

Environment and Rural Affairs Monitoring & Modelling Programme (ERAMMP)

ERAMMP Report-135: Integrated Modelling Platform (IMP) BPS Taper Scenarios

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ERAMMP

Integrated Modelling Platform (IMP)

BPS Taper Scenarios

Top of chain only: SFARMOD & LAM

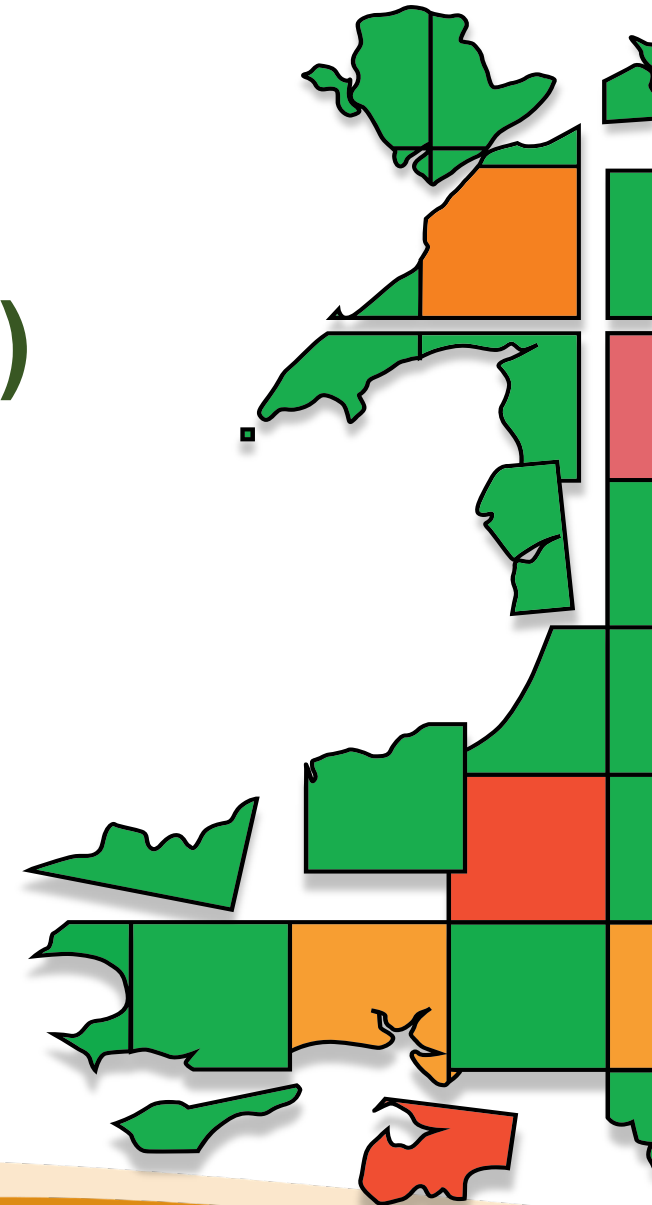
September 2025



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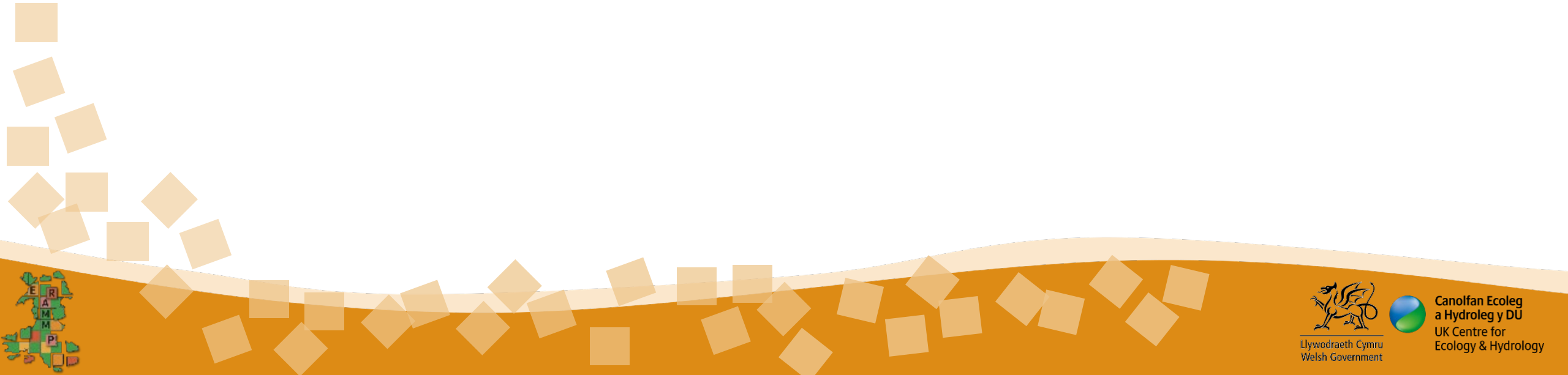
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Menu

- [Run descriptions](#)
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- [Part 1: Agriculture](#)
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A decorative background featuring a wavy line separating a light orange upper section from a darker orange lower section. Numerous small, semi-transparent orange squares are scattered across the background, some appearing to float above the wavy line and others below it. In the bottom right corner, there is a navigation link and two logos.

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A small map of Wales, divided into regions, with the letters E, R, A, M, and P placed in different areas.

The logo of the Welsh Government, featuring a red dragon.

Llywodraeth Cymru
Welsh Government

The logo of the UK Centre for Ecology & Hydrology, featuring a stylized globe.

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Summary of slide pack runs

Run	Name	BPS	GAEC	CoAP	SFS	Farm Transitions
1	Baseline: 100% BPS	✓	✓	X	X	X
2	Counterfactual: 100% BPS	✓	✓	✓	X	X
3	BPS taper (80%)	✓	✓	✓	X	X
4	BPS taper (60%)	✓	✓	✓	X	X

BPS: Basic Payment Scheme

GAEC: Good Agricultural and Environmental Conditions

CoAP: Control of Agricultural Pollution Regulations

SFS: Sustainable Farming Scheme

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Baseline: 100% BPS

- Assuming 100% payment of BPS
 - Based on the area payment and redistributive payment on the first 54ha
- 2022-23 prices used (based on farm-gate prices from John Nix Farm Management Pocketbook).
- Farm type transitions (changing EFT, leaving full-time agriculture) are not allowed in the baseline.
- The Good Agricultural & Environmental Conditions (GAEC) requirements and costs **have been** included.
- Control of Agri-Pollution (CoAP) regulation requirements and costs **have not been** included.
- No capping of BPS payments.
 - In 2015 Welsh Government introduced a progressive BPS reduction system where payments above £150,000 were reduced, with no payments made over £300,000.
 - No capping of BPS payments are implemented in the BPS taper scenario runs as the very large farms identified in the IMP modelling may not represent single businesses for the purpose of BPS.

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The Counterfactual: 100% BPS

- Assuming 100% payment of BPS
 - Based on the area payment and redistributive payment on the first 54ha
- 2022-23 prices used (based on farm-gate prices from John Nix Farm Management Pocketbook).
- Farm type transitions (changing EFT, leaving full-time agriculture) are not allowed in the counterfactual.
- GAEC requirements and costs **have been** included.
- CoAP regulation requirements and costs **have been** included.
- No capping of BPS payments

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BPS Taper: 60 and 80% BPS

- Assuming 60% and 80% payment of BPS
- 2022-23 prices used (based on farm-gate prices from John Nix Farm Management Pocketbook).
- Farm type transitions (changing EFT, leaving full-time agriculture) are not allowed in the BPS taper runs.
 - The BPS taper is not being implemented in isolation from the SFS scheme and therefore will primarily impact in the long-term those farms that choose not to enter the SFS. It would therefore be unreasonable to assume large-scale structural change from the BPS taper alone and thus transitions have been left off.
- GAEC requirements and costs **have been** included.
- CoAP regulation requirements and costs **have been** included.
- No capping of BPS payments

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Context

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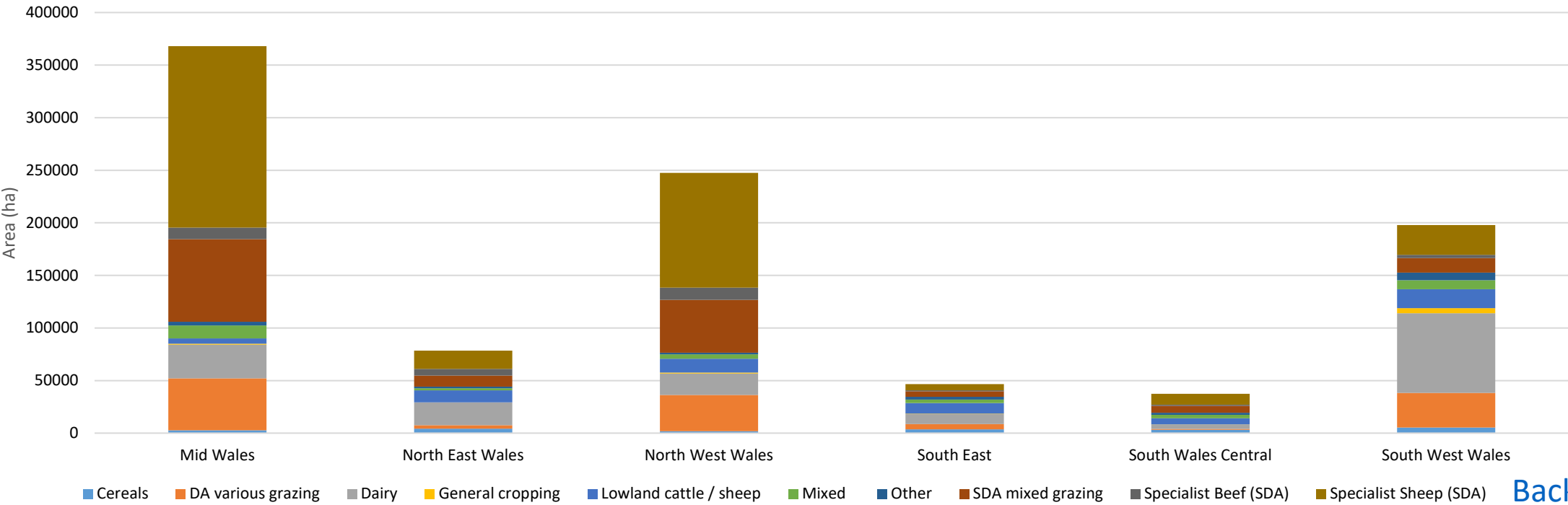
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Farm type and area by region

Agricultural models are applied to all full-time farms

Calculations use productive agricultural area for full time farms:
853,353 ha and exclude: bare rock, buildings & yards, sand dunes, mud flats

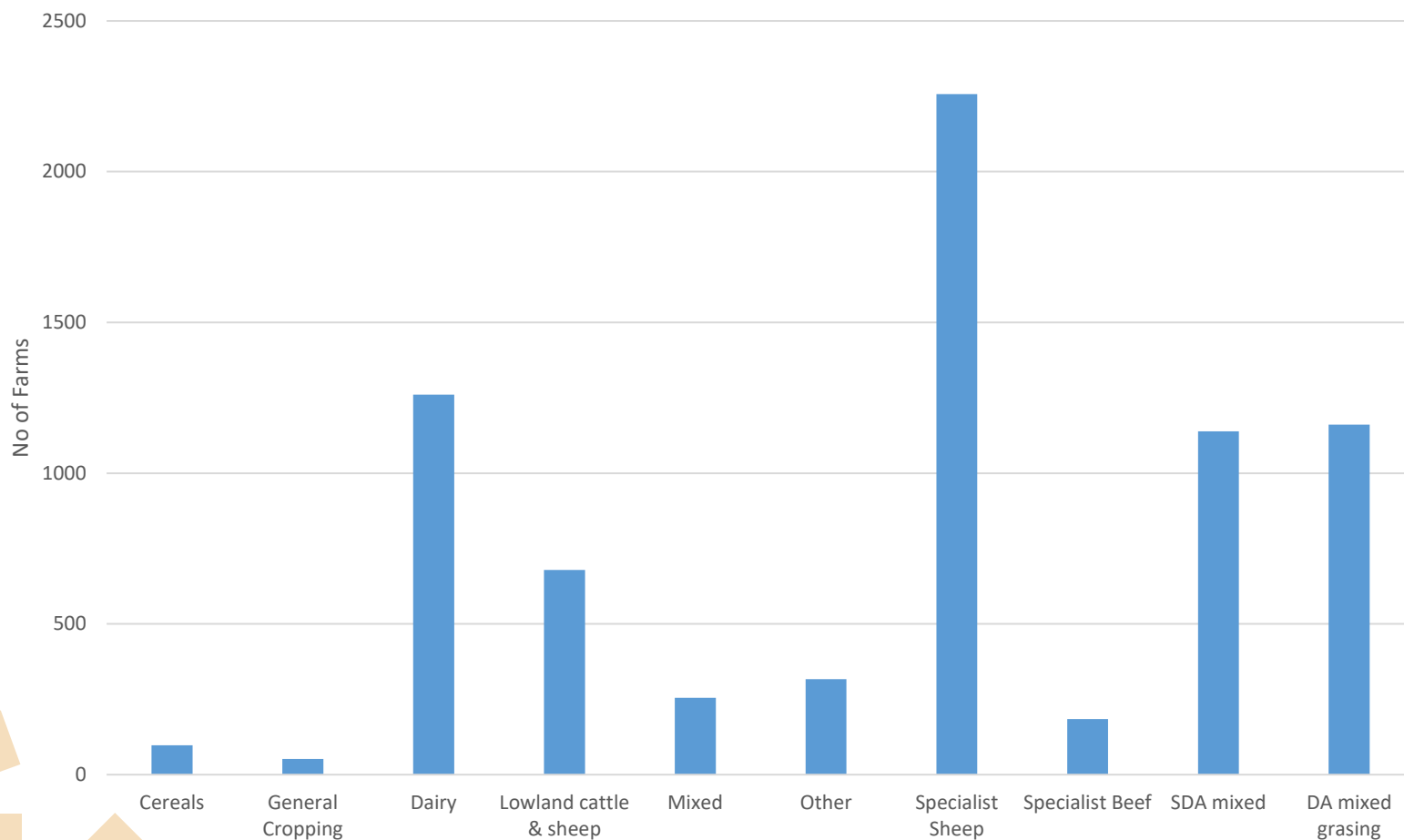
Farm Type	Number	Area (ha)
Full-time	7,401	976,094
Spare / Part-time	8,887	338,131
Total	16,288	1,314,225



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Farm numbers by type



- Total number of full-time farms in baseline: 7401
- Specialist Sheep account for 30% of all farms
- Dairy accounts for 17% of all farms
- General cropping represent <1% of all farms

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PART 1: Agriculture

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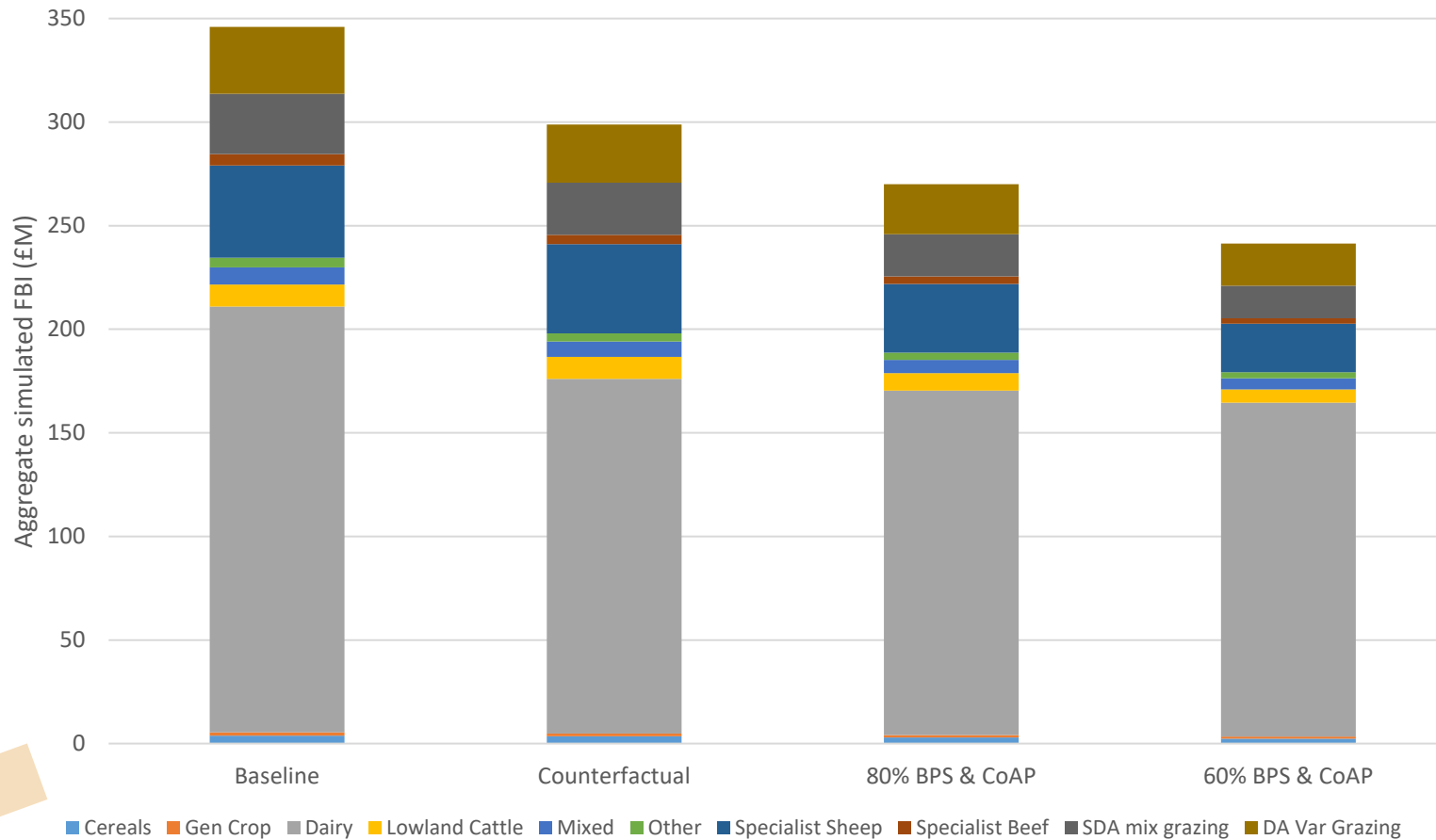


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Total simulated Farm Business Income from full-time farms



Counterfactual (continuation of full BPS and introduction of CoAP)

The introduction of the CoAP leads to a reduction in total simulated FBI of 13.6% from baseline, this is mainly attributable to the reduction in dairy GLUs (-9%), costs of N export due to the limits on N inputs (for which beef and sheep GLUs are unaffected) and N input restrictions.

Tapering of BPS:

The tapering of BPS to 80% and 60% reduces the total simulated FBI from £299m in the counterfactual to £270m (-9.6%) and £241m (-19.3%), respectively. These changes are predominantly caused by the reduction in simulated BPS payments.

- Short-term (no EFT transitions)
- Based on 2023 prices

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Total simulated Farm Business Income from full-time farms

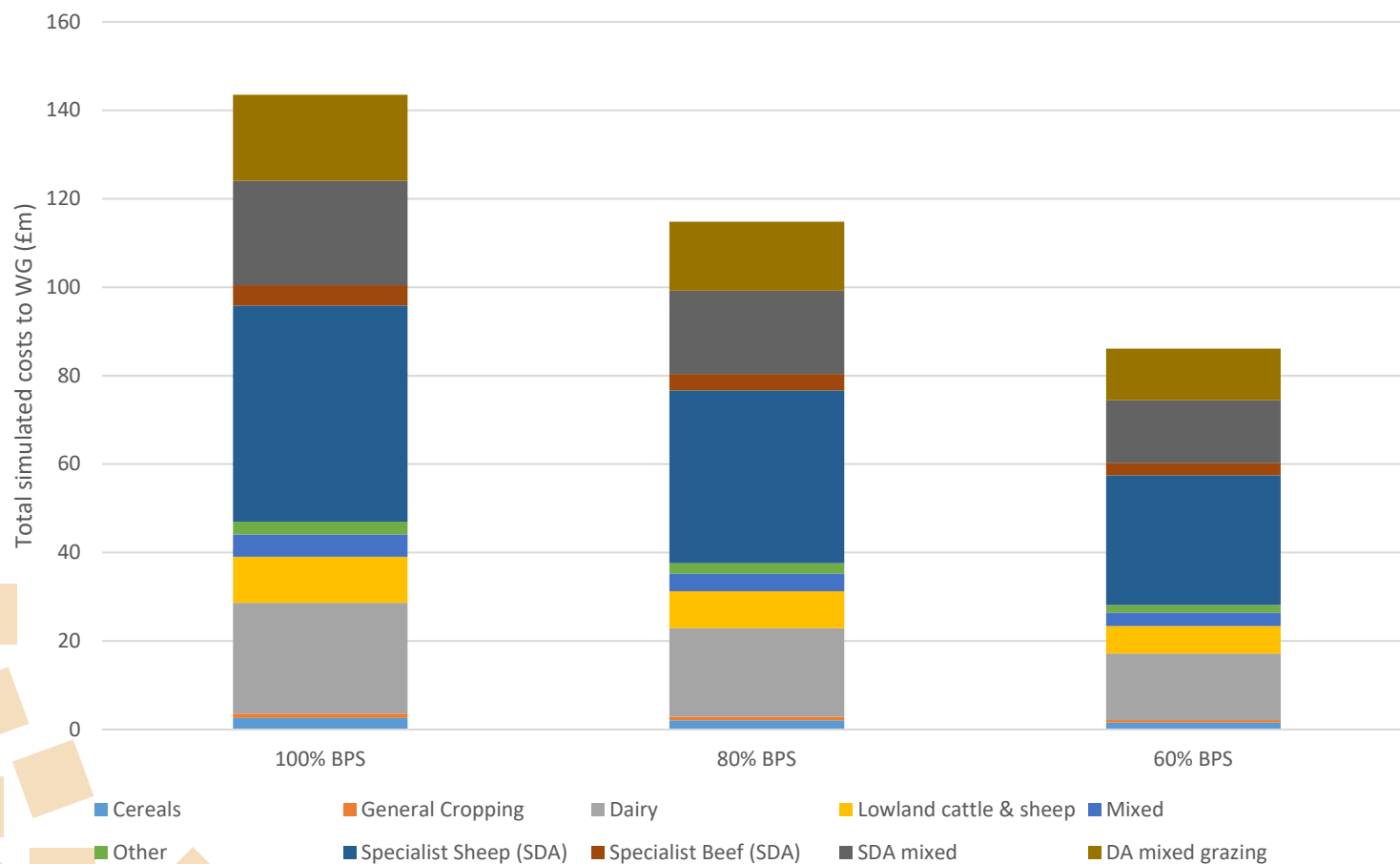
Change in aggregate FBI	£m	% change
Baseline to Counterfactual	-47.0	-13.6
Counterfactual to 80% BPS	-28.8	-9.6
Counterfactual to 60% BPS	-57.5	-19.3
Difference in aggregate FBI	£m	% difference
80% to 60% BPS	-28.8	

- Short-term (no EFT transitions)
- Based on 2023 prices

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Total WG payments for BPS taper scenarios



- The simulated WG BPS payments for 100% BPS are used in the baseline and counterfactual.
- The reduction in BPS area payments to 80% and 60% leads to equivalent reductions in total simulated WG payments from £143.5m (Baseline and Counterfactual) to:
 - £114.8m (-£28.7m, 80% BPS)
 - £86.1m (-£57.4m, 60% BPS)

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Change or difference in WG payments for BPS taper scenarios

Change in total WG payments	Change (£m)	Change (%)
Baseline to Counterfactual	0	0
Counterfactual to 80% BPS	-28.70	-20
Counterfactual to 60% BPS	-57.40	-40
Difference in total WG BPS payments	Difference (£m)	Difference (%)
80% to 60%	-28.70	

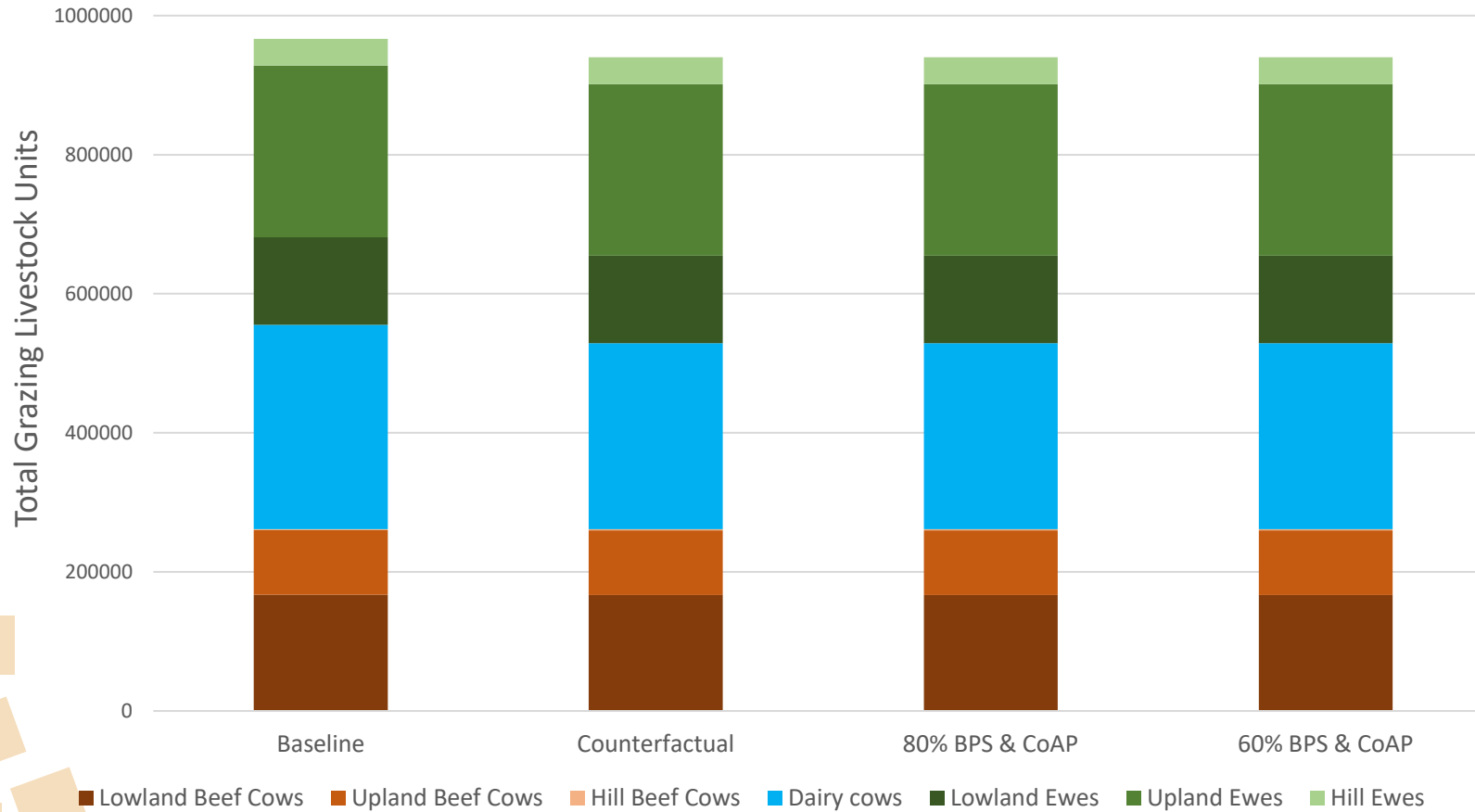
There is no difference in WG payments between the Baseline and Counterfactual as both are 100% BPS.

The largest change in average BPS payments associated with the taper scenarios occur within the Cereals (very small number of farms) and all three SDA farm types (sheep, beef and mixed).

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Stocking (GLUs)



Counterfactual (continuation of full BPS and introduction of CoAP):

The introduction of the CoAP in the Counterfactual leads to a reduction in dairy GLUs due to the limits on N inputs, with beef and sheep GLUs being unaffected.

Tapering of BPS:

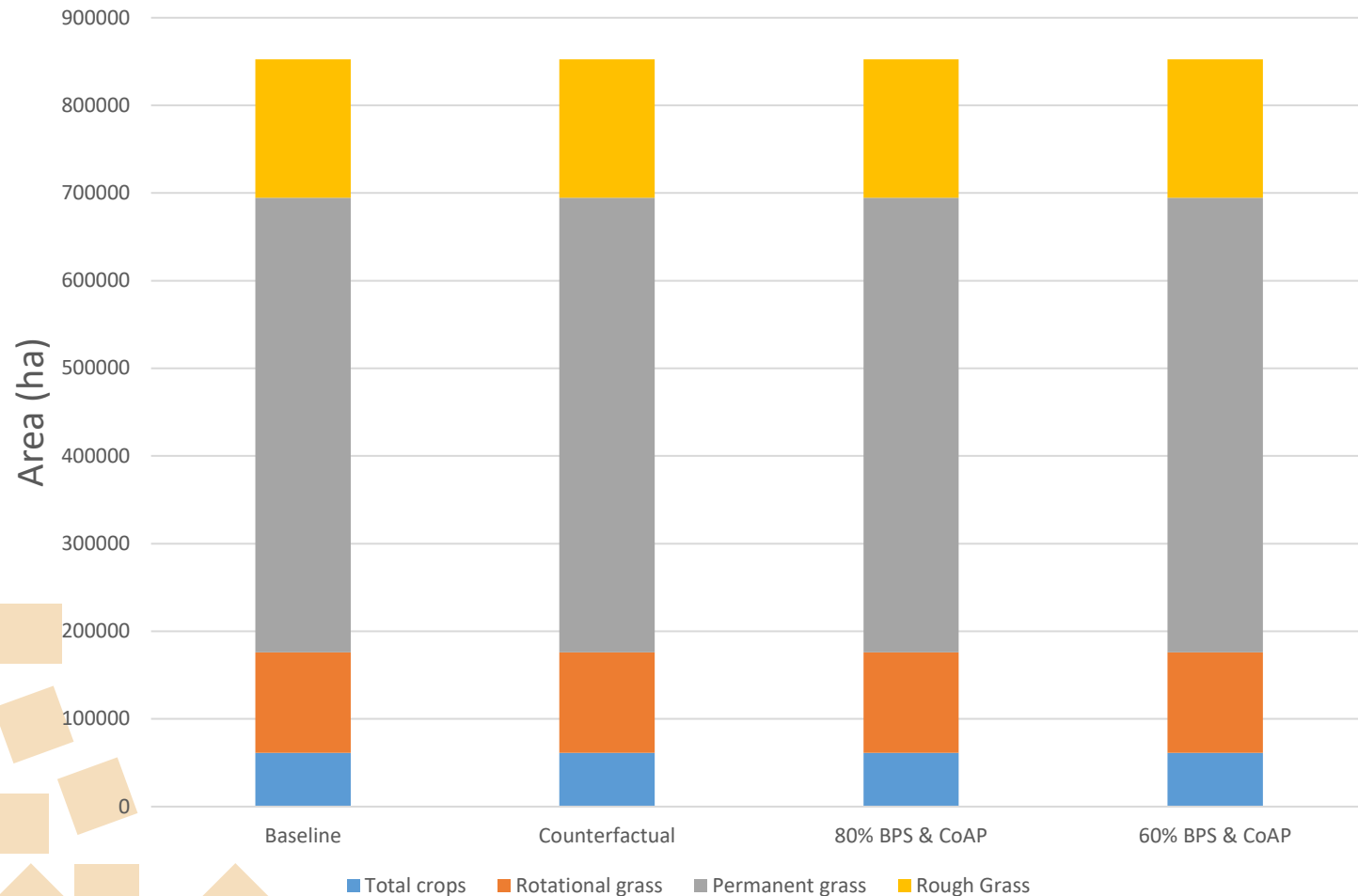
Whilst the reduction of BPS leads to a reduction in simulated FBI, there is no change to livestock. This implies that farms are optimally stocked (considering the productivity of the land, feed/forage requirements of the stock and the cost of buying in feed), this is not changed by the BPS.

- Hill – land higher than 400m asl
- Upland – land between 200m and 400m asl
- Lowland – land below 200m asl.

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On-farm land use



Changing BPS rate has little effect on aggregate land use because:

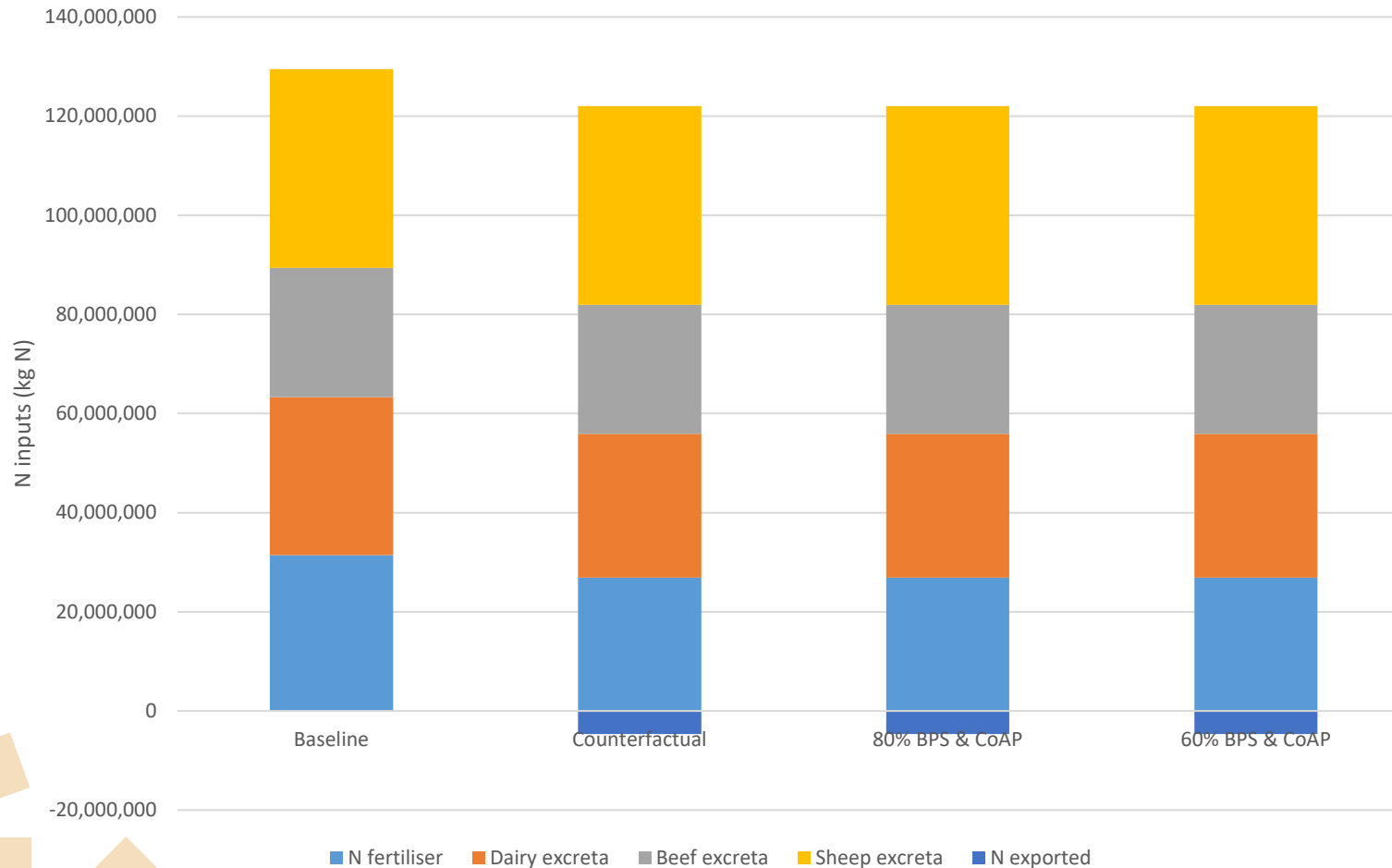
- (1) Farm Types are not allowed to change;
- (2) There is limited arable activity in Wales and only a limited number of ley-arable systems where grazing livestock is competing with arable crops for the land.

Where livestock do compete a decrease in BPS increases the cost of feeding grass but also decreases the opportunity cost of not growing a cash crop, this is seen in the lowland beef. Within arable systems the BPS affects trade-offs within rotations and mechanisation. Low BPS level will see cropping changes to avoid mechanisation bottle necks at the time of critical operations, such as harvest and sowing. Yield losses of 2-5% a week are possible if work is delayed and excess labour and machinery to avoid delays is expensive. In addition to mechanisation, rotations are a trade-off between growing the highest value crops and introducing lower value break crops to cycle fertility and disrupt weeds and diseases.

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Changes in nutrient inputs



Counterfactual (continuation of full BPS and introduction of CoAP): The introduction of the CoAP leads to a 14.5% reduction in N fertiliser and 9% reduction in dairy excreta. There is minimal (<1%) reduction in beef excreta and no impact on sheep excreta.

Tapering of BPS: The reduction of BPS leads to minimal changes in N fertiliser and livestock excreta that are consistent with the very small increases in crop areas and changes in livestock type/number.

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PART 2: Summary

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Summary of simulated impacts: BPS taper

	Counterfactual	80% BPS & CoAP	60% BPS & CoAP	Difference (80% to 60%)
Aggregate agricultural Income (£m)	299	270	241	-29
Number of farms changing from full-time to part-time	107	186	293	107
Total WG Payment (£m)	143.51	114.81	86.10	-29
Total Livestock (GLU)	939,993	939,993	939,984	-10

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Final Considerations

- This slide pack shows results from applying the Integrated Modelling Platform (top part of the modelling chain only involving SFARMOD and the LAM) to the BPS taper scenarios.
- The scenarios use 2022/2023 prices, based on farm-gate prices from John Nix Farm Management Pocketbook).
- Changes in land use are driven by on-farm economics and land suitability. Land use change has been limited by the decision to turn off farm transitions. The modelling does not take into account skills or cultural and behaviour responses.
- The top part of the IMP modelling chain is applied to only full-time farms (> 1 FTE labour).
- Full assumptions that underpin the modelling are included in [ERAMMP Report 133](#).

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