

Nursery Survey

2018 Edition

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Coverage: Great Britain

Geographical breakdown: Scotland

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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 2016 to September 2017. 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.

“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. Further detailed information is provided on page 4 of this release.

Figures for the planting year October 2016 to September 2017 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 main findings are:

- A total of 45.8 million plants derived from improved nursery stock were sold to Scotland in 2016/17. This represents an increase from the previous year, when 41.2 million plants sold to Scotland were from improved stock.
- Of all sales in Great Britain in 2016/17, 55.7 million plants (94%) were derived from improved nursery stock, an increase from the 52.1 million plants sold in the previous year that were from improved stock.

Sales of nursery stock

The figures in this release have been obtained from a voluntary survey of nursery businesses in Great Britain, run on behalf of Forestry Commission Scotland.

The survey was originally set up to monitor the level of use of improved nursery stock in Scotland annually, as part of the system for reporting progress over the intended 10 year life of the Scottish Forestry Strategy 2006 (SFS).

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.

'Tested' means material derived from the selection of individual trees or stands that have undergone evaluation for genetic quality and have been shown to be superior, in comparison to accepted standards.

Sales of nursery stock to Scotland

An estimated total of 49.1 million Sitka spruce and Scots pine plants were sold to Scotland in 2016/17 (Table 1). This comprised 43.5 million Sitka spruce plants and 5.7 million Scots pine plants. This was an increase on previous years, although Scots pine sales remained below the 2013/14 peak of 5.9 million plants.

A total of 45.8 million plants derived from improved nursery stock were sold to Scotland in 2016/17 (93%). This represents an increase from the previous year, when 41.2 million plants sold to Scotland were from improved stock.

Table 1: Sales of nursery stock¹ to Scotland, 2005/06 to 2016/17

	Sitka spruce			Scots Pine	million plants
	Seedlings	VP ²	Total		Total
Total stock					
2005/06	21.1	3.5	24.5	2.9	27.4
2006/07	18.4	3.7	22.1	4.2	26.3
2007/08	19.9	5.3	25.2	3.5	28.7
2008/09	20.5	6.1	26.6	3.8	30.4
2009/10	14.8	5.2	20.0	2.5	22.5
2010/11	18.3	6.5	24.8	3.1	27.9
2011/12	16.4	6.7	23.1	4.6	27.7
2012/13	19.9	5.8	25.7	4.2	29.9
2013/14	23.6	6.8	30.4	5.9	36.3
2014/15	28.5	6.0	34.5	4.7	39.3
2015/16	32.4	5.9	38.4	5.6	44.0
2016/17	36.4	7.1	43.5	5.7	49.1
Improved stock					
2005/06	17.2	3.5	20.6	1.7	22.3
2006/07	15.7	3.7	19.4	2.6	22.0
2007/08	18.0	5.3	23.4	1.7	25.0
2008/09	20.0	6.1	26.1	1.5	27.6
2009/10	14.7	5.2	19.8	1.5	21.4
2010/11	17.9	6.5	24.4	2.3	26.7
2011/12	15.5	6.7	22.2	2.3	24.6
2012/13	17.8	5.8	23.5	1.4	24.9
2013/14	21.7	6.8	28.5	2.5	31.0
2014/15	26.6	6.0	32.7	2.3	35.0
2015/16	31.6	5.9	37.6	3.6	41.2
2016/17	34.9	7.1	42.0	3.8	45.8
% Improved					
2005/06	81%	100%	84%	57%	81%
2006/07	85%	100%	88%	62%	84%
2007/08	91%	100%	93%	47%	87%
2008/09	98%	100%	98%	41%	91%
2009/10	99%	100%	99%	61%	95%
2010/11	98%	99%	98%	76%	96%
2011/12	95%	100%	96%	51%	89%
2012/13	89%	100%	92%	33%	83%
2013/14	92%	100%	94%	43%	85%
2014/15	93%	100%	95%	50%	89%
2015/16	98%	100%	98%	64%	94%
2016/17	96%	100%	97%	67%	93%

Source: Forest Research.

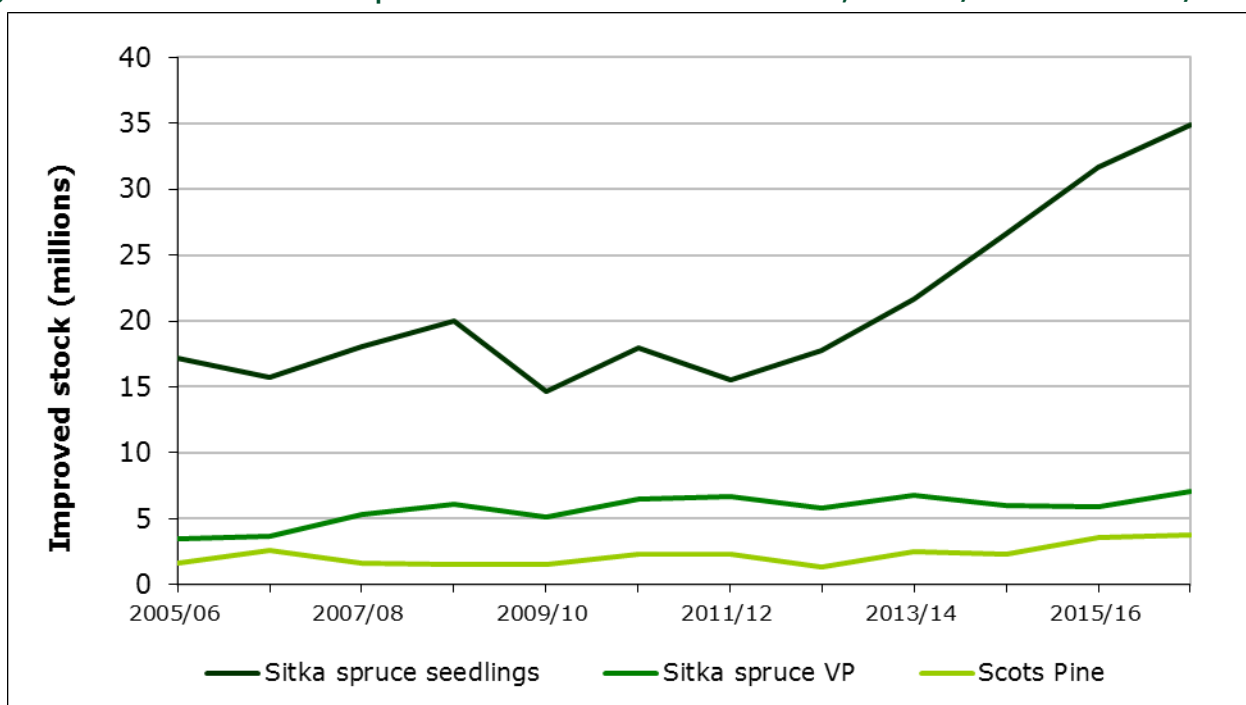
Note:

- (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.

Figure 1 presents the sales of improved nursery stock to Scotland since the 2005/06 planting season. It indicates an increase in sales over most of the period.

Sitka Spruce seedlings, Sitka Spruce VP and Scots Pine all saw an increase in sales of improved nursery stock to Scotland in 2016/17, with each species selling the largest volumes recorded since this survey began in 2005/06. Sitka Spruce seedlings sales saw the largest overall increase with an extra 4 million sales.

Figure 1: Sales of improved stock to Scotland, 2005/06 to 2016/17



Source: Forest Research.

Note:

1. VP = vegetative propagation.
2. Years are planting years, running from October to September.

Total sales of nursery stock in Great Britain

Total sales (covering all GB) accounted for an estimated 59.2 million Sitka spruce and Scots pine plants in 2016/17 (Table 2). This comprised 52.5 million Sitka spruce plants, the highest levels recorded by the survey for this species, and 6.8 million Scots pine plants.

55.7 million plants (94% of all sales) in 2016/17 were derived from improved nursery stock, an increase from the 52.1 million plants sold in the previous year that were from improved stock.

Table 2: Total sales (all GB) of nursery stock¹, 2005/06 to 2016/17

	Sitka spruce			Scots Pine	million plants
	Seedlings	VP ²	Total		Total
Total stock					
2005/06	26.9	5.7	32.6	4.0	36.7
2006/07	25.7	6.3	32.0	5.9	37.9
2007/08	29.8	7.3	37.1	5.1	42.2
2008/09	26.0	8.1	34.1	5.5	39.6
2009/10	20.0	7.7	27.7	3.9	31.6
2010/11	23.4	10.1	33.5	4.2	37.7
2011/12	22.2	9.8	32.0	5.8	37.9
2012/13	24.5	9.2	33.7	5.2	38.9
2013/14	27.8	10.2	37.9	7.2	45.1
2014/15	32.6	8.9	41.5	5.7	47.3
2015/16	40.0	8.1	48.1	7.0	55.1
2016/17	43.4	9.1	52.5	6.8	59.2
Improved stock					
2005/06	20.4	5.7	26.2	2.4	28.5
2006/07	20.7	6.3	27.0	3.9	30.9
2007/08	26.3	7.3	33.5	2.7	36.2
2008/09	24.9	8.1	33.0	3.1	36.2
2009/10	19.3	7.7	26.9	2.3	29.2
2010/11	23.0	10.0	33.0	3.3	36.3
2011/12	21.3	9.8	31.2	3.2	34.4
2012/13	22.5	9.2	31.7	2.3	34.0
2013/14	25.6	10.2	35.7	3.7	39.5
2014/15	30.9	8.9	39.9	3.3	43.2
2015/16	39.1	8.1	47.2	4.9	52.1
2016/17	41.9	9.1	51.0	4.7	55.7
% Improved					
2005/06	76%	100%	80%	58%	78%
2006/07	80%	100%	84%	66%	82%
2007/08	88%	100%	90%	53%	86%
2008/09	96%	100%	97%	57%	91%
2009/10	96%	100%	97%	58%	92%
2010/11	98%	99%	99%	80%	96%
2011/12	96%	100%	97%	56%	91%
2012/13	92%	100%	94%	45%	87%
2013/14	92%	100%	94%	52%	88%
2014/15	95%	100%	96%	58%	91%
2015/16	98%	100%	98%	70%	94%
2016/17	97%	100%	97%	70%	94%

Source: Forest Research.

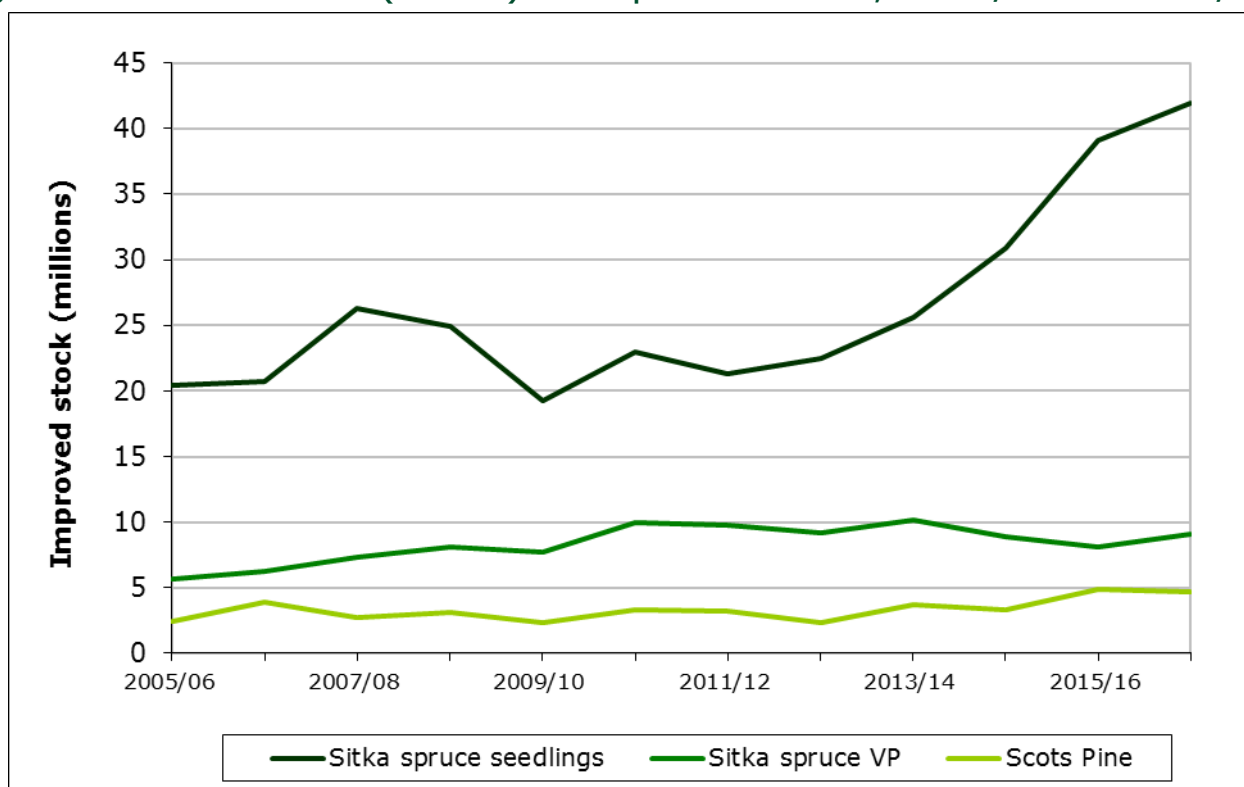
Note:

- (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.

Figure 2 shows the total GB sales of improved stock. Sitka Spruce saw an increase in total Sales of improved nursery stock in 2016/17 with Scots Pine falling slightly by 0.2 million plants.

Figure 2 also illustrates the increase in improved Sitka Spruce seedling sales since the 2011/12 planting season.

Figure 2: Total sales (all GB) of improved stock, 2005/06 to 2016/17



Source: Forest Research.

Note:

1. VP = vegetative propagation.
2. 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, Wales and Scotland.

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 Forestry Commission Scotland.

The results relate to respondents only; no estimates have been made for non-respondents to 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.

The survey was originally set up to monitor the level of use of improved nursery stock in Scotland annually, as part of the system for reporting progress over the intended 10 year life of the Scottish Forestry Strategy 2006 (SFS). The Scottish Forestry Strategy is

available at <http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/forestry-strategy>.

Quality

For the 2016/17 survey, questionnaires were issued to a total of 13 nurseries (including the 3 Forestry Commission nurseries). A total of 13 responses (including nil responses) were received, giving a response rate of 100%.

Further quality information on FC Official Statistics is available at:

www.forestresearch.gov.uk/tools-and-resources/statistics/about-our-statistics/code-of-practice/quality-of-official-statistics/.

Revisions

Figures for the planting year 2016/17 are published for the first time in this release. Figures for earlier years have not been revised.

The Forestry Commission's revisions policy sets out how revisions and errors to these statistics are dealt with, and can be found at:

<https://www.forestresearch.gov.uk/documents/4355/FCrevisions.pdf>.

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 "Woodland Area, Planting and Public Funded Restocking" (to be renamed "Provisional Woodland Statistics from 2019) in early June. Final figures are released in Forestry Statistics at the end of September.

Release schedule

Results for the planting year 2017/18 are expected to be published in September 2019.

Official Statistics

This is an Official Statistics publication. For more information about Official Statistics and the UK Statistics Authority visit www.statisticsauthority.gov.uk.