or earlier so would have met the Year 4 target step. For late maturing breeds such as Limousin/Charolais, the figure that would have met the Year 4 target step ranges from 35 – 44%.

For a traditional native breed such as Irish Moiled, 24% were slaughtered at 24 months or earlier so would have met the Year 4 target step. For the Year 1 target of 30 months, 62% were slaughtered at 30 months or earlier so would have met the Year 1 target step.

Further analysis of selected breeds, showed that for an early maturing breed such as Aberdeen Angus/Hereford/Shorthorn between 78 – 91% were slaughtered at 30 months or earlier. For late maturing breeds such as Limousin/Charolais, between 78 - 84% would have met the Year 1 target step. For a traditional native breed such as Irish Moiled (which accounted for only 0.08%% of all clean cattle slaughtered), 62% were slaughtered at 30 months or earlier.

In relation to carbon savings, in 2020 58% of animals were slaughtered at more than 24 months. Reducing the age of slaughter to 24 months for this 58% could result in savings of 0.2 Mt CO₂e. This equates to 3.5% of 2019 agricultural sector emissions.

Table 12. Finished clean beef cattle slaughtered in 2020 – Beef, Dairy and Native breeds

Breed	>12 - <=24 months %	>24 - <=26 months %	>26 - <=28 months %	>28 - <=30 months %	>30 months %	Total Number of Breed Slaughtered
Limousin	35	14	14	15	22	81,404
Charolais	44	14	13	13	16	76,825
Simmental	44	13	12	11	19	18,125
Belgian Blue	38	16	14	14	18	18,068
Friesian*	43	11	11	11	24	30,595
Holstein*	48	10	10	9	22	10,606
Aberdeen Angus	50	16	14	11	9	65,142
Hereford	41	16	14	14	15	24,537
Shorthorn / Shorthorn Beef	43	14	13	12	18	6,696
Stabiliser	64	10	9	9	9	2,080
Belted Galloway	33	11	11	18	28	556
Galloway	45	8	8	14	25	121
White Galloway	10	10	10	30	40	10
Irish Moiled	24	14	12	12	38	289
Total Clean Beef Cattle Slaughtered						352,827

**suckler herds with less than 5 dairy cows are counted as part of the suckler herd*

The evidence does not support the contention that the pace of implementation is too fast or that native / late maturing breeds cannot meet the proposed targets. 82% of animals are already meeting the proposed Year 1 target of 30 months irrespective of breed. However, to make the slaughter age more achievable for steers, young bulls and heifers, it is proposed that the step for Year 4 is adjusted to 26 months. This

would mean that 56% of steers, young bulls and heifers slaughtered would meet the new Year 4 target.

The proposed revised pace of phased implementation is set out below.

Year of Scheme	Maximum Age at Slaughter
1	30 months
2	28 months
3	27 months
4	26 months

To remain compliant with WTO Blue Box requirements, a quantitative limit needs to be set at a Northern Ireland level based on the number of animals slaughtered across an historic year. It is proposed that this quantitative limit should be set at 352,000 animals. Setting the limit at a Northern Ireland level, not individual farm level, facilitates trade in livestock, avoid distortions and also means there is no risk of the overall number increasing.

Final Decision

Proceed with the proposal to reduce the age at slaughter for clean beef animals through measured steps to 26 months. A revised phased implementation for this measure is set out below:

Year of Scheme	Maximum Age at Slaughter
1	30 months
2	28 months
3	27 months
4	26 months

A quantitative limit of 352,000 animals is set at a Northern Ireland level to ensure the measure is compliant with WTO Blue Box requirements (production limiting scheme).

20. MINIMUM AGE AT SLAUGHTER

Consultation suggestions

There is a single minimum slaughter age of 12 months for all cattle.

Stakeholder views

64% of respondents supported this proposal. The main themes were:

Good agreement

- Some high performing breeds/those with genetic potential are ready for slaughter before 12 months; and
- Concern on welfare grounds if there is no minimum.

No agreement

- Below 12 months not widely accepted as beef, needs further discussion with meat sector/retail;
- Could upset the veal market;
- Minimum slaughter weight might be more appropriate;
- Need to permit in certain circumstances, such as on welfare grounds; and
- Minimum age of 12 months could result in inefficiencies.

Department's analysis

Applying a minimum age at slaughter could cause intensive beef producers to retain animals slightly longer than they would otherwise, or alter the economics of rosé veal relative to young beef. On balance, there is no particular policy objective that is served by imposing a minimum slaughter age, and there is some risk of these unintended consequences.

Final Decision

No minimum slaughter age for cattle but that this matter is reviewed in 2/3 years to confirm that this approach is not causing unforeseen problems.

21. Different slaughter ages for bulls, steers and heifers

It is widely accepted that cattle of different sex grow and mature at different rates, in that bulls will normally finish first, followed by heifers and then steers.

Consultation suggestions

Rather than a single maximum slaughter age of 24 months for all cattle, there should be different slaughter ages for bulls, steers and heifers, reflecting their different inherent rates of growth.

Stakeholder views

54% of respondents supported this proposal. The main themes were:

Good agreement

- Better to have a single slaughter age for simplicity; and
- Bulls finish quicker than steers/heifers.

No agreement

- Flexibility needed for different classes of animal; and
- Too inflexible for slower maturing/native breeds.

Department's analysis

Further work is needed to develop this aspect of the policy and to determine if it would deliver worthwhile additional benefits relative to the additional complexity it would impose on scheme implementation. The immediate focus needs to be on reducing the age of slaughter closer to 24 months. The issue should be kept under review.

Final Decision

Different slaughter ages for cattle is not introduced at this stage. The immediate focus needs to be on reducing the age at slaughter closer to 24 months.

22. TIERED APPROACH TO MAXIMUM AGE OF SLAUGHTER

A tiered approach which provides a higher payment for an earlier age at finishing compared to later age at finishing could be considered.

Consultation suggestions

Consideration is also being given to the possibility of a tiered approach to the maximum age of slaughter, whereby the earlier the finished slaughter age the higher the rate of payment.

Stakeholder views

The consultation did not specifically ask respondents to comment on a tiered approach to payments for earlier finished animals and no comments have been noted.

Department's analysis

Introducing tiered payments, where farmers who finish their animals earlier would receive a higher payment, will add complexity to any future scheme. In order to keep any proposed scheme easy for stakeholders to understand and straightforward for DAERA to administer, a tiered approach should not be introduced at the initial stage but can be kept under review to achieve further gains if needed in the future.

Final Decision

A tiered approach to payments is not introduced at this stage and that the matter is kept under review

23. NEGATIVE SUBSIDY

Consultation suggestions

Consideration may also be given at a later stage to introducing a “negative subsidy” on over age (i.e. over 24 months) cattle presented for slaughter if there is insufficient movement towards the earlier finishing of cattle.

Stakeholder views

The consultation did not specifically ask respondents to comment on the proposed “negative subsidy”. Three comments have been noted, none of which supported the introduction of a negative subsidy

Department’s analysis

A negative subsidy would mean that those presenting animals for slaughter over 24 months at some point after the end of Year 4 of the scheme would have a deduction applied to their other subsidy receipts. As with tiered payments, introducing a negative subsidy would add complexity to any future scheme. In order to keep any scheme easy for stakeholders to understand and for DAERA to administer in the early stage, a negative subsidy should not be introduced but can be kept under review to further incentivise the change if needed in the future.

Final Decision

A negative subsidy is not introduced at this stage and that the matter is kept under review.

24. ADDITIONAL DESIGN PRINCIPLES

Consultation suggestions

In keeping with the Programme design principles, it was proposed this measure would:

- Be monitored to ensure that adverse environmental behaviours, particularly on HNV land, are not incentivised; and
- Be delivered in parallel with appropriate knowledge interventions to enable farmers to achieve the high husbandry standards that will be required to meet the scheme conditions.

Stakeholder views

The consultation did not specifically ask respondents to comment on the proposed additional design principles. However, some respondents did comment on potential for the measure to lead to negative environmental behaviours. There was some support for encouraging appropriate use of rare breeds of cattle in HNV and LFA areas.

There was also support for the provision of training for farmers to be able to produce beef as efficiently as possible and support to improve the health and welfare of the animals.

Department's analysis

The aim of the Measure is to help drive efficiency and reduce emissions by reducing the slaughter age of clean cattle and the numbers of older cattle being presented for slaughter. Monitoring the impacts of the measure, including both positive and negative environmental impacts, will be key will to demonstrating whether or not the measure is a success and whether additional steps are necessary to address unintended consequences.

Appropriate knowledge interventions will need to be available to farmers to ensure they are equipped with the knowledge and skills required to be able to increase the

productivity and improve the environmental sustainability of their businesses and support farmers on this journey

Final Decision

The design principles outlined in the consultation form part of scheme as the measures are further developed and implemented.

25. OTHER SPECIFIC SUGGESTIONS FOR THE BEEF SECTOR

Consultation suggestions

The consultation exercise asked for other specific suggestions to provide support for the beef sector.

Stakeholder views

There were 81 responses to this questions. The main themes were:

- Consideration should be given to schemes to improve efficiency and environmental sustainability such as those in Ireland and Scotland;
- Incentivise pasture based/organic sectors;
- Consider support farmers in the hills/uplands similar to LFA/Area of Natural Constraint Schemes;
- Support to improve the genetic merit of herds;
- Potential incentives for native /traditional breeds that use extensive grazing systems; and
- Support animal health /welfare initiatives.

Department's analysis

The consultation responses highlighted that further measures could be brought forward to improve efficiency and environmental sustainability and also support animal health and welfare initiatives. Whilst these suggestions were supported by stakeholders, further work is required to clearly define the need.

Final Decision

No further proposals for support of the beef sector are brought forward at this stage and that the issue is kept under review as the other proposed measures are implemented and the Ruminant Genetics Programme is developed.

26. SHEEP

There are approximately 968,000 breeding ewes on Northern Ireland farms, with the total sheep number recorded as just over 2 million.

Consultation suggestions

The consultation exercise asked for specific suggestions for incentivising productivity in breeding ewes.

Stakeholder views

There were 84 responses to this question. The main themes were:

- The sheep sector provides a range of public goods which needs to be recognised;
- Sheep play an important environmental and conservation role particularly in the uplands which needs to be maintained;
- Support for improving the health and welfare of sheep such as the Irish Sheep Welfare Scheme should be considered;
- Support to ensure that sheep are raised to the highest welfare and environmental standards;
- Support to improve the genetics and overall quality of the Northern Ireland sheep flock;
- Lack of support has the potential to distort the market and balance between cattle and sheep; and
- Lack of support could have negative consequences for the Northern Ireland Wool Sector.

Department's analysis

The Department has carried out extensive work in an attempt to define the need to incentivise productivity in breeding ewes. At this point, there is no clear defined need.

The sheep sector is fragmented and records very minimal data. On many farms there is no recording of sheep data, outside completion of the annual sheep inventory and records of sheep sold off the holding. Further work needs to be undertaken to explore how a future Ruminant Genetics Programme could lead to improved productivity and environmental sustainability for the sheep sector and how farmers could be incentivised to collect data to support such a Programme. Therefore, there are no proposals, at this stage, to support the sheep sector.

Final Decision

No further proposals for support to incentivise productivity in breeding ewes are brought forward at this stage. However, work will be undertaken to explore options for support that will improve the overall performance and resilience of the sheep sector. This will include work to explore how the sheep sector could be incentivised to provide baseline performance data to inform future sector support measures and to engage in a future Ruminant Genetics Programme.

27. FARMING WITH NATURE

The environmental challenges that need to be tackled in Northern Ireland are substantial. They range from deteriorating water and air quality, habitat and biodiversity loss and fragmentation, to the wide ranging impacts of climate change. The agricultural sector is vital to our food security and underpins our rural communities, but some agricultural practices have detrimental impacts on our environment. There is, however, significant potential for farmers and land managers to make vital positive contributions to tackling these environmental impacts head on and to be properly recognised by society for doing so.

With over 70% of land in Northern Ireland under agricultural management, our environment is heavily influenced by farming practices. Improved grassland makes up around 40% of our farmland area and this, coupled with changing farm practices over many decades, has resulted in habitat and biodiversity losses across our farmed landscape. Agricultural practices also contribute to air pollution and climate change through emissions of ammonia and Greenhouse Gases. Many of our water bodies are not meeting the standards to be classified as being at good status, and nutrients from agriculture are part of the problem.

Consultation suggestions

In the consultation document, DAERA proposed a Farming with Nature Package that could be used to support farmers across all land types to make substantial contributions to environmental improvements and sustainability while continuing to pursue increased productivity, improved resilience and operating within an effective functioning supply chain.

The key principles proposed are listed below:

- **Landscape Scale** – schemes that are scalable and strategically focused in terms of their objectives, delivering environmental outcomes at a landscape scale;
- **Eligibility** - Receipt of the Farm Sustainability Payment will not be a gateway requirement to be able to access the Farming with Nature Package.

- **Minimum land area** - A minimum land area of 3 ha is proposed for farm businesses and other land managers to be eligible for the Farming with Nature package.
- **Financial incentives** - Environmental payments will, as far as possible, seek to recognise and reward the public goods provided by farmers and land managers who achieve a verified level of environmental performance through delivery of identified outcomes. It is proposed that an individual business cap on the level of payment available under the Farming with Nature Package would not be imposed.
- **Outcomes based** – designed so that farmers can achieve desired outcomes, though activity based prescription will still have a place in future scheme design, where appropriate.
- **Time Horizon** - An appropriate time horizon will be adopted, recognising that environmental improvements take time to materialise and must be sustained.
- **Collaborative Participation** - Where possible, participants in schemes will be incentivised to work collaboratively with other farmers and land managers, with assistance from facilitators and advisers. Incentives will be designed to encourage large scale uptake of targeted measures designed to achieve specific, demonstrable environmental outcomes at a landscape/catchment scale.
- **Monitoring and Evaluation** - Robust monitoring and evaluation of scheme performance will be essential to ensure that the desired outcomes are being achieved, and where they are not, or where evidence suggests that further improvements are possible, then policy will be amended accordingly.

Stakeholder views

There were 132 responses and the main themes were:

- Broad agreement for the introduction of a Farming with Nature Package, and that the proposals represent a good starting point for future scheme design.

Some concerns around:

- Transition of funding from Farm Sustainability to Farming with Nature, payment levels, timing of implementation;
- Recognition of previous improvements under agri-environment schemes, habitats already on farm;and
- Level of financial incentives.

Department's analysis

Previous and current agri-environment policy was implemented through schemes developed under Pillar 2 of the CAP that aimed to deliver environmental improvements on farmland. The current Environmental Farming Scheme (EFS) provides farmers and landowners with the opportunity to implement a range of funded actions to deliver environmental improvements through a five year agreement.

Environmental improvements attributed to measures carried out under previous agri-environment schemes have tended to be small and localised. Prescriptive approaches to measures may not achieve the desired environmental improvements and the start/stop nature of previous and current schemes do not provide sufficient time for environmental improvements to be realised.

The current EFS is quite complex, with a large number of specific prescriptions. Uptake has been sporadic and geographically dispersed which may hinder the achievement of demonstrable environmental outcomes. However, the EFS Group projects show promise, particularly in encouraging uptake and in delivering co-ordinated environmental actions.

Across Europe there is a move away from schemes with defined agricultural management requirements which must be carried out by participants, towards an outcomes-focused approach. Some advantages of this are that:

- There is a much clearer link between payments and environmental objectives;
- The 'production' of environmental sustainability (and public goods) become a profit centre on the farm;
- Participants take 'ownership' of environmental results and this can lead to improved public recognition of the role of farmers and land managers in supporting the environment and providing public goods;
- Agreements with participants only specify the desired results, rather than defining in detail the required actions. This gives participants the flexibility to use their skills, professional judgement and local knowledge and can lead to an enhanced awareness of the importance of the environment as an essential resource in the agricultural system; and
- Monitoring and verification responsibilities for the paying authority are simplified and the burden of monitoring and verification are reduced for the paying authority.

Final Decision

The Department proceeds to develop the Farming with Nature Package through co-design with stakeholders and in line with the principles stated in the consultation document.

The Department will ensure an orderly transition from the Environmental Farming Scheme to Farming with Nature.

28. ELIGIBILITY AND MINIMUM LAND AREA

Consultation suggestions

DAERA proposed that receipt of the Farm Sustainability Payment would not be a gateway requirement to be able to access the Farming with Nature Package. A minimum area of land controlled of 3 ha was also proposed.

Stakeholder views

There were 194 responses, with 33% in agreement. The main themes were:

- Conflicting views on a minimum land area;
- Smaller farms should not be excluded; and
- Conflicting views on who should be eligible under the scheme, some stakeholders felt that the scheme should be open to active farmers only, not landowners, others that the Scheme should be available to both farmers and landowners.

Specific comments were received from 113 respondents; some commented on both eligibility and minimum land area, while others only provided views on one of these issues.

Department's analysis

The objective of schemes under the Farming with Nature Package is to support environmental improvements across all agricultural land. In order to deliver the required environmental outcomes, a high uptake of measures at a landscape scale will be necessary, including on land in conacre and common land. This could result in dual use, for example, with the tenant claiming Farm Sustainability Payment and the landlord claiming a Farming with Nature payment (e.g. for hedge or tree planting), but it is considered that systems can be introduced to control this effectively. Work to define the conditions around common land will be undertaken.

There were a number of stakeholder responses which suggested that this Scheme should only be available to active farmers and not land owners. The policy rationale of the Scheme is to enhance and improve environmental sustainability and in the initial stages to improve habitats and biodiversity at a landscape level in Northern Ireland.

This can only be achieved if a holistic approach is taken and support is provided to those who can deliver the scheme objectives irrespective of whether they are the land manager or the active farmer. It is, however, the Department's expectation that it will normally be the active farmer who will be able to meet the scheme conditions, but there will be instances where it may be the landlord/land manager.

In order to ensure that value for money is maximised and the financial burden of administering future schemes, a minimum area of land controlled of 3 ha is considered to be appropriate.

Final Decision

All land managers with 3 ha or more of eligible agricultural land who meet the scheme requirements will be eligible to participate in the Farming with Nature Package. This includes land under conacre and common land. The following will become conditions of schemes under the Farming with Nature Package:

- (i) Compliance with the new Farm Sustainability Standards; and
- (ii) Participation in the Soil Nutrient Health Scheme.

29. PAYMENT CAP

Environmental payments will, as far as possible, seek to recognise and reward the public goods provided by farmers and land managers who achieve a verified level of environmental performance through delivery of identified outcomes. This approach aims to encourage the environment to be seen as another on-farm enterprise with the potential to become a profit centre within an overall sustainable farming model and to assist farmers and land managers to make an economic return on the environmental assets that they create and manage appropriately.

Consultation suggestions

It was proposed that an individual business cap on the level of payment available under the Farming with Nature Package would not be imposed.

Stakeholder views

A specific consultation question was not asked on an individual business cap but some respondents suggested that a cap on payments should be considered. Others commented that a cap should not be imposed.

Department's analysis

Under the current Environmental Farming Scheme (EFS), a cap of £20,000 is applied to Wider level agreements. There is no cap imposed on Higher level (H) agreements. Payments under EFS are made over the 5 year lifetime of the agreement, and currently, 96% of payments under EFS (H) agreements fall below £100,000.

The scale of the environmental challenges across Northern Ireland is significant and due to the large area of land under agricultural management, a financial cap on measures could limit the delivery of environmental outcomes. However, the design of schemes under a Farming with Nature Package is in the initial stages. Further work is required in relation to proposals for elements of scheme design including agreement length, the conditions required to ensure the inclusion of common land, and what needs to be in place to encourage collaborative working to optimise environmental outcome delivery. The impact of the level of capping on the inclusion of common land under future schemes and on collaborative working, in particular, requires significant further consideration.

In summary, there is insufficient information available to recommend the level of capping that should be applied at this stage.

Final Decision

In principle, a cap on the level of payment available under the Farming with Nature Package will be applied. Work to progress on the details of a cap, including the appropriate level, as elements of scheme design, such as length of agreement, are developed.

30. OUTCOME BASED APPROACH

Consultation suggestions

DAERA proposed that schemes would be outcome based and designed to be delivered by farmers using the knowledge and expertise that they have acquired and will acquire, to achieved the desired outcomes, though activity based prescription will still have a place in future scheme design, where appropriate.

Stakeholder views

There was good support for an outcome based approach and 81 responses provided views on what needs to be in place to support delivery of an outcome-focused approach. There were concerns that any activity based prescription would result in a lack of flexibility for future schemes.

Department's analysis

To date, the majority of agri-environment schemes have been management or actions-based payment schemes. The ability of these schemes to deliver demonstrable and long lasting environmental benefits has been unclear. They have been criticised for being inflexible (not allowing for site specific characteristics and management requirements). The prescriptive nature of actions-based schemes have not generally been linked directly to environmental outcomes, with participants instead being compensated for income foregone and/or costs incurred in carrying out the required activities. This has led to a generic approach to implementation without regard to site specific environmental issues.

Recently there has been a move towards more focused agri-environment schemes that are better targeted to achieve verifiable results. However, schemes wholly dependent on outcomes can present unacceptable levels of risk for farmers, and so activity based prescription would still have a place in future scheme design, where appropriate.

Final Decision

Stakeholder suggestions to support delivery of an outcome based approach are evaluated and proposals worked up and incorporated into future Test and Learn pilots/schemes as appropriate.

31. INITIAL FOCUS ON HABITATS

Given the scale and complexity of the challenges involved, DAERA recognises that there is a need to prioritise actions to achieve a positive environmental impact and assist in meeting environmental obligations and commitments. There is significant scope for influencing biodiversity, and the habitats that support it, through agricultural practices. The UK has committed to addressing the drivers of biodiversity loss and to putting nature and biodiversity on the road to recovery by 2030, as set out in the UN Leaders' Pledge for Nature.

Productive farming systems can include important wildlife habitats, and some agricultural management practices, such as low-intensity grazing and hedgerow creation, can deliver benefits for some species.

Consultation suggestions

It was proposed that the initial focus of the Farming with Nature Package should be on reversing the trends in nature decline through retaining, maintaining, restoring and creating habitats that are important for species diversity and improved connectivity between habitat areas. By restoring wildlife rich habitats, corridors and stepping stones in the wider countryside and enabling wildlife populations to grow and travel between them we also aim to help safeguard those small, isolated extents of high nature value land and other areas of priority habitats. The environmental assets already present on farms require active management to ensure that they are capable of making the best possible contribution to biodiversity.

Stakeholder views

There were 123 responses to this question and good support for an initial focus on habitats. Main themes were:

- *Various aspects of scheme design* – not to be approached in a silo fashion, should include integration of mixed farming landscapes, flexible and site specific habitat restoration plans, and landscape-scale habitat creation;
- *Sufficient finance available* – creation of new habitats and maintenance of existing habitats should be financially rewarded. Bridging the financial gap between those who farm in a sustainable manner and those who do not. Ensuring subsidies are paid to small farmers to stay on the land and promote nature and a sustainable environment;
- *Eligibility* – Active and non-active farmers should be included. Some concerns about the perceived hierarchical nature of the proposal and its relevance to selective farms; and
- *Habitat connectivity* – the creation of a long forest connecting sites of high biodiversity value across Northern Ireland. The creation of a more coherent and resilient ecological network. Reverse the trends in nature decline through native trees and hedgerows, riparian buffer strips, and tree plantations around livestock yards.

Department's analysis

Habitat and biodiversity losses have been recorded across all our farmed landscape over many decades. The extent and condition of semi-natural habitats and hedgerows has significantly diminished and become fragmented. This is due to the conversion of semi-natural habitats to more productive, less species-diverse agricultural grassland, coupled with hedge, dry stone wall and stone bank removal and deterioration, reducing the diversity and range of rich habitats for species. Semi-natural habitats are also sensitive to nitrogen enrichment. Between 2015 and 2017, nutrient nitrogen critical loads were exceeded at 84% of the nutrient sensitive habitats in Northern Ireland. Habitat connectivity, which describes the ability of species to move through the landscape between areas of habitat, is reduced when habitats are lost or fragmented. Declines in species numbers and diversity have been recorded. Increasing numbers of species have been added to the list of species of conservation concern.

Productive farming systems can include important wildlife habitats and corridors and some agricultural management practices, such as low intensity grazing and hedgerow creation, can deliver benefits for some species.

Much of the legislative effort in relation to protecting our habitats and species has been directed towards sites of high nature value. Other intermediate-value habitats, which have less protection, contain much of the species diversity in the countryside and provide ecosystem services that provide food, materials and water, contribute to flood control and store carbon. They can be damaged or lost relatively quickly as land use and economic circumstances change. For this reason it was proposed that the Farming with Nature Package should focus on maintaining and enhancing existing biodiversity and creating new habitats on individual farms and at landscape level.

Final Decision

Actions to reverse the trends in nature decline by creating and restoring habitats that are important for species diversity are prioritised and that proposals are worked up for a Test and Learn pilot/scheme.

32. HABITAT MANAGEMENT ACTIONS/MEASURES

Consultation suggestion

Actions for the following habitats and other measures were proposed as listed:

- Hedgerows;
- Restoration of dry stone walls and stone ditches;
- Field margins;
- Pollinator strips;
- Riparian buffer strips;
- Winter stubble;
- Native trees;
- Ancient woodlands;
- Parkland;
- Tree plantations around livestock yards;
- Integration of trees within crop or livestock farming systems;
- Semi-natural grasslands;
- Use of improved grasslands and croplands as refuges for over-wintering birds and breeding habitats;
- Non-native species – integration of the control and eradication with other farm management measures; and
- Ponds.

Stakeholder views

There were 174 responses to this question, with 72% in agreement with focusing on the habitat management actions listed. The main themes were:

- *Flexibility of habitat management actions* – allowing change over time. The proposals provided options available to all types of farming enterprise. Whilst the management actions were appropriate as an initial step, they should not be prescriptive and should be flexible to allow local solutions; and
- *Training requirements* – Suitable training and guidance should be given to farmers to allow for habitat identification. This will allow farmers to draw up their own

management plans. Specific training is needed for farmers on hedgerow management. There is a long learning curve.

Suggestions for other quick win management actions were:

- *Support for hedgerows* – grants needed for more hedge planting. Removal of hedgerows needs to stop. No penalties for farmers who have thick hedges. Hedgerows can easily be accommodated (on the farm) with little loss in productivity;
- *Support for tree planting and woodland* – pay farmers to grow trees in hedgerows and not to reclaim land. We need trees and these areas should qualify under environmental payments. Better management of existing ancient woodlands;
- *Training requirements* – regenerative agricultural courses should be taught at CAFRE. Clear actions with specific short webinars. Ensure communication is in place to highlight examples of best practice. On-farm training; and
- *Focus on ensuring clean water* – Subsidise farmers under 10 ha to promote sustainable clean water and nature friendly habitat. Look at times of year for spraying slurry. Reed bed filtration systems or tree planting around slurry stores.

Departmental analysis

There was broad support for focusing on the habitats management actions listed in the consultation document as an initial mechanism to kick start improved awareness and capacity to manage environmental assets. It was noted that the environmental assets already present on farms require active management to ensure that they are capable of making the best possible contribution to biodiversity. In order to deliver quick-wins for the environment and to kick-start improved awareness and capacity to manage environmental assets, a range of actions for habitats and other measures were also supported.

Final Decisions

A shortlist of initial habitat management actions are prioritised and design proposals worked up to incorporate them into a Test and Learn pilot/scheme.

Specific stakeholder suggestions for other quick win management actions will also be considered, and their potential for inclusion as future management actions within a Farming with Nature Package evaluated.

33. TEST AND LEARN PILOTS

The Department recognises the need to identify solutions and decisions that will inform the development of robust policy and future agri-environment schemes.

Consultation suggestion

A series of Test and Learn Pilots was proposed to test new delivery and reward models that will facilitate large scale adoption and deployment of modern control and assurance technologies.

Stakeholder views

Of the 119 responses regarding Test and Learn Pilots, 75% were in agreement. The main themes were:

Good agreement

- Design:
 - Piloting new approaches of farm support ensures they are practical to deliver and capable of delivering environmental outcomes; and
 - Ensuring the financial and advisory rewards from participation will attract interest from farmers and support farmer to farmer learning.
- Collaboration:
 - Opportunity to listen to those on the ground with experience in their particular area; and
 - Welcome the opportunity to support DAERA with Test and Learn pilots.
- Education:
 - Habitat management becomes second nature to farmers; and
 - Need to start fostering the will for farmers to collaborate early.

No agreement or unsure

- Unnecessary delays:

- Having protracted pilots must not be seen as a delaying tactic;
- Knowledge is already available and lessons should not needlessly be relearned;
- Design concerns; and
- Age profile (barrier to change).

Forty eight responses provided further suggestions for other components that could be incorporated into Test and Learn pilots and 65 respondents made suggestions for partnership delivery models that could encourage collaborative working.

Departmental analysis

Test and Learn Pilots could be used to inform the development of future agri-environment schemes, and inform understanding of, for example, hybrid approaches to combining actions with outcome and results-based approaches, targeting of appropriate and effective measures, remote/novel technologies for monitoring and evaluation, new delivery models, improved participation and partnership working, and how best to embed learning and knowledge transfer opportunities.

Final Decisions

Test and Learn pilots are progressed and that specific stakeholder suggestions on the pilot components are considered and incorporated as appropriate; and

Partnership delivery models aimed at encouraging collaborative working are considered and, as appropriate, incorporated into a future Test and Learn pilot.

34. FARMING FOR CARBON

The agriculture sector accounted for 26% of the total CO₂e emissions in Northern Ireland in 2019. This is significantly higher than the proportion of the CO₂e emissions attributable to agriculture for the other parts of the UK. In England, Wales and Scotland the proportions stood at 8.4%, 13.8% and 16.3% respectively. This reflects the different composition of the Northern Ireland economy and emitting sectors and the fact that agriculture in Northern Ireland is much more skewed towards livestock production and ruminant livestock in particular (which is the principal source of methane in Northern Ireland - a potent GHG).

The majority of Northern Ireland food and drink sales go to external markets, with Great Britain (~50%) and Republic of Ireland (~15%) the two main destinations. However, GHG emissions are allocated to the area of production and not where the products are consumed. Taking all of this together, the much higher contribution of agriculture to Northern Ireland's GHG emissions footprint is primarily a structural issue. That places Northern Ireland in a uniquely challenging position when compared with the rest of the UK. However, the fact remains that Northern Ireland's success in Contributing to UK net zero under the UK Climate Change Act will be influenced by the ability of agriculture to reduce its net emissions. Deep emissions reductions will be required from all sectors of Northern Ireland to achieve this UK-wide target.

The total cattle numbers in Northern Ireland, at over 1.61 million in 2020, are somewhat lower than the numbers in 1990. In both the beef and dairy sectors, AFBI research and CAFRE demonstration projects have clearly demonstrated the financial and productivity benefits of calving replacement heifers by 24 months of age and of slaughtering beef cattle by 24 months of age or earlier. In addition, there are opportunities to increase dairy cow productive life through selective breeding for increased lifespan or through crossbreeding programmes. Reducing dairy cow replacement rates to 20% from current typical levels of around 28% would reduce the numbers of replacement dairy heifers required and benefit not only productivity and profitability, but also GHG emissions.

The Climate Change Committee (CCC), in its advice on reducing GHG emissions in Northern Ireland in February 2019, December 2020 and April 2021, recognised that there are limited options currently available to reduce agricultural GHG emissions. The policy measures recommended by the CCC include:

- Low carbon farming practices: crops and soil management; livestock breeding, health and diet improvement; manure management; and fuel efficiency;
- Higher levels of afforestation;
- Agroforestry - integrating trees within grassland or arable land; and
- Peatland restoration from a carbon source to sink through re-wetting and control of nitrogen deposition.

The future use of land is highlighted by the CCC as critical to the UK transition to net-zero by 2050. Policies on land use for forestry, agroforestry and the management of peatlands in Northern Ireland need to be considered in relation to meeting GHG emissions and carbon reduction targets that will be set by a future Northern Ireland Climate Change Bill once enacted.

Agricultural land can act as a very significant carbon sink (carbon sequestration). A range of actions have carbon sequestration potential. These actions range from peatland rewetting, land and soil management techniques, and increased woodland and hedgerow planting. These actions also assist in farms becoming more climate change resilient and adaptable to the climate change into which we are already locked.

For these potential carbon farming practices to improve the sustainability of agriculture in Northern Ireland, the impacts of these practices must be verifiable through recognised and accredited processes. The Soil Testing and LiDAR measure will establish the baseline carbon storage capabilities in agricultural soils and in above ground biomass in hedgerows and tree cover. The Woodland Carbon Code (WCC) is the quality assurance standard for woodland creation projects in the UK, generating independently verified carbon storage data. Scotland's Rural College (SRUC) has recently been awarded funding to conduct a feasibility study for a UK Farm Soil Carbon Code.

Independent verification of the impact of carbon farming practices presents the opportunity for farmers to fully realise the value of carbon sequestration on their farms as another on-farm enterprise. This will become increasingly important if the value of carbon credits increase in line with CCC projections.

Consultation suggestions

In its consultation document, DAERA presented initial policy proposals being considered to reduce carbon/GHG emissions. These are outlined below. However, it is recognised that these represent simply the start of the carbon reduction journey for Northern Ireland agriculture. As science and knowledge expands, new possibilities will open up which will guide future new policy initiatives.

Reducing numbers of older livestock – The section on the Sustainable Beef Measure has already described the GHG benefits of reducing age at slaughter for beef cattle and reducing non-productive periods for breeding stock. Achieving earlier age at slaughter and first calving will in practice involve increased emphasis on selective breeding for animal health and performance traits and improved health management planning and practice on farms.

Therefore, land that may be released by reducing the numbers of unproductive animals - plus other measures to increase grassland productivity must be made available and attracted into alternative remunerated uses. This would be in line with the pathway suggested by the CCC. These alternative uses could include land managed for environmental outcomes, forestry and bioenergy feedstocks. All of these issues are under active consideration and will be the subject of further policy development and stakeholder engagement.

Feed additives - there is ongoing worldwide research into feed additives to reduce enteric methane from ruminant livestock. A number of feed additive products are either commercially available or undergoing regulatory approval. Consideration is being given to the development of a challenge fund model to test these additives in Northern Ireland conditions and, if successful, and the market for these products

matures sufficiently, taking necessary steps to make sure enteric methane reducing feed additives are routinely incorporated in ruminant concentrate diets.

Breeding - enteric methane emissions are subject to genetic variations. Ongoing research across Europe suggests that animal selection for reduced enteric methane production has the potential to directly reduce enteric methane emissions by up to 25%. This is an area where industry can take a lead in directing genetic selection programmes to drive a reduction in the carbon footprint of ruminant livestock.

Urease inhibitor fertilisers - research carried out locally by AFBI has shown that urea fertiliser treated with a urease inhibitor significantly reduces N₂O emissions compared to the most commonly used fertiliser in Northern Ireland, calcium ammonium nitrate (CAN). Urease inhibitor treated fertilisers are already commercially available in Northern Ireland.

Timing of fertiliser and slurry applications - research carried out locally by AFBI has shown that an interval of at least 5 days between fertiliser and slurry applications significantly reduced N₂O emissions compared to application of both fertiliser and slurry on the same day. Consideration is being given to how such practices could be encouraged.

Legumes and herbs (including peas and beans) - the natural fixation of nitrogen from the atmosphere through the action of symbiotic bacteria species associated with clovers and a range of herbs included in grass swards can lead to considerable reductions in the quantities of inorganic nitrogen fertiliser used on farms. In addition, ongoing research is indicating the possibility of increased carbon sequestration in soils managed to optimise the growth of mixed species swards. The soil nutrient status data made available to farmers through the Soil Nutrient Health Scheme will assist farmers to manage soils to retain optimum clover levels in swards.

Farming carbon - work to establish and refresh baseline data on carbon stored in agricultural soils and above ground biomass is proposed through the Soil Nutrient Health Scheme. As the baseline levels of soil carbon and research supporting further

soil carbon sequestration are validated to enable carbon accumulations to be credited in the GHG Inventory, DAERA will engage with stakeholders on the design of possible schemes to incentivise the farming of carbon as a business enterprise.

Peatland rewetting - the objectives of the Northern Ireland Peatland Strategy have been stated above. To support the objectives of the strategy, a scheme to encourage and facilitate the rewetting and sustainable management of peatlands is likely to be co-developed with stakeholders under the umbrella of that Strategy and funded outside of future agricultural policy.

Biomethane and hydrogen - there is growing interest in the potential to use anaerobic digestion to generate biomethane for injection into the Northern Ireland gas grid and/or to produce hydrogen as a power source for the heavy goods transport sector using a combination of manures from livestock farms, waste streams from food processing and energy crops grown on land diverted from conventional agricultural uses. These developments have the potential to contribute to the decarbonisation of the agriculture, domestic heating and road transport sectors.

Combining this with technologies to capture and recycle nutrients from the digestate that would otherwise be land spread could also help address nutrient loading and water quality problems. Work is ongoing with industry stakeholders to explore the potential development of these circular economy initiatives.

It was proposed that the Carbon Reduction programme would be complemented by several other streams within the policy programme, as outlined below:

- Farm Sustainability Payment - conditions attached to the Farm Sustainability policy measure include the requirement to participate in the Soil Nutrient Health Scheme which will assess soil carbon and above ground carbon in farm hedges and trees;
- The Farming with Nature Package that will focus initially on habitat and biodiversity will help create the conditions for greater carbon sequestration

through the expansion of tree cover, hedgerow management, unfarmed margins and buffer strips, etc.;

- Knowledge and Innovation Measures - where possible, future agricultural policy interventions will include a strong education, training and knowledge exchange component that should focus on improving productivity, environmental performance and sustainability, including a reduction in the carbon footprint;
- Generational Renewal - bringing younger farmers into a controlling position on farm businesses should help drive the adoption of new and innovative agricultural technologies that will improve productivity, reduce carbon intensity and create the conditions that will allow land to be released to other uses while sustaining agricultural production; and
- The proposed Ruminant Genetics Programme will produce information and genetic evaluations to drive improvement in livestock productivity, health and welfare and thus reduce GHG emissions. It will also open up the possibility of breeding directly for reduced enteric methane emissions.

It was also proposed that the Farming for Carbon Measure would also be supported by complementary DAERA policy measures, notably in relation to woodland creation. The Forests for Our Future Programme, launched in 2020, has the objective of planning 9,000 ha of new woodland by 2030. The Small Woodland Grant Scheme provides grant aid for woodland planting area between 0.2 and 5.0 ha; with an establishment grant and annual premia.

Stakeholder views

1. Low Carbon Emission Farming Practices

68% of all respondents supported the Low Carbon Emission Farming Practices proposal while 32% did not. There was strong support from farming organisations and non-affiliated organisations and good support from environmental organisations, individual farmers and other individuals. The UFU commented that they had some concerns around including biomethane / hydrogen within a future

support model. A number of environmental organisations commented on role of nature based solutions to reduce carbon emissions relative to technologically focused solutions. A number of respondents also commented on the potential to develop the arable and horticulture sectors and to develop closer circular synergies between the arable and livestock sectors. Respondents also commented on the need for DAERA to develop a land use strategy and the need for detailed land use change modelling.

2. Farming of Carbon as a Business Enterprise

71% of respondents supported the Farming of Carbon as a Business Enterprise proposal while 29% did not. There was strong support from farming organisations, environmental organisations and non-affiliated organisations and good support from, individual farmers and other individuals. The UFU commented that careful consideration would be needed in terms of how any future carbon markets are developed. A number of respondents also commented on the need for development of rigorous monitoring, reporting and verification practices to provide robust baselines against which future farming carbon enterprises can be based. Respondents also commented on the need for the widespread use of farm carbon calculators to monitor individual business progress in reducing carbon emissions and sequestering carbon on farms.

Department's analysis

Reducing the numbers of older cattle

The 2020 Census data indicate that there were approximately 150,000 cattle over 24 months of age in Northern Ireland. This amounts to almost 10% of total cattle numbers. These cattle represent animals which, through improved breeding, health and management, could be removed from farms without impacting on the output beef and milk. Reducing the carbon emissions associated with beef cattle slaughtered over 24 months would reduce total agricultural sector emissions by 3.5%.

Feed additives

Evidence from mitigation modelling carried out by SRUC on behalf of the CCC indicates that incorporation of methane inhibiting feed additives in the diet of 266

thousand cattle in Northern Ireland would reduce emissions by 121 kt CO₂e/year by 2050. This equates to 1.9% of the agriculture sector emissions in the 1990 base year.

Breeding

Ongoing research with dairy cattle by Wageningen University in the Netherlands and with beef cattle by Teagasc in the Republic of Ireland suggests that there is sufficient genetic variation in enteric methane emissions by cattle for methane emissions to be reduced by up to 25% through genetic selection by 2050.

Evidence from mitigation modelling carried out by SRUC on behalf of the CCC indicates that increased uptake of cattle genetic improvement practices using genomic tools to improve animal performance, health and longevity could reduce emissions by 29 kt CO₂e/year by 2050. This equates to 0.5% of the agriculture sector emissions in the 1990 base year.

Urease inhibitor fertilisers

Research carried out locally by AFBI and Teagasc has shown that urea fertiliser treated with a urease inhibitor significantly reduces N₂O emissions by over 70% compared to the most commonly used fertiliser in Northern Ireland, calcium ammonium nitrate (CAN).

Evidence from mitigation modelling carried out by SRUC on behalf of the CCC indicates that urease inhibitor fertilisers could reduce emissions by 400 t CO₂e/year by 2050 in Northern Ireland.

Timing of fertiliser and slurry applications

Research carried out locally by AFBI has shown that an interval of 5 days between slurry and fertiliser applications significantly reduces N₂O emissions by over 80% compared to application of both fertiliser and slurry on the same day.

Legumes and herbs (including peas and beans)

The natural fixation of nitrogen from the atmosphere through the action of symbiotic bacteria species associated with clovers and a range of herbs included in grass

swards can lead to considerable reductions in the quantities of inorganic nitrogen fertiliser used on farms. Maintaining sward clover content at around 20% through optimal soil nutrient and pH management is required to achieve adequate levels of nitrogen fixation.

Evidence from mitigation modelling carried out by SRUC on behalf of the CCC indicates that incorporation of legumes in grass swards on 299 thousand hectares in Northern Ireland would reduce emissions by 101 kt CO₂e/year by 2050. This equates to 1.6% of the agriculture sector emissions in the 1990 base year.

Research is ongoing into the impacts of incorporating legumes and herds in grass swards on soil carbon sequestration and biodiversity.

Farming carbon

For carbon farming practices to be credited with emissions reduction in the agriculture sector in Northern Ireland, the impacts of these practices must be verifiable through recognised accreditation processes, backed by recognised science. A considerable body of research effort is being funded to provide this evidence.

The Woodland Carbon Code (WCC) is the quality assurance standard for woodland creation projects in the UK, generating independently verified carbon storage data.

The long term agroforestry research ongoing at AFBI Loughgall provides valuable research evidence for the carbon sequestration potential of agroforestry showing carbon sequestration of over 8.0 t CO₂e/ha/year for silvo-arable systems and over 13.0 t CO₂e/ha/year for silvo-pastoral systems.

Hedgerow carbon sequestration research has been undertaken through AFBI by Blair (under review) showing hedgerow carbon sequestration of over 1.0 t CO₂e/km/year. The DAERA funded Soil Nutrient Health Scheme will provide valuable evidence on the above ground biomass carbon stored in hedgerows.

SRUC has recently been awarded funding to conduct a feasibility study for a UK Farm Soil Carbon Code. Research from the AFBI long term slurry application trial on the potential of grassland soils to continue to sequester carbon at rates of 2.0 to 4.0 t CO₂e/ha/year. Analysis of the long term Park Grass Experiment at Rothamstead has shown that limed soils have sequestered over 4.0 t CO₂e/ha/year. The Soil Nutrient Health Scheme will establish the baseline carbon storage capabilities in agricultural soils and in above ground biomass in hedgerows and tree cover.

Peatland rewetting

Evidence presented by the CCC suggests that rewetting peatlands will have a relatively rapid impact on reducing carbon emissions over a 1 to 3 year time period. However, the CCC do not envisage restored peatlands returning to carbon sequestration status before 2050, as restoration of these sensitive habitats to near natural conditions also requires nitrogen deposition to be brought under control and for other required restoration actions to take effect.

Biomethane and hydrogen

A DAERA working group and work by Anderson (2021) in the Queen's University of Belfast have reviewed the quantities of surplus livestock manures in Northern Ireland. There are approximately 9.2 million m³ slurry produced annually (from housed cattle, pigs and poultry). If anaerobically digested (AD), this manure would produce approximately 250 million m³ of biomethane or 2.5 TWh. This equates to approximately 14% of the natural gas consumed in Northern Ireland (Firmus, SGN, Phoenix & power stations) or an estimated 10% of Northern Ireland's 23TWh yearly heat use.

In addition to generating renewable biomethane and hydrogen, diverting this slurry from land spreading to centralised AD plants equipped with advanced technologies to further process the digestate fibre into peat replacing compost for the horticulture and bio-fertilisers for export, these proposals would make significant contributions to improving water quality in Northern Ireland as well as helping to decarbonise the domestic heating sector and the heavy goods transport sector.

Final Decisions

Low Carbon Emission Farming Practices are developed as follows:

- Reductions in the numbers of older cattle for slaughter and improved suckler cow productivity to be progressed through the suckler cow and beef carbon reduction measures within the Beef Sustainability Package and that further options to reduce the age at first calving and replacement rates within the dairy sector are co-designed with stakeholders.
- The use of feed additives to reduce enteric methane emissions, nitrogen and phosphorus outputs to be progressed by collaborative industry research through a Research Challenge Fund.
- Breeding cattle that are more environmentally efficient to be progressed through the Ruminant Genetics Programme.
- The use of urease inhibitor fertilisers, the optimal timing of fertiliser and slurry applications and the establishment of grassland swards with legumes and herbs to reduce fertiliser nitrogen use is progressed through applied research and knowledge transfer initiatives.
- Peatland Rewetting and sustainable management is progressed under the umbrella of the Northern Ireland Peatland Strategy.
- Biomethane and hydrogen production from agricultural waste is developed through the Green Growth Strategy employing technologies to capture and recycle nutrients post digestion that would otherwise be land spread as farm animal slurries.
- Forestry, agroforestry, new and taller, wider hedgerows, soil carbon and removal of methane from the atmosphere over time through reductions in agricultural methane emissions.

DAERA undertakes the development of a future land use policy during the next mandate.

The principle of encouraging the Farming for Carbon as a Business Enterprise is developed through co-design with stakeholders in line with the carbon sequestration and methane emission reduction principles outlined in the consultation document. Detailed monitoring, reporting and verification procedures for agricultural carbon emission reductions and sequestration need be developed at both a national and a business level through the application of farm carbon calculators to ensure transparency and confidence in the Farming of Carbon.

35. INVESTMENT MEASURE

Support for on-farm capital investment is one way for government to help deliver the four key desired outcomes identified in the Framework Portfolio. These can take the form of capital grants and financial instruments (such as loans or loan guarantees).

Capital investment is not a policy objective in its own right. The purpose of any capital support is to enable or facilitate the achievement of other policy goals, including broader priorities across DAERA such as Green Growth. In designing capital interventions, DAERA will draw on assessment of previous Northern Ireland schemes and information from other jurisdictions.

The most recent capital support scheme for the agriculture sector has been the Farm Business Improvement Scheme - Capital (FBIS-C), which to date has offered more than £43 million support for capital investment. An independent evaluation of the FBIS-C scheme is being undertaken by the Agri-Food and Biosciences Institute (AFBI). Interim reports on scheme outcomes have been produced and the final report will be available in April 2023. These will be used to inform future development.

Consultation Suggestions

In line with government requirements on the use of public money, financial support for capital investment can only be justified where there is evidence of “market failure”. For example, certain forms of investment can have benefits for the environment, in terms of thriving wildlife, flood mitigation, carbon capture etc. However, such investments are not incentivised or rewarded through the market price paid for the food produced, and so there is a rationale for government to intervene to address this “market failure”. One way of doing that is to incentivise farmers and growers to make on-farm investments to deliver such public goods.

In considering future capital support, DAERA will bear in mind that certain investments are more likely to need capital support, that overcapitalisation of farms should be avoided, and that collaboration should be promoted where possible. Capital support may not always be the first or only way of assisting farm businesses, and must be considered alongside other measures.

Stakeholder views

Overall, the responses supported the proposals, with 64% agreeing the proposed guidelines when considering future capital support, and 57% agreeing the draft design principles when considering future capital support. The main themes were:

Good agreement

- Important to avoid overcapitalisation;
- Support for investments that are cutting edge or innovative;
- Collaboration should be supported;
- Investment support for environmental improvements, carbon reduction and other public goods needs to be considered and prioritised; and
- A recognition that capital may not be the most efficient means of securing objectives.

No agreement

- Cut the red tape, too complicated, need to simplify;
- Need to support small farms;
- Doesn't offer better terms for under-represented groups (young farmers, women up to 60) and does not support generational renewal; and
- Collaboration can be difficult to achieve / maintain.

Department's analysis

The provision of appropriate, evidence based capital investment support to the agriculture and horticulture sectors (e.g. through grants or loan incentives) will be targeted to contribute to the achievement of the four desired outcomes of the Framework Portfolio. The benefits achieved will be realistic and measurable so that the impact of spending public money can be clearly seen.

DAERA will engage with the agriculture and horticulture sectors to explore current and future market failures. The draft design principles set out in the consultation will help determine what should and should not be supported by capital assistance under the Measure, how schemes should be designed, and how we will measure outcomes.

Final Decision

Proceed with the development of the Investment Measure on the basis of the guidelines and design principles set out in the consultation, including further engagement with stakeholders to gather evidence on the market failures affecting investment in the agriculture and horticulture sectors.

36. KNOWLEDGE AND INNOVATION MEASURES

The future success of the Northern Ireland agri-food industry, like any other industry, will be determined largely by the ability of its people to acquire, assimilate and deploy knowledge that equips them to prosper in changing markets and trading conditions and how quickly and efficiently they can do this in comparison with competitors in other regions.

The DAERA Knowledge Framework sets out the rationale for DAERA's involvement in education, knowledge and skills, what the Department seeks to achieve and the nature of its interventions. It aims to ensure that individuals, organisations, and businesses within the agri-food industry have access to high quality, relevant and accessible education, training and technology exchange to improve productivity, resilience, environmental performance and sustainability. The framework is underpinned by five key principles. It focuses on the education, training and technology exchange requirements of the agriculture, horticulture and food sectors and any other land based sectors that are determined and shaped by Departmental priorities. It will encourage lifelong learning that is flexible and wherever possible will allow progression. It will partner and collaborate with other education and training providers and those in the research sector. It will also ensure that all education and training is delivered to the relevant quality standards and that any investment in knowledge is targeted to deliver the best possible returns in terms of achieving DAERA's objectives.

The Knowledge components in the future Agricultural Policy Framework Portfolio follow the guidelines in the Knowledge Framework to help achieve its objectives.

The attainment of an agricultural qualification early in a farming career is insufficient to maintain a high level of professional competence for an entire working life. A long-term commitment to, and investment in, Continuous Professional Development (CPD) is relevant to all farmers, land managers, workers and those supporting the industry, regardless of what stage they are at in their career or of the level of formal qualification held. Currently, several knowledge transfer and innovation programmes are being

delivered by DAERA's College of Agriculture, Food and Rural Enterprise (CAFRE), through the Northern Ireland Rural Development Programme (NIRDP). These include:

- Business Development Groups (BDGs) Scheme - this uses a group training approach that allows peer to peer learning and sharing of knowledge, over several years, with the aim of improving the technical efficiency, profitability and environmental sustainability of farm businesses;
- Farm Family Key Skills (FFKS) Scheme - this provides a flexible mechanism for the training of farmers and farm family members on a number of key areas, for example, improved awareness of anti-microbial resistance, health and safety;
- Farm Innovation Visits (FIVs) - this seeks to increase farmers' awareness and understanding of the benefits of investing in innovation, through showcasing successful innovative projects, in order to increase the adoption of new technologies. The FIVs scheme enables groups of farmers to visit regions outside Northern Ireland to learn about the benefits that have arisen from the adoption of specific innovations by farm and horticulture businesses;
- Innovation Technology Evaluation Demonstration Scheme (ITEDS); Technology Demonstration Farms (TDFs) - these seek to support farmers to better understand the benefits of investing in innovation, through showcasing successful innovative projects, in order to increase the adoption of new technologies; and
- European Innovation Partnership Scheme (EIP) - EIPs bring together advisers, researchers and businesses to work in partnership with farmers and through knowledge exchange, innovation and cooperation consider how practical solutions might be developed to address an identified problem or opportunity for the agri-food industry.

Consultation suggestions

In its consultation document, DAERA proposed encouraging the continuous life-long learning and professional development of those working in the agriculture and

horticulture industry focused on harnessing innovation to drive improved productivity, resilience, environmental performance and the sustainability of farm and horticulture businesses.

In supporting this aim, DAERA proposed the development of a suite of knowledge transfer and innovation programmes that build on the strengths and success of the existing provision, enable continuity, provide reach and access to land managers, farmers and the workforce and deliver additional positive impact on the productivity, environmental sustainability and resilience of Northern Ireland's agri-food industry.

The key principles for the development of new Knowledge Transfer and Innovation measures are that the programmes developed must be:-

- Aligned with the Department's policy position and principles set out in the Knowledge Framework;
- Evidence-based and informed by the evaluation of current NIRDP Knowledge Transfer and Innovation schemes being delivered by CAFRE, and outlined above;
- Focused on the delivery of an improvement in productivity, environmental sustainability, resilience and supply chain integration;
- Integrated to ensure other DAERA programmes/schemes have a strong knowledge and innovation link, for example, the Ruminant Genetics Programme to aid in the achievement of desired outcomes;
- Provide access to global innovations which are appropriate for local adoption;
- Embed peer learning and sharing of best practice in the delivery model;
- Encourage cooperation and partnership;

- Support the continuous professional development of professionals working within businesses that support the agri-food sector enabling their access to high quality knowledge and innovation updates;
- Use flexible, focused and targeted approaches to achieve measurable outputs; and
- Utilise technology through the use of both face to face and online delivery.

Stakeholder views

The majority of respondents indicated support for the proposed approach to knowledge transfer and innovation, building on the success of the current Schemes delivered through the Northern Ireland Rural Development Programme. There was also support for widening the provision to include continuous professional development for those experts who engage with farmers. The peer learning approach to delivery was seen as beneficial and the utilisation of a blended approach to delivery, using both online and face to face delivery, was encouraged, as was local and evening delivery. 80% of respondents indicated that there were gaps in the current provision with environmental challenges, carbon, soil management, animal health topics given as examples. Respondents from the Horticulture sector indicated a requirement for specific programmes.

One training requirement highlighted was training for women in agriculture and support was also expressed for training in transferable skills. Concern was expressed by some respondents around making a Level 3 qualification in agriculture a requirement for farmers with the view expressed that there was a need to take into account qualifications other than those linked to agriculture, as well as life time experiences in agriculture/farming

Department's analysis

The agri-food industry is becoming increasingly complex with ongoing technological advances and business demands. Participation levels in existing Knowledge and Innovation programmes have demonstrated a demand and recognition by the industry of the benefits of knowledge and skills development to drive the adoption of innovation

and the long-term sustainability of businesses. The responses to the consultation broadly support the direction of travel set out by the Department that successor programmes build on the success of current knowledge and innovation programmes, incorporate a range of delivery methods - blended delivery - online and face to face, address gaps - environmental challenges facing farmers.

Farmers participating clearly demonstrate financial and personal benefit and there is a real opportunity to increase participation in future Knowledge and Innovation programmes.

While existing Knowledge and Innovation schemes focus on farmers, land managers and workers, it is vital that those professionals interfacing with these individuals, for example, veterinary practitioners, sales representatives, also develop and maintain their technical knowledge and skills. DAERA will work with other providers to commission and deliver research and facilitate and encourage uptake of this research through continuous professional development programmes. This will help ensure that they are well equipped to provide ongoing help and support to the development of their clients' businesses.

Final Decision

A suite of knowledge transfer and innovation programmes that build on the success of the current programmes delivered through the Northern Ireland Rural Development Programme are developed and expanded to include an agri-food development programme for professionals interacting with farmers and growers.

37. GENERATIONAL RENEWAL

Accelerating the transition of farming businesses to those with better training and skills, who are more open to innovation and change and who have a longer investment horizon could help drive the policy outcomes being pursued under this Framework Portfolio. Past initiatives have sought to encourage generational renewal with simple financial incentives. However, the issues involved are more complex than that approach would imply, as this may not only require planning for succession but also planning for restructuring of the business and addressing sensitive family and social issues arising from the transfer of the farm to the next generation.

Consultation suggestions

DAERA proposes the development and delivery of a Generational Renewal Programme which comprises policy interventions around knowledge and incentives. The programme will provide farming families with the knowledge and skills to help them plan the successful transfer of the management and leadership responsibility and the legal inheritance of the farm business to a properly qualified (or training to be) successor, both male and female, with the transfer occurring within the optimum time period for that successor to drive the business forward and where the needs and aspirations of the retiring farmer have been properly considered.

The Programme will bring together a range of services/providers who have an important role to play in Generational Renewal and will include:-

- Development and delivery of a three phased programme
 - Phase 1 – planning for succession;
 - Phase 2 – development of the successor;
 - Phase 3 – maintaining professional support for both generations;
- Education to ensure the successor has at least an appropriate Level 3 qualification;
- Capacity building for the successor with a particular focus on leadership, technical, environmental and business training;

- Appropriate incentives when agreed actions/objectives are met;
- Access to support and guidance for future-proofing the business; and
- Links to other support services, particularly for the retiring farmer.

Stakeholder views

The majority of stakeholders (90%), in response to the consultation question on the need to encourage longer term planning for farm businesses indicated that this was necessary. Areas highlighted in relation to long term planning included land tenure arrangements and the introduction of fiscal measures.

There was also strong support from organisations and individuals for a generational renewal programme and the proposed three phased approach to this programme. 83% of respondents were supportive of the provision of education and skills including both academic and transferable skills development, although concern was expressed about the requirement for successors to have a Level 3 qualification. The provision of incentives was also supported with 85% of respondents in agreement.

Department's analysis

Traditionally in Northern Ireland, it has been normal practice for both the succession and the inheritance of family farms to take place together after the death or ill health of the older generation, with planned retirement and transfer seldom being a consideration. This widespread lack of expectation of retiring and unwillingness to retire has led to a farming population whose median age has been steadily rising over the past number of decades. According to 2018 DAERA equality indicators statistics, 36% of managers of a family farm in Northern Ireland are over the age of 65, only 8% are under the age of 40 and 9% are women.

There are many younger people actively involved in farming, but the ageing principal farmer population in agriculture highlights two major problems for the industry, namely difficulties experienced by the younger generation in assuming the leadership role

within farming businesses, and difficulty in relinquishing it by the older generation of farmers.

Younger farmers are more likely to be trained and to be motivated to adopt new and innovative agricultural technologies, making them more competitive in the current marketplace and securing them as key players in safeguarding the future of food production and protecting the environment and rural landscapes.

More efficient and more highly skilled farmers are crucial to the success of the Northern Ireland agri-food industry in meeting modern food production demands and sustaining vibrant rural communities and landscapes. The ability of farmers to adjust and plan for the longer term has become more pressing, yet succession planning is an issue that is often underrated and avoided by farmers.

DAERA has undertaken work previously on succession planning through the Farm Family Options Mentoring Programme, delivered as part of the NIRDP 2007-2013. This programme highlighted that succession planning and associated legal/financial issues are areas of concern for many farmers where support and guidance is needed. Of approximately 2,200 farm businesses mentored as part of the NIRDP, only 50% of businesses had made provision for even a basic Will. This indicates that many businesses are not adequately prepared for the transfer of either the business as a going concern or the associated assets, and do not have the plans in place that will ensure a smooth transition to the next generation and underpin long term success.

DAERA recognises that there are a number of barriers linked to social, emotional and financial issues that prevent many farmers discussing the topic of succession planning. These concerns and an uncertain future for the farm can be the source of much stress and anxiety and lead to sub-optimal outcomes.

Women contribute greatly to the operation of family farms in Northern Ireland. However, fewer than one out of ten farmers in Northern Ireland are female. The population of females who have chosen a career in farming also has an older age profile than their male counterparts. In recent years, there has been a significant shift

toward more females studying and working in agriculture across the UK. However, they still remain underrepresented in the industry as a whole. DAERA is cognisant of the need to encourage females in farming and to eliminating any perceived barriers to accessing the industry as a viable career path.

A number of respondents to the consultation highlighted the issue of land tenure in Northern Ireland and the fact that lack of security of tenure under the traditional conacre created difficulties in terms of good land management, productivity, environmental stewardship, business development and new entrants to the industry. The predominant use of conacre as a means of letting land is driven principally by tradition and culture. There is no legal or other incentive that makes this a better choice for land rental compared with longer term lease arrangements. In the Republic of Ireland, tax incentives have been created to encourage landowners to rent their land in longer term letting agreements and this has had significant uptake. Taxation is, of course, a reserved matter and not within the gift of the NI Executive. However, the Department has been making representations to the Whitehall counterparts on this matter to explore the possibility of a similar mechanism in the UK. In the meantime, there is also scope to engage with Northern Ireland legal, accountancy and land letting professionals to ensure that common misunderstandings about the relative merits of conacre versus long term lets are addressed.

Final Decision

To encourage longer term planning for farm businesses that a Generational Renewal programme is developed which is based on a three phased approach to include planning for succession, development of the successor and maintaining support for both generations. This will include knowledge and skills development and explore the provision of appropriate incentives. The future of the current Young Farmers' Payment will be considered in the context of this Programme.

DAERA will engage with professional bodies in Northern Ireland dealing with land letting to seek to address some of the misunderstandings that exist around the relative merits of conacre versus long term lets.

38. SUPPLY CHAIN MEASURE

An effective functioning supply chain will play a key role in delivering increased productivity, improved resilience and an industry that is environmentally sustainable. The focus of supply chain measures within the Framework Portfolio will be primarily upon the factors that fall within the control of individual producers and growers, where substantial gains can be achieved. The supply chain component of the Framework will also provide a bridge across to the parallel Northern Ireland Food Strategy Framework that is also in the early stage of development.

Consultation Suggestions

In its consultation document, DAERA proposed three areas where intervention is needed:

- **Improving information flow and transparency** - helping to create the information infrastructure that drives transparency, confidence and the effective transmission of market signals amongst supply chain partners;
- **Addressing Fragmentation** - providing support, where needed, to help sectors address blockages to collaboration and cooperation between supply chain actors. Providing the tools (education, mechanisms to encourage cooperation, regulation) to help sectors improve supply chain integration and co-ordination; and
- **Using the supply chain to achieve better strategic outcomes** - encouraging the supply chain to identify, agree and align behind the achievement of strategic objectives, such as a sustainability agenda for Northern Ireland agri-food which is supported by all actors in the food chain and which creates a positive narrative for the industry as it responds to social and market drivers.

Stakeholder views

There was strong agreement that more needs to be done to create effective functioning supply chains. The main themes were:

- Transparency and fairness around pricing, grading and traceability throughout the supply chain - use of technology such as blockchain;

- Buy-local, marketing and promotion of local produce; and
- Encouragement of more widespread producer collaboration.

Around one third of overall responses commented on the Supply Chain Measures. The responses supported the proposals, with 73% agreeing the proposed policy areas when considering future supply chain measures. The main themes were:

Good agreement

- Need to focus on entire supply chain, on local produce/shorter supply chains and on market intelligence/skills/professional assistance;
- Encourage formation of Producer Groups/Organisations;
- Need for strong policy coherence between supply chain and the emerging Food Framework, especially through buy-local/procurement.

More work needed

- Need more information/clarity on proposals.

There were also some general suggestions made in relation to actions that consultees would like the Department to take to support supply chain development in the agriculture and horticulture sectors. There were also a number of responses on specific early actions that the Department could take:

- Significant opportunity in local food public procurement;
- Development of tailored schemes to encourage supply chain co-operation, including Producer Organisations.
- Improve transparency and quality of feedback information (pricing and performance data) to farmers – using, for example, blockchain technology.

Department's analysis

Evidence suggests that efficient and competitive supply chains:

- Are transparent with effective flows of robust, credible data along the entire chain. Enhanced transparency assists in better, market-led decision making and trusted working across all stages of the supply chain;

- Are characterised by skilled and knowledgeable workforces that are innovative, strategic and market-focused; and
- Tend to have high levels of cooperation and collaboration, integration and partnership working.

There is a range of supply chain structures in the industry in Northern Ireland - from the highly vertically integrated to the extremely fragmented. The key characteristics that indicate efficient and competitive supply chains, as set out above, are not uniformly evident across all sectors in Northern Ireland.

Analysis of information, which was gathered through informal engagement across a wide range of sectors, discussions and desk research, indicates variability within sectors. There is evidence of fragmentation, mistrust (which derives from lack of information), inconsistent transmission of market signals, and some lack of common purpose or strategic alignment. These issues could hinder sectors' ability to address the big overarching challenges we are facing (such as responding to climate change and sustainability issues).

Final Decision

To proceed with the development of the Supply Chain Measures on the basis of the future approach and policy proposals set out in the consultation, including further engagement with stakeholders as we review existing measures and systems and explore opportunities to make improvements to meet the specific needs of Northern Ireland supply chains. In any areas where supply chain matters in Northern Ireland intersect with reserved matters within the UK, DAERA will be fully engaged in the process to ensure that Northern Ireland's interests are fully recognised.

39. SOIL NUTRIENT HEALTH SCHEME (SNHS)

An Expert Working Group (EWG) developed a report on “Delivering Our Future, Valuing Our Soils” *A Sustainable Agricultural Land Management Strategy (SALMS) for NI*. The SALMS Report included a number of key decisions designed to improve soil health and the sustainability of land management. The SALMS recommended a soil sampling and analysis programme of all agricultural land in Northern Ireland along with training on nutrient management planning for farmers. The SALMS also recommended Light Detection and Ranging (LiDAR) scanning of Northern Ireland to be undertaken to identify nutrient run-off risks to waterways and measure above ground biomass (AGB) carbon stocks.

This Measure has the following four objectives:

- To establish a robust baseline of soil nutrient status for all productive farm land in Northern Ireland within the lifetime of the scheme, for up to 100% of participating farms;
- To deliver baseline data on soil carbon stocks and modelling research to provide a better understanding of changes in soil carbon stocks across agricultural grasslands, which can inform on their carbon sequestration potential, for up to 100% of participating farms;
- To deliver a LiDAR dataset and determine a baseline for the carbon stored within the above ground biomass and determine the carbon sequestration potential across Northern Ireland’s farmed landscape; and
- To provide Hydrologically Sensitive Area (HSA) risk mapping for the Northern Ireland landscape.

Consultation suggestions

In its consultation document, DAERA proposed to run a Soil Nutrient Health Scheme to provide a baseline on soil nutrient health and carbon stocks. The Scheme will include Northern Ireland wide soil sampling and analysis on farms and a LiDAR survey of Northern Ireland. The resulting data will be processed to produce farm level nutrient

and run-off maps and quantify the amount of carbon stored in soils and in above ground biomass. An objective of this work is to baseline the existing store of soil and above ground carbon in our farmed landscape.

The baseline data would provide a unique benchmark with the potential to inform shape and monitor the development of:

- (i) Future agricultural policy;
- (ii) A knowledge transfer tool to encourage positive behaviour change on farms in relation to nutrient management and tree and hedge planting;
- (iii) How more targeted spatially dependant environmental interventions could result in more efficient improvements across several key environmental indicators; and
- (iv) The carbon data captured will help to inform future policy development.

Stakeholder views

Ninety per cent of stakeholders from all sectors, farming, environmental and non-farming agreed with the proposed uses for data which will be provided via the SNHS. The requirement to have a nutrient management plan linked to future support payments was also well received across all the sectors with 79% in agreement. Suggestions were made by stakeholders on how the data provided by the SNHS could be used or promoted by Government. Some of the main themes were:

- Data must not be used to regulate the industry, otherwise farmers may choose to withdraw from the scheme;
- Keep ongoing publicity of the benefits of the scheme to farm profit and the environment;
- Information may be useful for the industry to back up sustainability credentials to customers at a Northern Ireland level;
- Could be used to enhance the 'green' image of farming, to make consumers aware that Northern Ireland fruit is produced to energy and nutrient efficient standards with minimal environmental impact;
- Allow government to focus knowledge transfer and advisory efforts in specific geographic areas, and to consider support measures such as, for example, lime spreading subsidy, or other approved soil conditioners;

- Farmers within specific catchment areas could work together to reduce nutrient runoff at a landscape scale thereby improving the quality of rivers rather than at a farm by farm level;
- Used as a basis for implementing carbon budgeting at individual farm level; and
- It would be important to see what all sectors of agriculture are currently contributing to GHG emissions and also what each land type is contributing be it SDA, DA or lowland.

Department's analysis

DAERA supported AFBI soil scientists to successfully pilot the soil sampling, analysis and LiDAR run-off risk mapping between 2017- 2019, over 3 water catchments and one open element which was available Northern Ireland wide. The evaluation of the pilots highlighted a number of key findings. These included:

- (i) The provision of individual field information for farmers helped to drive behaviour change in relation to nutrient management practices;
- (ii) Applying nutrients to meet crop need is a central tenet of why soil testing and nutrient management planning (NMP) are important;
- (iii) Improved nutrient management can contribute to improved water quality and can also have economic benefits for farmers; and
- (iv) A Northern Ireland wide programme could provide government with invaluable baseline information for prioritising future interventions.

Final Decision

In order to secure future support payments, applicants must have nutrient management plans. Details on how and when this may be implemented will be taken forward during the design of future schemes (when agreed), particularly the Farm Sustainability Payment.

40. RUMINANT GENETICS PROGRAMME

Genetic improvement is achieved as a result of breeding from the best performing animals within a population. This requires the identification of those animals with the most desirable traits. Genetic improvement produces long term beneficial changes to the output, productivity and quality of animal products.

In addition, genetic improvement in ruminant livestock can contribute significantly to achieving the target reductions in GHG emissions per unit of output. In ruminant livestock sectors, accurate and up-to-date performance data (e.g. milk yield and liveweight gain) linked to both dam and sire identification and genetic information is absolutely key to identify the best animals from which to breed.

The specific outcomes of the ruminant genetics programme are:

Short/medium term:

- I. The provision of tools and information to enable dairy, beef and sheep farmers to identify and breed from the better performing animals in the population;
- II. The provision of tools and information to enable dairy, beef and sheep farmers to identify and cull the poorer performing animals in the population; and
- III. The provision of enterprise level physical benchmarking data to enable farmers to assess their performance relative to their peers and identify areas for improvement.

Long term:

- I. Increased productivity, through genetic improvement, to reduce the amount of feed resources required per unit of milk, beef and sheepmeat produced;
- II. Through genetic improvement, reduced GHG emissions in livestock production per unit of milk, beef and sheepmeat produced (indirectly through improved efficiency of production and directly through reduced methane emissions);
- III. Increased disease resistance to increase the productivity, survivability and welfare of dairy and beef cattle and sheep; and
- IV. Increased disease resistance to reduce the use of animal health pharmaceuticals.

The ruminant genetics programme will complement several other work streams within the Programme, as outlined below:

- **Carbon** - a reduction in methane emissions of up to 26% is possible over 10 years by breeding more productive animals, assuming ruminant numbers remain constant. Therefore, the genetic improvement programme can make a significant contribution to achieving government targets for the reduction in GHG emissions;
- **Farm Sustainability Measure** - improved economic performance, particularly in the redmeat sectors, will do much to reduce heavy reliance on ongoing safety net funding and vulnerability to volatility;
- **Environmental sustainability** - better performing, healthier animals will require lower inputs per unit of output, reduce nutrient loadings, lower the need for pharmaceutical interventions, reduce the risks of anti-microbial resistance and release of pharmaceuticals to the environment; and
- **Supply Chain** - better sustainability and productivity through the use of genetically superior livestock will provide a market advantage but could also be encouraged by milk and meat processors working with their supply base to promote uptake of the Ruminant Genetics Programme.

Consultation suggestions

In its consultation document, DAERA proposed that an industry led Ruminant Genetics Programme will collect and collate the necessary performance data, from various sources and produce genetic evaluations from which producers can make informed bovine breeding decisions to improve the genetic merit of their livestock. It will also provide physical benchmarking reports at enterprise level to inform producers of how their businesses are performing relative to their peers and identify areas for further investigation and improvement. The sheep sector also wish to increase the rate of genetic improvement. However, at this stage, the best approach for achieving this has yet to be decided.

The ultimate long-term aim of this industry-led programme is to increase the annual rate of genetic gain in the ruminant livestock sectors to drive productivity, resilience, animal health and welfare and environmental gains.

The Department is seeking to be supportive and therefore, considering investing in the initiative and encouraging the industry to participate in it. The Department's involvement in this way will provide space to allow policy recognition and policy support, but the ownership of the Ruminant Genetics Programme will be for industry itself.

The following key tasks necessary from the future Agricultural Policy Programme have been identified to help this industry-led initiative achieve the outcomes described above:

- (i) Within the Farm Sustainability Payment - a requirement to register the sires of all calves born;
- (ii) Within the Beef Sustainability Package – a requirement to provide specified data from suckler cows (still to be agreed) to the Ruminant Genetics Programme;
- (iii) Establish knowledge transfer programmes, e.g. discussion groups and demonstration farms, to educate and inform producers of the benefits of using livestock genetic merit information as a management tool in their farm business and ensuring that they acquire the necessary skills to exploit this information; and
- (iv) Assist farm businesses to utilise the data coming from the Ruminant Genetics Programme to drive better economic and environmental performance from their ruminant enterprises

Stakeholder views

65% of respondents agreed that DAERA should pump prime the initiation of an industry led Ruminant Genetics Programme. There was strong support from farming and environmental organisations.

55% of respondents agreed that farmers should be required to provide data for the Ruminant Genetics Programme. The main themes were:

Good agreement

- Farmers should be required to provide data in order to facilitate improvements in the National herd;
- This would vastly improve the rate of knowledge and potential improvements with such a data base; and
- Must be part of wider essential data collection measures which will improve baselines for biodiversity, greenhouse gas emissions, and other environmental metrics which have been well studied and can more effectively help deliver environmental outcomes and improve economic efficiency and resilience.

No agreement

- Concerns expressed that this may be too onerous for some farmers; and
- This should not be compulsory.

74% of respondents supported the proposal that knowledge transfer programmes should be developed to support farmers adopt genetic improvement programmes. The main themes were:

- Very strong agreement with the proposals;
- It will be important that farmers are in a position to understand reports and use the data for decision making;
- There is a considerable level of training to impart this knowledge to all farmers and to train and influence their breeding decisions;
- Sharing of information between peers tends to be well received as per the Business Development Group principle. Peer-peer uptake of new technologies is successful;

- Genetic progress in the beef and sheep sectors has been slow compared to other sectors and therefore support to adopt new technologies will be required initially;
- Genetics might more readily capture the imagination of many livestock farmers than some other desirable initiatives; and
- Such programmes are vital to ensure that farmers recognise the need for careful breeding and have the knowledge and skills to deliver on that programme.

Department's analysis

Currently, Northern Ireland ruminant farmers are predominately making breeding decisions in the absence of performance data. Informed estimates indicate that only 30% of cows in the dairy herd, 2% of cows in the suckler herd and less than 1% of sheep flocks are performance recorded. Therefore, the majority of cattle and sheep farmers in Northern Ireland do not have access to genetic evaluations from which to make informed breeding decisions. This represents a considerable brake on the ability of the ruminant sector, and the red meat sector in particular, to make rapid advances in areas such as productivity, animal health and welfare and environmental footprint. Estimates from Abacus Bio have identified potential gains from a livestock genetic improvement and data programme in the order of £25m per annum. Better informed and more accurate breeding decisions require the use of science-based measurements known as Estimated Breeding Values (EBV). Farmers need the knowledge, understanding and confidence to use these tools. Therefore, while the first step is to initiate a programme to ensure EBV data is available on a much wider scale than at present, it is also critically important to develop an effective knowledge transfer and research element in future breeding programmes

Final Decisions

DAERA invests in the initiation of an industry led Ruminant Genetics Programme;

Farmers will be required to provide data necessary for the Ruminant Genetics Programme as an eligibility condition of future support payments.

Knowledge transfer and innovation programmes are developed to support farmers to adopt genetic improvement programmes.

41. CONTROLS AND ASSURANCE

The most recent version of Cross Compliance has been in place since the review of the CAP in 2015 but the basic elements - the requirement for farmers to comply with Statutory Management Requirements (SMRs) and maintain their land in Good Agricultural and Environmental Condition (GAEC) - have been in existence since 2005. Cross Compliance refers to the regulatory baseline that all farmers must meet to receive Basic Payment Scheme (BPS) or area based Rural Development support. It lays the foundation upon which farmers can produce food and provides an important mechanism to protect and safeguard the environment. Cross Compliance requirements listed in former EU legislation are now retained in domestic law.

Consultation Suggestions

Cross Compliance

DAERA has four main avenues of compliance control available to it within the sphere of agriculture - Cross Compliance, legislative enforcement, Official Control Regulations and civil sanction. In simplifying Cross Compliance, DAERA remains conscious of the need to ensure that farm businesses not in receipt of area-based scheme payments remain compliant with legislative requirements on animal, plant and human health, animal welfare and the environment. DAERA is, therefore, investigating the implications of enforcement of these requirements through means other than the successor to Cross Compliance. This goes hand in hand with a review of the Cross Compliance penalty system and legislation.

DAERA proposes to replace the current Cross Compliance SMR/GAECs with a simplified system of Farm Sustainability Standards, with the current verifiable standards re-written as a set of underlying requirements to better meet local needs and plug gaps that have been identified and address overlaps. It is anticipated that the simplified system of Farm Sustainability Standards will apply to the Farm Sustainability Measure and to the Farming with Nature measures. Through this, DAERA seeks to achieve the following outcomes:

- Protect the integrity of the industry and encourage good practice behaviours that underpin the four key desired outcomes of the Programme;

- Compliance by claimants with relevant minimum legislative requirements;
- An industry achieving Farm Sustainability Standards where there is no statutory baseline; and
- Implement Standards which complement and underpin the policy objectives across other parts of the Agricultural Policy Framework. In pursuing these outcomes, the Department will incorporate lessons learned from previous experience of the CAP Cross Compliance regime.

Design Principles

The process of developing this new approach is distilled into three main principles:

- Principle 1 - undertaking a managed phasing out of SMRs under Cross Compliance towards reliance on the base legislation for enforcement, except where there is very good reason to retain the status quo;
- Principle 2 - developing a flexible and responsive replacement for the GAEC standards that meets current and emerging environmental issues; and
- Principle 3 - building in proportionality and responsiveness to the penalty system, with a much greater emphasis on securing compliance rather than recourse to penalty.

DAERA's overall aim is to make the new Farm Sustainability Standards system simpler, more flexible and more responsive to meet the challenge of current and emerging issues, whether environmental or related to animal health and welfare, food safety or plant health. To support this, a further principle is the use of remote sensing and administrative controls by default (where appropriate) and the development and use of educational and communication resources to better inform farmers and improve their understanding of their responsibilities and the sanctions they may face if they do not meet those responsibilities. DAERA also understands the need to have a system where the standards and requirements are capable of being adhered to and evidenced by the farmer. DAERA proposes six new Farm Sustainability Standards:

1. Protection of waters from pollution;
2. Protection of habitats and biodiversity;
3. Protection of Landscape and Heritage;
4. Livestock food and feed/herd and flock health and biosecurity;
5. Welfare and Protection of Farm Livestock (including transport); and
6. Livestock Identification and Traceability.

Penalty System

DAERA is seeking to simplify the penalty system and is considering using other tools to both ensure compliance with standards and process non-compliances fairly where they do occur. In particular, there is a need to move away from the 'penalty culture' and use knowledge/education to better explain the reasons why compliance is important. In future, the focus of penalties will be on the repeat offenders and where significant harm has been done to, for example, the environment. The Department is also considering the introduction of Fixed Penalty Notices which would not duplicate other Farm Sustainability Standard penalties. There is also a link to broader knowledge and skills where, as with a traffic speeding fine, for example, attendance at a training course instead of a monetary penalty may be offered and bring benefits in future understanding and compliance. An extension of this idea could be the requirement for all applicants to complete an online training course on Farm Sustainability Standards, similar to the application requirement under the Environmental Farming Scheme. Scheme payment would only be made after confirmed completion of the course by the applicant. Discretion by the DAERA inspector could also allow room for the provision of guidance of farm businesses, rather than levying a penalty in all instances of non-compliance. Advice could be provided on compliance for minor non-compliances, rather than immediate imposition of a penalty, taking into account the risks and potential 'harms' to animal health, plant health, human health and/or the environment in the determination of the course of action.

DAERA also proposed to review and revise the penalty matrices and the concepts of severity, extent, permanence, reoccurrence and intentionality/negligence under the future penalty system. The application of negligence against some non-compliances

means that the penalty applied is low and appears out of step where significant damage has been caused to the environment or where animal health or welfare have been compromised. Negligence in terms of Farm Sustainability Standards must not relate to a farmer's negligence to familiarise himself/herself with the rules. It must be applied on the basis of whether the action was due to negligence - or perhaps in layman's terms: was it accidental. DAERA considers that where a farmer has undergone training in Farm Sustainability Standards, which could be required when signing up to a scheme, he has gained a knowledge of the standards required as part of the 'contract' for payment and, therefore, even a first breach of those rules could be considered 'Intentional'.

Land Eligibility

DAERA proposed to make all agricultural land eligible for payment except for hard features (e.g. buildings, yards, laneways, etc.) under future area based schemes. The aims of this approach are to:

- Make any future land eligibility rules simpler to administer;
- Avoid the unintended consequences of the previous approach, which led to problems such as habitat degradation and water contamination;
- Bring areas of agricultural land currently out of scope within the protective framework of Farm Sustainability Standards; and
- Encourage sustainable land management and the maintenance of active farming and habitat development.

Design Principles

The following design principles will apply:

- DAERA wishes to introduce changes that are practical, easily understood by all farm businesses and are efficiently enforced;
- Land eligibility for schemes will be defined to ensure objectives and targets on environmental sustainability, water quality, biodiversity and climate change are met;
- Any changes will seek to avoid unintended consequences such as land abandonment or the undermining of the impact of future schemes;

- Land eligibility rules will be relevant to sustainable land management in Northern Ireland; and
- Value for money considerations will be built into the administration of future area based schemes.

Stakeholder views

Overall, the large majority of respondents supported the proposal to replace the current Cross Compliance SMR/GAECs with a simplified system of six Farm Sustainability Standards and underpinning requirements, with 80% of respondents in agreement. Respondents were in good agreement on the need for the protection of habitats and biodiversity, landscape and heritage (including archaeological features) and habitats <2ha. They were also in good agreement with the training / education focus to ensure compliance and the need for improved guidance and pro-active communications. There was also good agreement on the need for a new approach to penalties to include, for example, fixed penalty notices. There were no substantive areas of disagreement.

Overall the majority of respondents supported the proposal to revise the current land eligibility rules to make all agricultural land (except hard features) eligible for direct payment under future area based schemes, with 88% of respondents in agreement. Respondents agreed that the proposal is a sensible and logical change to policy which will simplify the rules; make administration more efficient and simpler for farmers; and have positive environmental benefits. There were no substantive areas of disagreement.

Department's analysis

Cross Compliance

DAERA has carried out a review of Cross Compliance and Land Eligibility in response to the 2018 Stakeholder Engagement. That engagement identified these as elements of the CAP direct support regime that could carry through to the new Agricultural Policy Framework Portfolio but should be reviewed to exclude requirements that are not particularly relevant or worthwhile in Northern Ireland.

There is significant public money invested in farm schemes to deliver public goods and farm businesses are effectively in a 'contract' with DAERA to deliver those goods. Therefore, it is appropriate that farm businesses are asked to meet certain requirements to ensure they are adequately protecting the environment, animal or human or plant health, and animal welfare. Since 2015, four of the Cross Compliance standards have had no recorded infringements and nine of the standards have had very low levels of non-compliance recorded in that period. More significantly, there are consistently five areas of greatest non-compliance. The incidence of non-compliance has either increased or there has been limited improvement in the past five years across all of these five controls: SMR1 - Protection of water against nitrates pollution GAEC7 - Retention of landscape features; SMR4 - Food and feed law; SMR13 - Protection of animals kept for farming purposes; and SMR7 - Cattle ID and registration. There is a need to address non-compliance in these areas and improve the understanding by farm businesses of the benefits of these controls. The verifiable standards and associated control points at inspection also need to be rationalised to reduce complexity and make the standards more locally relevant and understandable. DAERA has also identified gaps and overlaps in the current system. For example, there is inadequate protection for small valuable habitats (less than 2 ha) as they fall outside the current GAEC requirements, and the inspection control points for SMR1 and GAEC1 are almost identical and, therefore, overlapping. Future Cross Compliance requirements also need to fit in with other conditionality requirements for future schemes.

Penalty System

DAERA is seeking to ensure that its penalty system for non-compliance with the new Farm Sustainability Standards is effective but fair. Current Cross Compliance is an administratively straightforward mechanism for applying penalties, rather than through the Courts. However, the proportionality of the penalties gives some cause for concern, particularly where different farmers are penalised the same percentage of their payment for similar breaches but the amount of money may be very different depending on the monetary value of that payment.

Land Eligibility

One of the fundamental rules for receiving payment under the current Direct Payments schemes (Basic Payments Scheme, Young Farmers' Payment, Environmental Farming Scheme and Protein Crops Scheme) has always been that payment can only be made on eligible agricultural land. However, this has been based on a 'activity' rather than 'outcomes' view of land eligibility, which has driven farmers to increase their eligible land in order to maximise their payments. This means that control of certain vegetation, in particular rush, heather or bracken through burning, spraying or by mechanical means can have unintended consequences, i.e. a detrimental effect on biodiversity and water quality. There is also a perception of conflict between the current land eligibility rules and the agri-environment scheme rules, in particular, around the control of temporary ineligible features like scrub and rush, but also in upland management and fertilisation of marginal land.

Final Decisions

The current Cross Compliance SMR/GAECs are replaced with a simplified system of Farm Sustainability Standards. The current verifiable standards will be re-written as a set of underlying requirements to better meet local needs and a compliance regime and penalty system for non-compliance devised for the Farm Sustainability Standards which is effective but fair. To support this, remote sensing and administrative controls will be used by default (where appropriate) and educational and communication resources developed to better inform farmers and improve their understanding of their responsibilities and the sanctions they may face if they don't do not meet those responsibilities.

All agricultural land is made eligible for payment except for hard features (e.g. buildings, yards, laneways, etc.) under future area based schemes. The Department will revise its land eligibility documentation effective from 1 January 2024.

42. METRICS, MONITORING AND EVALUATION

DAERA is currently undertaking work in relation to metrics which will be used to monitor and evaluate the progress of the Future Agricultural Policy.

Monitoring and evaluation are fundamentally important elements underpinning the success of any policy framework. The agricultural policy programme has overarching objectives captured in the four outcomes around *productivity, sustainability, resilience and a responsive supply chain*.

Consultation suggestions

There is a need for a number of high level metrics that capture these outcomes and against which progress can be measured. This will involve establishing baselines and underlying trends, monitoring progress and, where appropriate, benchmarking this progress against other regions.

The monitoring and evaluation programme for the Programme will include a wide range of metrics within a hierarchy. As well as high level crosscutting metrics that reflect the four Programme outcomes, there will be appropriate metrics developed within each workstream.

It is proposed that there would be an annual report which presents updates for each of the high level metrics (that cross cut the various workstreams) as well as those developed within the various workstreams and are, for the most part, specific to those workstreams.

Stakeholder views

67% of respondents agreed the principles against which the metrics should be developed. There was good agreement with the proposed high level metrics, but a number of respondents suggested that further work needs to be carried out on the detail of those metrics. Some respondents made suggestions in relation to additional high level metrics particularly in relation to including a social indicator; supporting metrics should be given further consideration particularly in relation to including

metrics on specific sectors, farm type/size and ecological outcomes. Respondents were of the view that the high-level metrics and any further metrics to be included should be simple to use and understand without any 'gold-plating'. Respondents also asked for continued stakeholder engagement should take place as further metrics are developed.

Department's analysis

In order to measure against the four programme outcomes and following early comparisons nationally and globally, the Department considers that the following high-level metrics are the most appropriate:

- (i) Total Factor Productivity for Northern Ireland Agriculture;
- (ii) Net GHG emissions for Northern Ireland Agriculture and LULUCF;
- (iii) Nitrogen and Phosphorus balances;
- (iv) Ammonia emissions from farming;
- (v) Indicator species;
- (vi) Net Farm income derived from the market; and
- (vii) Gross Value added from agriculture and food processing

Final Decisions

Further work is undertaken to fully develop the seven high level metrics proposed in the consultation document.

The suggested inclusion of a social indicator will not be taken forward as this is not directly relevant to any of the four high level strategic outcomes for the policy framework.

The suggestions put forward for supporting metrics are given further consideration particularly in relation to including metrics on specific sectors, farm type/size and ecological outcomes.

The proposed high-level metrics and any further metrics to be included should be simple to use and understand without any 'gold-plating'. In addition, that continued stakeholder engagement should take place as further metrics are developed.

43. HORTICULTURE

The Northern Ireland production horticulture sector makes an important contribution to the economy, the environment and human health. DAERA statistics for 2019 indicate that horticulture holdings in Northern Ireland occupy 3,000 ha, equivalent to 0.3% of the total farmed land area, but have an estimated output of £101.3m or 5% of the total gross output of Northern Ireland agriculture.

The UK is currently highly reliant on imports of horticulture products (fruit, vegetables and ornamental crops) to meet growing consumer demand. Defra estimates the value of imports to the United Kingdom of these products in 2019 to be almost £8 billion. A number of these imported products could be grown successfully in Northern Ireland.

The lifestyle trend market signals highlight the growth in the plant-based foods market and people selecting to eat less meat, adopting a flexitarian diet. Increasing fruit and vegetable consumption forms part of a number of Government initiatives including 5/7-a-Day and tackling childhood obesity. Plant-based foods grown and consumed within a region are associated with a lower carbon foot-print and this is an important consumer purchasing choice. In addition, a switch to production horticulture has the opportunity to contribute positively to climate change policies.

A Production Horticulture Programme would assist the industry to achieve economic, environmental, and broader population health and wellbeing benefits, by focusing on the four desired outcomes of the Future Agricultural Policy Framework Portfolio.

Consultation suggestions

In its consultation document, DAERA proposed that the focus will be on production horticulture, defined as plant propagation and cultivation to produce food/edible crops, ornamental crops and other crops (i.e. those grown for use as pharmaceutical plant products or as plant based ingredients in processed foods). It also proposed that programmes should be developed through a collective process involving key stakeholders, other government departments and social partners;

- Improved supply chain integration should be achieved through incentivising collaboration and cooperation within the supply chain where fragmentation exists and scale is a supply barrier.
- Assisting in building collaborative partnerships to access Research and Development and Innovation that will benefit production horticulture growers from wherever this is available;
- Providing access to cutting-edge knowledge transfer and innovation support programmes to ensure those working in the industry have the required knowledge and skills to enable them to maximise market opportunities, and deliver the desired outcomes of the Framework Portfolio;
- Facilitating learning from others through industry/supply chain visits and supporting clusters for shared/peer learning;
- Optimising precision of data used in decision making tools/models through data projects and incentivised high value data collation; and
- Supporting businesses transition through knowledge and support for adoption of new technology.

Stakeholder views

Stakeholders expressed views on the proposed outcomes for horticulture. Many recognised that it would be extremely challenging to achieve the growth outcomes and for some sectors (e.g. top fruit) it would be impossible given the short timescale. Labour was cited as a particular problem for some sectors. The importance of getting supply chain right was frequently emphasised. Generally, stakeholders welcomed that horticulture was finally being given due attention and an opportunity to grow and emphasised the environmental and health importance of growing plants as food. There were suggestions that growth may have to come from inward investment as well as local growth and high tech horticulture and some environmental concerns were expressed.

As regards policy proposals, 89% were in favour and 21% against, with all the major organisations being largely positive. Stakeholders generally welcomed the emphasis on stakeholder engagement, collaboration, knowledge, innovation and accessing R&D and supply chain but emphasised the need for integrated packages of support and support for Producer Organisations models going forwards. The importance of attracting and supporting new and young growers was also highlighted, as was the folly of potentially adopting a one size fits all approach for different sectors / groups within sectors.

Some were disappointed with the proposals and felt that they did not go far enough, failing to capitalise fully on the wider benefits and linkages of horticulture for society e.g. public health agenda, public procurement, biosecurity, etc.

The design principles were supported by 72% of respondents which again included a significant majority of organisations. Some stakeholders, however, felt that the principles were too generic, limited and conservative and that restricting focus to market failure was too limiting and that market opportunity should also be a focus. Others felt that there needed to be more explicit links to public health and environmental agendas e.g. health diets, public well-being, climate change. Numerous suggestions were given by 32 respondents on how success could be measured.

Department's analysis

The horticulture sector is fragmented, with a diverse range of production enterprises impacting on scale of production and consistency of supply for some sub-sectors. There is limited availability of robust statistical and economic data for the sector, including number and scale of businesses and the costs and returns of production. Historically, there has been limited successful cooperation within the sector, even though this would represent a clear opportunity to address the weaknesses arising from its fragmented structure. The challenge is to develop solutions to build capacity (including that for cooperative capacity) and supply chain integration for the sector to address current problems of scale, consistency and continuity of supply of product.

The sector also has a significant productivity challenge and coupled with constrained access to labour, focus is needed on how to produce more with the same resource or the same with less resource, crucially without negatively impacting the environment. The sector needs the know-how to use advanced technology, robotics and automation as a pre-requisite for its investment to address issues such as labour availability, productivity and sourcing lower cost energy supply.

The provision of quality market intelligence and consumer insight data is needed in an appropriate format for use by the industry on an on-going basis. To deliver impact, new knowledge and skills are needed in areas such as how to improve productivity, apply the principles of lean production, decision-making, using data effectively, ability to assess investment in new technology/systems that match the needs of the business/sector, and understanding of environmental footprint and greener options.

Final Decision

The horticulture policy proposals are further developed through a pilot programme (or programmes) working in consultation with relevant sub-sectors of the industry and focusing on the production of crops with good economic potential.

ANNEX 1

Beef Sustainability Package

General information

Table 1 below shows the list of beef, dairy and native breeds on APHIS as defined for an analysis linked to the consultation.

Table 1. Beef, Dairy and Native breeds

Beef Breeds		Dairy Breeds	Native Breeds
Australian Lowline	Pinzgauer	Armoricaine	Aberdeen Angus
Ankole	Romagnola	Ayrshire	Belted Galloway
Angler Rotvieh	Rotbunt	Baltata Negra	Blue Grey
Aubrac	Red Poll	Baltata & Baltata Romanesca	British White
Blue Albion	Salers	Baltata Bruna	Devon
Bazadais	Simmental	Bruna De Maramures	Dexter
Belgian Blue	Unknown	Bretoone Pie Noire	English Park
Beefalo	Vaynol	Danish Red	Galloway
Bison	Wagyu	Droimeann	Gloucester
Beefmaster	Yak	East Finish Brown	Hereford
Braunbieh	Zebu	Fleckvieh	Highland
British Blue		Friesian	Irish Moiled
Brahman		Frisona Espagnola	Kerry
Water Buffalo		Groninger Blaarkop	Longhorn
Canadian Black		Guernsey	Lincoln Red
Charolais		Holstein	Luing
Chianina		Jersey	Murray Grey
Chillingham		Lithuanian Black and White	Old English
Blonde D'Aquataine		Montbeliarde	South Devon
European Angus		Meuse Rhine Yssel	Shorthorn

Gasconne		Normande	Shorthorn Beef
Gayal		Norweigan Red	Speckle Park
Gelbvieh		Pustertaler	Stabiliser
Lakenvelder		Reggiana	Shetland
Limousin		Swiss Brown	Sussex
Maine Ahjou		Shorthorn Dairy	Tyrone Black
Malkekorthorn		Swiss Grey	Welsh Black
Marchigiana		Swedish Red	Welsh White
Miniature Zebbu		Tarantaise Tarina	White Galloway
Parthenais		Valsostana Nera	White Park
Piemontese		Vosgienne-Vosges	