



Rural and Agricultural Development – Maximising the Potential in the Islands of Orkney, Shetland & Outer Hebrides

Trends in Agriculture



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6 Trends in Agriculture

108. Data has been extracted from both the June Agricultural Census (JAC) and the IACS to demonstrate trends in agricultural activity across the Islands. It should be noted that the JAC is self-reporting and has variable levels of completion, although SAF form submissions are used to complete cropping data and the Cattle Tracing System (CTS) is used to complete cattle data (available from 2006). IACS data is reported by farmers in the SAF, and a proportion are verified during inspections. For agricultural holdings that do not claim agricultural support (SAF submission) there may be data quality issues.

6.1 June Agricultural Census

6.1.1 Occupiers and Spouses on agricultural holdings

109. Table 23 shows the number of full-time, part-time more than 50% of their time (>50%) and part-time less than 50% of their time (<50%) occupiers and spouses in 2000, 2010 and 2021. Across the Rest of Scotland there was an 18% reduction in full time occupiers and spouses between 2000 and 2021 (a loss of 2,483) with a 2% decline in part-time >50% and 4% decline in part-time <50%. In Orkney and Shetland there was greater decline in the number of occupiers and spouses engaged in agriculture over the period whilst in the Outer Hebrides there has been some interesting reversal of longer-term trends in recent years (see Figure 8).
110. There was 27% decline in full time occupiers and spouses in Orkney between 2000 and 2021, with 33% decline in Shetland and 31% increase in the Outer Hebrides. It is worth noting most of the declines in full-time activity occurred in the 2000s as adjustments to activity took place – driven by decoupling of agricultural support coupled with poor agricultural output prices. There was a 27% decline in part time occupiers and spouses spending more than 50% of their time on the holding in Orkney, with 23% decline in Shetland and only 2% decline in the Outer Hebrides. For part-time occupiers and spouses spending less than 50% of their time on a holding there was 19% decline in Orkney, 15% decline in the Outer Hebrides and 23% decline in Shetland.

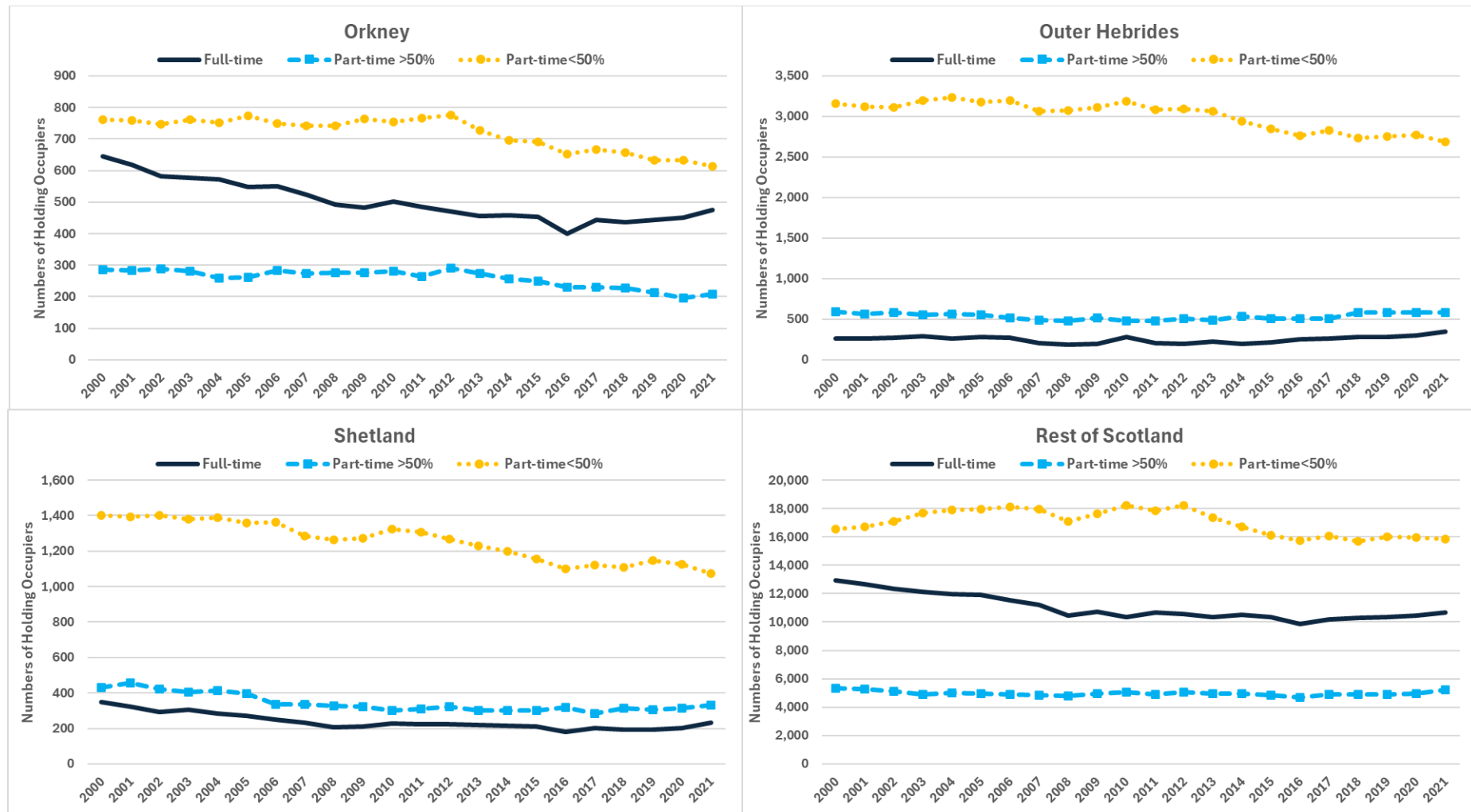
Table 23 Number of full-time and part time occupiers and spouses on agricultural holdings, selected years

Region	Metric	2000	2010	2021	2000–2021
Orkney	Full-time	645	501	474	–27%
	Part-time >50%	287	280	209	–27%
	Part-time<50%	761	754	614	–19%
Outer Hebrides	Full-time	263	282	345	31%
	Part-time >50%	595	483	585	–2%
	Part-time<50%	3,160	3,189	2,692	–15%
Shetland	Full-time	347	230	232	–33%
	Part-time >50%	429	300	331	–23%
	Part-time<50%	1,401	1,323	1,075	–23%
Rest of Scotland	Full-time	12,950	10,341	10,671	–18%
	Part-time >50%	5,309	5,058	5,229	–2%
	Part-time<50%	16,567	18,210	15,851	–4%

Data: extracted from RESAS June Agricultural Census obtained through Scottish Government Data Sharing Agreement No 53 with SRUC



Figure 8 Trends in occupiers and spouses on agricultural holdings 2000–2021



111. Figure 9 shows the age distribution of occupiers of BRNs. It is noticeable that the age profiles of full-time occupiers differ, with 57% of full time occupiers in Shetland were aged 65 and over in 2021, with 50% in the Outer Hebrides, only 38% in Orkney and 34% in the Rest of Scotland. Shetland (19%) had a higher proportion of under 40-year-olds running part time >50% businesses.
112. Within each of the island groupings there were differences in the age profiles of BRN occupiers. Figure 10 shows, for example that in the North East Isles – Shetland had only 5% of the occupiers under 40 – similarly to Outer Northern Isles – Orkney where only 9% were young. In contrast 19% of occupiers in Nothmavine & Yell – Shetland, 17% in North Uist – Outer Hebrides and 16% in South Isles – Orkney were younger, in the under 40 age grouping. The breakdown of ages at sub regional level for full and part time occupiers of BRNs is given in Figure 68 in Annex 4 Agricultural data.
113. These age profiles matter as they have impacts on the long term service needs (e.g. schools, nursery care, health care, etc.) of communities and sectors, and may demonstrate where, for example, risks of abandonment by elderly farmers and crofters could be located should the future support system be overly complex or come with high entry level and compliance costs.

Figure 9 Age distribution of occupiers of BRNs 2021

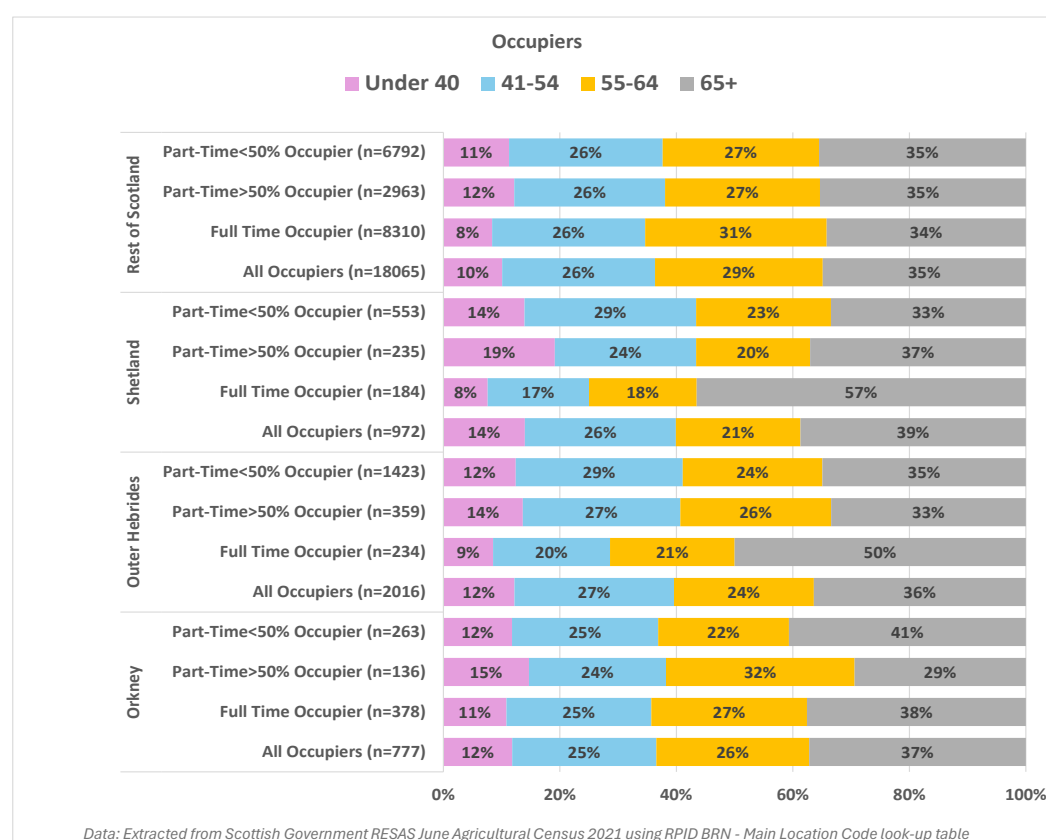
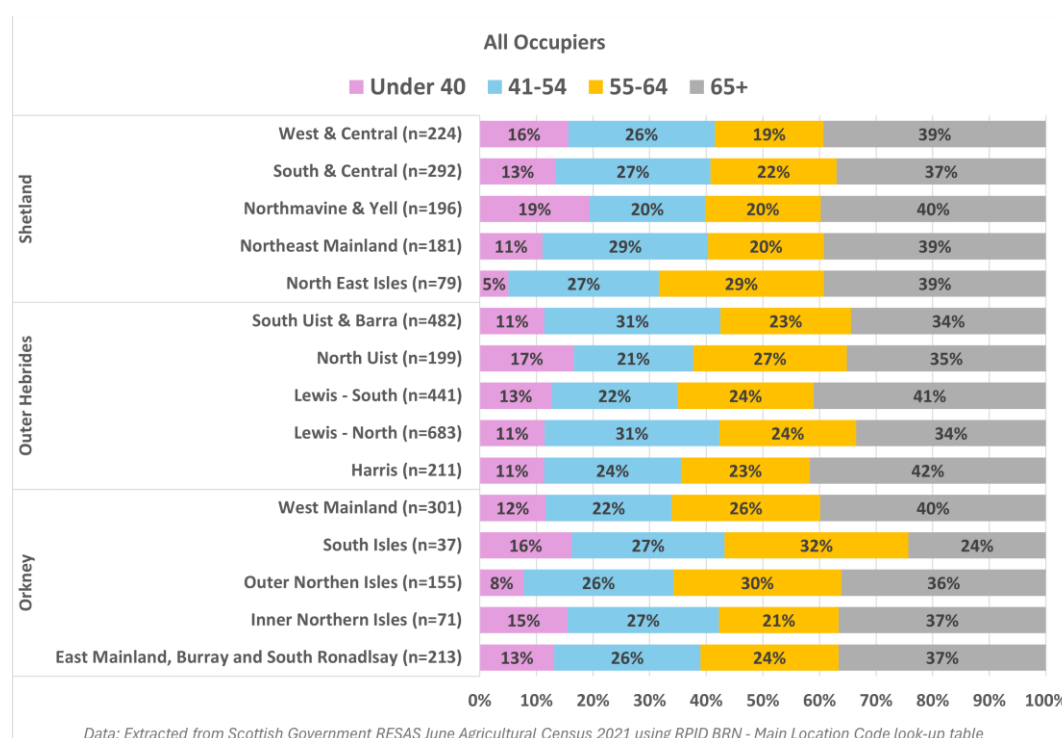


Figure 10 Occupiers of BRNs by age group and sub-island regions 2021

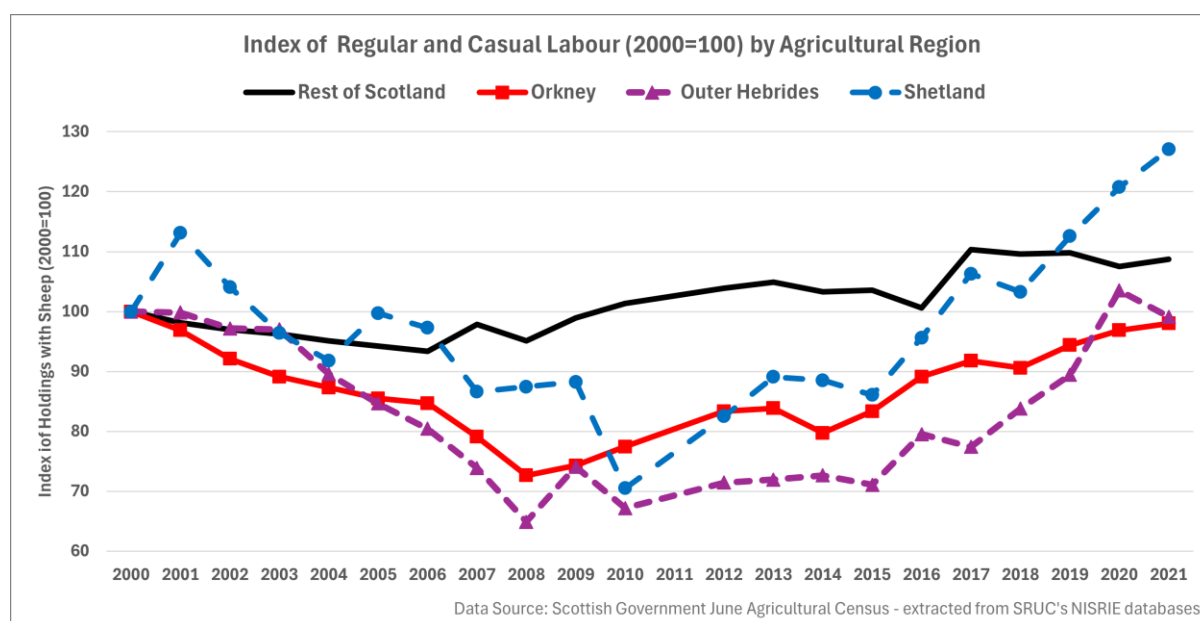


6.1.2 Workers

114. The absolute number of Full Time Employees (FTEs) engaged in agriculture remains opaque, rather the much-cited numbers refer to the headcount engaged in agriculture without accounting for part-time working or seasonal migrant labour. Whilst the RESAS calculation for Standard Labour Requirements (based on standardised labour factors per head of livestock or per hectare of land use) can provide alternative metrics, a new methodology was introduced in 2016 meaning that the long-term data trends are inconsistent. The JAC does also gather information on the labour force employed on agricultural holdings across Scotland, although non-completion (particularly by small holdings) means that some of the reported data is modelled estimates.
115. Nonetheless, Figure 11 shows the index (2000=100) of the regular and casual workforce employed on agricultural holdings. All three island groupings deviated from the trends across the Rest of Scotland during the time period. In each of the islands there was a reversal of the downward trend about 2008-2010, which coincided with the financial sector crash in 2008 and subsequent public sector squeeze. In Orkney, between 2000 and 2008 agricultural employees had declined by 27%, but fully recovered to 2000 headcount levels by 2021 (it is worth noting this figure does not disaggregate full and part-time/casual workers). A similar pattern occurred in the Outer Hebrides (33% decline between 2000-2010) followed by a period of recovery to 2000 levels in 2021. In Shetland, whilst the

decline in agricultural workers also occurred (29% decline between 2000 and 2010) it is noticeable how after 2015 the headcount of workers engaged in agriculture continued to grow rapidly, with 27% higher headcount in 2021 than in 2000. The timing of the upturn in 2015 coincides with the start of the 5-year transition away from SFPS to the BPS + Greening model (where Shetland received a significant uplift in agricultural support payments). These patterns are somewhat mirrored in the standard labour requirement data shown in Figure 69 in Annex 4 Agricultural data.

Figure 11 Index of number of total regular and casual labour use, 2000–2021



116. Table 24 provides the number of employed workers for selected years. In Orkney in 2000 it was estimated that there were 607 workers engaged in agricultural labour, falling to 441 in 2008 before bouncing back to 595 in 2021. In the Outer Hebrides 567 people were estimated to be employed in agriculture in some capacity in 2000, falling to 368 in 2008 before recovering to 562 in 2021. In Shetland the regular and casual agricultural workforce had fallen to 320 in 2008 from 366 in 2000 where it stabilised until 2015 (315) before increasing to 465 in 2021. In Orkney, the number of holdings recording regular and casual workers fell by 15% between 2000 and 2021 to 298 in 2021. In the Outer Hebrides there was an 8% decline in holdings recording agricultural workers whilst in Shetland there was an increase of 9% over the period, with an absolute increase of 58 holdings (33% increase) between 2015 and 2021.

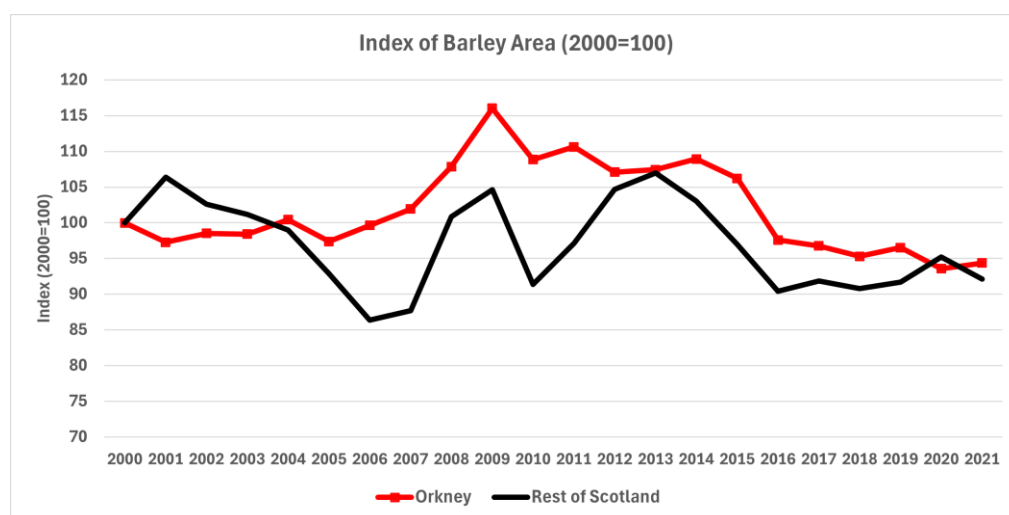
Table 24 Count of holdings with and headcounts of employed regular and casual workers on agricultural holdings, selected years 2000–2021

Metric	Region	2000	2008	2015	2021	2000-2021
Total Workers	Orkney	607	441	506	595	-2%
	Outer Hebrides	567	368	403	562	-1%
	Shetland	366	320	315	465	27%
	Rest of Scotland	25,268	24,039	26,165	27,479	9%
Holdings with workers	Orkney	350	257	286	298	-15%
	Outer Hebrides	323	230	237	297	-8%
	Shetland	214	193	176	234	9%
	Rest of Scotland	10820	8872	9175	9073	-16%

6.1.3 Crops

117. Small amounts of crops are grown in Shetland and the Outer Hebrides but in Orkney c.3.5k to 4.6k hectares of barley have been grown annually over the last 20 years. Figure 12 shows the index of barley area for Orkney and the Rest of Scotland; Orkney appears to have witnessed less seasonal fluctuations than the Rest of Scotland. Orkney saw the area of barley grow by 19% (747 Ha) between 2005 and 2009, but that area saw steady erosion (in particular, 2016) to be 5% lower in 2021 (c.3.8k Ha grown) than in 2000. Whilst the islands may have limited barley production they are nonetheless important for genetic conservation of bere barley varieties⁴⁹.

Figure 12 Index of barley area grown, Orkney and Rest of Scotland (2000–2021)



⁴⁹ See: <https://pure.uhi.ac.uk/en/publications/back-to-the-future-using-ancient-bere-barley-landraces-for-a-sust> and <https://www.sasa.gov.uk/variety-testing/scottish-landraces/scottish-landrace-protection-scheme-slps/bere-barley> and <https://www.hutton.ac.uk/news/understanding-living-heritage-bere-barley-more-sustainable-future>

118. Other than barley, oats has been a traditional arable crop grown for stock feed, but areas remain very small. Table 25 shows the total area of barley and oats grown in the three island groups for selected years. It is worth noting the increasing area of oats grown in the Outer Hebrides (after a period of apparent significant decline between 2009 and 2015⁵⁰).

Table 25 Hectares of barley and oats grown in Selected years, 2000–21

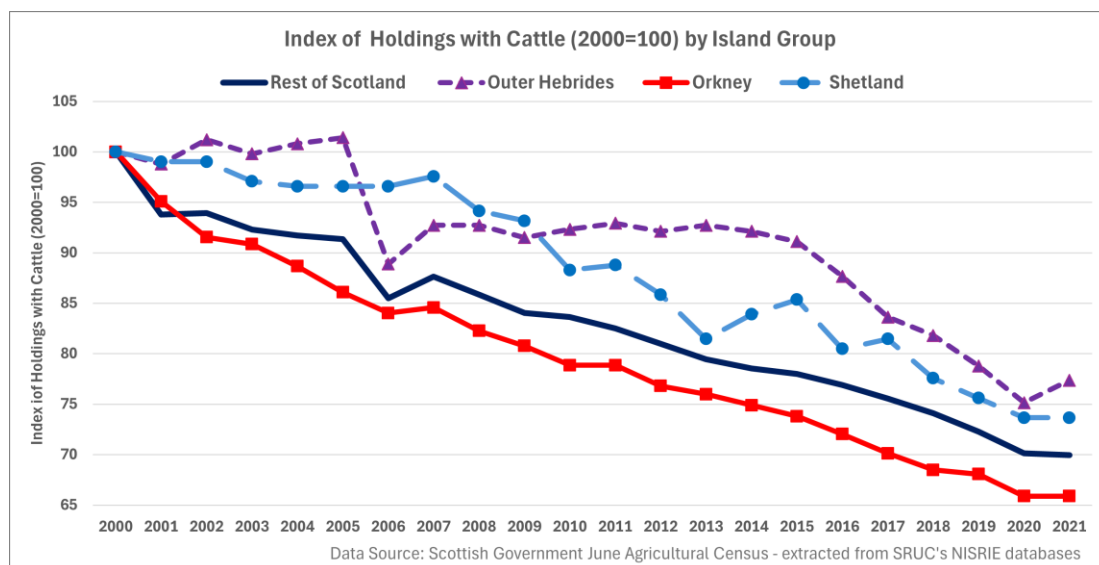
	Crop	2000	2008	2016	2021	2000-2021
Orkney	Barley	4,002	4,316	3,906	3,777	-6%
Outer Hebrides	Barley	25	44	10	7	-72%
	Oats	143	158	288	230	60%
Shetland	Barley	49	62	60	60	23%
Rest of Scotland	Barley	312,915	315,511	282,954	288,323	-8%
	Oats	21,883	21,401	30,762	33,340	52%

6.1.4 Cattle

119. The number of holdings carrying cattle has seen a long-term decline across Scotland, but also in each of the island groups. It should be noted that from 2000–2005 the data is self-reported through the JAC questionnaire, whereas from 2006 the data uses the Animal and Plant Health Agency's (APHA) Cattle Tracing System. Figure 13 shows the long-term trend in holdings with cattle (summarising data in Table 26) where the long term decline in the total number of holdings with cattle in Orkney followed a similar pattern to the Rest of Scotland, except the decline was larger (34% decline compared to 30%). After an initial period of change in 2005–2006 (that may reflect changes in data source, but also a reflection of the Fischler CAP reforms and the introduction of the SFPS in 2005) the number of holdings with cattle stabilised in the Outer Hebrides – possibly through encouragement of native breeds through agri-environment schemes. However, in the Outer Hebrides since 2015 and the introduction of the BPS and Greening there was steady decline in the number of holdings with cattle. In Shetland between 2000 and 2021 there was a 26% decline in the number of holdings with cattle – a relatively consistent decline.

⁵⁰ This is perhaps a data error.

Figure 13 Index of the total number of agricultural holdings carrying cattle, 2000–2021



120. In 2021 the JAC data suggested that there were c.77k cattle (cows, heifers, bulls, steers, calves) on 483 holdings in Orkney, c.5.9k cattle on 383 holdings in the Outer Hebrides and c.4.8k cattle on 151 Holdings in Shetland (see Table 26). Table 26 shows the total number of cattle also declined in all areas by 15–18% over the 2000 to 2021 period. For the Rest of Scotland, the impact of the 2001 Foot and Mouth Disease outbreak is apparent in Figure 14, with some recovery of cattle numbers up until 2007 before long continual decline. In both Orkney and Shetland, the decline in cattle numbers accelerated in post 2005 as headage payments were largely phased out being replaced by the SFPS. Whilst cattle numbers in Orkney recovered in 2010 and 2011 this was likely in reaction to increasing beef prices at the time. Whilst cattle numbers were holding up better in the Outer Hebrides there was a steep decline in 2019, perhaps as 5-year Rural Priorities Scheme contracts ended.



Figure 14 Index (2000=100) of the total number of cattle on agricultural holdings 2000-2021

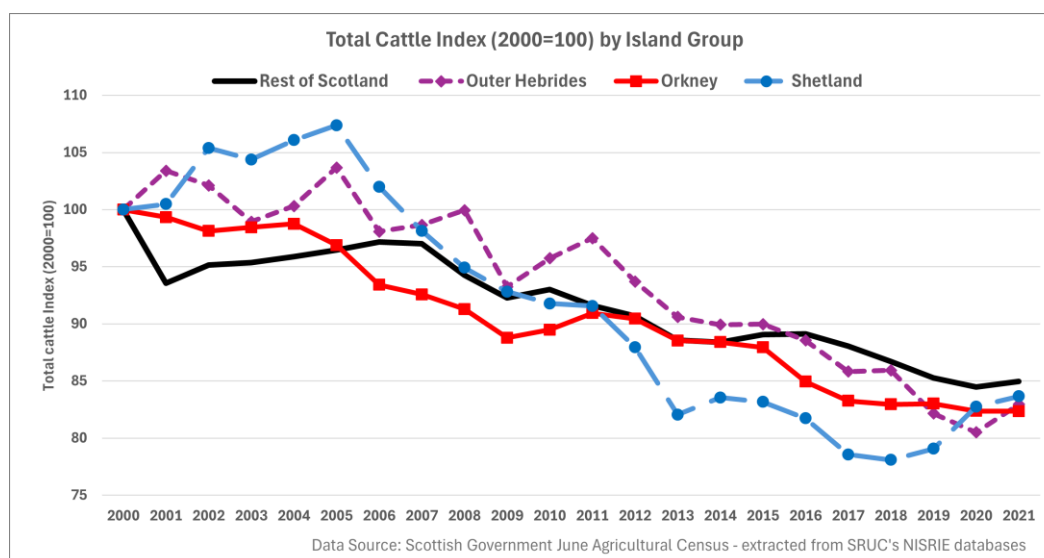


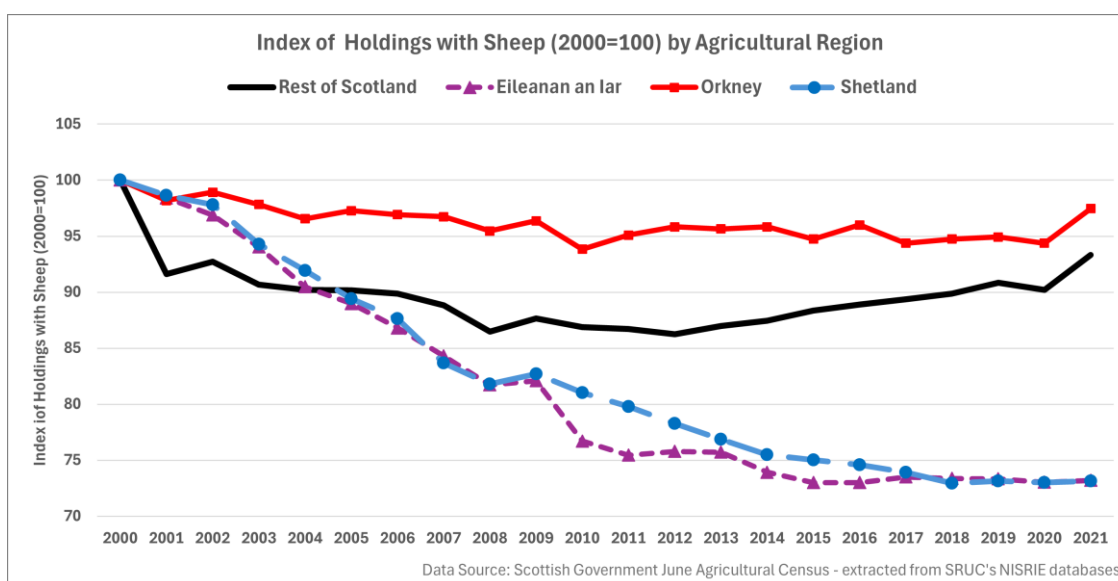
Table 26 Trends in the number of cattle and the number of holdings carrying cattle, 2000-2021

Year	Head of Cattle				Holdings with Cattle			
	Outer Hebrides	Orkney	Shetland	Rest of Scotland	Outer Hebrides	Orkney	Shetland	Rest of Scotland
2000	7.2k	93.6k	5.7k	1,922.9k	495	733	205	13.7k
2001	7.4k	93.0k	5.8k	1,799.2k	489	697	203	12.9k
2002	7.3k	91.8k	6.0k	1,829.5k	501	671	203	12.9k
2003	7.1k	92.1k	6.0k	1,833.7k	494	666	199	12.7k
2004	7.2k	92.4k	6.1k	1,844.0k	499	650	198	12.6k
2005	7.4k	90.7k	6.2k	1,854.6k	502	631	198	12.5k
2006	7.0k	87.4k	5.8k	1,868.7k	440	616	198	11.7k
2007	7.1k	86.6k	5.6k	1,865.8k	459	620	200	12.0k
2008	7.2k	85.4k	5.4k	1,812.5k	459	603	193	11.8k
2009	6.7k	83.1k	5.3k	1,774.2k	453	592	191	11.5k
2010	6.9k	83.7k	5.3k	1,788.4k	457	578	181	11.5k
2011	7.0k	85.1k	5.2k	1,761.6k	460	578	182	11.3k
2012	6.7k	84.6k	5.0k	1,743.8k	456	563	176	11.1k
2013	6.5k	82.9k	4.7k	1,703.3k	459	557	167	10.9k
2014	6.4k	82.7k	4.8k	1,699.4k	456	549	172	10.8k
2015	6.4k	82.3k	4.8k	1,712.5k	451	541	175	10.7k
2016	6.3k	79.5k	4.7k	1,713.7k	434	528	165	10.6k
2017	6.1k	77.9k	4.5k	1,693.1k	414	514	167	10.4k
2018	6.2k	77.6k	4.5k	1,667.1k	405	502	159	10.2k
2019	5.9k	77.7k	4.5k	1,639.6k	390	499	155	9.9k
2020	5.8k	77.1k	4.7k	1,624.7k	372	483	151	9.6k
2021	5.9k	77.1k	4.8k	1,633.6k	383	483	151	9.6k
2000-21	-17%	-18%	-16%	-15%	-23%	-34%	-26%	-30%

6.1.5 Sheep

121. In contrast to long term trends in Orkney and the Rest of Scotland, Figure 15 (with data shown in Table 27) shows there was long term decline in the number of holdings carrying sheep in both Shetland and the Outer Hebrides. Across the Rest of Scotland, after a period of decline in holdings with sheep, from 2013 there has been increasing number (from a low of c.10.7k in 2012 to 11.6k in 2021). In Orkney, after some slow steady decline in sheep holdings to 2010 – there was a period of long-term stability before an increase in 2021 when there were 537 holdings with sheep. In both Shetland and the Outer Hebrides there was 27% decline in the number of holdings with sheep between 2000 and 2021. In the Outer Hebrides there were 2,207 holdings with sheep in 2021 (a decline of 808) whereas in Shetland in 2021 there were 1,125 holdings with sheep (a decline of 413). In both Shetland and the Outer Hebrides, the long term decline stabilised and flattened out.

Figure 15 Index (2000=100) of the number of agricultural holdings carrying sheep, 2000–2021



122. Whilst the number of holdings with sheep is important as it acts as a useful sign of agricultural activity, changes in the number of animals also tells its own story. In Figure 16 and Table 27 it is apparent that the Outer Hebrides has seen a different pattern to sheep production in the last 20 years than Orkney and Shetland and, indeed, the Rest of Scotland. Thomson (2011)⁵¹ described how these declines started in the 1990s as a result of scrapie control programmes, poor market prices, exchange rates affecting support payments, changing CAP rules regarding

⁵¹ Thomson (2011) response from the Hills: Business as Usual or a Turning Point? [Response from the hills: Business as usual or a turning point? \(figshare.com\)](https://figshare.com/articles/Response_from_the_hills_Business_as_usual_or_a_turning_point/12345678)

'extensification, and the move from the headage based Hill Livestock Compensatory Allowance scheme to an area based LFASS scheme). In both Orkney and Shetland post 2005 sheep numbers declined quickly as farmers and crofters adjusted to the removal of sheep headage payments when the area-based SFPS was introduced.

123. Orkney had a 17% decline in total sheep (c.24k) between 2004 and 2008, with Shetland a 19% decline (c.75k). After this period of adjustment both Shetland and Orkney (alongside the Rest of Scotland) had a decade of stability regarding sheep numbers, with some increases from 2018, as farmers and crofters reacted to strong demand and high output prices (in 2021 there were c.130k total sheep in Orkney and c.290k in Shetland). In stark contrast the decline in sheep numbers in the Outer Hebrides continued until around 2015 (introduction of BPS and Greening and SUSSS) after which numbers stabilised. Outer Hebrides sheep numbers in 2021 (c.143k) were only 48% of what they were in 2000 (c.299k), compared to Shetland and Orkney where sheep numbers have been retained better (75% and 87% of the 2000 head count in 2021 respectively).

Figure 16 Index (2000=100) sheep on agricultural holdings 2000–2021

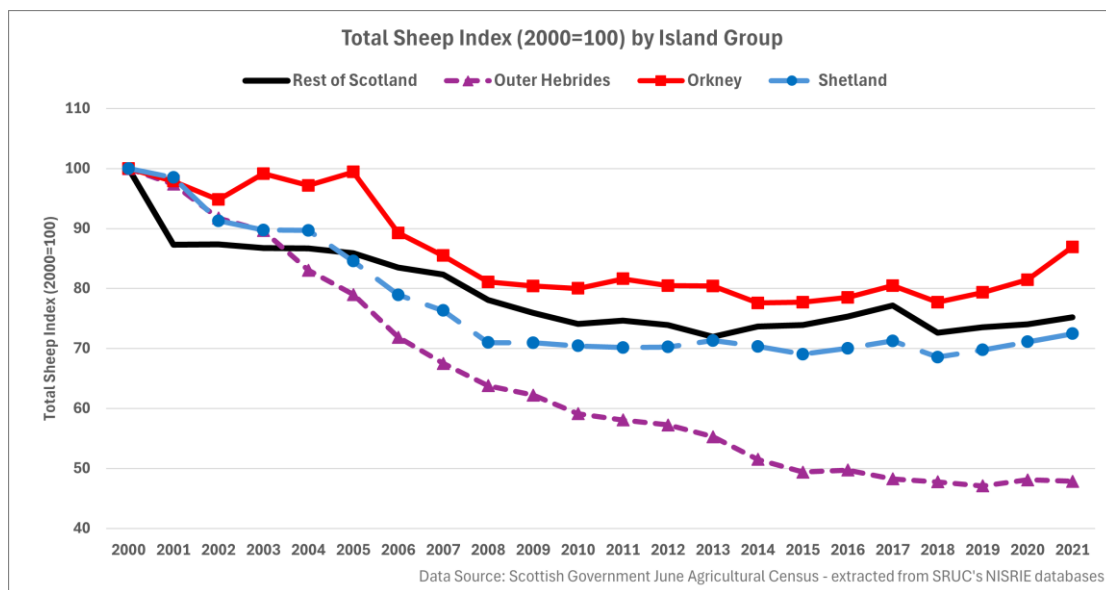


Table 27 Trends in the number of sheep and the number of holdings carrying sheep, 2000–2021

Year	Head of Sheep				Holdings with Sheep			
	Outer Hebrides	Orkney	Shetland	Rest of Scotland	Outer Hebrides	Orkney	Shetland	Rest of Scotland
2000	299.4k	149.7k	399.7k	8,338.1k	3,015	551	1,538	12.4k
2001	291.6k	146.5k	393.7k	7,278.1k	2,967	541	1,517	11.4k
2002	274.7k	141.9k	364.9k	7,281.7k	2,921	545	1,504	11.5k
2003	268.4k	148.4k	358.8k	7,230.6k	2,835	539	1,450	11.3k
2004	248.6k	145.5k	358.4k	7,229.8k	2,728	532	1,414	11.2k
2005	236.6k	148.8k	338.0k	7,159.7k	2,683	536	1,375	11.2k
2006	215.2k	133.6k	315.6k	6,963.6k	2,617	534	1,348	11.2k
2007	202.2k	128.0k	305.0k	6,863.0k	2,542	533	1,287	11.1k
2008	191.0k	121.4k	283.8k	6,508.6k	2,464	526	1,258	10.8k
2009	186.4k	120.4k	283.7k	6,330.9k	2,475	531	1,272	10.9k
2010	177.0k	119.8k	281.5k	6,176.5k	2,313	517	1,246	10.8k
2011	173.9k	122.2k	280.4k	6,224.8k	2,275	524	1,227	10.8k
2012	171.4k	120.4k	280.8k	6,163.3k	2,285	528	1,204	10.7k
2013	165.6k	120.4k	285.1k	5,999.6k	2,283	527	1,182	10.8k
2014	154.2k	116.1k	281.1k	6,141.1k	2,229	528	1,161	10.9k
2015	147.9k	116.3k	276.1k	6,161.1k	2,201	522	1,154	11.0k
2016	148.9k	117.5k	279.9k	6,279.8k	2,201	529	1,147	11.1k
2017	144.5k	120.5k	284.8k	6,435.2k	2,216	520	1,137	11.1k
2018	143.0k	116.3k	274.0k	6,052.7k	2,212	522	1,122	11.2k
2019	141.0k	118.8k	278.8k	6,130.5k	2,211	523	1,125	11.3k
2020	144.1k	121.9k	284.3k	6,170.5k	2,202	520	1,123	11.2k
2021	143.2k	130.1k	289.6k	6,268.8k	2,207	537	1,125	11.6k
2000–21	-52%	-13%	-28%	-25%	-27%	-3%	-27%	-7%

124. There was regional variation in the change in sheep numbers within the island groupings. Figure 17 shows that compared to 2000, the largest declines in total sheep numbers in the Outer Hebrides were in Harris (60% decline or c.34k head), Lewis South (47% decline or c. 48k head) and South Uist and Barra (50% decline or c.28k head). In Shetland (see Figure 18) South and Central maintained sheep numbers best (only 17% decline or c.17k head) compared to Northeast Mainland (32% decline or c.28k head) and Northmavine & Yell (38% decline or c.34k head).

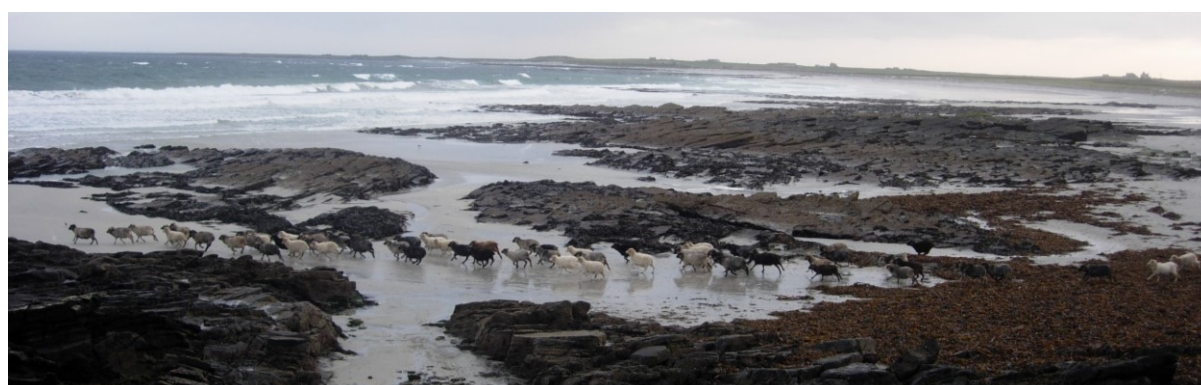


Figure 17 Index of total sheep by sub-region in the Outer Hebrides, 2000 – 2021

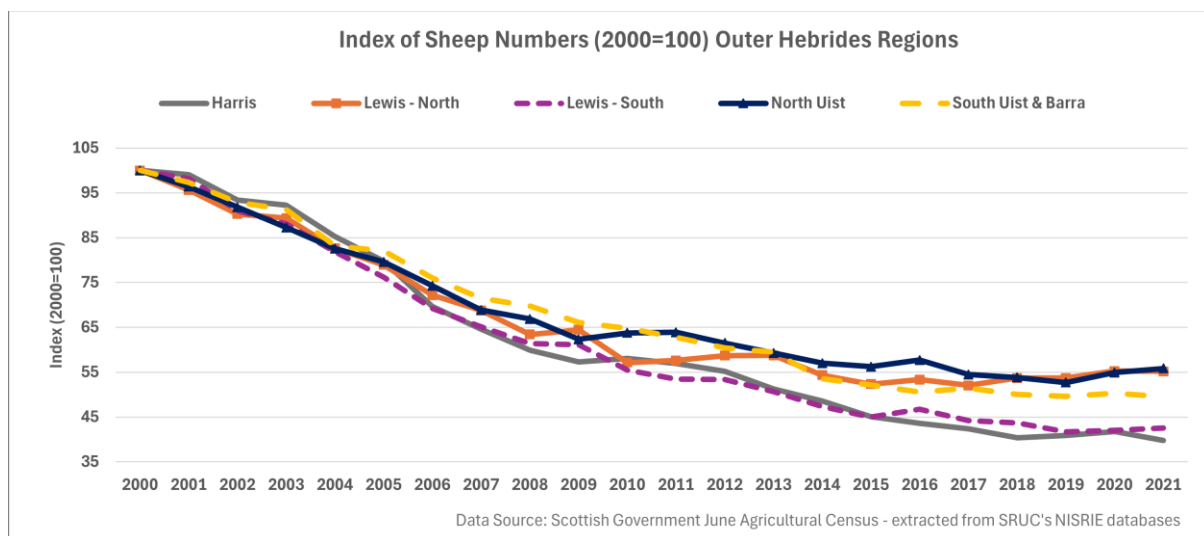
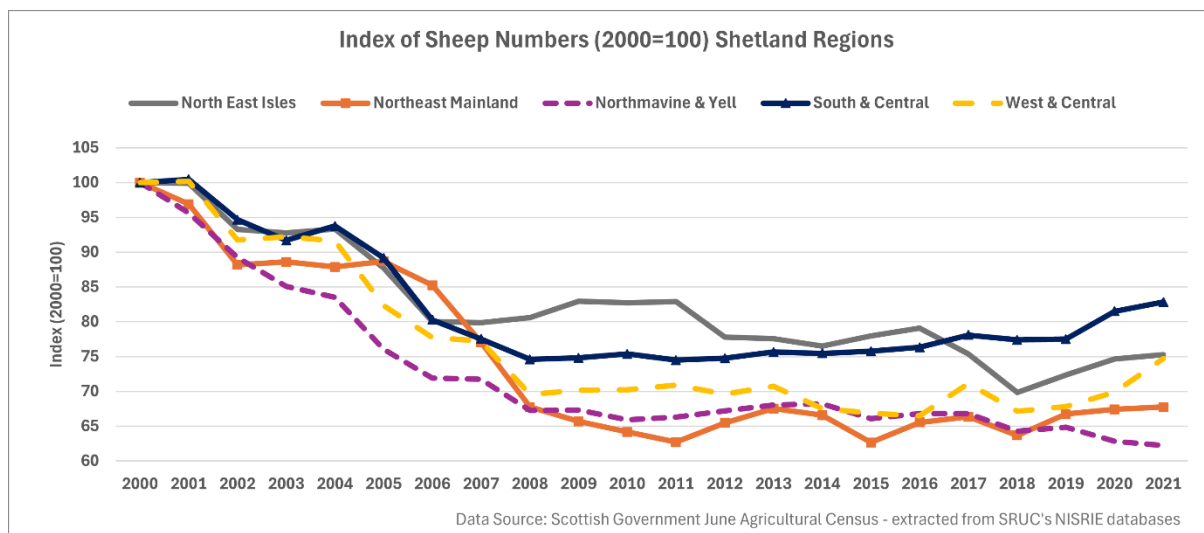


Figure 18 Index of total sheep by sub-region in the Outer Hebrides, 2000 – 2021



125. The significant reductions in sheep numbers in many of these areas has meant that there are fewer people actively farming and crofting, that is breaking linkages with land management, cultural heritage and identity. Whilst many stakeholders acknowledged that historic stocking densities were indeed too high, causing environmental damage, many raised concerns that the lack of stock grazing in some areas will also lead to environmental change, particularly in areas where grazing animals provided habitats for ground nesting birds to thrive.

6.2 SAF declared Animals

126. The number of animals under the control of all BRNs is declared by those farms and crofters submitting a SAF to claim agricultural support. This is technically verifiable through cross checks of official data, but also through inspection of records during routine 'risk' and 'random' official livestock inspections by RPID.
127. Table 28 shows the number of animals declared by SAF business and Table 29 shows the number of BRNs declaring those animals at island group level (noting that risks of disclosure mean that data has been redacted for dairy cattle in Shetland and Outer Hebrides).
128. In Orkney between 2015 and 2022, on BRNs claiming support:
- The number of dairy animals fell by 18% with the number of BRNs with dairy cows (any dairy cow, whether milked or not) fell from 20 to 16.
 - The number of suckler cows fell by 7%, with 14% decline in BRNs carrying suckler cows.
 - The number of ewes and gimmers increased 12% with 5% more BRNs carrying sheep (up from 388 to 409).
 - The number of ewe hoggs increased by 24%, perhaps reflective on an increase in total breeding ewes.
 - The number of horses and ponies fell by 21%, mostly since the Covid pandemic.
 - The number of poultry fell by 46%, but that all occurred in 2022 which was a consequence of avian influenza.
129. In the Outer Hebrides between 2015 and 2022 on BRNs claiming support:
- Suckler cow numbers fell by 7%, but with 17% fewer BRNs (a drop of 64) carrying them. This is important in extensive grazing management systems, such as the Machair, where cattle are noted for their positive biodiversity impacts.
 - The larger proportionate fall in Other Dairy & Beef cattle under 6 months appears to reflect a move in calving periods (towards after the SAF declaration).
 - Ewe and gimmer numbers fell by 17% (a loss of 10k), with a corresponding 17% reduction in BRNs carrying breeding ewes (a reduction of 223).
 - Compared to ewes and gimmers there was only a 5% decline of ewe hoggs, reflective of more hoggs being retained to meet SUSSS retention conditions for those predominately on R3 BPS land.
130. In the Shetland between 2015 and 2022 on BRNs claiming support:
- 13% fewer BRNs had suckler cows with a 7% reduction in the number of cows.

- Whilst ewe and gimmer numbers were static across the period there were 11% fewer BRNs that carried breeding ewes (a reduction of 97).
- Ewe hogg numbers increased by 7% despite the number of BRNs with ewe hoggs falling by 9%

131. It is important to note that there is a consistent and worrying decline in the number of BRNs claiming support and carrying animals on their land. This implies that some businesses have withdrawn from agricultural activity and that trend appears to be continuing. Whilst some withdraw from the sector, or downsize, others remain and increase scale of production. The raison d'être of crofting revolves⁵² around access to land for small holders at fair and affordable rents – and continued erosion of the active crofting base poses risks to community resilience, rural economies and environmental outcomes.



⁵² [The Sheep | The Orkney Sheep Foundation](#)

Table 28 Number of animals declared in SAF submissions by BRNs

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2015-2022
Orkney										
Dairy Cows	2,176	2,095	2,152	2,239	2,053	1,933	1,935	2,039	1,791	-18%
Suckler Cows	25,696	25,392	25,067	24,760	24,596	24,795	24,650	24,655	23,867	-7%
Other Dairy & Beef <6 months	5,537	4,990	5,303	5,045	4,914	5,596	5,221	5,297	5,182	-6%
Other Dairy & Beef 6-24 months	32,192	31,205	29,607	29,503	30,204	29,465	29,551	28,764	29,153	-9%
Other Dairy & Beef >24 months	3,841	3,819	3,738	3,781	3,762	3,687	3,323	3,322	3,129	-19%
Ewes & Gimmers	47,519	44,903	45,372	45,768	45,617	57,179	48,632	49,962	53,257	12%
Ewe Hoggs	11,400	11,745	11,045	11,429	9,932	10,934	13,048	12,839	14,148	24%
Other Sheep	9,755	6,803	8,657	6,057	7,434	6,474	6,607	8,213	11,444	17%
Horses & Ponies	351	340	317	307	350	284	256	259	279	-21%
Poultry	5,314	5,571	5,470	4,891	5,463	5,401	5,555	5,479	2,848	-46%
Outer Hebrides										
Dairy Cows	-	-	-	-	-	-	-	-	-	-
Suckler Cows	2,764	2,812	2,725	2,637	2,564	2,546	2,601	2,621	2,563	-7%
Other Dairy & Beef <6 months	730	700	530	580	524	639	689	596	526	-28%
Other Dairy & Beef 6-24 months	1,089	1,014	974	1,119	1,043	1,107	1,088	1,013	1,024	-6%
Other Dairy & Beef >24 months	490	462	401	373	356	387	400	378	290	-41%
Ewes & Gimmers	58,199	55,325	52,775	58,389	51,536	51,098	51,009	49,921	48,025	-17%
Ewe Hoggs	13,818	13,298	13,878	13,313	12,751	13,813	13,939	13,056	13,081	-5%
Other Sheep	7,400	6,710	6,315	6,767	6,839	6,738	6,497	6,447	5,711	-23%
Horses & Ponies	103	99	63	54	61	102	78	61	89	-14%
Poultry	3,744	2,567	2,598	2,506	2,610	2,042	2,877	2,989	1,937	-48%
Shetland										
Dairy Cows										
Suckler Cows	1,642	1,580	1,571	1,617	1,581	1,612	1,703	1,607	1,521	-7%
Other Dairy & Beef <6 months	285	310	318	280	242	188	230	214	213	-25%
Other Dairy & Beef 6-24 months	1,692	1,712	1,671	1,551	1,611	1,668	1,739	1,520	1,514	-11%
Other Dairy & Beef >24 months	345	344	299	356	320	295	329	282	229	-34%
Ewes & Gimmers	128,475	126,776	124,239	124,218	123,576	125,177	126,539	126,222	128,184	0%
Ewe Hoggs	31,125	30,972	31,050	31,289	28,986	31,634	32,888	32,565	33,263	7%
Other Sheep	9,992	9,421	11,706	12,204	11,765	12,120	11,540	11,576	11,760	18%
Horses & Ponies	542	561	538	686	687	652	600	576	584	8%
Poultry	2,377	2,723	1,823	2,663	2,358	3,173	3,450	3,116	2,870	21%

Table 29 Number of BRNs declaring specific types of animals in SAF submissions, 2022

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2015-2022
Orkney										
Dairy Cows	20	18	19	16	15	15	15	18	16	-20%
Suckler Cows	473	460	439	432	439	433	430	427	408	-14%
Other Dairy & Beef <6 months	332	280	297	272	275	292	267	270	258	-22%
Other Dairy & Beef 6-24 months	488	469	464	455	454	442	444	440	429	-12%
Other Dairy & Beef >24 months	435	429	416	405	405	410	407	404	387	-11%
Ewes & Gimmers	388	382	392	394	387	390	396	401	409	5%
Ewe Hogs	295	293	284	291	286	273	305	301	307	4%
Other Sheep	359	348	363	358	365	356	369	377	379	6%
Horses & Ponies	91	90	94	91	106	83	76	75	80	-12%
Poultry	156	176	171	166	179	167	172	148	140	-10%
Outer Hebrides										
Dairy Cows	-	-	-	-	-	-	-	-	-	-
Suckler Cows	370	353	339	327	321	320	318	309	306	-17%
Other Dairy & Beef <6 months	148	144	123	139	126	133	144	139	124	-16%
Other Dairy & Beef 6-24 months	237	239	208	220	221	218	232	221	211	-11%
Other Dairy & Beef >24 months	152	158	136	130	131	120	129	129	116	-24%
Ewes & Gimmers	1,305	1,253	1,196	1,191	1,177	1,178	1,169	1,098	1,082	-17%
Ewe Hogs	1,102	1,045	992	988	962	954	981	909	890	-19%
Other Sheep	1,068	1,017	955	965	951	949	960	917	877	-18%
Horses & Ponies	30	25	20	20	22	26	27	21	31	3%
Poultry	174	127	97	99	113	101	141	158	137	-21%
Shetland										
Dairy Cows	-	-	-	-	-	-	-	-	-	-
Suckler Cows	128	121	121	110	115	115	118	108	111	-13%
Other Dairy & Beef <6 months	46	41	45	44	50	41	36	35	35	-24%
Other Dairy & Beef 6-24 months	139	130	127	128	128	130	133	122	118	-15%
Other Dairy & Beef >24 months	96	91	100	90	94	98	92	88	85	-11%
Ewes & Gimmers	851	837	808	801	786	781	771	757	754	-11%
Ewe Hogs	730	728	702	704	678	666	672	673	665	-9%
Other Sheep	694	683	687	688	671	671	663	644	638	-8%
Horses & Ponies	83	85	86	105	100	105	100	92	92	11%
Poultry	138	137	128	154	137	153	155	138	129	-7%

Box: 1 North Ronaldsay Sheep

The **North Ronaldsay sheep breed** is an ancient breed of sheep that has survived on Orkney for millennia, with bones from ancestor sheep found at Skara Brae⁵³. The breed, uniquely, has adapted to surviving by primarily on grazing seaweed, reflecting that they were historically excluded from better grazing land by a drystone dyke that circles the island. Scientific evidence⁵⁴ reveals that Orkney sheep from the Neolithic to Viking period had some seaweed in their diet but not to the extent witnessed in North Ronaldsay. The 'sheep dyke' was completed by the North Ronaldsay crofters in 1832 to maintain the grazing land for cattle and other sheep breeds – thereby confining the North Ronaldsay breed to the foreshore and their seaweed diet.



Photo: Marion Muir

The breed is considered a 'priority' on the Rare Breed Survival Trust 2024–25 'watchlist'⁵⁵ although recent genetic diversity research⁵⁶ demonstrates the island currently has a genetically "healthy effective population"⁵⁷. There is an estimated population of about 1,500 sheep on the island, and these slow maturing animals are slaughtered aged 3–6 years and are renowned for their distinctive flavour.

The North Ronaldsay Sheep Court was uniquely established in 1839 to maintain the dyke and sheep health, and to record ownership. The Sheep Court remains a functioning body that implements the North Ronaldsay Native Sheep Regulations (most recently updated in 2022) and they continue to maintain the 'sheep dyke' that are frequently damaged by storms, and they manage all aspects of the flock. Indeed, other sheep breeds are prohibited from going outside the sheep dyke to maintain the cultural, scientific and historical importance of the breed. The Court are not a registered common grazings committee.

Currently the foreshore to low water mark is considered common grazing on the island but most of it is excluded from agricultural support. Only 68 Ha of common grazing above the high-water mark is eligible for BPS Region 2. Given the historic, cultural and genetic importance of the flock there is an argument that capital maintenance and annual revenue support should be considered for AECS / Tier 3 scheme eligibility.

⁵³ Balasse M, Tresset A, Obein G, Fiorillo D, Gandois H. (2019) Seaweed-eating sheep and the adaptation of husbandry in Neolithic Orkney: new insights from Skara Brae. *Antiquity* 93(370):919–932. doi: <https://doi.org/10.15184/aqy.2019.95>

⁵⁴ Balasse et al (2019)

⁵⁵ [The Watchlist Priority Breeds 2024 | Rare Breeds Survival Trust \(rbst.org.uk\)](https://www.rbst.org.uk/The-Watchlist-Priority-Breeds-2024)

⁵⁶ Banos, G. (2023) Genomic analysis of the North Ronaldsay sheep. A SRUC report for the Rare Breeds Survival Trust. <https://www.rbst.org.uk/Handlers/Download.ashx?IDMF=d71f4977-b219-479f-be8b-b70702988263>

⁵⁷ <https://www.rbst.org.uk/genomic-analysis-of-the-north-ronaldsay-sheep>

6.3 Cattle performance conditionality – what the metrics tell us

132. The Scottish Government previously appointed a number of [Farmer Led Groups](#) to make recommendations on future agricultural policy in the context of climate change. As part of the recommendations from the [Suckler Beef Climate Group](#) there were a series of recommendations about improving technical efficiency of the suckler herd to minimise unnecessary greenhouse gas emissions. As part of their body of evidence, Thomson and Moxey (2021) noted that robust metrics such as calving intervals, age at first calving, mortality rates and age at slaughter were relevant to many of the interventions that the group had recommended.
133. Northern Ireland⁵⁸ have subsequently introduced new coupled support, through their Beef Carbon Reduction Scheme where a payment is made to drive down maximum age at slaughter (maximum 30 months in year 1 moving to 26 months in year 4). Further, through their Suckler Cow Scheme, they will introduce new coupled support payments based on heifer calving ages (34 months in year 1 down to 29 months in year 4) and calving interval (415 days in year 1 moving to 385 years in year 4).
134. The Scottish Government have committed that from 2025 the SSBSS scheme will have a further eligibility criterion included, beyond the 30 day calf retention, that only calves born to dams with a calving interval (time since last calf registration) of less than 410-days will be eligible. Should coupled beef support be retained in the future policy mix (there are strong arguments that it can provide policy leverage to improve standards and lower emissions) it is possible that additional conditions on heifer calving age and age at slaughter could be considered. Charts showing calving dates (Figure 71), age at first sale (Figure 72) and heifer calving age (Figure 73) for each of the island groupings are provided in Annex 4 Agricultural data.
135. Using extracts from the Cattle Tracing System (CTS) held by the Animal and Plant Health Agency (APHA) it was possible to assess cattle performance metrics on the islands. Table 30 shows the number of calves registered, total dams with calves registered, cows that had previously calved with a calf registered in 2022 as well as heifers calving in 2022 (with calf successfully registered). Of the 24,919 dams with calves in Orkney in 2022 18% were heifers. In Shetland 22% of the dams were heifers (the higher rate likely reflects that dairy cows make up a higher proportion of the total herd) and in the Outer Hebrides 19% of the 2,049 dams with a calf registered in 2022 were heifers.

⁵⁸ [Farm Support and Development: New Schemes and Measures | Department of Agriculture, Environment and Rural Affairs \(daera-ni.gov.uk\)](#)

Table 30 Number of calves registered, dams and heifers with a calf registered, 2022

Metric	Outer Hebrides	Orkney	Shetland	Scotland
Calves Registered	2,208	25,965	1,710	554,084
Total dams with calf registered	2,049	24,919	1,629	530,857
Cows with calf Registration	1,658	20,419	1,276	410,394
Heifers with calf registration	391	4,500	353	120,463
Heifers as % of Dams	19%	18%	22%	23%

136. Table 31 provides summary statistics for calving intervals of all dams (including the small amount of dairy cattle), heifer calving ages, age at first off movement of non-dams under 42 months of age. For these statistics the percentile number reveals the proportion of dams above or below that number, so for example the 10th percentile calving interval of 334 days for the Outer Hebrides means that 10% of dams there perform better than 334 days and 90% perform worse.
137. For calving intervals Table 31 shows that in 2022:
- The median calving interval of the 1,658 dams that had previously had a calf registered in the Outer Hebrides was 373 days, marginally higher than the national average of 371 days. The mean of 414 was significantly affected by a very long tail of dams with poor calving intervals, as indicated by the 75th percentile of 407 days (national average is 399 days) and a 90th percentile of 631 days (national average of 475).
 - In Orkney there was better technical efficiency in the cattle herd, with a median calving interval of 369 days across the 20,419 dams that had previously calved, a mean of 390 days and a 90th percentile of 434 (meaning only 10% of dams have calving intervals over 434 days).
 - In Shetland median calving interval of the 1,276 dams that had previously calved was 370 days, with a 75th percentile of 451 days and 90th percentile of 451 days.
138. Heifers normally calf between 24 and 36 months, with some slower maturing native breeds on extensive hill ground calving over 36 months. The rationale for 24 months and 36 months is that those heifers can slip into the main herd calving period. For those calving at 28–29 months there is often a practice of giving the heifer a longer period to recover after its first calf, before slipping into the main herd with a more prolonged calving interval. For first calving age Table 31 shows that in 2022:
- The median heifer calving age in the Outer Hebrides was 35 months (mean 36 months), with only 10% calving before 2 years and 10% (90th Percentile) calving after 47 months).

- The median heifer calving age in Orkney was 28 months, with 25% of the heifers calving before 25 months of age. Only 10% of heifers calved older than 37 months.
- The median heifer calving age in Shetland was 26 months, with a quarter (35th percentile) calving at 24 months or better. Only 10% of heifers calved down older than 37 months.

Table 31 Cattle performance metrics, 2022

Region / Metric	Total Head	Percentile					Mean
		10 th	25 th	50 th	75 th	90 th	
Outer Hebrides							
Calving Interval Days	1,658	334	352	373	407	631	414
First Calving Age Months	391	26.1	32.8	35.2	36.6	47.0	35.8
Age at first off move months*	1,797	5.4	6.5	7.9	9.8	13.3	9.0
Orkney							
Calving Interval Days	20,419	337	352	369	392	434	390
First Calving Age Months	4,500	23.7	24.6	27.9	34.8	36.7	29.9
Age at first off move months*	17,775	10.6	12.5	16.6	19.0	22.2	16.2
Shetland							
Calving Interval Days	1,276	336	354	370	390	451	392
First Calving Age Months	353	23.4	24.0	26.3	35.2	37.3	29.8
Age at first off move months*	1,264	3.8	6.3	9.6	12.3	18.3	10.4

* animals with calf registered or over 42 months have been removed to reduce impacts of home grown heifers, cows or bulls being sold impacting on 'stores'

139. Whilst slaughter age is a nationally important metric with regards to greenhouse gas emissions many of the cattle producers in the islands do not sell directly to slaughter, rather they are selling 'store' calves of various ages to specialist finishers (or indeed intermediaries) or breeding heifers and young bulls to other breeders on the islands or the mainland. Table 31 shows animals that were moved off the holding of birth to another holding and not then subsequently slaughtered within 7 days of the first move after animals with a calf registration or those over 42 months of age at first move were removed (to remove breeding stock from the data). It shows that in 2022:

- In the Outer Hebrides most of the calves were sold before they were yearlings. 10% of calves were first moved from holding of birth at 5.4 months, with 25% before they reached 6.5 months of age. These were likely early weaned calves being sold due to changing seasons and market timings. The median age of first sale was 7.9 months with 75% of calves first sold by the time they were 9.8 months old. 10% of animals were first moved after 13.3 months – reflecting the limited opportunity for retaining calves for prolonged periods on the holding of birth.
- In Orkney, only 10% of calves were under 10.6 months at first sale (weanlings), with only a quarter sold by the time they were 12.5 months. The median age

at first sale was 16.6 months with 25% over 19.0 months and 10% over 22.2 months – some of these may be going to slaughter within a short period from leaving the holding (but that would require further investigation of the data out with this commission) and may include in-calf heifers and young bulls, etc.

- In Shetland most of the calves were also sold before they were yearlings – similarly to the Outer Hebrides. 10% of calves were first moved from holding of birth at 3.8 months of age (likely impacted by dairy holdings), with 25% before they reached 6.3 months of age. These were likely early weaned calves being sold due to changing seasons and market timings. The median age of first sale was 9.6 months with 75% of calves first sold by the time they were 12.3 months. 10% of animals were first moved after age 18.3 months – likely including some young bulls and breeding heifers (possibly in calf), with some older, slower maturing stock for finishing.

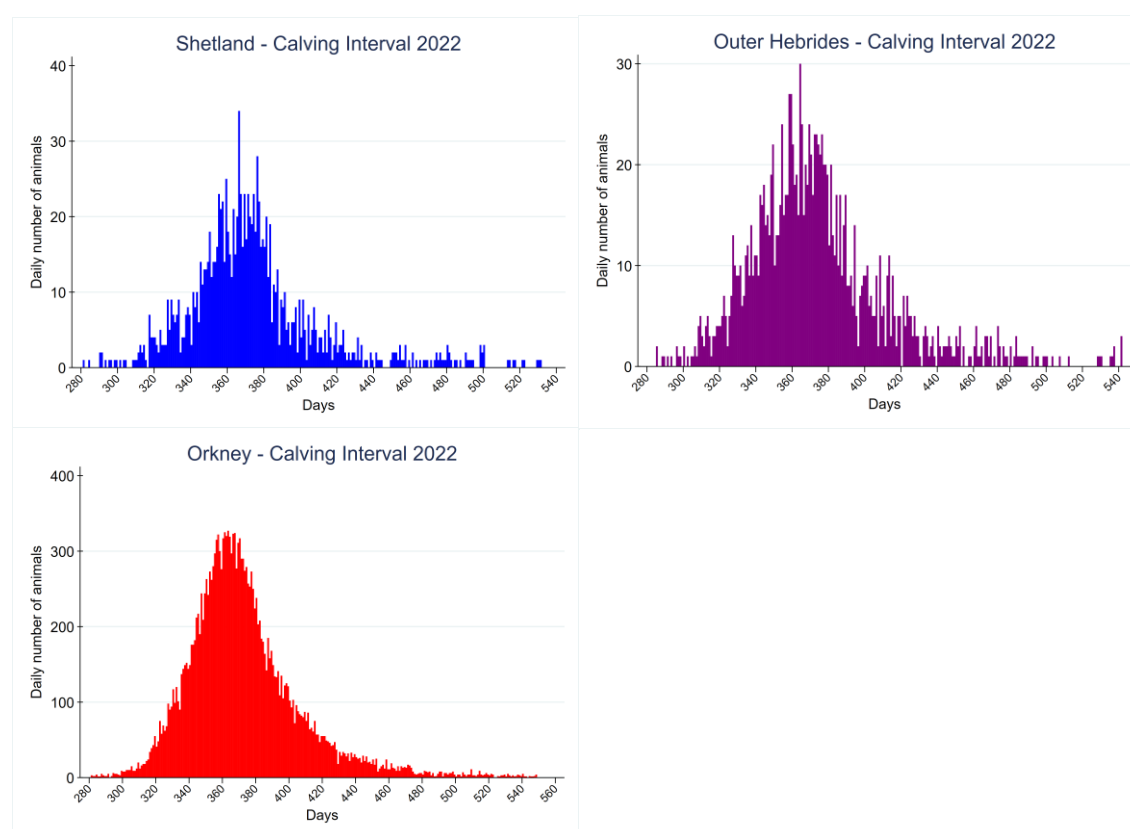
140. It is important to acknowledge that all calves registered to heifers (and retained on holding for 30 days) will be eligible for SSBSS support when the new calving interval condition comes into force. It is also important to acknowledge that the Scottish Government may reduce the threshold over time to encourage further efficiency improvements and to ensure public monies are not paying for inefficiencies and excess greenhouse gas emissions.
141. Table 32 shows the number of cows that had previously calved (and total dams that includes qualifying heifers) that meet various thresholds. In the Outer Hebrides in 2022, 76% of the cows that had previously calved, and 81% of the total calved dams in 2022, would have met the 410 day threshold – meaning 19% of 2022 calves would be ineligible for the new 2025 SSBSS eligibility criteria. In Orkney, 87% of the dams (including heifers) calving in 2022 would have been eligible for the new SSBSS criteria, 87% of dams in Shetland and 83% of dams across Scotland. Unless performance improves then if the calving interval was to be pushed down to 390 days, for example, over time then there would be c.26% of Outer Hebrides, c.21% of Orkney and c.19% of Shetland calves that would become ineligible. Thus, the importance of an awareness campaign and the provision of support for farmers and crofters to improve their performance, should it be required, cannot be underestimated in a 'just transition'.

Table 32 Calving interval thresholds and number of cows previously calved that meet thresholds 2022.

Region	Metric	Calving Interval Threshold (Days)						
		370	380	390	400	410	420	430
	Cows	787	987	1,123	1,200	1,266	1,317	1,360
	% of cows	47%	60%	68%	72%	76%	79%	82%
	% of dams	57%	67%	74%	78%	81%	83%	85%
Orkney	Cows	10,759	13,387	15,128	16,355	17,215	17,838	18,257
	% of cows	53%	66%	74%	80%	87%	87%	89%
	% of dams	61%	72%	79%	84%	87%	90%	91%
Shetland	Cows	648	850	961	1,020	1,069	1,105	1,127
	% of cows	51%	67%	75%	80%	84%	87%	88%
	% of dams	61%	74%	81%	84%	87%	90%	91%
Rest of Scotland	Cows	196,450	243,246	277,083	300,991	318,399	331,203	341,111
	% of cows	48%	59%	68%	73%	78%	81%	83%
	% of dams	60%	69%	75%	79%	83%	85%	87%

142. The profiles of calving intervals for dams (dairy and beef breeds) that had previously calved in each of the island groups are shown in Figure 19. The x-axis provides the calving interval in days and the y-axis provides the daily number of dams with calf registrations.

Figure 19 Calving Interval, 2022

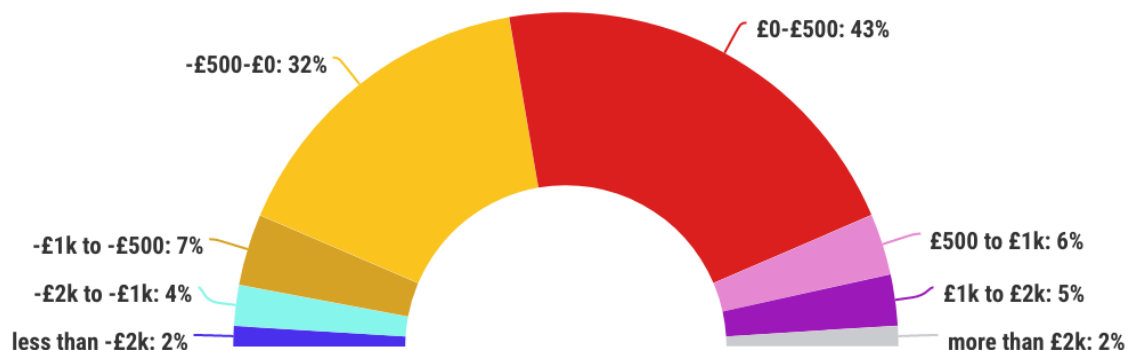


143. It is worth noting that the SSBSS budget is ringfenced. Further the Islands and Mainland schemes have their own ringfenced budgets. This means that the

monies not spent on ineligible calves should be recycled onto the remaining eligible calves, therefore boosting payment rates per eligible calf. Using the total SSBSS Island payment data and CTS suckler cow metrics on associated holdings our modelling predicts that based on 2022 calving intervals the payment rate on Islands would jump from £145 to £166 per eligible calf under a 410 days calving interval threshold.

144. This implies that if a farm / croft has fewer than approximately 1 in 7 cows failing the 410-day eligibility threshold they should not be disadvantaged financially from this new performance condition (i.e. 7 calves at £145 is approximately equivalent to 6 calves at £166). On this basis, the smallest herds (7 calves and under) need to have 100% of calves qualifying to see an uplift, but should any calf fail to be eligible due to the 410 criteria they would see support reductions without any minor producer derogation. Figure 20 shows the modelled prediction of change in total SSBSS Island payments (all Scotland) if a 410 calving interval is applied to 2022 performance and payment data. Modelling predicts that 32% of the BRNs lose £0 to £500 whilst 43% gain £0 to £500 under the 410 day condition. 7% of the BRNs were modelled to gain more than £1k whilst 6% were modelled to lose more than £1k in support.

Figure 20 Summary of change in modelled SSBSS Islands payments per BRN based on 2022 data and a 410 day calving interval condition



145. It should be acknowledged that calving interval is a technical efficiency metric and there are many reasons that a cow does not successfully calf within target periods (bull fertility, cow fertility, cow health, poor management, nature, etc.). Whilst it is not argued that the aim of a cow should be to have a calf every year, stakeholders have pointed to the challenges of that, particularly on smaller herds that are reliant on bull hire – either through the Scottish Government bull hire scheme for crofters or privately.
146. There are strong arguments that small herds should perhaps be given a derogation on this metric in recognition that they contribute small total amounts of livestock derived greenhouse gases in Scotland, plus they often have significant biodiversity

grazing benefits. Table 33 shows the total number of BRNs claiming SSBSS Islands support in 2022 by herd size (based on calved dams), alongside the estimated number of dams (matched to CTS) and modelled payments (based on dams)⁵⁹. Within the SSBSS Islands there were 1,181 matched BRNs of which 42% had herds of less than 10 cows and 63% had herds of less than 25 cows. Herds of under 10 cows only accounted for 6.1% of the calving dams and payments made in the SSBSS Islands, with 17% of the dams and money being allocated to herds under 25 cows. At the other extreme, the 3% of businesses with herds over 150 cows in the SSBSS Islands, were estimated to have 18.3% of the cows and payments in 2022.

Table 33 All SSBSS Island claims 2022 by herd size

Hed Size 2022	BRNs		Calved Dams		Estimated 2022 Dam Payment	
	1,181		38,327		£5,537,485	
0-10	501	42.4%	2,349	6.1%	£339,384	6.1%
10-25	245	20.7%	4,183	10.9%	£604,360	10.9%
25-50	183	15.5%	6,707	17.5%	£969,027	17.5%
50-75	101	8.6%	6,153	16.1%	£888,985	16.1%
75-100	60	5.1%	5,243	13.7%	£757,509	13.7%
100-150	56	4.7%	6,670	17.4%	£963,682	17.4%
150-200	22	1.9%	3,710	9.7%	£536,021	9.7%
Over 200	13	1.1%	3,312	8.6%	£478,518	8.6%



⁵⁹ The CTS extract we have access to does not include a dam to calf look-up, so we are estimating the dam population based on BRNs claiming and the CTS holdings associated with those dams