Scottish Fish Farm Production Survey 2024

October 2025

Scottish Government
Riaghaltas na h-Alba

Contents

Executive Summary

These tables below summarise the results from the 2024 fish farm production survey (slight difference in these summary figures from figures in the main report are due to rounding).

Rainbow Trout (*Oncorhynchus mykiss*)	**Units**	**2023**	**2024**
Total production	(tonnes)	9,258	8,171
Production for the table	(tonnes)	8,793	7,695
Production for restocking	(tonnes)	465	476
Number of staff employed	(number of people)	136	106
Mean productivity	(tonnes/person)	68.1	77.1
Number of ova laid down to hatch	(millions)	4.2	4.5
Number of ova imported	(millions)	2.2	2.2

In 2024, the production of rainbow trout decreased by 1,087 tonnes, a decrease of 12%, to 8,171 tonnes. Employment decreased by 30 staff (22%) and mean productivity increased to 77.1 tonnes per person. The number of ova laid down to hatch increased to 4.5 million and the number of ova imported remained the same at 2.2 million.

Atlantic Salmon (*Salmo salar*)

Ova and smolts	**Units**	**2023**	**2024**
Number of ova produced	(millions)	56.0	55.7
Number of ova laid down to hatch	(millions)	74.7	89.5
Number of ova exported	(millions)	0	0
Number of ova imported	(millions)	40.6	54.9
Number of smolts produced	(millions)	51.5	44.6
Number of smolts put to sea	(millions)	48.8	45.8
Number of staff employed	(number of people)	305	280
Mean productivity	(thousands of smolts/person)	168.9	159.4

The production of ova decreased by 0.3 million in 2024 and the number of ova laid down to hatch increased by 14.8 million. No ova were exported in 2024 and the number of ova imported increased by 14.3 million from the 2023 figure. The number of smolts produced decreased by 6.9 million. In 2024 the number of staff employed decreased by 25 (8%) and the mean productivity decreased by 9,500 smolts per person.

Production fish	Units	2023	2024
Total production	(tonnes)	150,949	192,000
Production of year 0 salmon	(tonnes)	90	174
Production of grilse	(tonnes)	64,854	66,995
Production of pre-salmon	(tonnes)	31,073	46,144
Production of year 2 salmon	(tonnes)	54,932	78,687
Mean weight year 0 salmon	(kg)	3.0	3.3
Mean weight grilse	(kg)	4.7	5.3
Mean weight pre-salmon	(kg)	4.5	5.2
Mean weight year 2 salmon	(kg)	5.9	5.9
Number of staff employed	(number of people)	1,480	1,362
Mean productivity	(tonnes/person)	102.0	141.0

Production tonnage increased by 41,051 tonnes (27%) with an increase in the mean harvest weight of year 0, grilse and pre-salmon. The mean harvest weight of year 2 salmon remained unchanged. Staff numbers decreased by 118 people (8%) and mean productivity increased to 141.0 tonnes per person.

Smolt survival (percentage harvested)

Survival (%)	Year 0 + 1	Year 2	Total
2021 input year class	50.4	18.3	68.7
2022 input year class	37.6	24.2	61.8

The smolt survival rate for the 2022 input year class decreased to 61.8%. Mortality is included in the number of fish not harvested for human consumption, which also consists of fish which have escaped, been culled for production reasons, removed for sampling purposes, statutory culls or selected for broodstock production.

Other Species
Including brown/sea trout (*Salmo trutta*); halibut (*Hippoglossus hippoglossus*); lumpsucker (*Cyclopterus lumpus*) and several species of wrasse (Labridae).

Other species	Units	2023	2024
Total production	(tonnes)	24	26
Number of staff employed	(full-time)	26	20
Number of staff employed	(part-time)	11	8
Number of ova laid down to hatch	(millions)	6.9	0.01
Number of ova imported	(millions)	0	0

Some figures are excluded from this report as providing them would reveal production information from an individual company. Production for 2023 and 2024 excluded any halibut production. Number of ova laid down to hatch in 2023 and 2024 excluded any halibut ova laid down to hatch.

In 2024, the production of other species increased by two tonnes from the 2023 total, although this figure does not include halibut production. Overall, employment decreased by nine (24%) in 2024. There was a decrease in the number of ova laid down to hatch during 2024 and halibut ova laid down to hatch in 2024 were not included in the 2023 figure.

Number of Confirmed Escape Incidents from Fish Farms Notified to the Scottish Government

Species	Number of reported incidents which could have led to an escape of farmed fish	Number of reported incidents which did lead to an escape of farmed fish	Number of fish escaped
Rainbow trout	1	0	0
Atlantic salmon (freshwater stages)	0	1	300
Atlantic salmon (seawater stages)	11	1	1

Escapes data from previous annual survey reports are available: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 46.

Introduction

The annual production survey of fish farms in Scotland for 2024 was carried out by the Marine Directorate of the Scottish Government. This survey collates annual production data from Scottish fin fish farm sites operated by authorised aquaculture production businesses. These are Official Statistics published in accordance with the Code of Practice for official Statistics. The production tonnage obtained is for the wet weight (i.e. weight of live fish) at harvest.

Responses to questionnaires from Scottish fish farming companies covering the period 1st January to 31st December 2024 are summarised in this report and returns are consistently received from 100% of companies. The questionnaires are given in the Supplementary Questionnaire Documentation. The survey is structured to allow readers to follow trends within the rainbow trout, Atlantic salmon and other farmed species sectors. Data from previous years have been reassessed and updated where necessary. To allow direct comparison to data provided in previous surveys, production information by region is presented in defined production areas. Data relating to production carried out in Na h-Eileanan Siar will be labelled as the Western Isles to maintain consistency with historical data sets.

To meet current accessibility legislation parts of this report have been reformatted. Where tables have had to be removed or reduced in size to meet accessibility requirements the full data sets are available in the Scottish Fish Farm Production Survey 2024, Supplementary Tables. Historic data are available on the Marine Directorate Data pages, Scottish Fish Farm Production Survey Data | Marine Scotland Data Publications, as well as in the new Scottish Fish Farm Production Survey 2024, Supplementary Tables. Also, Table 17 and Chart 31 exclude production figures for larval stage cleaner fish which may be traded for on-growing at facilities outside of Scotland, shortly after hatching. These now refer only to cleaner fish large enough to deploy on salmon farms. Trade in larval stage fish are included in Table 19.

The cooperation of the Scottish fish farming sector in completing the questionnaires is gratefully acknowledged.

October 2024

An Official Statistics Publication for Scotland

These statistics are official statistics. Official statistics are statistics that are produced by crown bodies, those acting on behalf of crown bodies, or those specified in statutory orders, as defined in the Statistics and Registration Service Act 2007.

Scottish Government statistics are regulated by the Office for Statistics Regulation (OSR). OSR sets the standards of trustworthiness, quality and value in the Code of Practice for Statistics that all producers of official statistics should adhere to.

More information about Scottish Government statistics is available on the Scottish Government website.

1. Rainbow trout (*Oncorhynchus mykiss*)

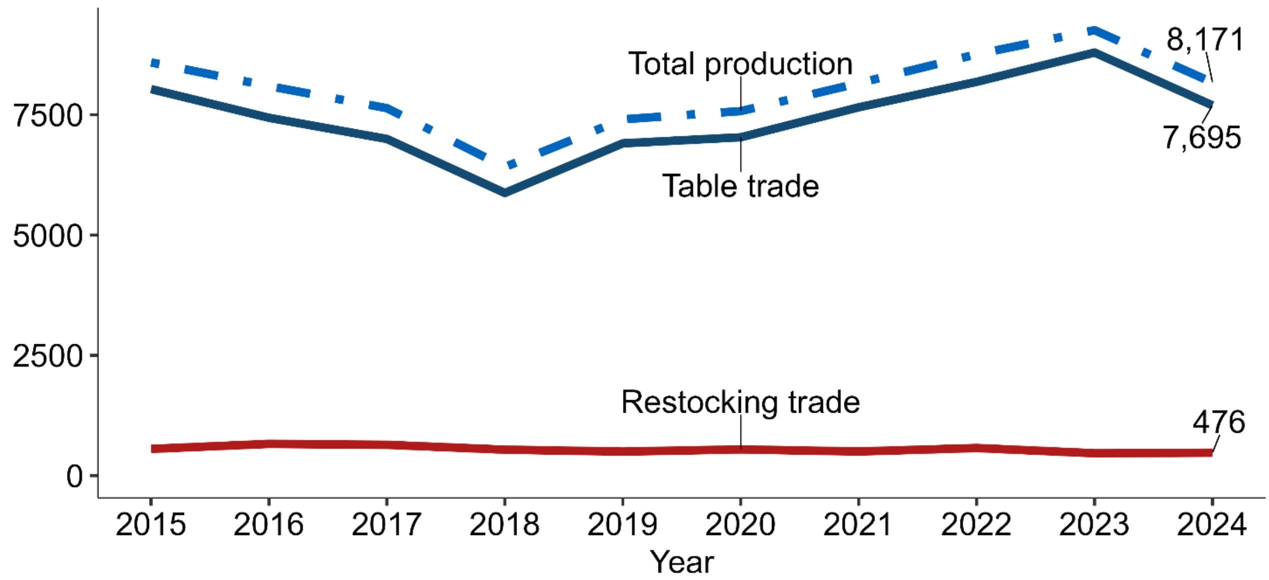
Production survey information was collected from all 17 companies actively involved in rainbow trout production, farming 46 active sites. This figure represents the entire sector operating in Scotland.

Production

Chart 1: Annual production (tonnes) of rainbow trout during 2015-2024.

Chart 1 illustrates the annual production of rainbow trout in Scotland over the period 2015 to 2024. The upper dashed and dotted blue line shows total production of rainbow trout in tonnes. The solid dark blue line shows the total rainbow trout production for the table trade while the lower solid dark red line shows the total rainbow trout production for the restocking trade.

Rainbow trout production in tonnes



Production decreased in 2024 by 1,087 tonnes, a decrease of 12%, to 8,171 tonnes. Production in 2025 is projected to be 4,349 tonnes, this is a sector estimate based on stocks currently being on-grown.

Production for the table in 2024 was 7,695 tonnes, a decrease of 1,098 tonnes (12%) on the 2023 total. This accounted for 94% of the total rainbow trout production, a decrease on the proportion to that produced in 2023. Also, a decrease in the number of fish in the small, medium and large size ranges was observed. These data are detailed in the Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 1b.

In 2024, production for the restocking of angling waters increased to 476 tonnes representing an increase of 11 tonnes (2%) on the 2023 total. This accounted for

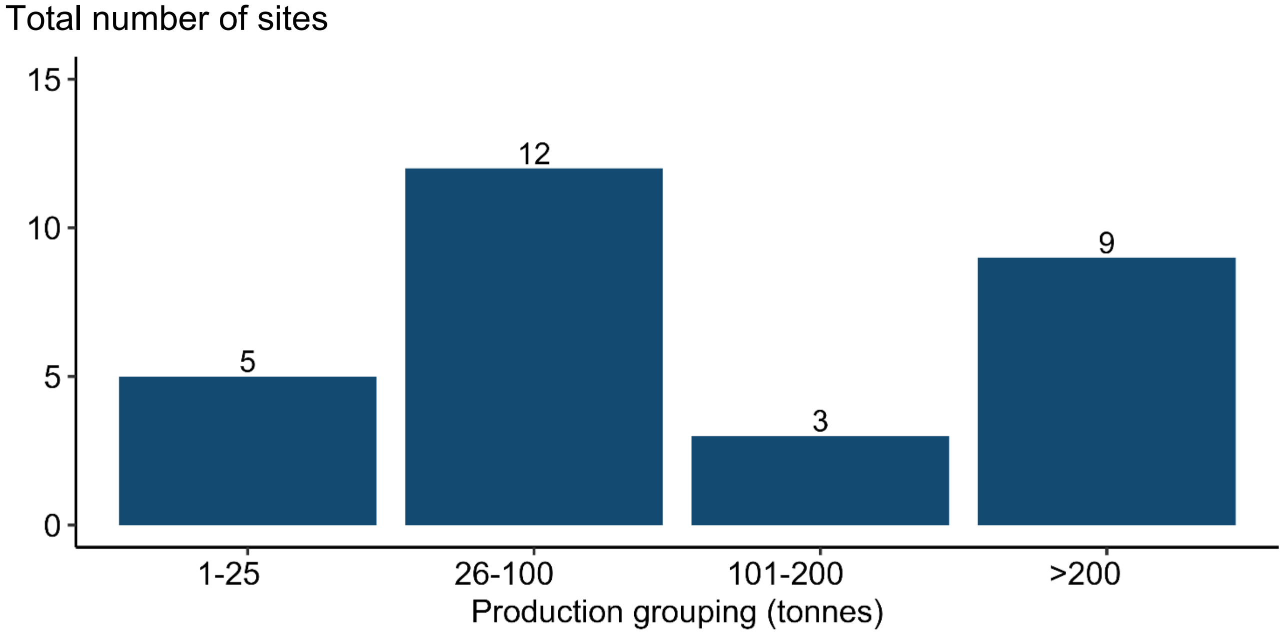
6% of total rainbow trout production in 2024. These figures represent the tonnage of fish supplied to angling waters for restocking purposes; they do not account for the catch taken by anglers. There was a decrease in the number of fish in the small and large size ranges but an increase in the number in the medium size range during 2024. These data are detailed in the Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 1b.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 1a, 1b and 1c.

Production by Site

Chart 2: Total number of rainbow trout sites grouped by tonnage produced during 2015-2024.

Bar chart 2 shows the number of sites that fall into each production grouping. The four categories were 1-25 tonnes, 26-100 tonnes, 101-200 tonnes and more than 200 tonnes.



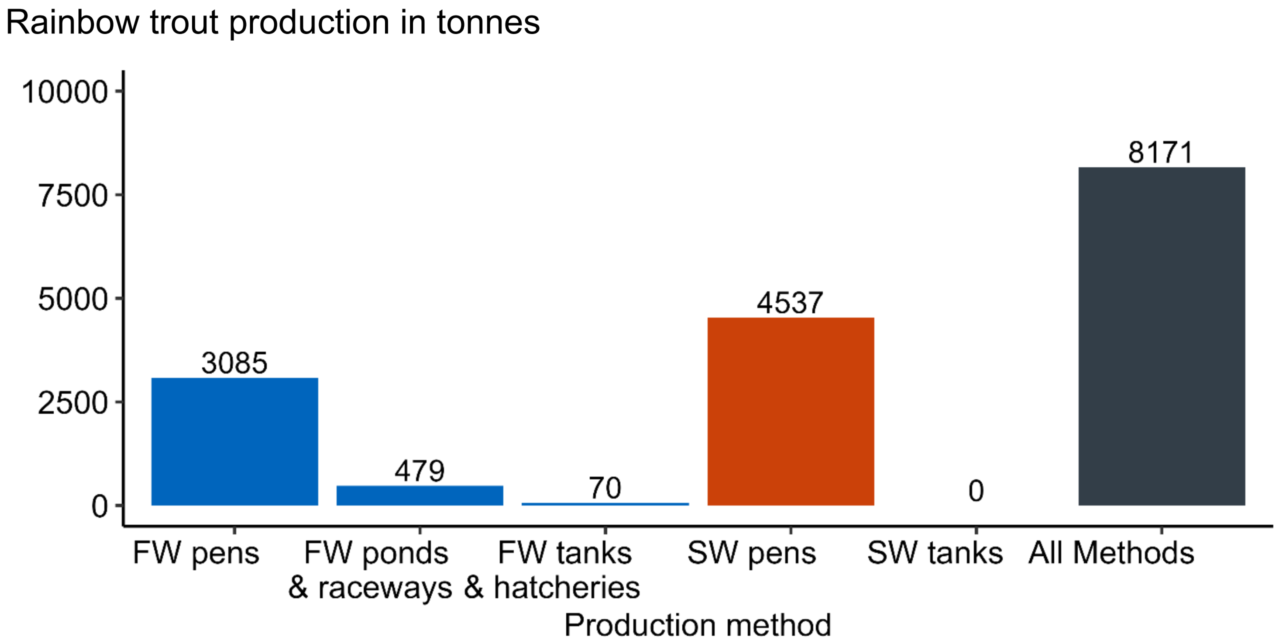
Production was reported from 29 of the 46 active sites. The number of producers in the 101-200 tonnes size bracket increased by one, while those in the <1-25 and >200 tonnes size brackets decreased by one. The number of sites in the 26-100 tonnes size bracket remained the same as in 2023. These figures do not include those sites specialising in the production of ova or young fish for on-growing.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 2.

Production by Method

Chart 3: Total rainbow trout production (tonnes) by production method in 2024.

Chart 3 presents the total volume of rainbow trout production in Scotland for the year 2024, categorised by production method. The blue bars show total rainbow trout production by freshwater production methods and the orange bars show the total rainbow trout production by seawater production methods. The dark grey bar shows total rainbow trout production by all production methods.



Seawater production accounted for 4,537 tonnes (56%) and freshwater production the remaining 3,634 tonnes (44%). Production from freshwater pens increased during 2024 while production from seawater pens, freshwater tanks and hatcheries and from freshwater ponds and raceways decreased.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables], Table 3.

Company and Site Data

In 2024, the number of companies authorised by the Scottish Government and actively engaged in rainbow trout production was 17. The number of sites registered and in production was 46.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables], Table 4.

Staffing and Productivity

Chart 4: Total number of staff employed in rainbow trout production 2015-2024.

Chart 4 shows total number of staff employed in rainbow trout production over the ten-year period from 2015 to 2024. The data are represented by a solid dark blue line which shows the combined total of full-time and part-time staff each year.

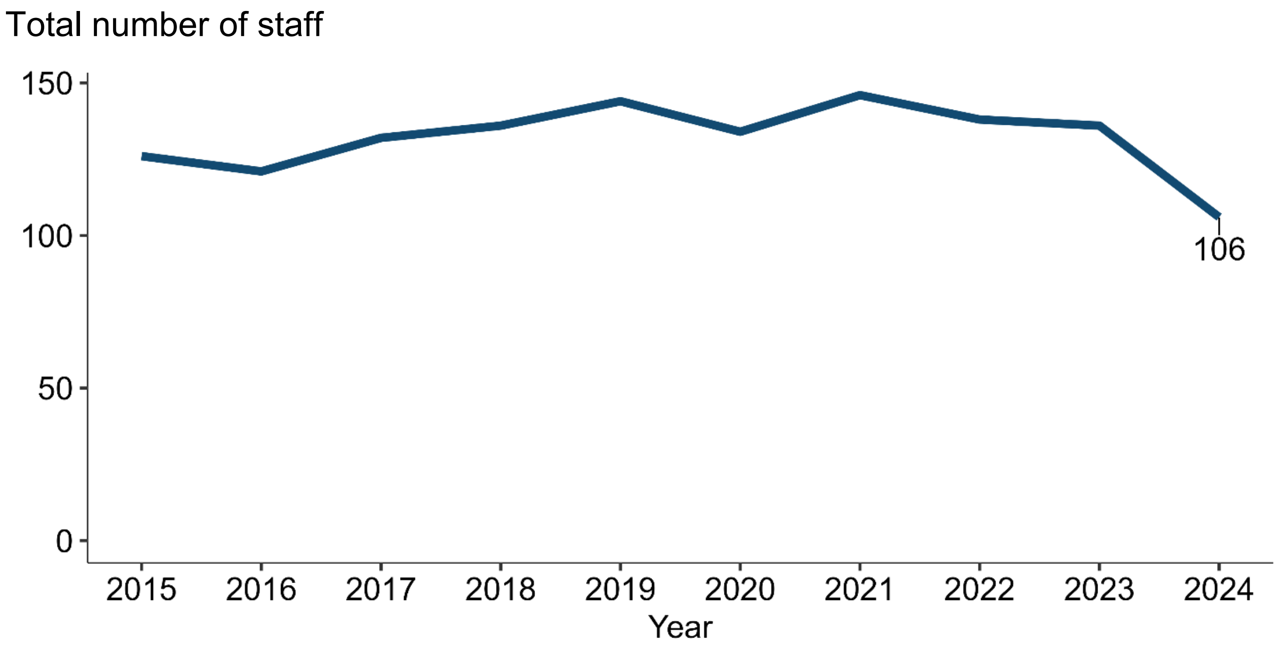
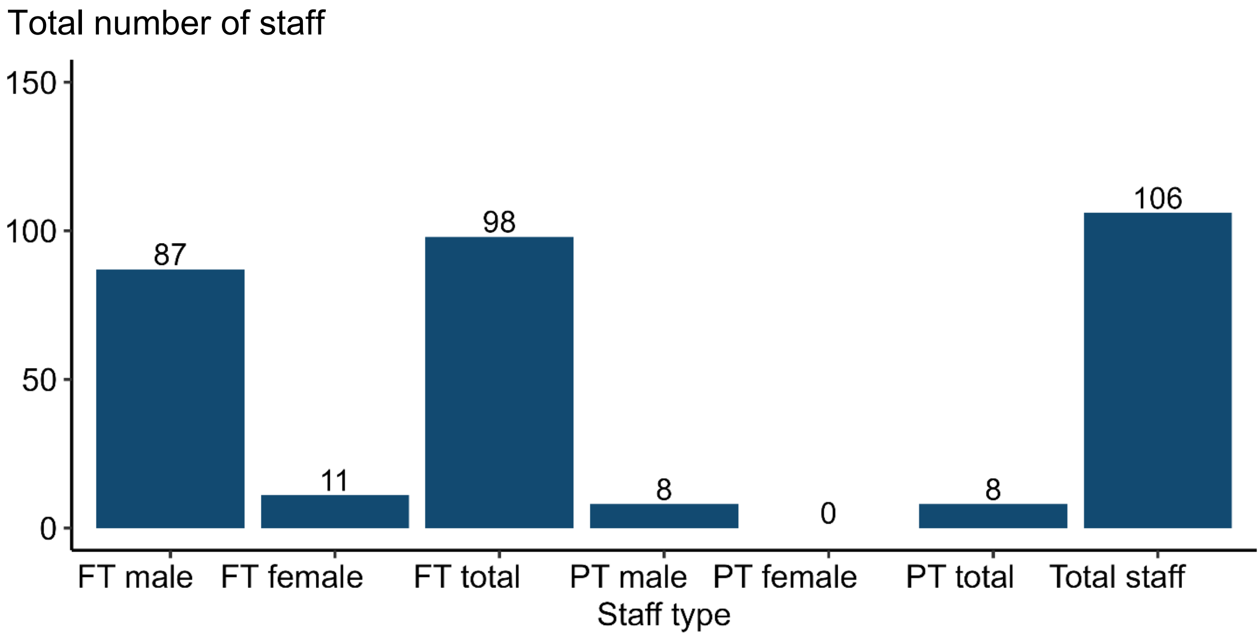


Chart 5: Number of full-time and part-time staff employed in rainbow trout production in 2024, by gender.

Chart 5 displays the number of staff employed in rainbow trout production by gender and employment status (full-time and part-time). The data are represented using dark blue bars for each category.

Note: FT = Full-time and PT = Part-time



In 2024, the total number of staff decreased by 30 (22%), resulting in 106 total staff. This reduction included 18 fewer full-time staff and 12 fewer part-time staff. Out of 106 staff, 95 were male (90%) and 11 were female (10%). Productivity, measured as tonnes produced per person, increased by 13% in 2024 to 77.1 tonnes per person, with no distinction between full and part-time employees being made for this calculation.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables](), Table 5.

Production by Area

Table 1: Rainbow trout production by area in 2024.

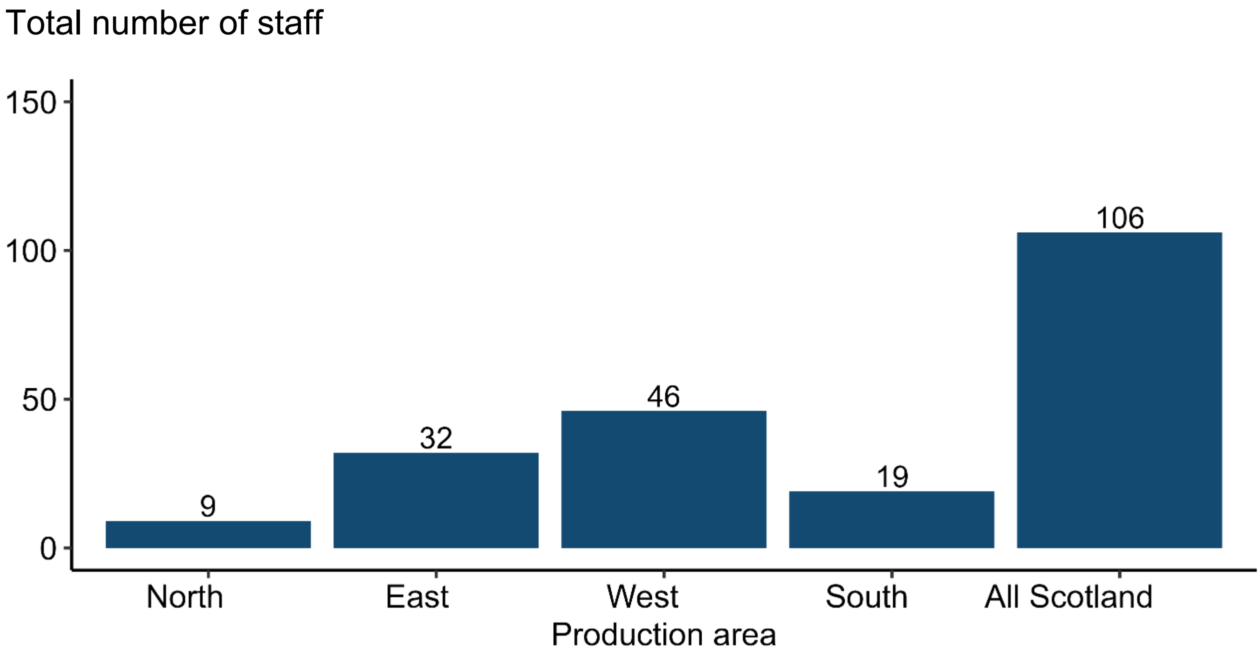
Table 1 presents a summary of rainbow trout production across Scotland in 2024. Production areas were North, East, West, South and All Scotland. The data includes the number of active sites, production volumes (in tonnes) for table trade, restocking trade, total production and the mean production per site.

Note: From 2018, the North area also included production and staff from the Western Isles and from 2021 production and staff from Orkney was also included.

Area	No. of sites	Table production (tonnes)	Restocking production (tonnes)	Total production (tonnes)	Mean tonnes per sites
North	10	3,222	37	3,259	325.9
East	9	734	167	901	100.1
West	18	3,735	3	3,738	207.7
South	9	4	269	273	30.3
All Scotland	46	7,695	476	8,171	177.6

Chart 6: Total number of staff employed in rainbow trout production by area.

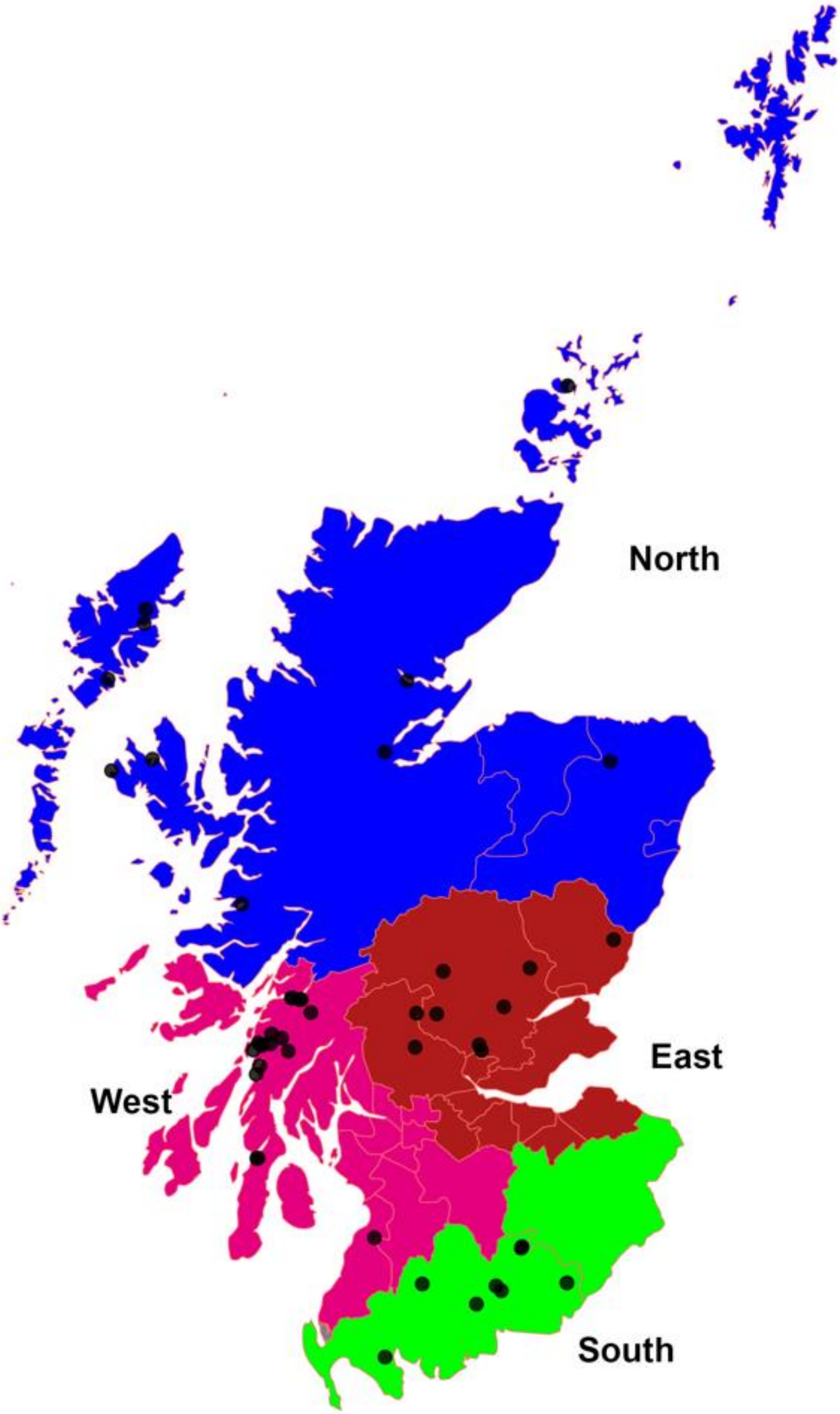
Chart 6 shows number of staff employed in rainbow trout production across different production areas in Scotland during 2024. The data are represented using dark blue bars for each area, North, East, West, South and All Scotland.



Productivity was greatest in the North at 325.9 tonnes per site and 362.1 tonnes per person.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables](), Table 6.

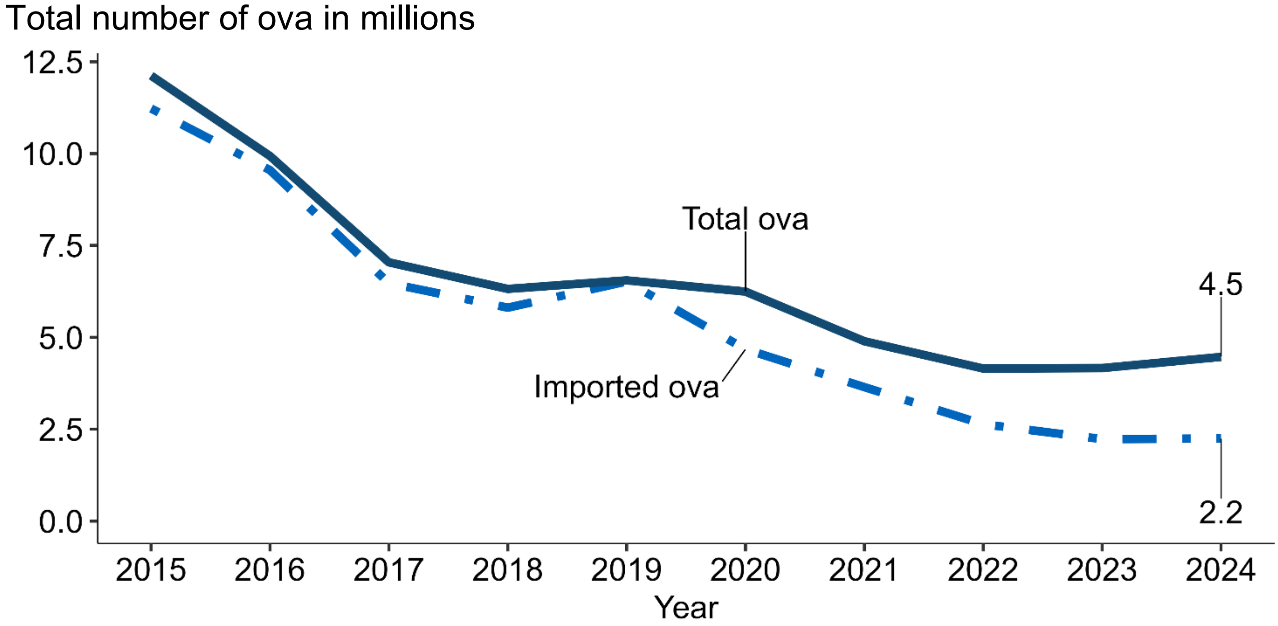
Figure 1: Distribution of active rainbow trout sites by production area in 2024.



Type and Source of Ova Laid Down

Chart 7: Total number (in millions) of rainbow trout eyed ova and imported ova laid down to hatch in 2015-2024.

Chart 7 displays two lines representing the number of rainbow trout ova used in Scotland from 2015-2024. The upper line, solid dark blue, shows the total number of ova laid down to hatch while the lower line, blue dashed and dotted, shows the total number of imported ova laid down to hatch.



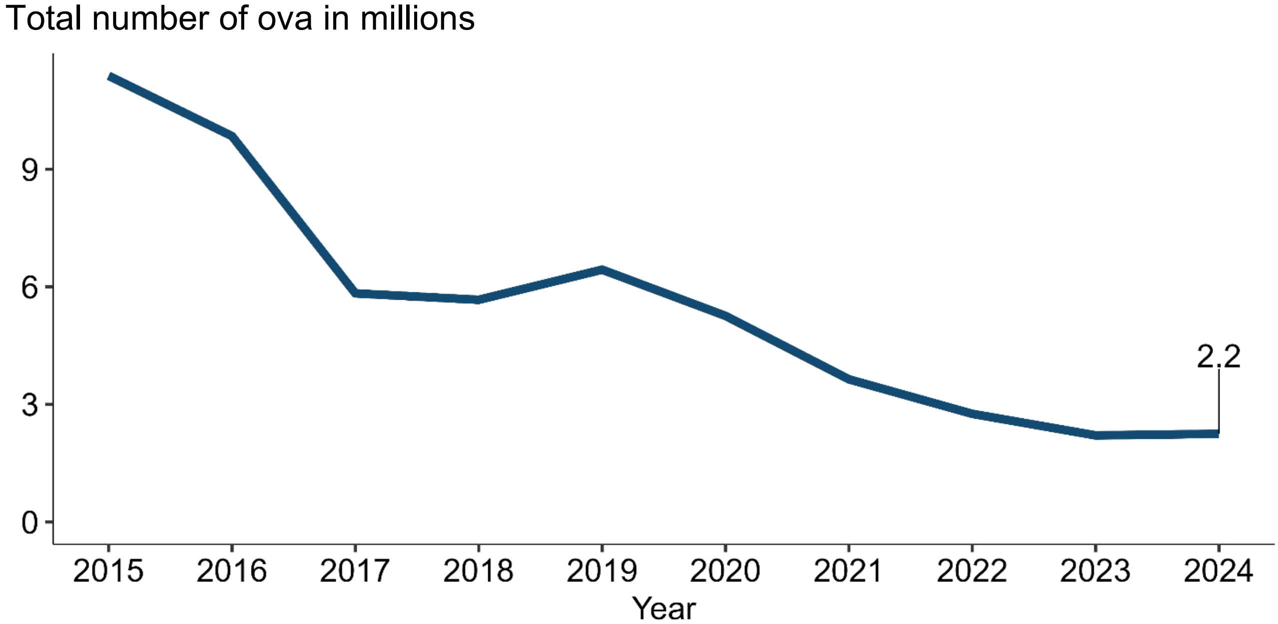
In 2024, the total number of eyed ova laid down to hatch increased by 0.3 million (7%) on the 2023 total. Ninety-seven percent of ova laid down to hatch in 2024 were triploid ova. Imported ova all came from the Northern hemisphere during 2024. The proportion of ova sourced from Great Britain (GB) broodstock increased, accounting for 50% of the total. In addition to GB produced ova the sector has a reliance on imported ova. Data on the importation of ova into Scotland are also available from the health certificates and are shown in Chart 7. Any discrepancy between the figures in Chart 6 and 7 is due to data being obtained from two independent sources.

A full breakdown of the ova types and source can be found in the: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 7 and Table 8.

Imports from Official Import Health Certificates

Chart 8: Total number (in millions) of rainbow trout ova imported into Scotland from outwith GB during 2015-2024.

Chart 8 shows a solid dark blue line graph for the total number of rainbow trout ova (in millions) imported into Scotland over a 10 year period, 2015-2024.



In 2024, official import health certificates show 2.2 million ova imported into Scotland from outwith GB. No change was observed in the import volume compared to 2023. The number of imports and their source country are detailed in the Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 9a.

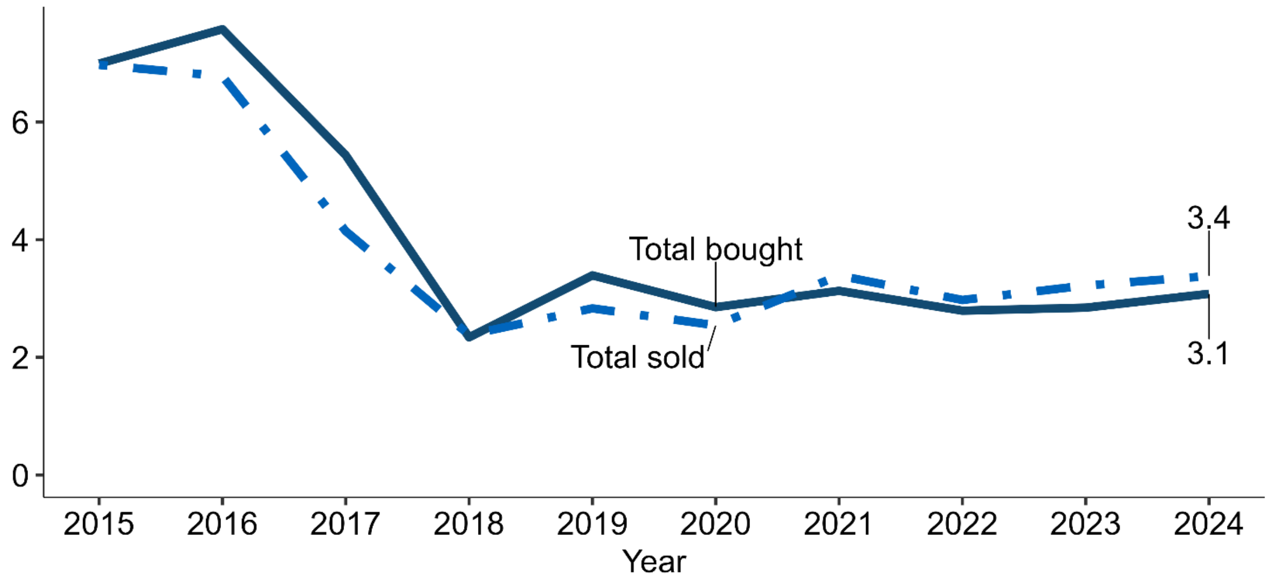
Suppliers from within the European Union (EU) accounted for 58% of ova imported into Scotland during 2024, with suppliers from the USA accounting for the remaining 42%. No producers imported part grown rainbow trout into Scotland from Northern Ireland during 2024 which had been the trend in recent years. Further data on the seasonal variation in ova numbers and sources of imported ova into Scotland from outwith GB during 2024 can be found in the: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 9b. While numbers and sources of fish imported into Scotland from outwith GB can be found in the: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 9c.

Trade in Fry and Fingerlings

Chart 9: Total number (in millions) of rainbow trout fry and fingerlings traded during 2015-2024.

Chart 9 illustrates the total number of rainbow trout fry and fingerlings traded annually from 2015 to 2024, measured in millions. The solid dark blue line shows the total number of fish bought while the dashed and dotted blue line shows the number of fish sold.

Total number of fry/fingerlings traded in millions



The established trade between hatcheries and on-growing farms continued in 2024. Some companies specialised in fry and fingerling production. The total number of fry and fingerlings bought, 3.1 million, increased by 8% and the number sold, 3.4 million, increased by 5%. The majority (99%) of bought fry/fingerlings were triploid fish. The disparity between supply and demand is due to trade with England and Wales. More detailed data relating to fry and fingerling trade can be found in the: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 10.

Use of Vaccines

Vaccines continued to be used as a preventative treatment against enteric redmouth disease (ERM), a potentially serious bacterial infection, caused by *Yersinia ruckeri*. Vaccination is generally carried out as a bath treatment at the fingerling stage, although some vaccines are administered by intra-peritoneal injection. A total of 3.1 million fish were vaccinated on 20 sites.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 11.

Organic Production

Of the 46 sites recorded as being active in rainbow trout production in 2024, none were certified as organic.

Escapes

In 2024 there was one incident reported where the company confirmed there was no loss of fish.

Escapes data from previous annual survey reports are available: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 46.

2. Atlantic Salmon (*Salmo salar*) - Ova and Smolts

Company and Site Data

In 2024, the number of companies authorised by the Scottish Government for freshwater production of Atlantic salmon decreased by four to 14. A total of 64 sites were actively engaged in commercial production, a decrease of three from the 2023 figure. This figure represents the entire freshwater sector operating in Scotland.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables](), Table 12.

Production and Staffing

Chart 10: Total number of staff employed in Atlantic salmon ova and smolt production 2015-2024.

Chart 10 shows total number of staff employed in Atlantic salmon ova and smolt production over the ten-year period from 2015 to 2024. The data are represented by a dark blue line which shows the combined total of full-time and part-time staff each year.

Total number of staff

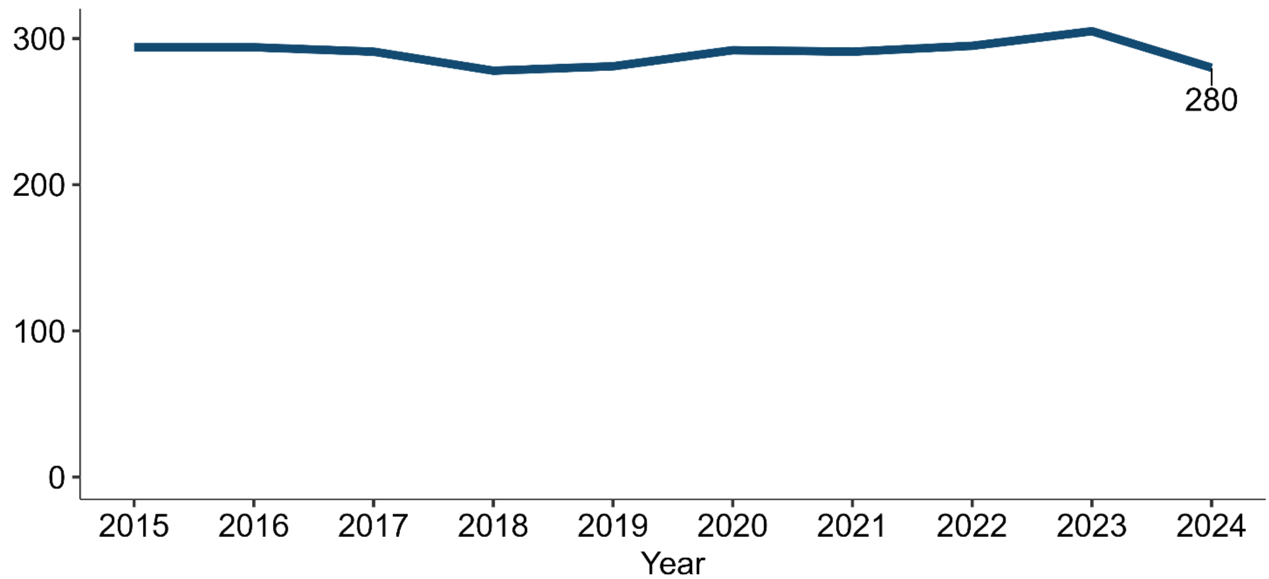
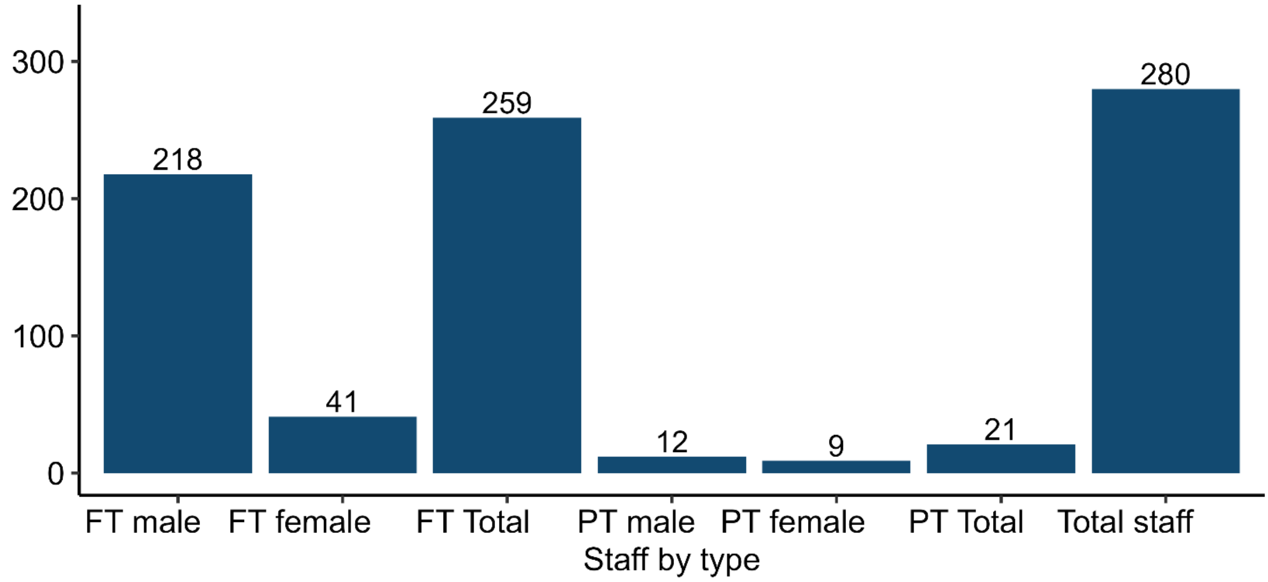


Chart 11: Number of full-time and part-time staff employed in Atlantic salmon ova and smolt production 2024, by gender.

Chart 11 displays the number of staff employed in Atlantic salmon ova and smolt production by gender and employment status (full-time and part-time). The data are represented using dark blue bars for each category.

Note: FT = Full-time and PT = Part-time

Total number of staff



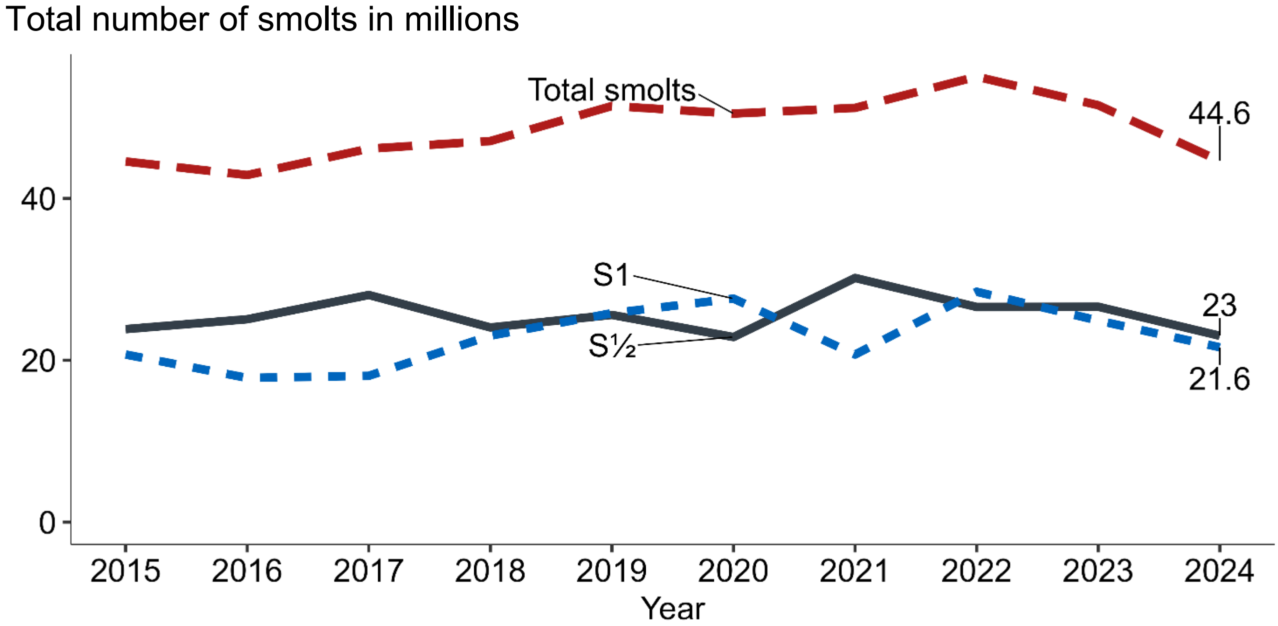
The number of staff employed in 2024 decreased by 25 people (8%) and productivity decreased by 6% to a figure of 159,400 smolts produced per person. Out of 280 staff, 230 were male (82%) and 50 were female (18%).

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables](), Table 13.

Smolts by Age Group

Chart 12: Total number (in millions) of Atlantic salmon smolts produced by type during 2015-2024.

Chart 12 illustrates the total number (in millions) of Atlantic salmon smolts produced over the period 2015 to 2024. The upper dashed dark red line shows total smolt production, measured in millions. The solid dark grey line shows the total number of S½ smolts produced while the dashed blue line shows the total number of S1 smolts produced.



Smolt production in 2024 totalled 44.6 million, representing a 13% decrease from the 51.5 million produced 2023. The number of S½ smolts produced fell by 14%, to 23.0 million smolts, while the number of S1 smolts produced decreased by 13%, to 21.6 million smolts. No S1½ smolts were produced during 2024.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 14.

Production Systems

Table 2: Number of production systems in 2023 and 2024.

Table 2 presents a comparison of the number of sites employing each type of production system for Atlantic salmon smolt production in 2023 and 2024.

Year	2023	2024
Pens	18	18
Tanks and Raceways	49	46
Total	67	64

Table 3: Total capacity, cubic metres (in thousands), by production system in 2023 and 2024.

Table 3 presents a comparison of the total production capacity (in thousands of cubic metres) used in salmon smolt production during 2023 and 2024, broken down by production system.

Year	2023	2024
Pens	342	345
Tanks and Raceways	85	91
Total	427	436

The types of facility used for the production of smolts in freshwater are pens or tanks and raceways. In 2024, the number of farms using pens remained the same and the number of farms using tanks and raceways decreased by three. In terms of volume, pen capacity increased by 3,000 m^3 and tank and raceway capacity increased by 6,000 m^3. This resulted in a 9,000 m^3 increase in volume available for the production of smolts in Scotland during 2024.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 15.

Table 4: Number (in millions) of smolts produced during 2023 and 2024 split by facility type.

Table 4 compares the number (in millions) of Atlantic salmon smolts produced in 2023 and 2024 split by facility type.

Year	2023	2024
Pens	19.2	18.3
Tanks and Raceways	32.4	26.3
Total	51.6	44.6

Table 5: Stocking densities by production system type in 2023 and 2024.

Table 5 presents a comparison of the stocking densities (smolts per cubic metre) used in salmon smolt production during 2023 and 2024 by production system.

Year	2023	2024
Pens	56	53
Tanks and Raceways	381	289

The average stocking densities of pens decreased from 56 to 53 smolts per m^3 in 2024 compared to 2023 while densities in tanks and raceways decreased from 381 to 289 smolts per m^3.

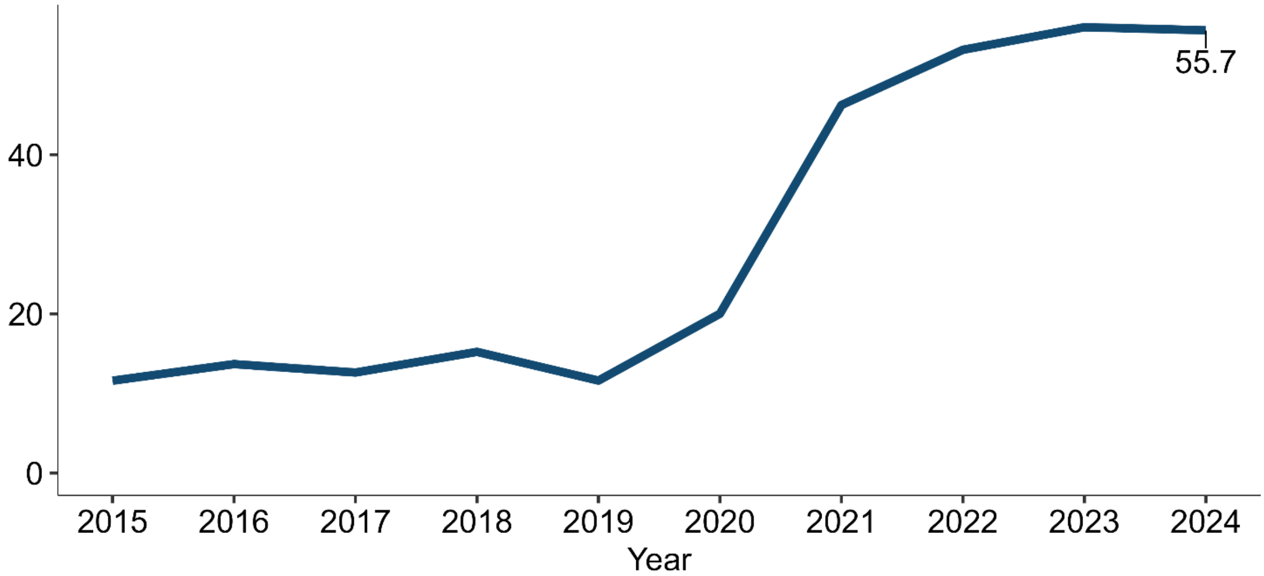
Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 16.

Ova Production

Chart 13: Total number (in millions) of Atlantic salmon ova produced during 2015-2024.

Chart 13 shows total number, in millions, of Atlantic salmon ova produced over the ten-year period, 2015 to 2024. The data are represented by a solid dark blue line.

Total number of Atlantic salmon ova in millions.



In 2024, close to 56 million ova were stripped, a decrease of less than 1% from the number of ova produced in 2023.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables], Table 17.

Chart 14: Total number (in millions) of Atlantic salmon ova laid down to hatch during 2015-2024.

Chart 14 shows total number, in millions, of Atlantic salmon ova laid down to hatch over the ten-year period, 2015 to 2024. The data are represented by a solid dark blue line.

Total number of Atlantic salmon ova in millions

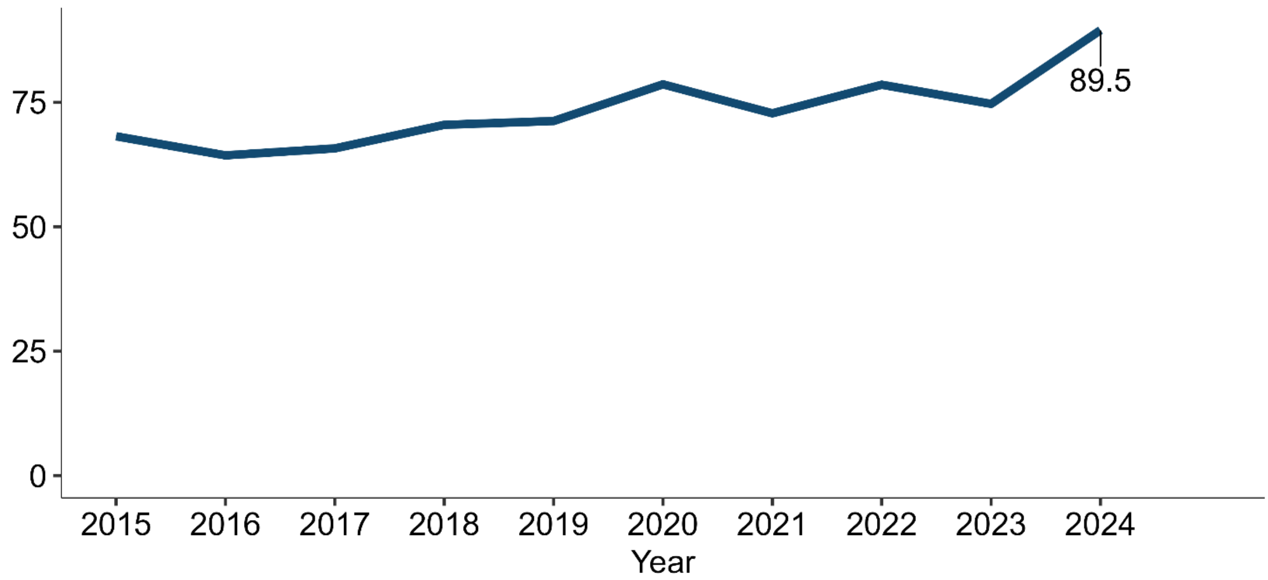


Table 6: Source, number (in thousands), previous year's estimate of ova laid down to hatch during 2015-2024 and projected production for 2025.

Table 6 shows the annual breakdown of the number (in thousands) of ova laid down to hatch during 2015-2024, catergorised by source: In-house broodstock, Out-sourced GB broodstock, GB wild broodstock and imported ova. The projected total for 2025 is also presented.

Year	In-house broodstock (in 000s)	Out-sourced GB broodstock (in 000s)	GB wild broodstock (in 000s)	Imported ova (in 000s)	Total ova (in 000s)	Previous year's estimate (in 000s)
2015	6,479	223	10	61,463	68,175	65,284
2016	5,884	4	0	58,458	64,346	59,604
2017	6,228	360	0	59,158	65,746	60,673
2018	8,780	200	0	61,499	70,479	67,374
2019	5,516	1,724	75	63,931	71,246	71,571
2020	5,195	4,480	258	68,685	78,618	70,598
2021	6,383	22,581	124	43,707	72,795	68,588
2022	2,906	29,871	0	45,761	78,538	77,306
2023	3,446	32,988	13	38,248	74,695	73,096
2024	5,244	31,635	17	52,604	89,500	79,002
2025	No data	No data	No data	No data	No data	73,420

The number of ova laid down to hatch was 89.5 million, an increase of 14.8 million (20%) on the 2023 figure. Imported ova accounted for 59% of ova laid down to hatch, this was an increase of 14.4 million (38%) on the 2023 figure. Supplies derived from GB broodstock (excluding wild origin ova) increased by 0.4 million, an 1% increase on the 2023 figure. In 2024, 17,000 ova from GB wild broodstock were laid down to hatch, ova derived from wild stocks are generally held and hatched for wild stock enhancement by the aquaculture sector in cooperation with wild fisheries managers.

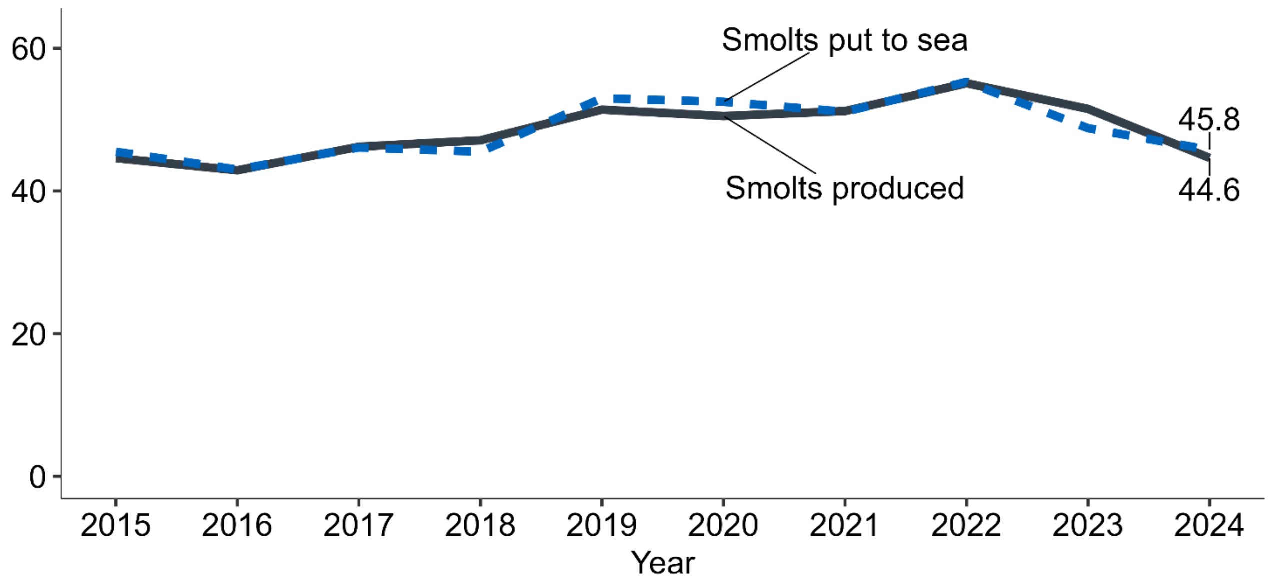
Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 18.

Smolts Produced and Put to Sea

Chart 15: Total number (in millions) of smolts produced and actual number (in millions) of smolts put to sea during 2015-2024.

Chart 15 illustrates the total number of smolts produced and total number of smolts put to sea annually from 2015 to 2024, measured in millions. The solid dark grey line shows the total number of smolts produced while the dashed blue line shows the number of smolts put to sea.

Number of smolts in millions



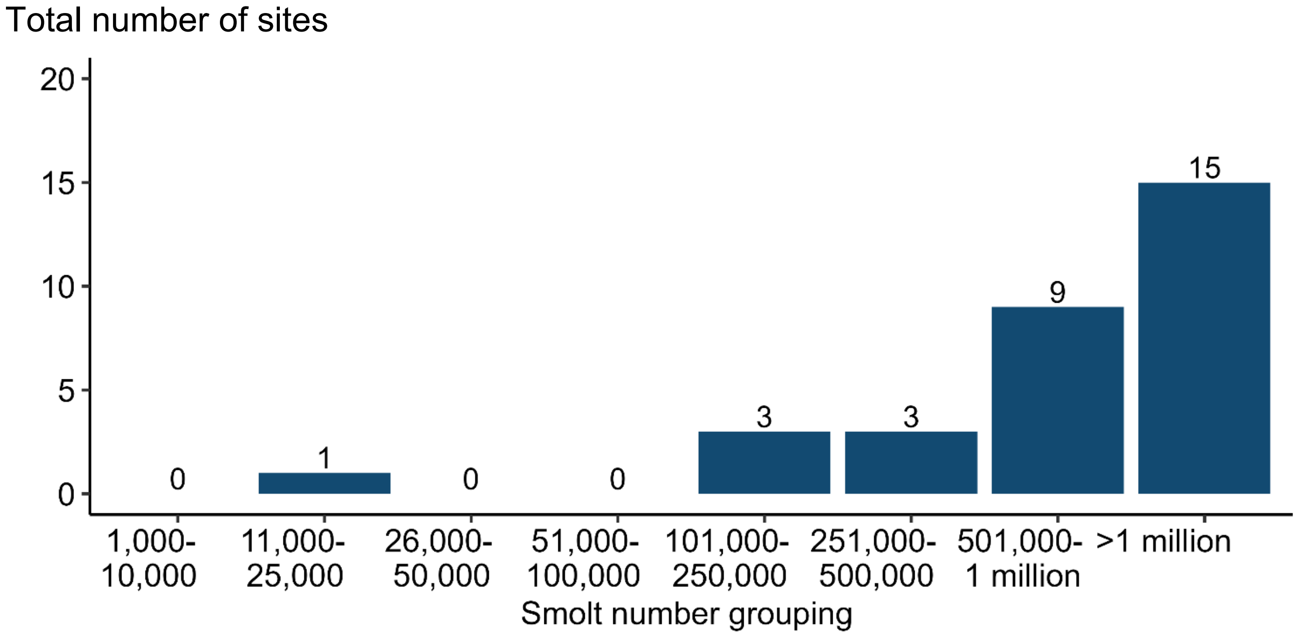
The figure for the number of smolts put to sea includes smolts produced in England and smolts imported from elsewhere, whereas smolt production data relate only to those produced in Scotland. In 2024, 45.8 million smolts were put to sea and 44.6 million smolts were produced. Smolt producers estimate putting 56.2 million smolts to sea in 2025. The ratio of ova laid down to hatch to smolts produced in 2024 was greater than the ratio in 2023. Detailed figures of estimates and ratios can be found in the Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 19.

Scale of Production

Chart 16: Atlantic salmon smolt producing sites grouped by number of smolts produced during 2015-2024.

Bar chart 16 shows the number of sites that fall into each smolt production category. The eight categories were 1,000-10,000 smolts, 11,000-25,000 smolts, 26,000 to 50,000 smolts, 51,000-100,000 smolts, 101,000-250,000 smolts, 251,000-500,000 smolts, 501,000-1 million smolts and greater than 1 million smolts.

Note: These data refer only to sites producing smolts. The sites holding only ova, fry or parr are excluded.



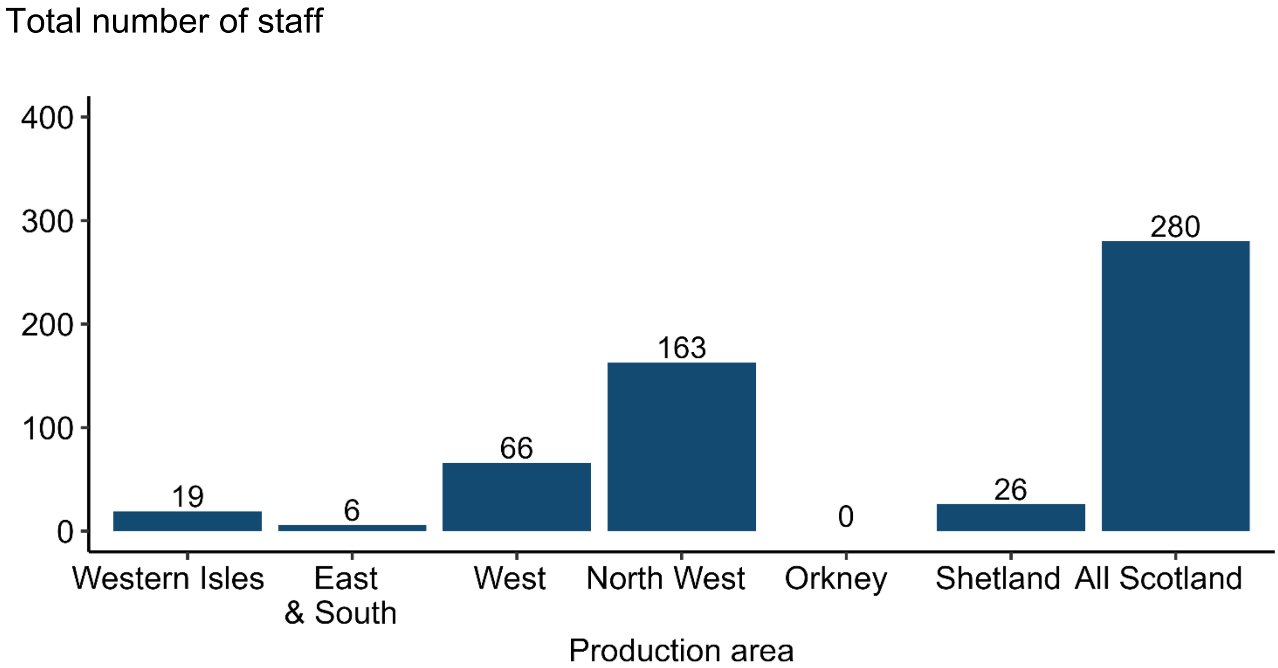
The number of sites producing smolts in 2024 was 31. There was only one site producing less than 101,000 smolts during 2024 while the number of sites producing between 101,000 and one million smolts per year decreased by four. The number of sites producing in excess of one million smolts per year remained at 15 sites.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables](), Table 20

Staff and production of Ova and Smolt by production area

Chart 17: Total number of staff employed in Atlantic salmon ova and smolt production by area.

Chart 17 shows number of staff employed in Atlantic salmon ova and smolt production across different production areas in Scotland during 2024. The data are represented using dark blue bars for each area, Westen Isles, East & South, West, North West, Orkney, Shetland and All Scotland.



The greatest number of staff were employed in the North West area.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables](), Table 21.

Table 7: Ova laid down to hatch (in thousands) in 2023-2024, smolt production (in thousands) in 2023-2024 and estimated smolt production (in thousands) in 2025-2026 by production area.

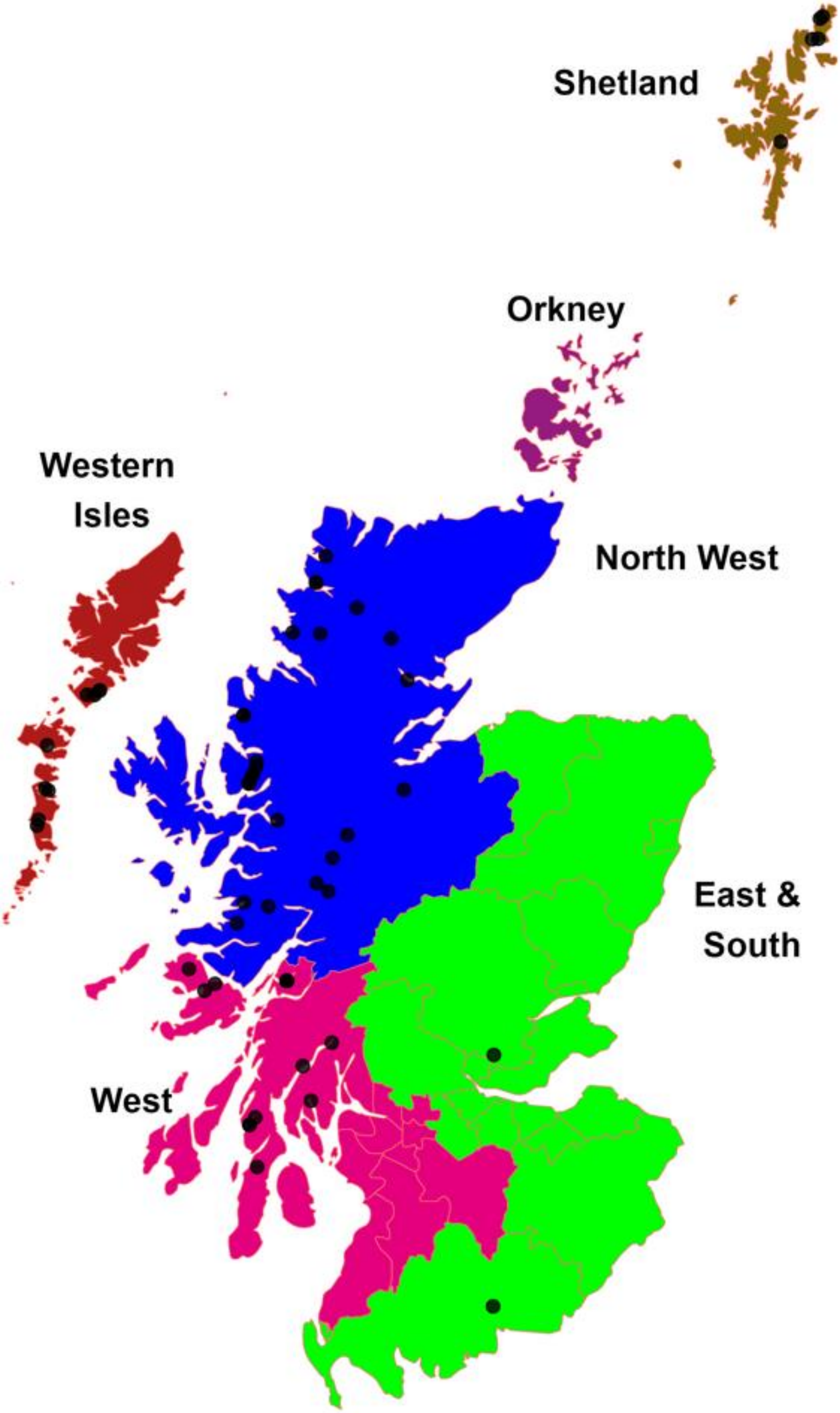
Table 7 presents regional data on ova laid down to hatch and smolt production (in thousands) in 2023 and 2024, and estimated smolt production in 2025 and 2026 (in thousands). Data are reported by individual production area, North West, Orkney, Shetland, West, Western Isles and East and South, with an overall total summarised for All Scotland.

Area	Ova laid down to hatch (in 000s) 2023	Ova laid down to hatch (in 000s) 2024	Smolt production (in 000s) 2023	Smolt production (in 000s) 2024	Estimated smolt production (in 000s) 2025	Estimated smolt production (in 000s) 2026
North West	48,659	57,324	27,907	28,876	34,323	35,149
Orkney	0	0	40	0	0	0
Shetland	5,474	6,009	1,777	3,265	3,100	4,700
West	16,550	24,313	18,507	11,231	16,935	16,820
Western Isles	4,012	1,854	2,373	290	854	770
East and South	0	0	920	970	946	1,000
All Scotland	74,695	89,500	51,524	44,632	56,158	58,439

In 2024, the North West and the West were the main areas where ova were laid down to hatch. The North West and the West were the main smolt producing areas.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 21.

Figure 2: Distribution of active Atlantic salmon ova and smolt sites by production area in 2024.



International Trade

Scotland has a high health status with regard to the listed diseases. Imports of Atlantic salmon must originate from a source that is of equal or higher health status and consignments must be accompanied by a health certificate issued by the competent authority confirming that all requirements have been met.
Exports are subject to the health conditions placed by the importing country. Potential exporters should ascertain from the competent authority in the importing country any specific health testing requirements that may be a condition of import and obtain a copy of the required health certificate. The Fish Health Inspectorate will provide advice on whether the source site can fulfil the export requirements.

Imports and Exports

Table 8: Source and number (in thousands) of salmon ova, fry, parr and smolts imported during 2020-2024 derived from health certificates.

Table 8 shows annual imports of salmon ova, fry, parr and smolts from 2020-2024 based on health certificate records. The table details the source countries, Iceland, Norway and the Republic of Ireland, and the number of imported ova and juvenile fish (in thousands), with yearly totals provided for each category.

Year	Ova from Iceland (in 000s)	Ova from Norway (in 000s)	Ova from Republic of Ireland (in 000s)	Total ova (in 000s)	Fry, parr and smolts from Republic of Ireland (in 000s)	Total fry, parr and smolts (in 000s)
2020	41,756	220	15,296	57,272	1,130	1,130
2021	31,276	160	19,260	50,696	300	300
2022	23,370	175	20,367	43,912	0	0
2023	28,571	0	12,010	40,581	250	250
2024	31,247	0	23,620	54,867	1,030	1,030

The numbers of ova imported increased by 35% in 2024. The number fry, parr or smolts imported increased, with 1,030,000 fish being imported from the Republic of Ireland during 2024.

In 2024, no ova were exported. Fry, parr and smolts exports decreased with 147,000 fish being exported during 2024.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 22a and Table 22b.

Vaccines

Table 9: Number of sites using vaccines and number (in millions) of fish vaccinated during 2015-2024.

Table 9 details the number of aquaculture sites administering vaccines and the total number of fish vaccinated (in millions) from 2015 to 2024.

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
No. of sites	55	47	46	43	46	43	43	40	34	33
No. of fish (in millions) vaccinated	48.0	42.6	58.4	51.0	52.4	59.2	54.9	56.2	48.5	65.4

Vaccines were used to provide protection against furunculosis, infectious pancreatic necrosis (IPN), ERM, vibriosis and salmonid alphavirus (SAV). The majority of fish were vaccinated against furunculosis, IPN and SAV, with smaller numbers of fish being vaccinated against ERM and vibriosis. A total of 65.4 million fish were vaccinated across 33 sites.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 23.

Escapes

In 2024, there was one escape incident involving the loss of 300 freshwater farmed Atlantic salmon.

Escapes data from previous annual survey reports are available: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 46.

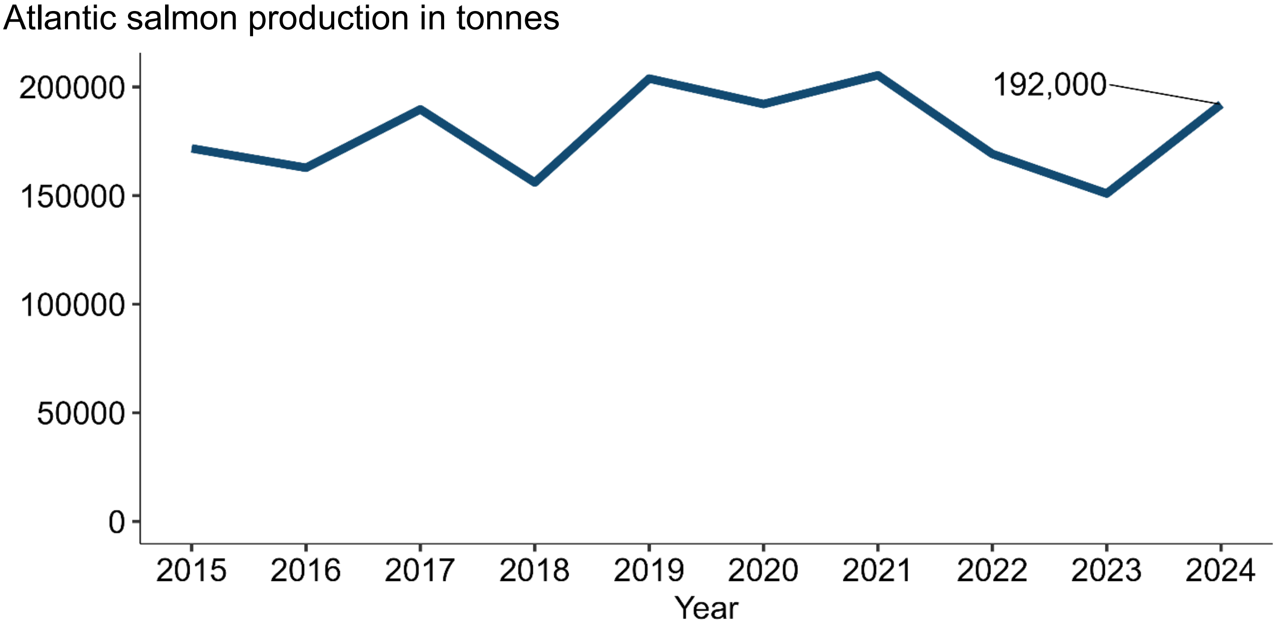
3. Atlantic Salmon - Production

Production

Production survey information was collected from all 11 companies actively involved in Atlantic salmon production, farming 215 active sites. This figure represents the entire sector operating in Scotland.

Chart 18: Annual production of Atlantic salmon (tonnes) during 2015-2024.

Data represented by a solid dark blue line in Chart 18 displays annual Atlantic salmon production (in tonnes) over the ten-year period, 2015 to 2024.

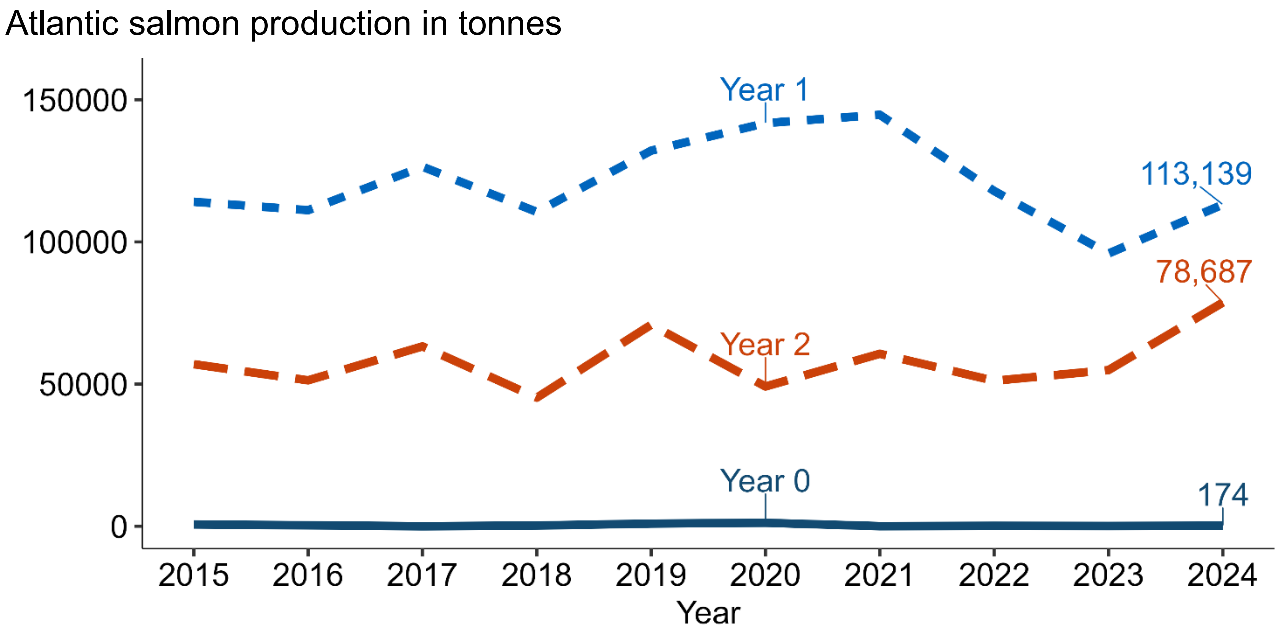


The total production of Atlantic salmon during 2024 was 192,000 tonnes, an increase of 41,051 tonnes (27%) on the 2023 total. Total production for 2025 is estimated to be 195,182 tonnes, this value is a sector estimate based on stocks currently being on-grown.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 24.

Chart 19: Total production (tonnes) of year 0, year 1 and year 2 Atlantic salmon harvested during 2015-2024.

Chart 19 illustrates the total production of year 0, year 1 and year 2 Atlantic salmon in Scotland over the period 2015 to 2024. The upper dashed blue line shows production of year 1 Atlantic salmon in tonnes. The lower solid dark blue line shows the year 0 Atlantic salmon production while the dark red dashed line shows the year 2 Atlantic salmon production.



In 2024 174 tonnes of year 0 (2024 input fish) were harvested, with a mean weight 3.4 kg. Also 113,139 tonnnes of year 1 (2023 input fish) mean weight 5.3 kg and 78,687 tonnes of year 2 (2022 input fish) mean weight 5.9 kg were harvested in 2024.

Data Source, additional data detailing the number, production (tonnes) and mean fish weights (kg) of year 0, year 1 and year 2 Atlantic salmon can be found: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 25.

Harvest of year 1 fish was also reported in terms of production of grilse (year 1 fish harvested during January to August) and pre-salmon (year 1 fish harvested during September to December). In 2024 66,995 tonnes of grilse with a mean weight of 5.3 kg were harvested and 46,144 tonnes of pre-salmon, mean weight of 5.2 kg.

Data Source, additional data detailing the number, production (tonnes) and mean weights of grilse and pre-salmon can be found: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 26.

Table 10: Percentage (by weight) of annual production by growth stage harvested during 2020-2024.

Table 10 shows percentage (by weight) of annual Atlantic salmon harvest by growth stage from 2020 to 2024. Growth stages include input year fish (year 0), grilse, pre-salmon and year 2 salmon.

Year	2020	2021	2022	2023	2024
Input year fish	<1	<1	<1	<1	<1
Grilse	45	45	39	43	35
Pre-salmon	29	25	31	21	24
Year 2 salmon	26	30	30	36	41

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 27.

Table 11: Survival to harvest and production in smolt year classes during 2015-2024.

Table 11 details the total harvest percentages (survival to harvest) of Atlantic salmon year classes during 2015-2024. The table shows smolt input numbers (in thousands) and the proportion of each year class harvested, for year 0, year 1 and year 2 Atlantic salmon.

Year	Smolt input (in 000s)	Year 0 % harvest	Year 1 % harvest	Year 2 % harvest	Total % of year class harvested (survival)
2015	45,465	0.5	54.2	24.4	79.1
2016	42,957	0.3	59.6	16.7	76.6
2017	46,116	0	47.3	26.5	73.8
2018	45,513	0.2	57.8	19.5	77.5
2019	52,990	0.6	53.8	20.0	74.4
2020	52,492	0.6	56.6	18.7	75.9
2021	51,131	0.03	50.4	18.3	68.7
2022	55,261	0.1	37.5	24.2	61.8
2023	48,845	0.06	44.0	No data	No data
2024	45,757	0.1	No data	No data	No data

In 2022, the last year for which survival can be calculated, the survival rate from smolt input to harvest decreased to 61.8%. Of the 2023 year class, 44.0% of the input has been harvested, 6.4% more than the average harvest of fish one year after input in the 2022 year class. In 2024, 0.1% of the fish were harvested from the 2024 input. This was a small increase compared with the proportion of fish harvested from the same year class in 2023.

Further details of fish numbers and tonnes harvested can be found in the: [Scottish Fish Farm Production Survey 2024, Supplementary Tables](), Table 28.

Smolts to Sea

Table 12: Number (in thousands) of smolts put to sea during 2015-2024.

Table 12 details number of smolts (in thousands) put to sea from 2015 to 2024, catergorised by smolt typre: S½, S1 and S1½.

Year	S½ smolts put to sea (in 000s)	S1 smolts put to sea (in 000s)	S1½ smolts put to sea (in 000s)	Total smolts put to sea (in 000s)
2015	22,886	22,569	10	45,465
2016	22,052	20,905	0	42,957
2017	25,490	20,626	0	46,116
2018	21,767	23,746	0	45,513
2019	24,525	28,465	0	52,990
2020	24,809	27,683	0	52,492
2021	29,421	21,396	314	51,131
2022	28,698	26,563	0	55,261
2023	25,859	22,986	0	48,845
2024	24,698	21,059	0	45,757

Table 13: Number (in thousands) and origin of smolts put to sea during 2015-2024.

Table 13 shows the number and origin of smolts put to sea from 2015 to 2024. The table presents annual totals and the percentage from Scottish, English and Other sources.

Year	Scottish origin (in 000s)	Scottish origin (%)	English origin (in 000s)	English origin (%)	Other origin (in 000s)	Other origin (%)
2015	43,445	96	938	2	1,082	2
2016	41,298	97	1,048	2	611	1
2017	44,840	97	976	2	300	<1
2018	43,831	96	1,318	3	364	<1
2019	51,942	98	751	1	297	<1
2020	50,292	96	1,070	2	1,130	2
2021	49,815	97	1,016	2	300	<1
2022	54,264	98	997	2	0	0
2023	47,647	98	948	2	250	<1
2024	44,240	97	487	1	1,030	2

The total number of smolts put to sea in 2024 was 45.8 million. This smolt input comprised S½s (54%) and S1s (46%). No S1½s were produced in 2024. Three percent of the smolts stocked to Scottish salmon farms were sourced from outwith Scotland, with 2% coming from sources outwith GB in 2024. This was a small increase compared with the proportion observed in 2023.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 29.

Survival to harvest and production in smolt year classes by production area

Table 14: Number (in thousands) of smolts put to sea and year class survival to harvest by area during 2020-2024.

Table 14 presents the number of smolts put to sea and year class survival to harvest by region from 2020 to 2024. Data are shown for the five production areas, North West, Orkney, Shetland, South West and Western Isles.

North West

Year	Smolt put to sea (in 000s)	Year 0 % harvest	Year 1 % harvest	Year 2 % harvest	Total % of year class harvested (survival)
2020	19,075	0.7	65.2	17.6	83.5
2021	13,868	0.1	52.3	14.2	66.6
2022	18,130	0	42.9	26.3	69.2
2023	12,811	0	40.2	No data	No data
2024	14,558	0.1	No data	No data	No data

Orkney

Year	Smolt put to sea (in 000s)	Year 0 % harvest	Year 1 % harvest	Year 2 % harvest	Total % of year class harvested (survival)
2020	4,578	0	47.2	32.5	79.7
2021	4,469	0	36.7	45.7	82.4
2022	5,217	0	24.5	40.4	64.9
2023	5,227	0	32.0	No data	No data
2024	5,470	0	No data	No data	No data

Shetland

Year	Smolt put to sea (in 000s)	Year 0 % harvest	Year 1 % harvest	Year 2 % harvest	Total % of year class harvested (survival)
2020	10,072	0.8	52.1	27.2	80.1
2021	10,090	0	48.1	22.8	70.9
2022	10,571	0	40.1	28.3	66.5
2023	8,938	0.3	48.2	No data	No data
2024	6,660	0	No data	No data	No data

South West

Year	Smolt put to sea (in 000s)	Year 0 % harvest	Year 1 % harvest	Year 2 % harvest	Total % of year class harvested (survival)
2020	9,485	1.2	55.3	12.1	68.6
2021	10,013	0	57.4	18.4	75.8
2022	10,152	0.8	39.2	11.4	51.4
2023	9,592	0	51.2	No data	No data
2024	13,480	0.3	No data	No data	No data

Western Isles

Year	Smolt put to sea (in 000s)	Year 0 % harvest	Year 1 % harvest	Year 2 % harvest	Total % of year class harvested (survival)
2020	9,282	0	49.5	11.7	61.2
2021	12,691	<0.1	49.6	9.7	59.3
2022	11,190	0	32.6	20.8	53.4
2023	12,277	0	44.4	No data	No data
2024	5,589	0	No data	No data	No data

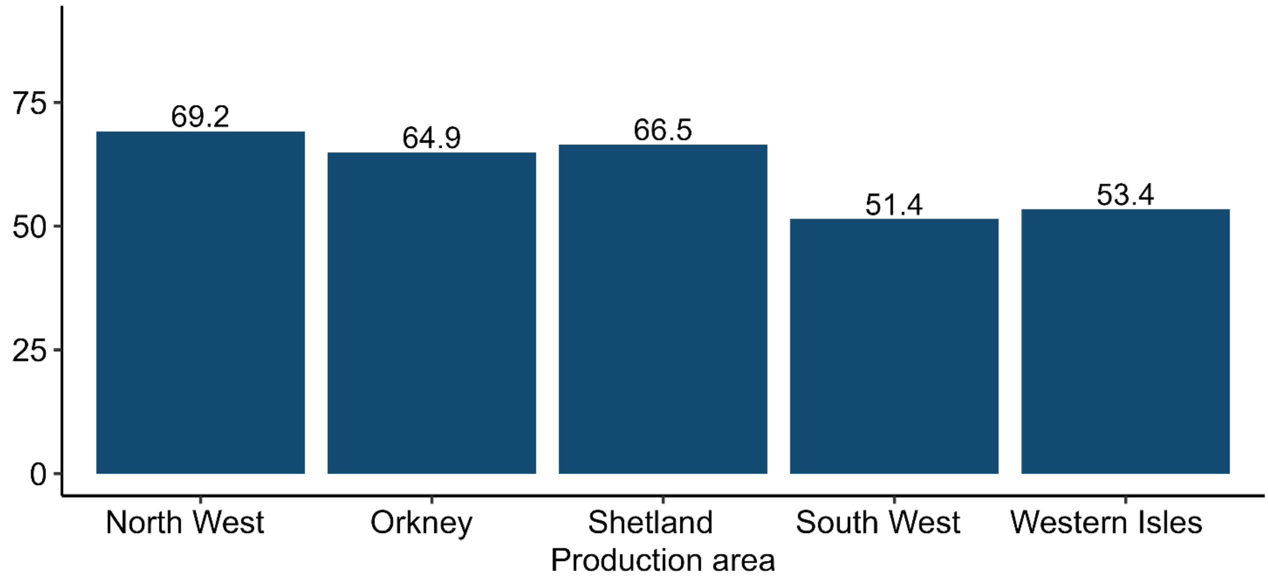
Further details of fish numbers harvested can be found in the: Scottish Fish farm production survey 2024, Supplementary Tables, Table 30.

Chart 20: Total percentage of year class harvested (survival to harvest) by area.

Bar chart 20 presents the total percentage of the 2022 year class harvested (survival to harvest) across the five production regions, North West, Orkney, Shetland, South West and Western Isles.

Note: Data shown is for 2022, the last year for which survival to harvest can be calculated.

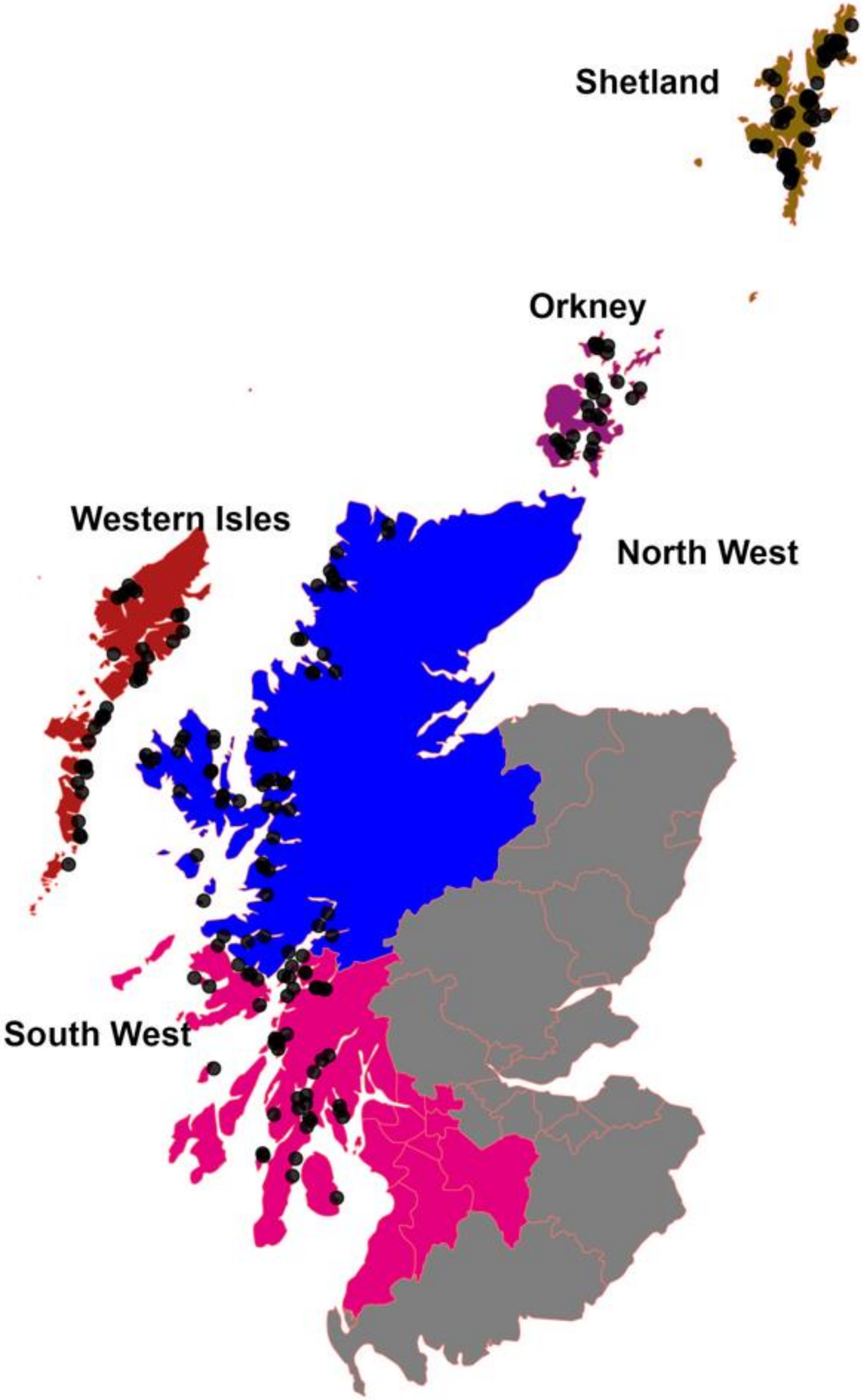
Percentage harvested (survival to harvest)



In the 2022 year class, the North West production area recorded the highest survival to harvest rate of the five production areas, reaching 69.2%. This was an increase in survival to harvest over the North West's 2021 year class figure. In contrast, all other production areas experienced a decline in survival compared with the 2021 year class, reduction in survival was greatest in the South West. Average survival to harvest across all production areas was 61.8% in the 2022 year class. Notably, North West, Shetland and Orkney exceeded this average, while the Western Isles and South West were below the average in the 2022 year class.

Further details of fish numbers harvested can be found in the: Scottish Fish farm production survey 2024, Supplementary Tables, Table 30.

Figure 3: Distribution of active Atlantic salmon production sites by production area in 2024.



Staffing

Chart 21: Total number of staff employed in Atlantic salmon production 2015-2024.

Chart 21 shows total number of staff employed in Atlantic salmon production over the ten-year period from 2015 to 2024. The data are represented by a dark blue line which shows the combined total of full-time and part-time staff each year.

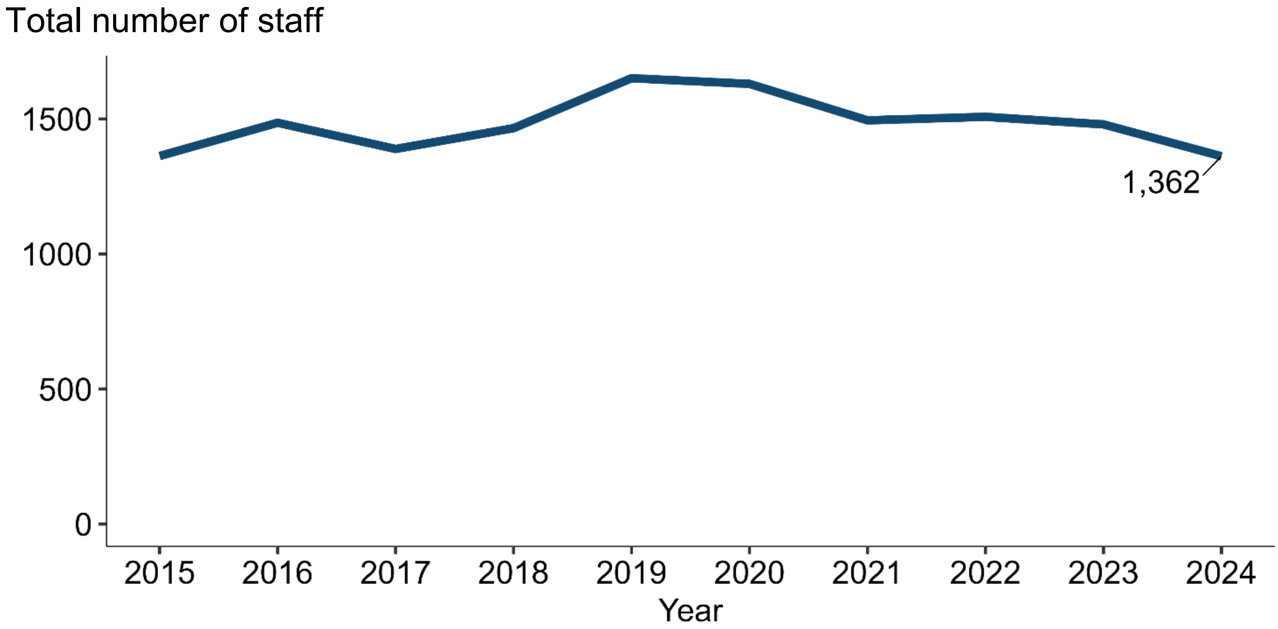
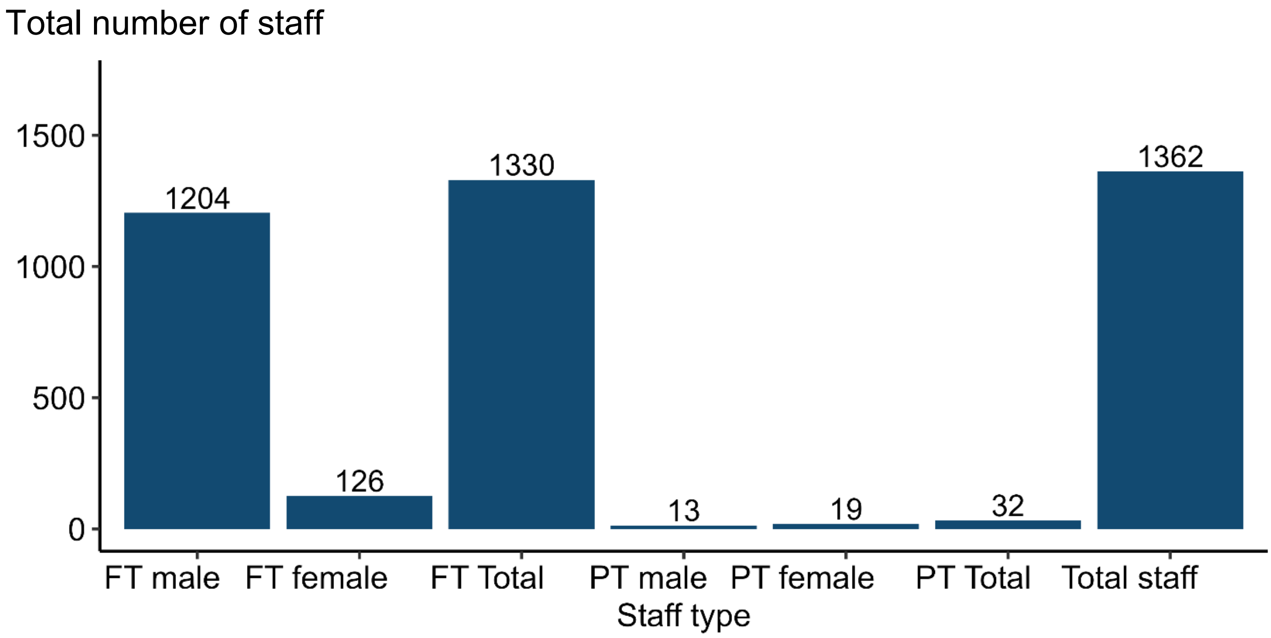


Chart 22: Number of full-time and part-time staff employed in Atlantic salmon production 2024, by gender.

Chart 22 displays the number of staff employed in Atlantic salmon production by gender and employment status (full-time and part-time). The data are represented using dark blue bars for each category.

Note: FT = Full-time and PT = Part-time



In 2024, the total number of staff employed in salmon production was 1,362, a decrease of 118 employees (8%) compared with 2023. Out of 1,362 staff, 1,217 were male (89%) and 145 were female (11%). The staffing figures collected refer specifically to the production of Atlantic salmon and do not include figures for staff involved with processing or marketing activities. Productivity increased from 102.0 to 141.0 tonnes produced per person.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 31.

Production Methods

Table 15: Production methods, capacity (cubic metres), tonnage and average stocking densities (kg/m^3) during 2023 and 2024.

Table 15 presents a comparison of seawater production systems (tanks and pens) in 2023 and 2024, detailing the number of operational sites, the total cubic capacity, annual production in tonnes and production efficiency in seawater pens measured in kg/m^3.

Method	No. of sites 2023	No. of sites 2024	Total capacity (in 000s m^3) 2023	Total capacity (in 000s m^3) 2024	Production (tonnes) 2023	Production (tonnes) 2024
Seawater tanks	1	1	5.7	5.6	23	0
Seawater pens	212	214	25,949	26,410	150,925	192,000
For pen sites: ratio of production (kg) to pen capacity (m^3)	No data	No data	No data	No data	5.8	7.3

In 2024, the majority of fish were produced in seawater pens. There was no production from seawater tank sites in 2024. This reflects the high installation and running costs incurred in operating seawater tank systems. Most seawater tank capacity has been re-deployed for the production of other species of marine finfish or salmon broodstock.

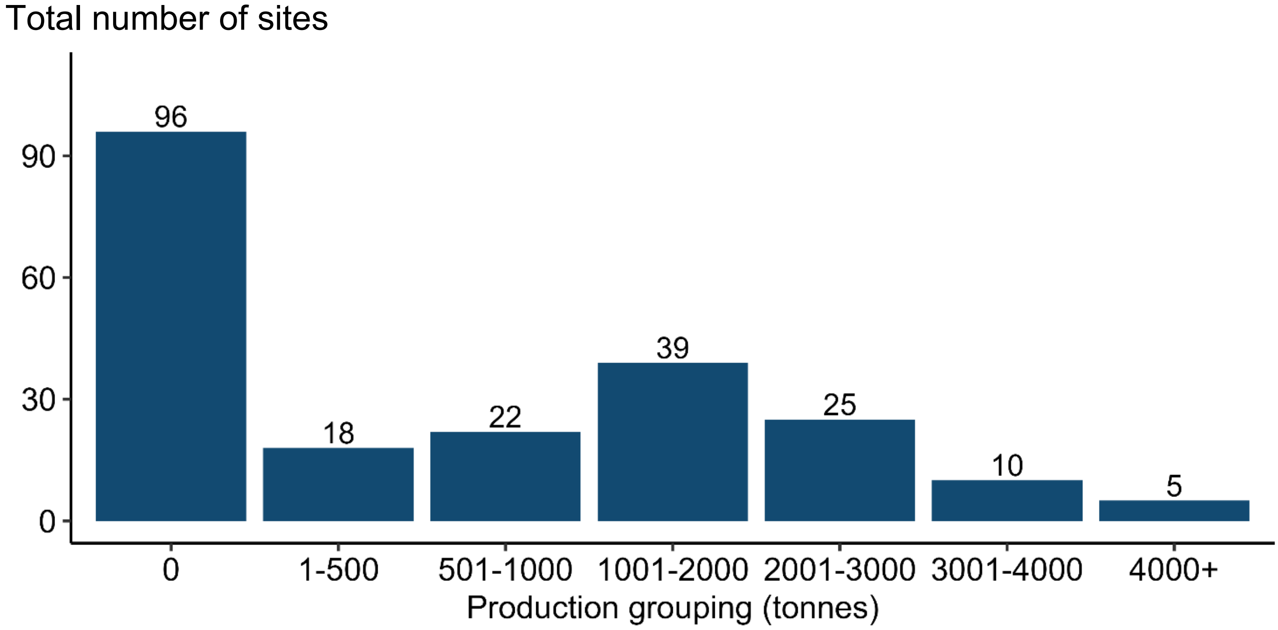
Seawater pen capacity increased by 461,000 m^3 during 2024 and the number of seawater pen sites in production increased by two. Production efficiency in seawater pens, measured as the ratio of fish weight in kilograms produced per cubic metre, increased from 5.8 kg/m^3 in 2023 to 7.3 kg/m^3 in 2024.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 32.

Scale of Production by Site

Chart 23: Number of sites shown in relation to their production grouping 2015-2024.

Bar chart 23 shows the number of sites that fall into their production grouping. The seven categories were 0 tonnes, 1-500 tonnes, 501-1,000 tonnes, 1,001-2,000 tonnes, 2,001-3,000 tonnes, 3,001-4,000 and over 4,000 tonnes.



In 2024, the number of sites with no production increased by nine while the number of sites producing 1 to 1,000 tonnes decreased by 21. The number of sites producing 1,000 to 4,000 tonnes increased by 13 and sites producing over 4,000 tonnes increased by one. The trend towards production in larger sites continued, with 89% of production being derived from sites producing over 1,000 tonnes.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables], Table 33.

Table 16: Number of companies grouped by production (tonnes), staff and productivity (tonnes per person) during 2023-2024.

Total Tonnage	0-1,000	1,001-5,000	5,001-10,000	>10,000	Total
No. of companies 2023	3	3	0	4	10
No. of companies 2024	4	2	1	4	11
No. of tonnes 2023	23	8,437	0	142,489	150,949
No. of tonnes 2024	0	2,058	5,922	184,020	192,000
Staff 2023 (total)	22	145	0	1,313	1,480
Staff 2024 (total)	32	55	112	1,163	1,362
Productivity 2023 (tonnes/person)	1	58	0	109	102
Productivity 2024 (tonnes/person)	0	37	53	158	141

The greatest productivity of 158 tonnes per person was achieved in the companies producing over 10,000 tonnes. The least productivity of zero tonnes per person was from the companies producing between 0-1,000 tonnes. In comparison with 2023, the average company productivity increased from 102 to 141 tonnes per person. Overall, production was dominated by four companies in 2024 which between them accounted for 96% of Scotland's farmed Atlantic salmon production.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 34.

Staff and Production by Production Area

Chart 24: Total production (tonnes) by area 2015-2024.

Chart 24 shows total tonnes of Atlantic salmon production across different areas in Scotland during 2015-2024. The production data are represented using different coloured lines for each area, North West (solid dark grey line), Shetland (solid purple line), Westen Isles (solid orange line), South West (green dashed line) and Orkney (dark blue dashed line).

Total number of tonnes

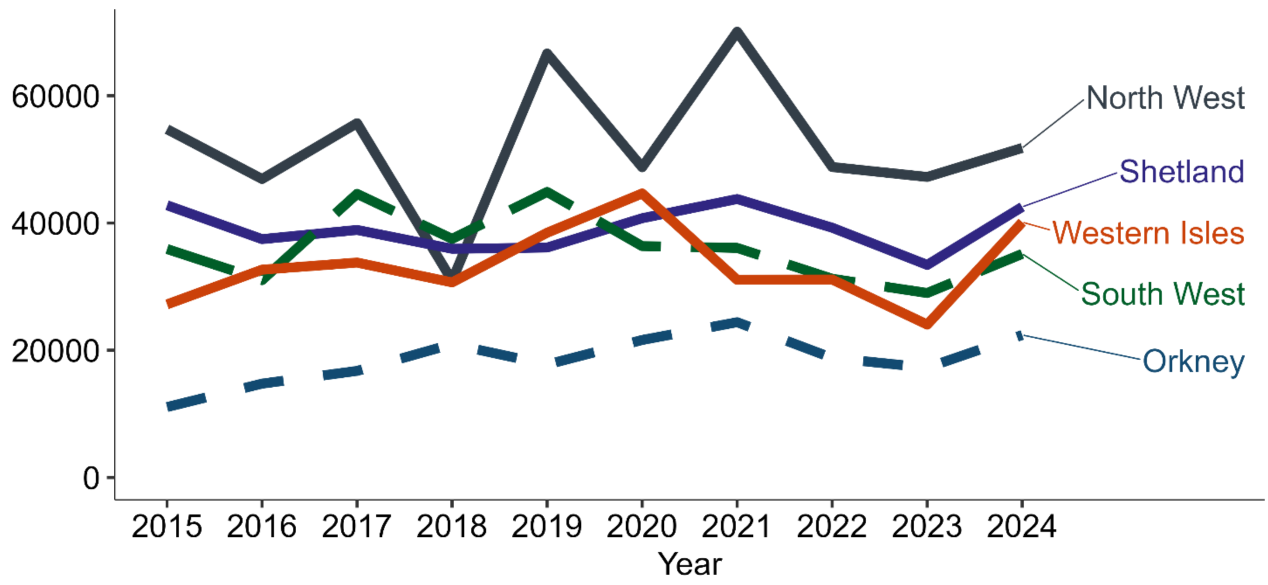
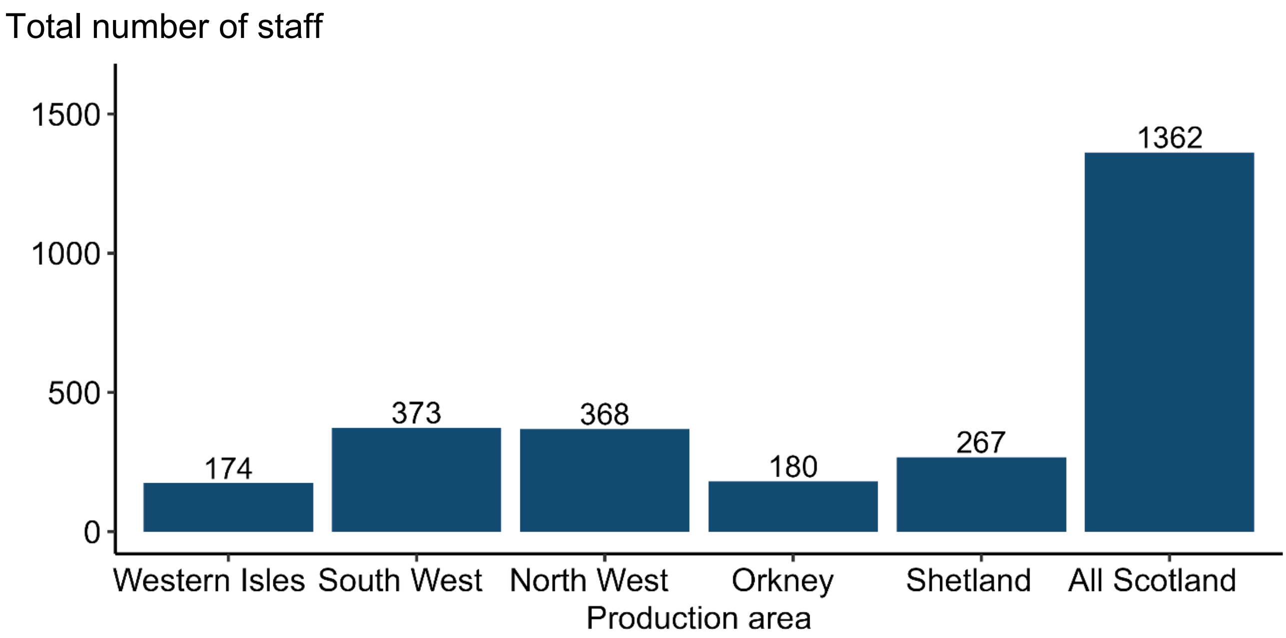


Chart 25: Total staff employed in Atlantic salmon production by area 2015-2024.

Bar chart showing total staff employed in Atlantic salmon production by area in 2024, with dark blue bars for Western Isles, South West, North West, Orkney, Shetland and All Scotland. Each bar is labelled with the number of staff in the category.



Further details of year class harvest, mean weight (kg) of fish and estimated production for 2025 by area can be found in the: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 35

Company and Site Data

Chart 26: Number of companies engaged in Atlantic salmon production during 2015-2024, split by producing and non-producing.

Line chart 26 shows the total number of Atlantic salmon companies operating in Scotland over the ten-year period, 2015-2024. The upper dashed blue line shows the total number of companies. The dark blue dashed line shows the number of businesses actively producing while the solid dark grey line shows the number of non-producing companies.

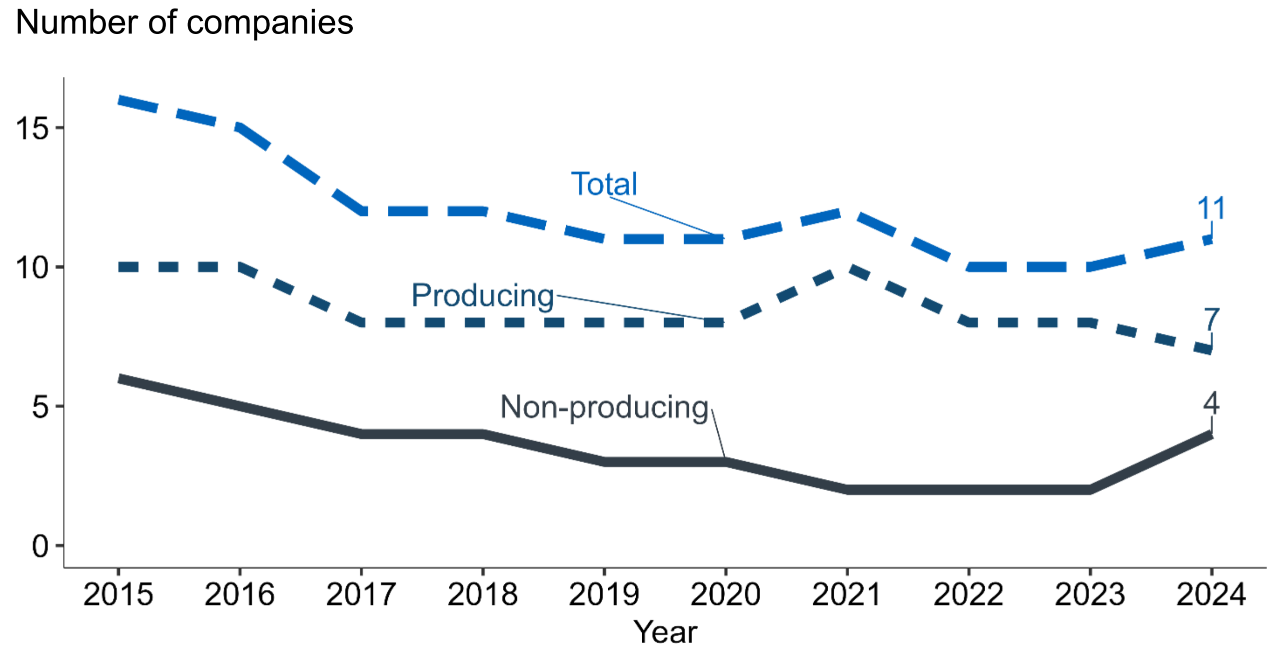
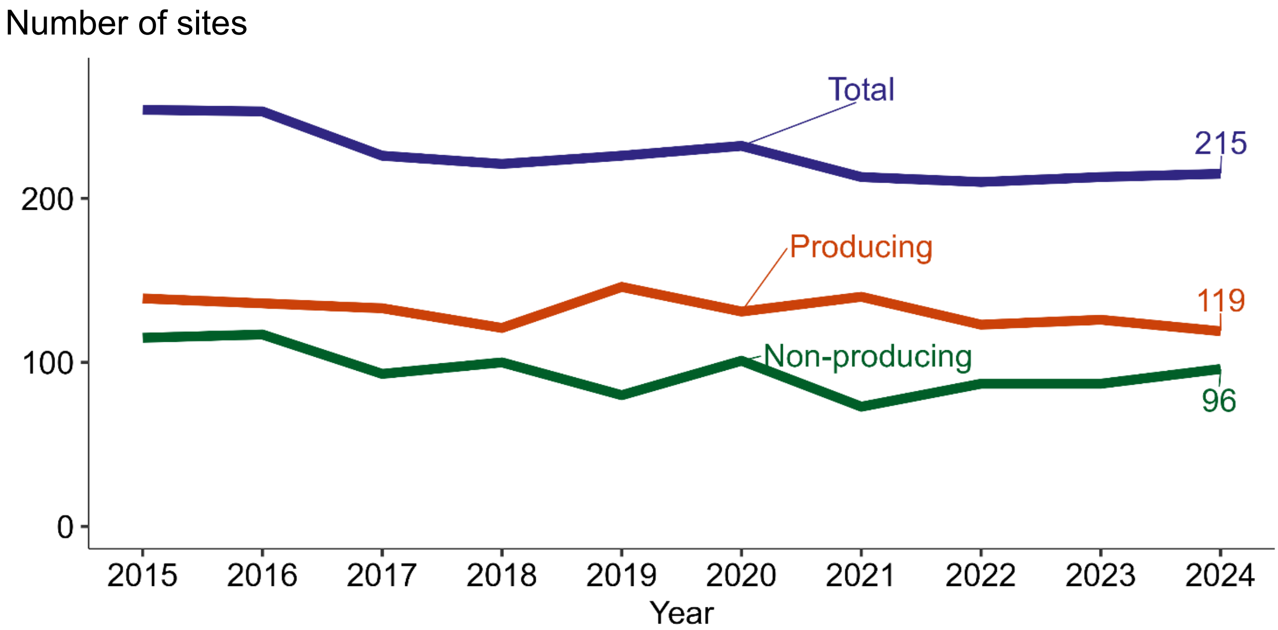


Chart 27: Number of sites engaged in Atlantic salmon production during 2015-2024, split by producing and non-producing.

Chart 27 shows the total number of Atlantic salmon sites operating in Scotland over the ten-year period, 2015-2024. The upper solid purple line shows the total number of sites. The orange solid line shows the number of sites actively producing while the solid green line shows the number of non-producing sites.



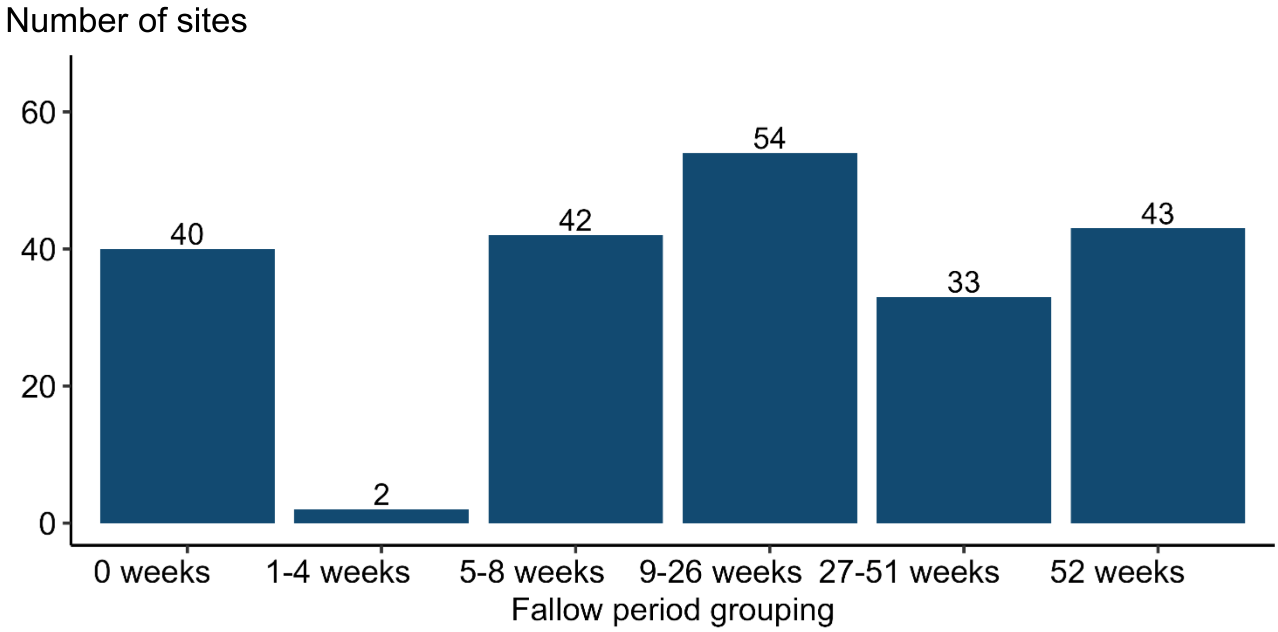
The number of companies authorised and actively producing Atlantic salmon in 2024 decreased by one to seven. Four companies were active and authorised, although not producing salmon for harvest in 2024. These 11 companies had 215 registered active sites, although not all these sites produced fish for harvest in 2024.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables], Table 36

Fallowing

Chart 28: Number of seawater pen sites employing a fallow period 2024.

Chart 28 shows the number of seawater pens and the fallow period durations they employed in 2024. Fallow period categories are 0 weeks, 1-4 weeks, 5-8 weeks, 9-26 weeks, 27-51 weeks and 52 weeks.



Of the 214 seawater pen sites recorded as being active in 2024, 43 sites were fallow for the entire year whilst 131 sites were fallow for a variable period. There were 40 sites that did not fallow in 2024. The normal production cycle in seawater varies in length between 12 months and two years. A fallow period at the end of production can break the cycle of disease or parasitic infections.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables], Table 37.

Broodstock Sites

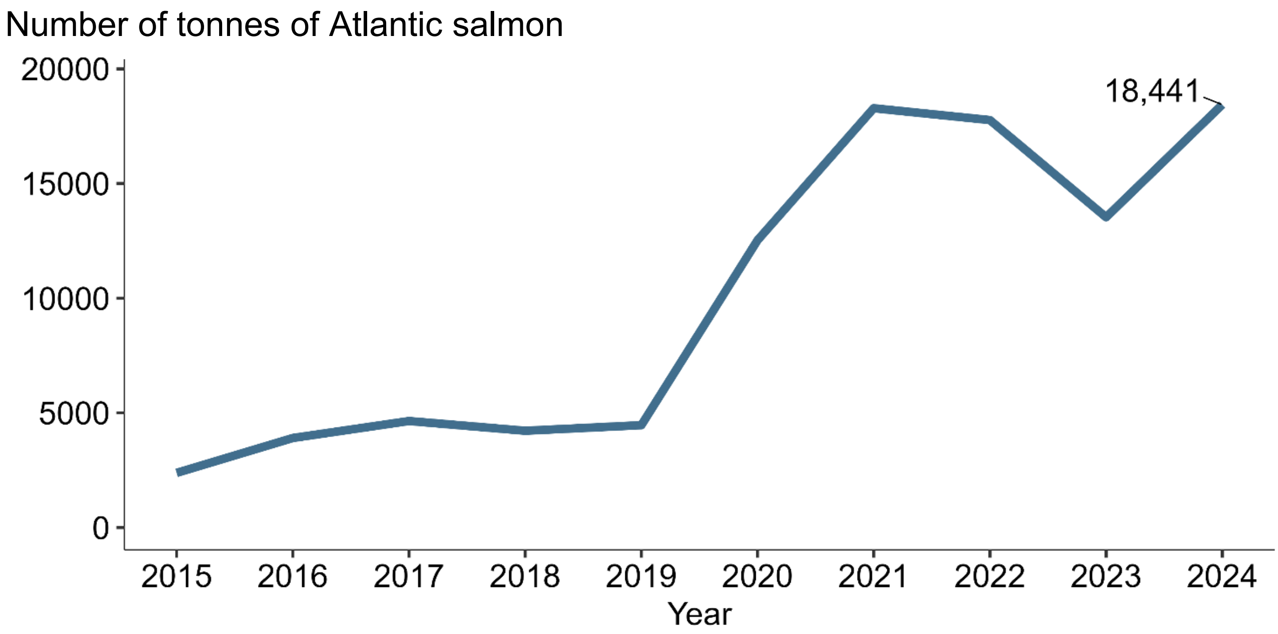
In 2024, the number of freshwater and seawater sites holding broodstock increased to six sites. A total of 7,875 fish were stripped, yielding 55.7 million ova, giving an average yield of 7,067 ova per fish.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables], Table 17 and Table 38.

Organic Production

Chart 29: Organic production of Atlantic salmon during 2015-2024.

Data represented by a solid dark blue line in Chart 29 displays annual organic Atlantic salmon production (in tonnes) over the ten-year period, 2015 to 2024.



Of the 214 active Atlantic salmon seawater pen sites in 2024, 12 were certified as organic, producing 18,441 tonnes. Organic production accounts for almost 10% of the total annual Atlantic salmon production.

Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables], Table 39.

Escapes

There was one incident involving the loss of one fish from a seawater Atlantic salmon production site in 2024. There were 11 additional incidents reported where the companies confirmed there was no loss of fish.

Escapes data from previous annual survey reports are available: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 46.

4. Other Species

The Scottish aquaculture sector has continued to farm other species of fish during 2024. The production of brown/sea trout (*Salmo trutta*) showed an increase, with the majority of production being for the angling restocking market. In 2024 there was production of halibut (*Hippoglossus hippoglossus*) but the figure cannot be published without revealing the production from an individual company. Lumpsucker (*Cyclopterus lumpus*) and several species of wrasse (Labridae) were also produced in 2024. The production of lumpsucker and wrasse are targeted at the marine Atlantic salmon sector where they are used as a biological control for parasites. Lumpsucker and wrasse figures were amalgamated into a single cleaner fish category as separate publication of lumpsucker data would reveal the production of an individual company.However since 2024 all cleanerfish production has been wrasse only.

Company, Site and Production Data

Table 17: Number of companies and sites producing other species in 2024, annual production of other species (tonnes) during 2023-2024 and projected production in 2025.

Note: The 2025 production values are sector estimates based on stocks currently being on-grown. Halibut production and estimated production figures cannot be shown without revealing the figure for an individual company. Cleaner fish represents amalgamated lumpsucker and wrasse figures (this figure excluded any larval stage fish).

Species	No. of companies	No. of sites	2023 production (tonnes)	2024 production (tonnes)	2025 Estimated production (tonnes)
Brown/sea trout	6	7	16	23	17
Halibut	1	1	Data excluded	Data excluded	Data excluded
Cleaner fish	2	3	8	3	3

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 40.

Staffing

Chart 30: Total number of staff employed in other species production 2015-2024.

Chart 30 shows total number of staff employed in Other species production over the ten-year period from 2015 to 2024. The data are represented by a dark blue line which shows the combined total of full-time and part-time staff each year.

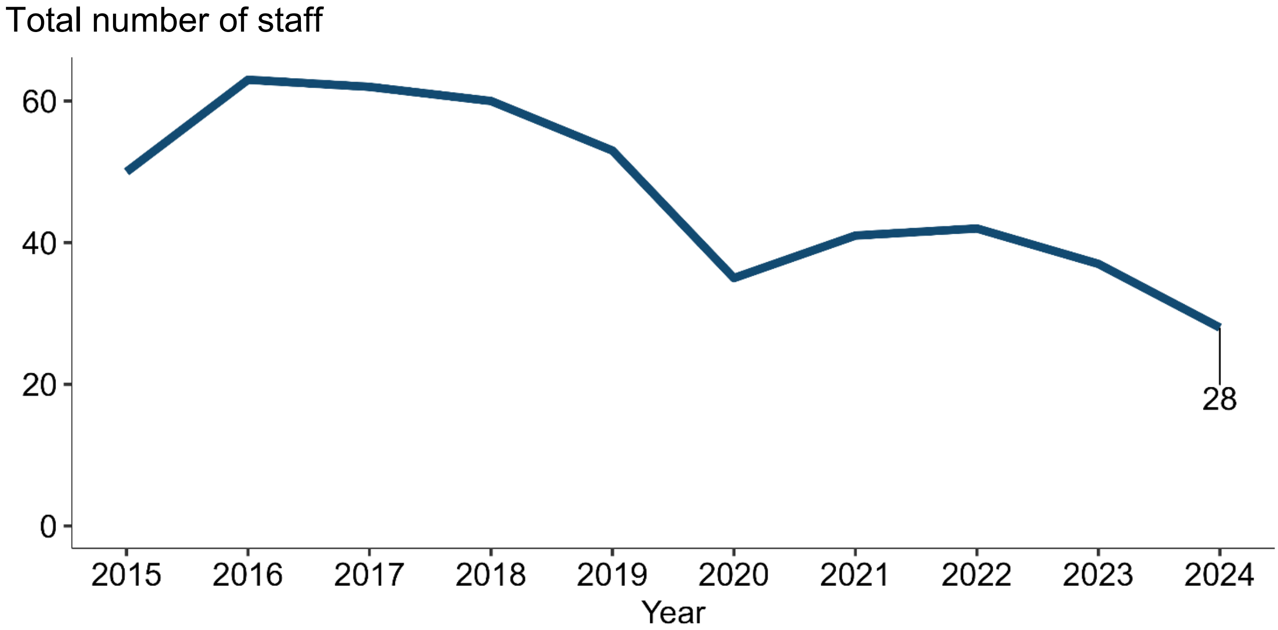
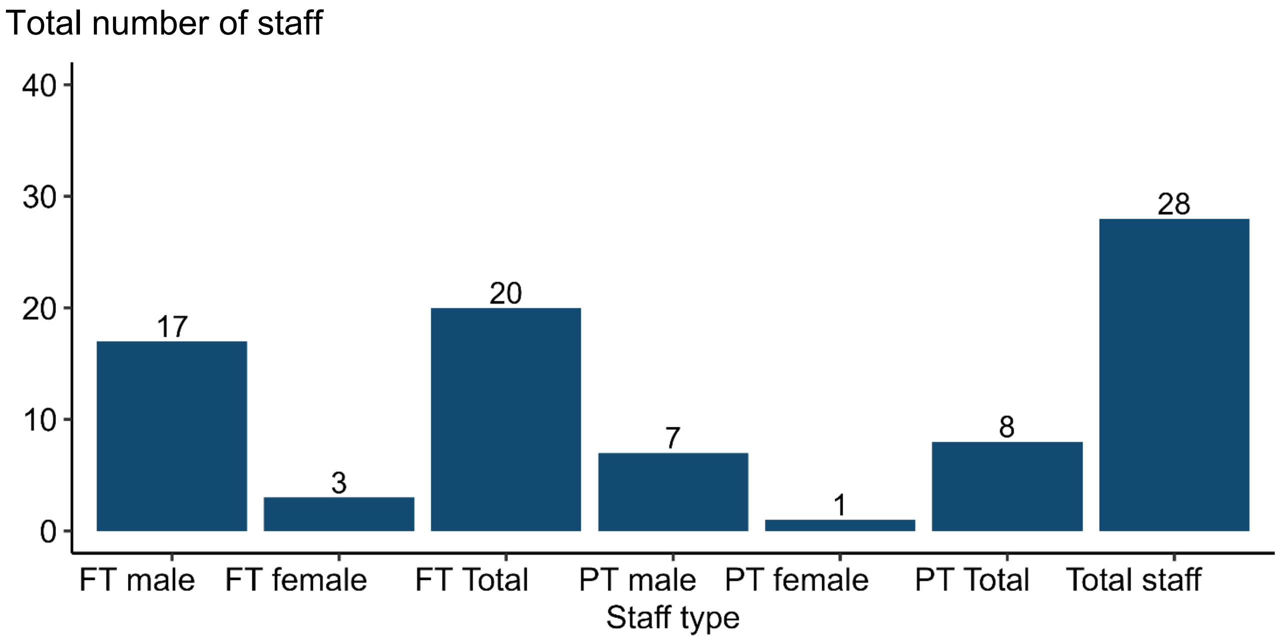


Chart 31: Number of full-time and part-time staff employed in Other species production during 2024, by gender.

Chart 31 displays the number of staff employed in Other species production by gender and employment status (full-time and part-time). The data are represented using dark blue bars for each category.

Note: FT = Full-time and PT = Part-time



In 2024, the overall number of staff employed in the production of other species decreased by nine employees (24%), to 28. Out of 28 staff, 24 were male (86%) and four were female (14%).

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 41.

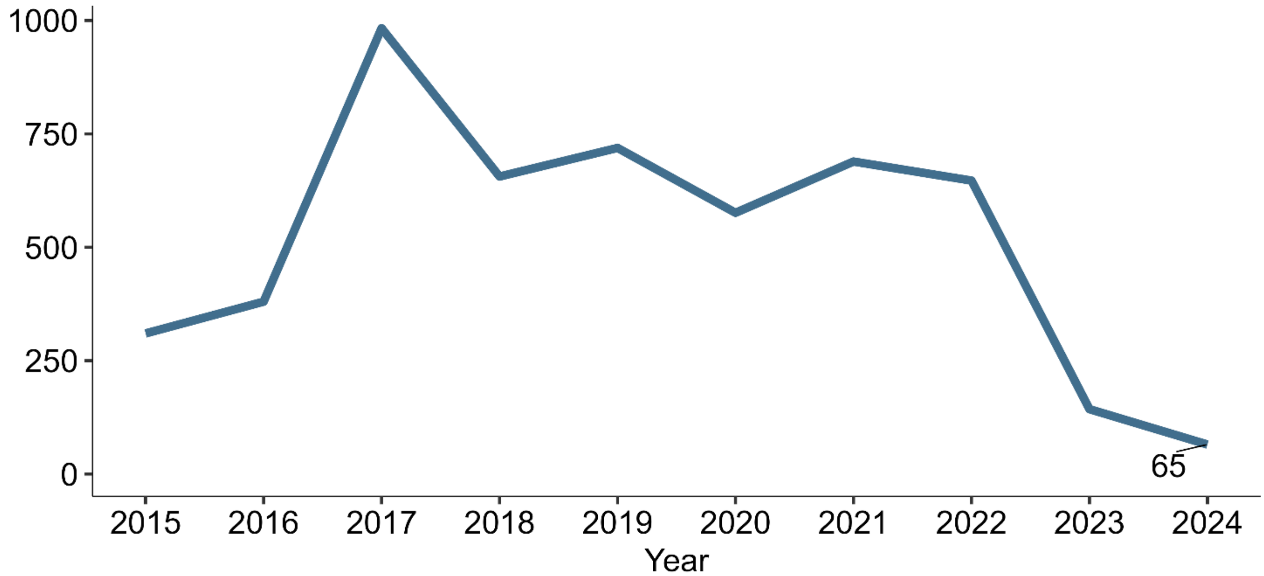
Production of Cleaner fish

Chart 32: Number of cleaner fish (lumpsucker and wrasse) produced during 2015-2024.

Chart 32 shows total number of cleaner fish produced (dark blue line) over the ten-year period, 2015 to 2024.

Note: Cleaner fish represents amalgamated lumpsucker and wrasse figures (this figure excluded any larval stage fish).

Number of cleaner fish in thousands



In recent years lumpsucker and wrasse species. have been produced for use as a biological control for parasites in the marine Atlantic salmon sector. Data on the number of fish produced has only been collected since 2015. These figures were for adult fish and did not include production of larval stage cleaner fish which may have been traded for on-growing at facilities outside of Scotland, shortly after hatching.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 42.

Ova Laid Down to Hatch

Table 18: Source of ova from other species laid down to hatch during 2024.

Note: Halibut own broodstock ova was laid down to hatch but this cannot be shown without revealing the figure for an individual company. Cleaner fish represents amalgamated lumpsucker and wrasse figures.

Species	Own broodstock laid down to hatch (in 000s)	Other GB broodstock laid down to hatch (in 000s)	Imported ova laid down to hatch (in 000s)
Brown/sea trout	10	0	0
Halibut	Data excluded	0	0
Cleaner fish	0	0	0

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 43.

Trade in Small Fish

Table 19: Trade in small fish of other species in 2024.

Note: Cleaner fish represents amalgamated lumpsucker and wrasse figures.

Species	Bought (in 000s)	Sold (in 000s)
Brown/sea trout	25	2
Halibut	0	0
Cleaner fish	0	21,825

The number of cleaner fish sold increased from 19.8 million in 2023 to 21.8 million in 2024. Many of these fish were larval stage fish which were traded for on-growing at facilities outside of Scotland.

There was also a small amount of production of brook charr (Salvelinus fontinalis), tiger trout (*Salmo trutta* crossed with *Salvelinus fontinalis*) and European eel (*Anguilla anguilla*). However, due to the small number of companies in production, it is not possible to summarise these data without revealing the production of individual companies.

Data Source: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 44.

Organic Production

Of the 10 sites recorded as producing other species in 2024, no organic production was reported.

Escapes

There were no reported escapes from sites rearing other species during 2024.

Escapes data from previous annual survey reports are available: Scottish Fish Farm Production Survey 2024, Supplementary Tables, Table 46.

5. Scottish Marine Regions

The Marine (Scotland) Act 2010 introduces integrated management of Scotland's seas. The creation of a National Marine Plan, as required by the Act, sets the wider context for planning within Scotland including what should be considered when creating regional marine plans. Eleven Scottish Marine Regions have been created under the Act (see Figure 4) which cover sea areas extending out to 12 nautical miles.

To support the development of Regional Marine Plans by Regional Marine Planning Partnerships, tonnages and financial values of annual finfish production have been calculated for the regions defined under the Act. These regional data are presented in Appendix 3. In order to maintain commercial confidentiality salmon production figures for Argyll & Clyde and the North Coast & West Highlands have been merged. Other finfish species including brown/sea trout, rainbow trout, cod, halibut and cleaner fish were produced, however these figures cannot be attributed to Scottish Marine Regions due to commercial confidentiality.

Figure 4: Scottish Marine Regions

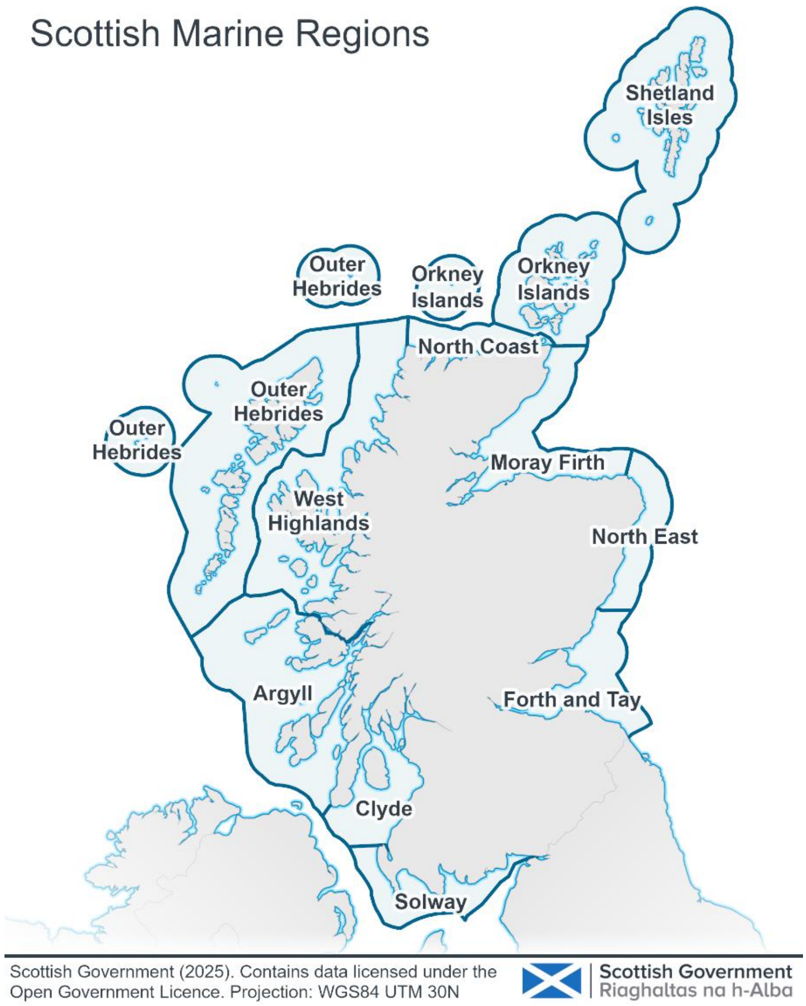


Chart 33: Total Atlantic salmon production (in tonnes) in each Scottish Marine Region during 2015-2024.

Note: Some SMRs have been combined to maintain confidentiality, the regions used were as follows: North Coast & West Highlands, Shetland Isles, Argyle & Clyde, Outer Hebrides and the Orkney Islands.

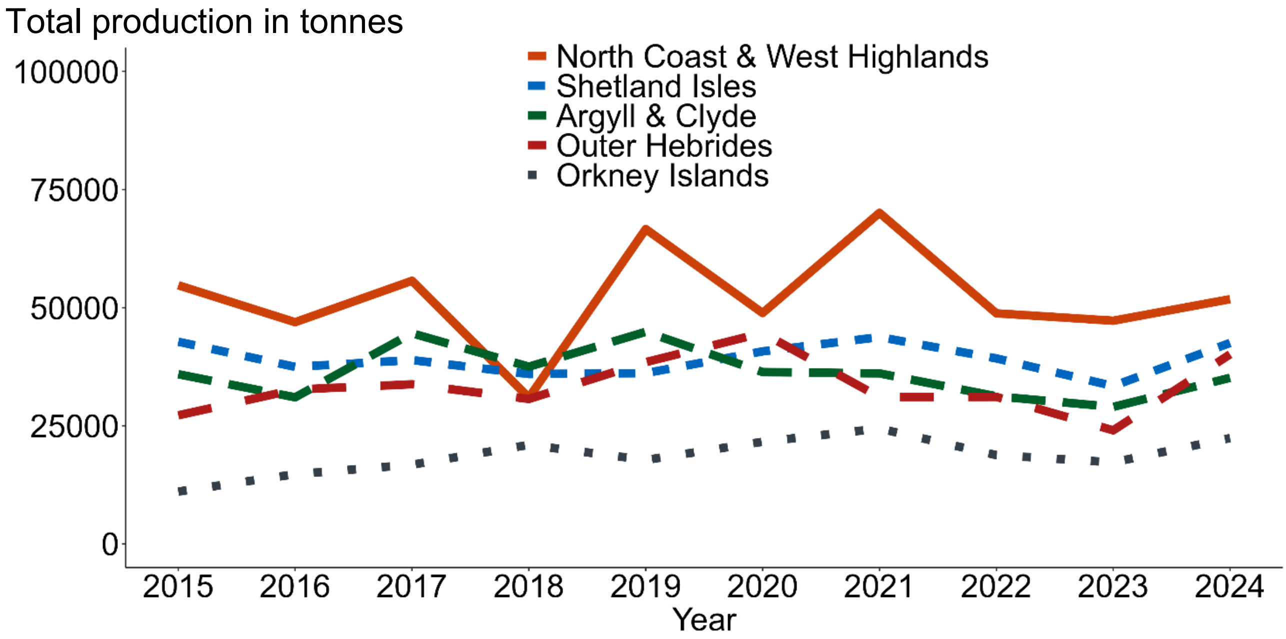
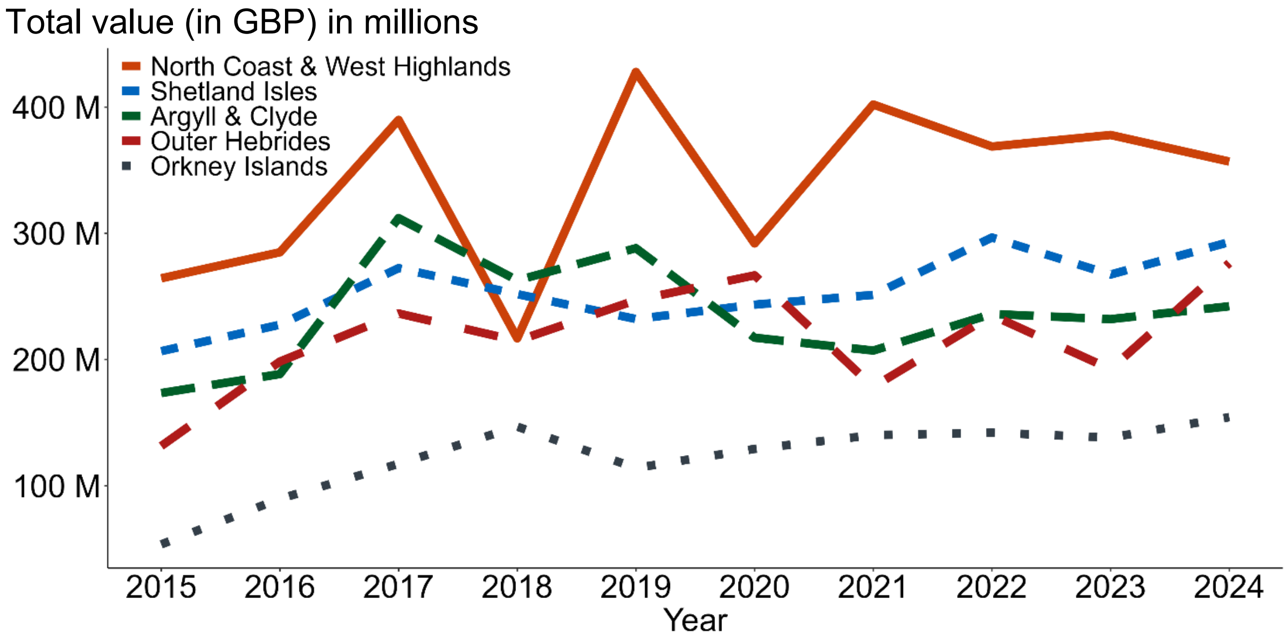


Chart 34: Total Atlantic salmon production value (in GBP) in each Scottish Marine Region during 2015-2024.

Note: Some SMRs have been combined to maintain confidentiality, the regions used were as follows: North Coast & West Highlands, Shetland Isles, Argyle & Clyde, Outer Hebrides and the Orkney Islands. Average price (real) have been adjusted for inflation based on 2024 price estimates.



Data Source: [Scottish Fish Farm Production Survey 2024, Supplementary Tables](), Table 45.

6. Summary

Rainbow trout

The production of rainbow trout decreased by 12% in 2024 to 8,171 tonnes and was directed at the table (94%) and restocking (6%) markets. The overall number of staff employed by the sector decreased by 30 people (22%) to 106 employees. There was an increase in the productivity of the sector to 77.1 tonnes per person.

In 2024, the number of eyed ova laid down to hatch was 4.5 million and was mainly triploid stock (97%). The proportion of ova from GB broodstock increased to 50% of the total. Suppliers within the EU were the largest source of imported ova accounting for 58% of the total, this was an increase proportionally from 2023. In addition to GB produced ova, the sector has a reliance on imported ova. No producers imported part grown rainbow trout from Northern Ireland in 2024, marking a departure from a practice that has been common in previous years.

Atlantic salmon

In 2024, total Atlantic salmon production increased by 41,051 tonnes (27%) reaching 192,000 tonnes. This increase was driven by a rise in the mean harvest weight of year 0 salmon, grilse and pre-salmon, as well as an increase in the number of fish produced across all categories (year 0, grisle, pre-salmon and year 2). The mean harvest weight for year 2 salmon remained unchanged. Survival to harvest declined from 68.7% in the 2021 year class to 61.8% in the 2022 year class. The number of staff directly employed on the farms decreased by 118 employees (8%). Overall, there was an increase of productivity, in tonnes produced per person, from 102 to 141. The trend towards concentrating production in larger sites was maintained with 89% of production being concentrated in the sites producing over 1,000 tonnes per annum. The harvest forecast for 2025 is estimated to be 195,182 tonnes.

During 2024, there was a slight decrease in the number of ova produced to 55.7 million. The number of ova laid down to hatch increased by 20% to 89.5 million. 2024 saw 59% of ova being imported with the remaining 41% being derived from GB broodstock (an increase of 1% on the 2023 figure). Smolt production decreased to 44.6 million, with 52% being produced as S½ smolts and 48% as S1 smolts. The number of staff directly employed on freshwater sites decreased by 25 (8%) in 2024 to 280 staff while productivity decreased to 159,400 smolts per person. Projections for 2025 suggest that more smolts will be produced than in 2024, followed by a further increase in 2026.

Other Species

Production of brown/sea trout decreased to 23 tonnes in 2024. Halibut production occurred in 2024 but the figure cannot be shown without revealing the production of individual companies. In 2024, wrasse continued to be produced for use as a biological control for parasites in the marine Atlantic salmon farming sector. Cleaner fish production figures were for adult fish and did not include production figures for larval stage cleaner fish which may have been traded for on-growing at facilities outside of Scotland. In 2024, the total number of staff employed in the production of other species decreased by nine people (24%) to 28 employees.

Supplementary Tables

The following supplementary tables are available for download alongside this publication in Excel format

- Table 1a: Rainbow trout - Annual production (tonnes) of rainbow trout between 1979 and 2024.
- Table 1b: Rainbow trout – Annual production (tonnes) of rainbow trout for the table trade between 1980 and 2024, according to weight category.
- Table 1c: Rainbow trout – Annual production (tonnes) of rainbow trout for the restocking trade between 1980 and 2024 according to weight category.
- Table 2: Rainbow trout - Number of sites grouped by tonnage produced between 1992-2024.
- Table 3: Rainbow trout – Number of sites by production tonnages and main methods of production between 1994 and 2024.
- Table 4: Rainbow trout - Number of companies and sites in production between 1981 and 2024.
- Table 5: Rainbow trout - Number of staff employed (by gender) and productivity per person between 1979-2024.
- Table 6: Rainbow trout – Production and staffing by area between 1997 and 2024.
- Table 7: Rainbow trout - Number and proportions (%) of eyed ova types laid down to hatch between 1992 and 2024.
- Table 8: Rainbow trout - Number and sources of eyed ova laid down to hatch between 1984 and 2024.
- Table 9a: Rainbow trout - Number and sources of ova imported into Scotland from outwith GB between 1994 and 2024.
- Table 9b: Rainbow trout - Seasonal variation in numbers and sources of ova imported into Scotland from outwith GB between 1994 and 2024.
- Table 9c: Rainbow trout - Number and sources of fish imported into Scotland from outwith GB between 2006 and 2024.
- Table 10: Rainbow trout - Number of fry and fingerlings traded between 1992 and 2024.
- Table 11: Rainbow trout - Number of sites rearing fish vaccinated against enteric redmouth disease (ERM) and number of fish vaccinated between 1986 and 2024.
- Table 12: Smolts - Number of companies and sites in production between 1979-2024.
- Table 13: Smolts - Number of smolts produced, staff employed and smolt productivity between 1979 and 2024.

- Table 14: Smolts - Number of smolts produced by type between 1993 and 2024.
- Table 15: Smolts - Number and capacity of production systems between 1984 and 2024.
- Table 16: Smolts - Number of smolts produced and stocking densities by production system between 1988 and 2024.
- Table 17: Smolt - Number of salmon ova produced between 1982 and 2024.
- Table 18: Smolts - Source, number, previous year's estimate of ova laid down to hatch between 1984 and 2024 and projected production for 2025.
- Table 19: Smolts - Actual and projected smolt production and smolts put to sea (millions) between 1987 and 2024.
- Table 20: Smolts - Smolt-producing sites grouped by numbers of smolts produced during 1987 and 2024.
- Table 21: Smolts - Staffing, ova laid down to hatch, smolt production and estimated production between 1990-2024 by region.
- Table 22a: Smolts - Source and number of salmon ova, fry, parr and smolts imported between 1992 and 2024 derived from health certificates.
- Table 22b: Smolts - Number of salmon ova, fry, parr and smolts exported between 1994 and 2024 derived from health certificates.
- Table 23: Smolts - Number of sites using vaccines and number of fish vaccinated between 1986 and 2024.
- Table 24: Atlantic salmon - Annual production of salmon (tonnes) between 1979 and 2024.
- Table 25: Atlantic salmon - Number, production (tonnes) of salmon harvested and mean fish weight (kg) per year class between 1985 and 2024.
- Table 26: Atlantic salmon - Number and production (tonnes) of grilse (January - August) and pre-salmon (September - December) harvested between 1985 and 2024.
- Table 27: Atlantic salmon - Percentage (by weight) of annual production by growth stage harvested between 1993 and 2024.
- Table 28: Atlantic salmon - Survival and production in smolt year classes between 1984 and 2024.
- Table 29: Atlantic salmon - Number and origin of smolts put to sea between 1982 and 2024.
- Table 30: Atlantic salmon - Number of smolts put to sea and year class survival by area between 1988 and 2024.
- Table 31: Atlantic salmon - Number of staff (by gender) employed in the production of salmon between 1979-2024.
- Table 32: Atlantic salmon - Production methods, capacity (cubic metres), tonnage and average stocking densities (kg/m^3) between 1984 and 2024.

- Table 33: Atlantic salmon - Number of sites shown in relation to their production grouping between 2012 and 2024.
- Table 34: Atlantic salmon - Number of companies grouped by production (tonnes), staff and productivity (tonnes per person) between 2012 and 2024.
- Table 35: Atlantic salmon - Staff and production (tonnes) by area between 1990 and 2023 and projected production in 2024.
- Table 36: Atlantic salmon - Number of companies and sites engaged in the production of Atlantic salmon between 1988 and 2024.
- Table 37: Atlantic salmon - Number of seawater pen sites employing a fallow period between 1993 and 2024.
- Table 38: Atlantic salmon - Number of sites holding Atlantic salmon broodstock between 1986 and 2024.
- Table 39: Atlantic salmon - Organic production of Atlantic salmon between 2010 and 2024.
- Table 40: Other species - Company, site and production data for other species between 1999 and 2024.
- Table 41: Other species - Number of staff (by gender)employed in farming other species between 1999-2024.
- Table 42: Other species - Number of cleaner fish (lumpsucker and wrasse) produced between 2015 and 2024.
- Table 43: Other species - Source of ova from other species laid down to hatch between 1999 and 2024.
- Table 44: Other species - Trade in small fish of other species between 1999 and 2024.
- Table 45: Atlantic salmon - Production tonnage and value (GBP) by Scottish Marine Region between 2014 and 2024.
- Table 46: Farmed fish escapes data from the annual production survey reports 2000-2024.

Glossary

Active	Fish farms in a production growing cycle which may contain stock or be fallow.
Broodstock	Adult fish held until maturation for breeding purposes.
Cleaner fish	Fish species that are used as biological control for parasites in the marine Atlantic salmon farming sector.
Diploid	Fish with the normal two sets of chromosomes.
ERM	Enteric redmouth disease.
Eyed-ova	Fish egg(s) at the stage of development when the heavily pigmented eyes of the embryo are sufficiently developed to be clearly visible.
Fallow	Fish farm having no stock, but still part of a growing cycle.
Fingerling	A term commonly applied to young stages of salmonid fish.
Fry	The life stage of a young salmon from independence of the yolk sac as the primary source of nutrition to dispersal from the redd.
Grilse	Salmon harvested between 1st January and 31st August after one winter at sea.
Intra-peritoneal	Within the body cavity.
IPN	Infectious pancreatic necrosis.
Larval stage	Recently hatched fish which live off a yolk sac attached to their bodies.
Non-producing	A site which is active, may be stocked with fish, but has not produced any fish for harvest during the specified year.
On-growing	Farm producing fish for the table market.
Ova	Eggs.
Parr	Young salmon at stage from dispersal from redd to migration as a smolt.
Photoperiod	Alteration of the daylight regime.

Pre-salmon Salmon harvested between 1st September and 31st December after one winter at sea.

Raceway Concrete or brick channels used for farming fish.

SAV Salmonid alphavirus.

S½ Salmon or sea trout smolting at approximately six months from hatch (usually by photoperiod and/or temperature manipulation).

S1 Salmon or sea trout smolting at approximately one year from hatch.

S1½ Salmon or sea trout smolting at approximately 18 months from hatch.

Smolt Fully silvered juvenile salmon or sea trout ready to be transferred or to migrate to sea.

Stripped Collection of ova/milt from broodfish.

Triploid Triploid fish are sterile fish which have three sets of chromosomes, unlike fertile fish that have two sets of chromosomes (diploid).

Year 0 salmon Adult salmon harvested in the same calendar year they were transferred to sea.

Year 1 salmon Adult salmon harvested in the first calendar year after they were transferred to sea.

Year 2 salmon Adult salmon harvested in the second calendar year after they were transferred to sea.

Year class Fish hatched or put to sea in a given year.

Data and Methodology

How to access the data

The data can be accessed via the supplementary tables: Scottish Fish Farm Production Survey 2024, Supplementary Tables.

Also for an interactive visual tool, the data can be accessed via a Shiny App: Data Visualisation App: Scottish Aquaculture Production Surveys Shiny.

How was the data collected

The data from this report has been collected via a questionnaire sent out to all authorised active fish production businesses (Supplementary Questionnaire Documentation).

Quality Assurance

Reported data are verified against a series of checks. Where necessary, the data are referred back to the person completeing the questionnaire for clarification. The information published is the summation of the reported data. Return rates of the survey forms is 100%.

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