

Nursery Survey

2022

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Coverage:

Great Britain

Geographical breakdown:

Scotland

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The research agency of the
Forestry Commission

Forest Research is the research agency of the Forestry Commission and is the leading UK organisation engaged in forestry and tree related research.

The Agency aims to support and enhance forestry and its role in sustainable development by providing innovative, high quality scientific research, technical support and consultancy services.

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Introduction

This publication provides estimates of sales of improved nursery stock by nurseries in Great Britain for the planting year October 2020 to September 2021. The figures cover sales of Sitka spruce and Scots pine to public and private sector clients in Scotland. Total sales of these species are also reported.

The figures in this release have been obtained from a voluntary survey of nursery businesses in Great Britain, run on behalf of Scottish Forestry, to monitor the level of improved nursery stock.

“Improved nursery stock” refers to genetically improved Sitka spruce and Scots pine stock raised from seed of seed orchard origin and by vegetative propagation of parent material derived from controlled crosses. These trees are predicted to grow faster and produce better timber than unimproved stock.

Figures for the planting year October 2020 to September 2021 are published for the first time in this release. Figures for earlier years are unchanged from those previously released. For further details, see the Revisions section of the Annex.

Key findings

The key findings are:

- A total of 57.6 million plants (92%) derived from improved nursery stock were sold to Scotland in 2020/21.
- Of all sales in Great Britain in 2020/21, 67.6 million plants (91%) were derived from improved nursery stock. This is an increase from the 56.0 million plants sold in the previous year that were from improved stock.

Improved nursery stock

Improved nursery stock is defined as follows:

Species	Definition
Sitka spruce: Seedlings	Seed orchard material that falls in the tested category under the UK Forest Reproductive Material Regulations. This material will have superior performance for growth rate and stem form relative to untested material.
Sitka spruce: VP	Vegetatively propagated tested 'family mixture' material (either half or full sib families). This material is derived from controlled cross-pollination and then multiplied using vegetative propagation. This stock has significant genetic gains for both quality and quantity traits.
Scots pine	Seed orchard material that falls in the tested category under the EU Forest Reproductive Material Regulations. This material will have superior performance for growth rate and stem form relative to untested material.

Sales of nursery stock to Scotland

An estimated total of 62.6 million Sitka spruce and Scots pine plants were sold to Scotland in 2020/21 (Table 1), comprising 54.9 million Sitka spruce plants and 7.7 million Scots pine plants. This represents an increase in sales of Sitka spruce (26%) and a marginal decrease in sales of Scots pine (-2%) from the previous year.

A total of 57.6 million plants (92%) derived from improved nursery stock were sold to Scotland in 2020/21. This is a 19% increase on the total improved nursery stock sold to Scotland in 2019/20, and the largest annual increase since 2013/14.

Table 1: Sales of nursery stock¹ to Scotland, 2016/17 to 2020/21

million plants

	Sitka Spruce Seedlings	Sitka Spruce VP ²	Sitka Spruce Total	Scots Pine	Total
Total stock³					
2016/17	36.4	7.1	43.5	5.7	49.1
2017/18	37.4	4.6	41.9	6.3	48.3
2018/19	36.9	7.3	44.3	8.7	53.0
2019/20	37.1	6.6	43.6	7.8	51.5
2020/21	49.5	5.4	54.9	7.7	62.6
Improved stock					
2016/17	34.9	7.1	42.0	3.8	45.8
2017/18	36.4	4.6	41.0	4.1	45.1
2018/19	36.2	7.3	43.5	5.8	49.3
2019/20	37.0	6.6	43.6	4.9	48.4
2020/21	48.0	5.4	53.4	4.2	57.6
% Improved					
2016/17	96%	100%	97%	67%	93%
2017/18	98%	100%	98%	65%	93%
2018/19	98%	100%	98%	67%	93%
2019/20	100%	100%	100%	62%	94%
2020/21	97%	100%	97%	55%	92%

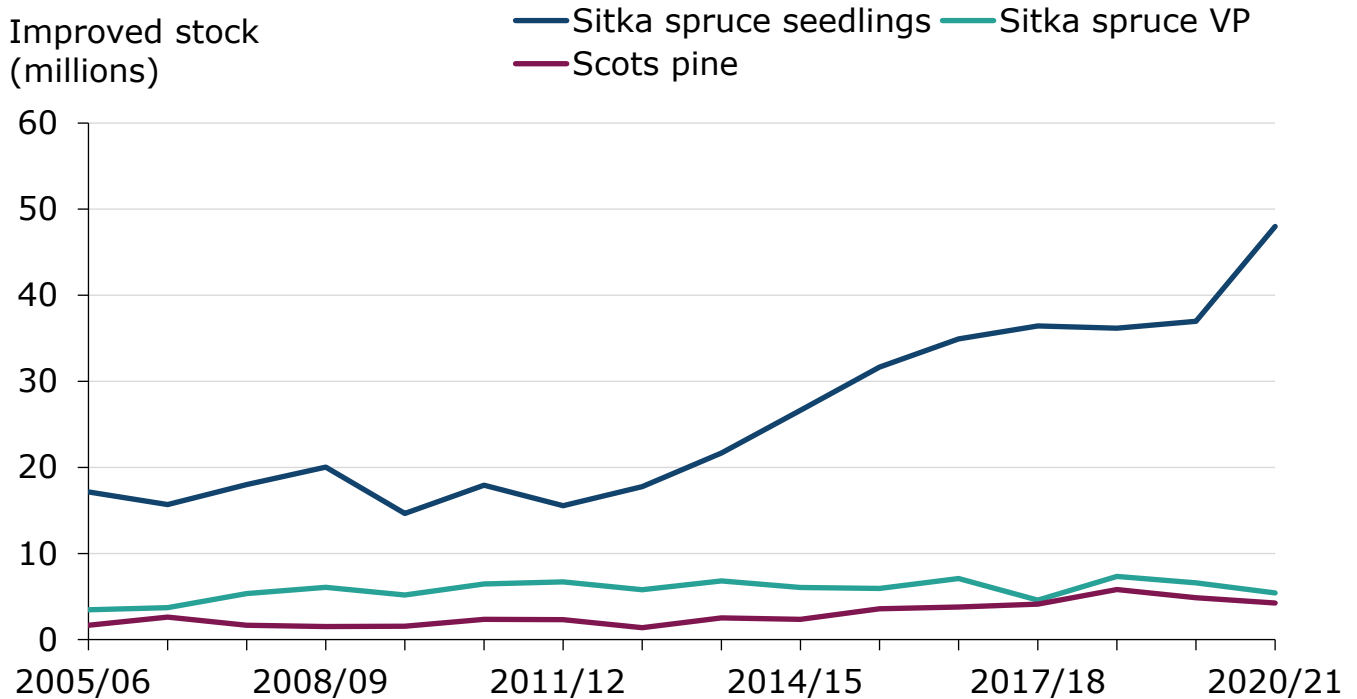
Source: Forest Research.

Note:

1. Results for respondents only. This is estimated to account for around 90-95% of all sales of Sitka spruce and Scots pine in each of the years shown in the table.
2. VP = vegetative propagation.
3. Years are planting years, running from October to September.

Figure 1 presents the sales of improved nursery stock to Scotland since the 2005/06 planting season. Sales of improved Sitka spruce seedlings have more than doubled since 2011/12.

Figure 1: Sales of improved stock to Scotland, 2005/06 to 2020/21



Source: Forest Research.

Note:

1. Results for respondents only. This is estimated to account for around 90-95% of all sales of Sitka spruce and Scots pine.
2. VP = vegetative propagation.
3. Years are planting years, running from October to September.

Total sales of nursery stock in Great Britain

An estimated 74.3 million Sitka spruce and Scots pine plants were sold in Great Britain in 2020/21 (Table 2), comprising 65.1 million Sitka spruce plants and 9.3 million Scots pine plants. This represents an increase of 27% in sales of Sitka spruce and 2% increase in sales of Scots pine from the previous year.

A total of 67.6 million plants (91% of all sales) in 2020/21 were derived from improved nursery stock. This is a 21% increase in total improved nursery stock sold in 2019/20.

Compared with 2018/19, 2019/20 saw a 12% decrease in sales of improved nursery stock in Great Britain. This year's 21% increase compared with 2019/20 is due to greater demand, particularly from private sector.

Table 2: Total sales (all GB) of nursery stock¹, 2016/17 to 2020/21

million plants

	Sitka Spruce Seedlings	Sitka Spruce VP ²	Sitka Spruce Total	Scots Pine	Total
Total stock³					
2016/17	43.4	9.1	52.5	6.8	59.2
2017/18	44.3	5.5	49.8	8.0	57.8
2018/19	49.3	8.0	57.3	10.1	67.4
2019/20	44.1	7.3	51.4	9.1	60.5
2020/21	59.3	5.8	65.1	9.3	74.3
Improved stock					
2016/17	41.9	9.1	51.0	4.7	55.7
2017/18	43.3	5.5	48.7	5.2	53.9
2018/19	48.5	8.0	56.5	7.2	63.7
2019/20	43.0	7.3	50.3	5.7	56.0
2020/21	56.3	5.8	62.1	5.5	67.6
% Improved					
2016/17	97%	100%	97%	70%	94%
2017/18	98%	100%	98%	64%	93%
2018/19	98%	100%	99%	71%	94%
2019/20	97%	100%	98%	63%	92%
2020/21	95%	100%	95%	59%	91%

Source: Forest Research.

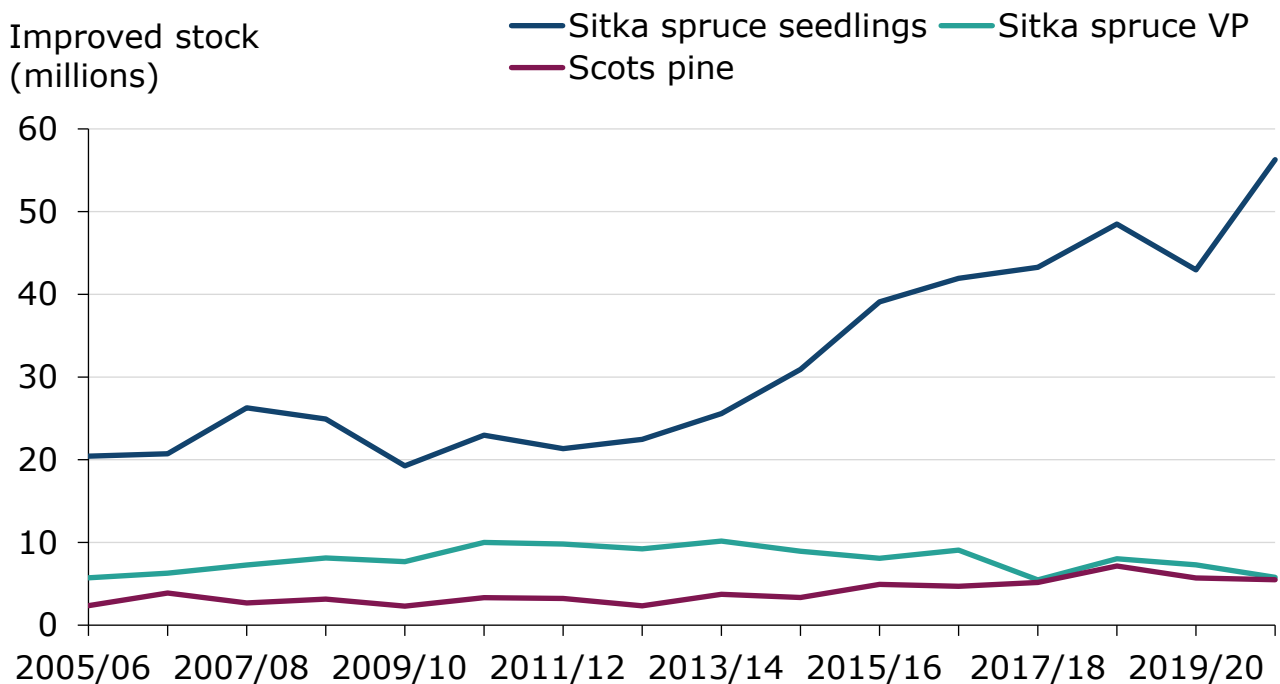
Note:

1. Results for respondents only. This is estimated to account for around 90-95% of all sales of Sitka spruce and Scots pine in each of the years shown in the table.
2. VP = vegetative propagation.
3. Years are planting years, running from October to September.

Figure 2 shows the total sales for all Great Britain of improved stock.

Since the 2005/06 planting season, improved Sitka spruce seedlings have reported an almost three-fold increase in sales. Improved Sitka spruce vegetative propagation and improved Scots pine sales have both remained relatively constant throughout.

Figure 2: Total sales (all GB) of improved stock, 2005/06 to 2020/21



Source: Forest Research.

Note:

1. Results for respondents only. This is estimated to account for around 90-95% of all sales of Sitka spruce and Scots pine.
2. VP = vegetative propagation.
3. Years are planting years, running from October to September.

Annex

Introduction

This annex provides background information on the nursery survey statistics presented in this release. It covers the data sources and methodology used to produce the statistics, information on quality measures and on any revisions to historic data and links to further information.

Glossary

Conifers

Trees with needles and cones, such as spruce, pine and larch.

Great Britain (GB)

England, Scotland and Wales.

Improved nursery stock

Genetically improved Sitka spruce and Scots pine stock raised from seed of seed orchard origin and by vegetative propagation of parent material derived from controlled crosses. Further detailed information is provided on page 4 of this release.

Planting year

Twelve month period running from October to September.

Scots pine

Species of coniferous tree, native to Great Britain.

Seed orchard

Orchard where trees are grown for seed production rather than timber.

Seedling

Young tree grown from seed, prior to being transplanted or planted out in the forest.

Sitka spruce

Species of coniferous tree, not native to Great Britain.

Vegetative propagation (VP)

Reproduction by cuttings, layering or grafting and not involving fertilisation.

Data Sources and Methodology

The figures in this release have been obtained from a voluntary survey of nursery businesses in Great Britain, run on behalf of Scottish Forestry (previously Forestry Commission Scotland). The survey was set up to monitor the level of use of improved nursery stock in Scotland annually.

The results relate to respondents only; no estimates have been made for non-respondents to the survey or for businesses not covered by the survey. It is estimated that the respondents in 2012/13 have accounted for around 90% of all sales of Sitka spruce and Scots pine, whilst respondents in other years have accounted for around 95% of total sales.

Quality

For the 2020/21 survey, questionnaires were issued to a total of 13 nurseries (including the 3 Forestry England/Forestry and Land Scotland nurseries). A total of 13 responses were received, giving a response rate of 100%.

Further information on the quality of our statistics can be found in our [quality report](#).

Revisions

Figures for the planting year 2020/21 are published for the first time in this release. Figures for earlier years have not been revised.

Our [revisions policy](#) sets out how revisions and errors to Forest Research statistics are dealt with.

Further information

The assistance of the Confederation of Forest Industries (Confor) and the nursery trade in the running of this survey and the provision of data are gratefully acknowledged.

Figures in tables have been independently rounded, so may not add to the totals shown.

Statistics on areas of new planting and publicly funded restocking are available on a financial year basis and are released twice a year. Provisional figures are released in Provisional Woodland Statistics in early-mid June. Final figures are released in Forestry Statistics at the end of September.

Release schedule

Future release dates to be confirmed.

Official Statistics

This is an Official Statistics publication. For more information about Official Statistics see the [UK Statistics Authority](#).

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