National Field Vegetable Census 2015

Bord Bia
Irish Food Board

Department of Agriculture, Food and the Marine
An Roinn Talmhaíochta, Bia agus Mara

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Appendix Tables

National Field Vegetable Census 2015

Introduction

The 2015 National Field Vegetable Census was compiled from a comprehensive survey of 165 field vegetable producers. The census was conducted in 2016, asking growers to provide details of field vegetable production 2014. The purpose of this census was to quantify the field vegetable production in 2014 and illustrate what changes have taken place since similar censuses that provided figures for 2008, 2005, 2002 and 1999. The list of growers surveyed was drawn up from information available within the Department of Agriculture, Food and the Marine (DAFM), Bord Bia and Teagasc.

The census was confined to growers producing at least two acres (0.8 hectares) of field vegetables. Crops grown under protection (glasshouses, polythene tunnels, cloches) are excluded but those grown under floating mulches or nets/fleeces are included. Potato production is not included in the census. Employment figures are for those working directly with field vegetables, people working in prepared vegetable enterprises are excluded.

This census, with the earlier censuses, provides an important overview of the trends emerging in the Irish field vegetable sector. The 2015 census is an important milestone in the review of field vegetable production since it marks 15 years since the rollout of centralised distribution by leading retail multiples. The data for the census was collected by DAFM and Bord Bia personnel. Bord Bia and DAFM wish to thank all field vegetable growers involved for their co-operation in compiling this census.

Notes:
The figures provided in this document are based on the best information available to Bord Bia and the Department of Agriculture, Food and the Marine. For convenience, some figures have been rounded. Data analysis for this census was carried out by Franklin Research, Dun Laoghaire, Co. Dublin.

Executive Summary

The census highlights ongoing consolidation in terms of grower numbers and increasing concentration of production in Leinster. The other main trends evident from this census are as follows:

- The total production area for field vegetables in 2014 is 4,267 hectares. This is slightly down on the 2008 figure but unchanged from the 2005 figure.
- The farmgate value of field vegetable production in 2014 is €80.0 million. This is a 15% increase since 2008.
- There are 165 field vegetable growers in 2014. This is a 22% decline since the 2008 census and continues the trend of declining grower numbers seen in previous censuses.
- The field vegetable sector provides 1,106 full-time equivalent jobs in 2014. This is a 21% increase since the last census.

Large scale producers represent a significant, and growing, proportion of the total production area. The largest 50 growers (in terms of area) account for 84% of the total field vegetable production area in 2014, up from 74% in 2008.

Field vegetable production is concentrated in Leinster. Dublin County has by far the highest production area with 1,847 hectares, followed by Meath (579 hectares) and Wexford (347 hectares). Counties in Leinster account for 87% of overall national production area (up from 83% in 2008). This increase may be related to grower proximity to market consolidators/central distribution centres.

Field Vegetable Crop Production

Carrots are the most important field vegetable in terms of production area and farmgate value. There are 716 hectares of carrots grown in 2014 (a 5% increase since 2008) with a farmgate value of €15.4 million (unchanged since 2008). Cabbage is the second most important crop but its production has fallen. There are 681 hectares of cabbage grown in 2014 (a 27% decrease since 2008) with a farmgate value of €11.3 million (a 16% decrease since 2008).

Among the other main crops, broccoli, swedes and parsnips all show significant increases in farmgate value. The production area of broccoli decreased 10% to 558 hectares in 2014 but its farmgate value increased by 41% to €6.2 million. The production area of swedes decreased 6% to 480 hectares in 2014 but its farmgate value increased by 25% to €7.5 million. The production area of parsnips increased 8% to 377 hectares in 2014 and its farmgate value increased by 80% to €8.3 million. The increase in farmgate value despite the reduction in production area is a result of better yields in 2014 due to weather affected yields in 2008, as well as an increased level of market preparation activity taking place at farm level. This is leading to increased employment at farm level for growers in the sector.

Market Outlets

Across the top 8 crops by farmgate value, 60% of output is sold directly to the retail multiples (e.g. Dunnes, Tesco, Musgrave, Lidl, Aldi) and 21% is sold to wholesalers. Seven percent (7%) is sold at farmshops/farmers markets, 7% to the prepared vegetable sector, 6% to greengrocers and 1% is sold directly to the catering sector.

Yield and Farmgate Value

This census report includes data on average yield and farmgate value per unit for each crop (see Table 1 on page 26).

Business Issues

Profitability issues are the primary business development issue for growers (i.e. achievable prices as against input costs). The highly competitive retail environment for fresh vegetables is considered a key factor influencing grower returns. The increased costs/investments incurred at farm level over recent years may not always be matched by price returns for the produce.

Organic Production

There are 19 organic field vegetable growers in 2014, with a production area of 135 hectares and a farmgate value of €3.5 million (see Section 6).

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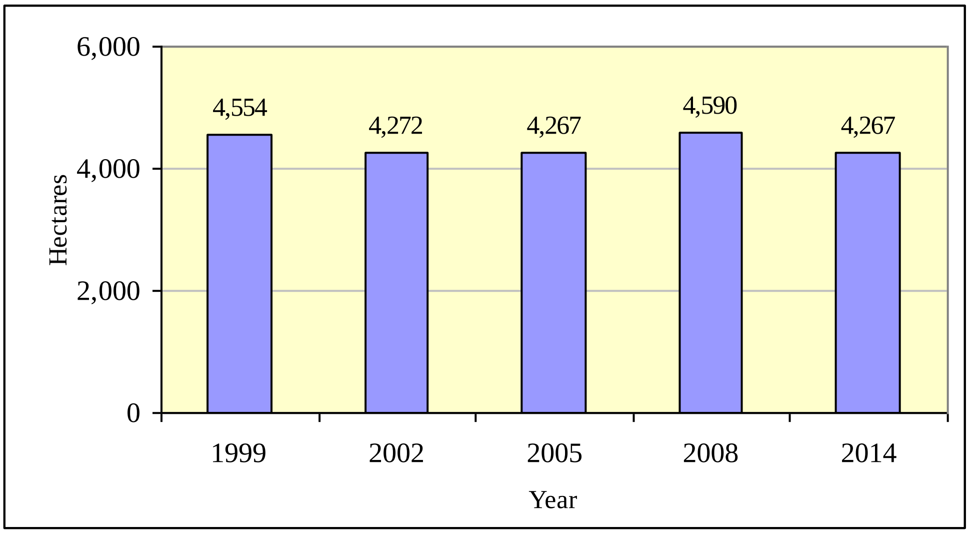
Section 1: Production Area, Farmgate Value, Number of Growers & Employment Levels

This section provides an overview of field vegetable production in Ireland, including total production area, farmgate value, number of growers and employment levels.

The main trend seen in this section is that total production area has remained relatively stable since 1999, despite a fall in grower numbers, highlighting consolidation in terms of grower size. The section also shows the increased concentration of production in Leinster.

Chart 1: Field Vegetable Production Area 1999-2014 (Hectares)



The total production area for field vegetables in 2014 is 4,267 hectares. This is a 7% decrease since 2008 but identical to the 2005 census production area. Overall, total production area for field vegetables in the 1999-2014 period has been relatively stable.

Chart 2: Field Vegetable Farmgate Value 1999-2014 (€ million)

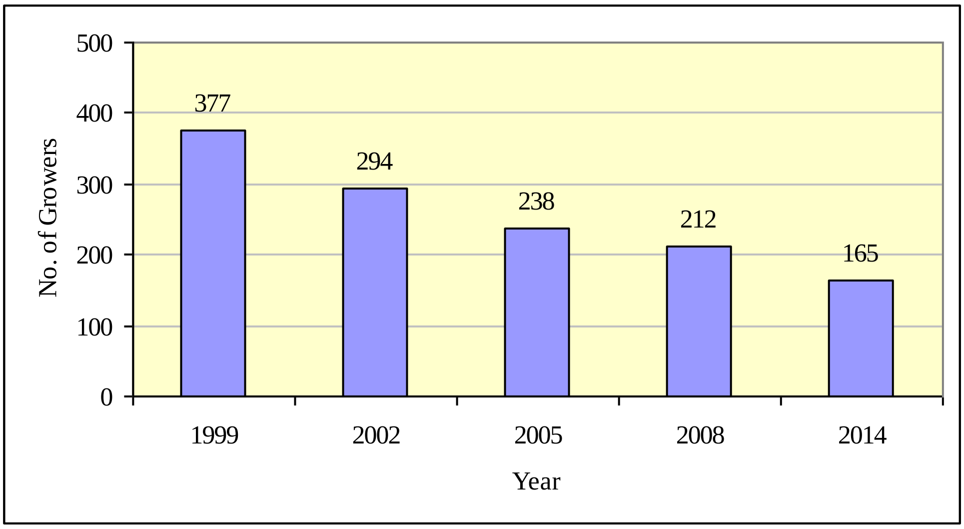
* farmgate value figures for 2005 were based on DAFM estimates. Figures for 2014, 2008, 2002 and 1999 were provided by growers.

Over the 15 years since 1999, growers have shifted from providing a basic product to now nearly all growers providing a shelf-ready product. The farmgate price now reflects this value added element. The farmgate value of field vegetable production in 2014 is €80.0 million. This represents a 15% increase since 2008, and is almost double the 1999 value. Changes in farmgate values over time should be considered in light of changes in costs and inflation over time.

The farmgate values for each county are shown in Appendix Table 1.1.

Note: All farmgate values are a snapshot of the value at that point in time, so inflation and rising input costs over time are <u>not</u> factored in.

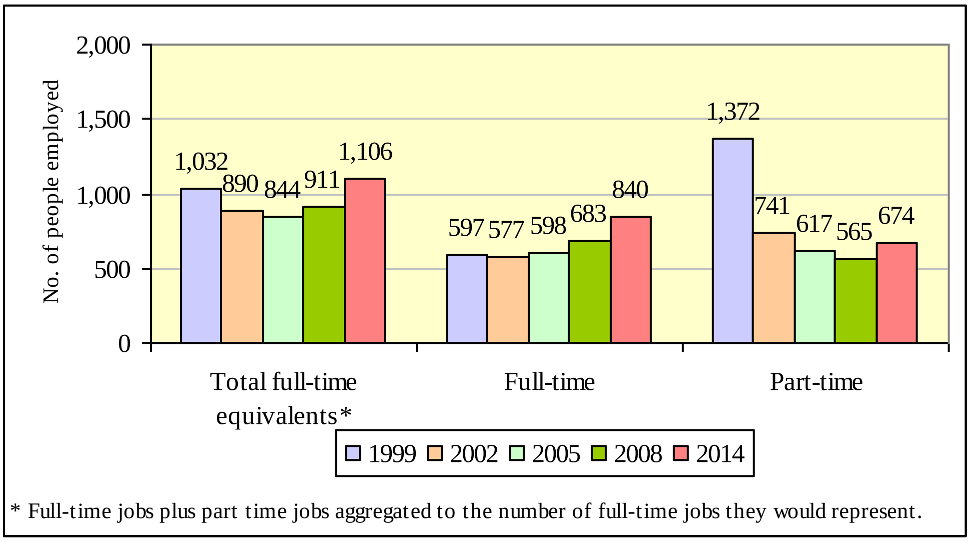
Chart 3: Number of Field Vegetable Growers 1999-2014



The 2015 census demonstrates the ongoing decline in grower numbers. There are 165 field vegetable growers in 2014 which is a 22% decline since the 2008 census (212 growers in 2008). Declining grower numbers has been evident in all the recent censuses, with grower numbers down 56% since 1999.

Note: Census forms were not completed by 10 growers. They were included by using DAFM data for these growers that showed their production area for different vegetables, and then using averages from the other growers for yield and price received to estimate their output and production value. Employment was estimated using their total vegetable production area and the average employment per hectare of the other growers.

Chart 4: On-Farm Field Vegetable Sector Employment 1999-2014



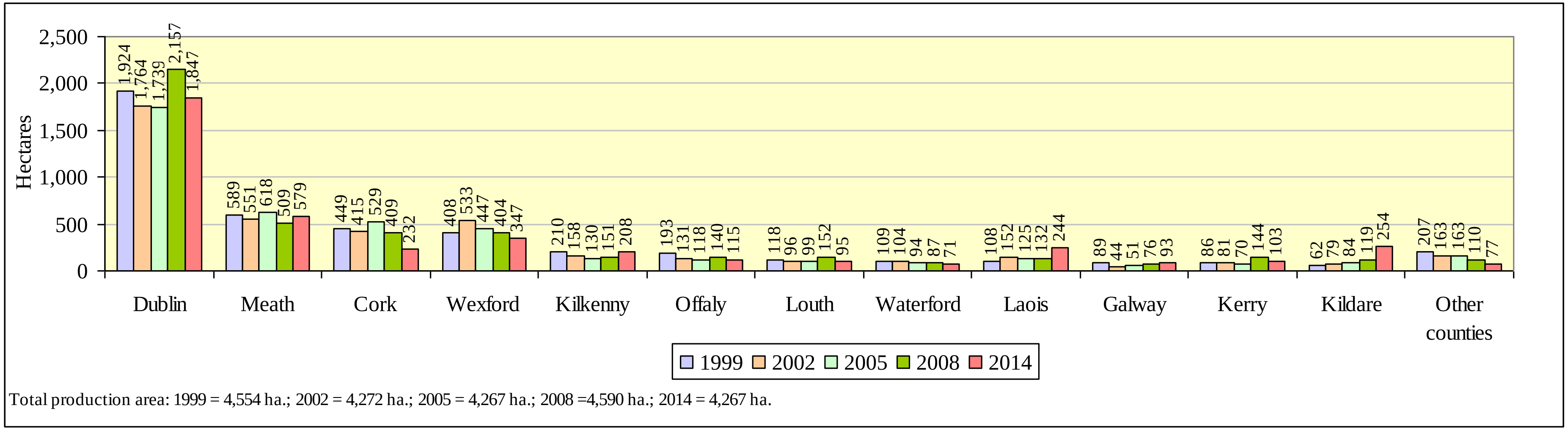
The field vegetable sector provides 1,106 full-time equivalent jobs in 2014. This is a 21% increase since the last census (911 full-time equivalent jobs in 2008).

The number of full-time jobs provided by the sector has increased by 23%, from 683 full-time jobs in 2008 to 840 in 2014. The sector provides 674 part-time jobs in 2014, up from 565 in 2008 (a 19% increase). The increase in employment over recent years is considered to be due to increased market preparation activity on farm to add value to field vegetables. Combined with increasing grower specialisation this is likely driving the increase in full-time employment.

Appendix Table 1.2 shows employment data for each county.

Note: the figures for "full-time equivalents" were calculated as follows. Based on an 8 hour working day, the number of days worked by each part-time/casual employee during 2014 were estimated. This figure was then added together for all part-time/casual employees and the total divided by 233 days to provide the full time equivalent figure for the part-time/casual labour. This figure is based on 253 working days in 2014 less 20 days minimum statutory annual leave entitlement for full-time employees.

Chart 5: Field Vegetable Production Area 2005-2014 by County (Hectares)



Dublin is the most important county for field vegetable production though its production area has decreased since the last census. There are 1,847 hectares of field vegetables in Dublin county in 2014 compared to 2,157 hectares in 2008 (a 14% decrease). The 1,847 hectares of field vegetables in Dublin in 2014 represents 43% of the national production area (down from 47% in 2008).

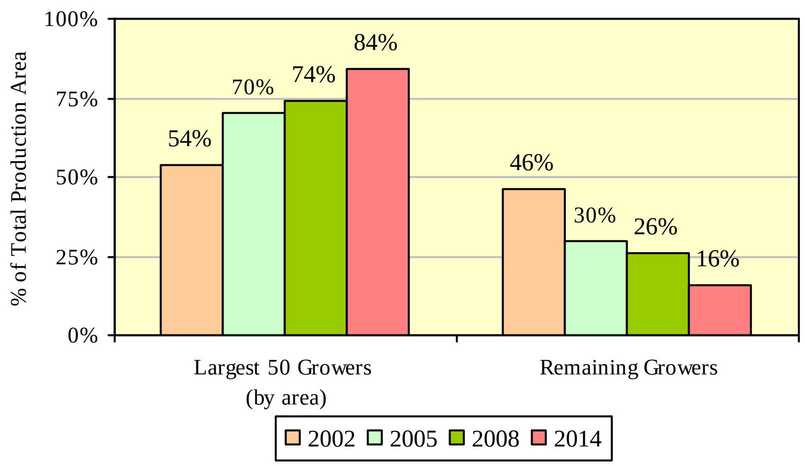
Field vegetable production is concentrated in Leinster. There have been increases in production area in counties such as Meath, Kilkenny, Laois and Kildare. Cork is the only major field vegetable producing county outside of Leinster, with a production area of 232 hectares (accounting for 5% of the national area), however its production area has fallen significantly since 2005.

Chart 5 includes all counties that were in the top 12 counties (by production area) in 1999 in order to see the effects of centralised distribution introduced since 1999. The main changes in production area by county are:

- production area in Kildare has increased four-fold, from 62 hectares in 1999 to 254 hectares in 2014
- production area in Laois has more than doubled, from 108 hectares in 1999 to 244 hectares in 2014
- production area in Cork has decreased by 48%, from 449 hectares in 1999 to 232 hectares in 2014, falling significantly in 2014 census compared to previous census's
- production area in Offaly has decreased by 40%, from 193 hectares in 1999 to 115 hectares in 2014
- production area in Waterford has decreased by 34%, from 109 hectares in 1999 to 71 hectares in 2014

Appendix Table 1.1 shows production statistics by county for 1999-2014.

Chart 6: Field Vegetable Production by Holding Size 2002-2014



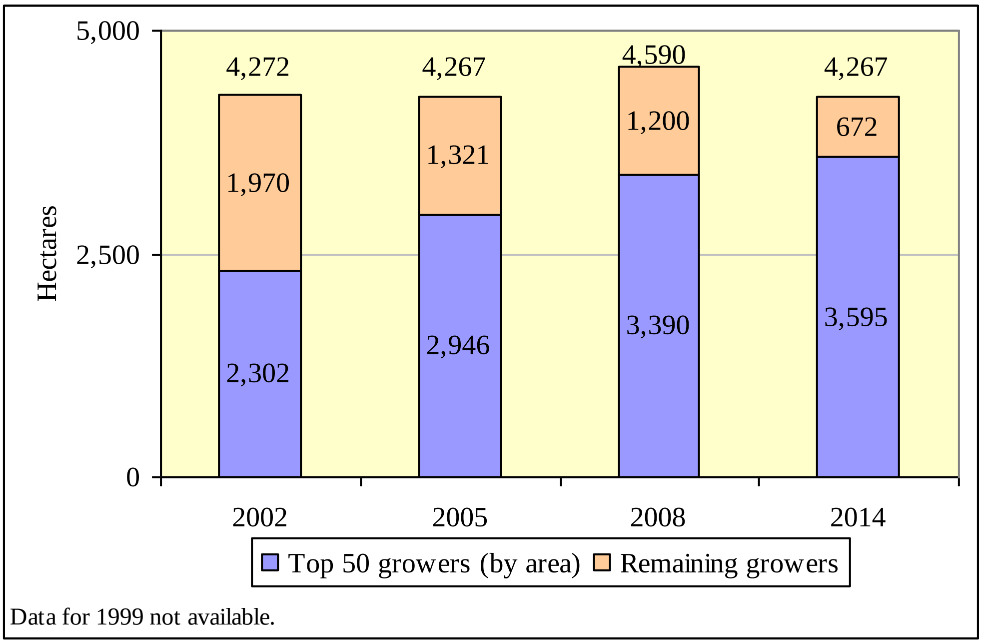
Total production area: 2005 = 4,267 ha; 2008 = 4,590 ha.; 2014 = 4,267 ha.
Data for 1999 not available.

Large-scale producers have increased their dominance of the sector. The largest 50 growers (in terms of area) account for 84% of the total field vegetable production area in 2014, up from 74% in 2005 and 54% in 1999. Market access issues and high investment costs present a challenge for small to medium sized growers.

The remainder of this section looks at the importance of the largest growers to overall production area, farmgate value and employment.

Note: the fall in the percentage of total production area among 'remaining growers' is partly due to a declining numbers of these growers (i.e. there were 244 'remaining growers' in 2002, 188 in 2005, 162 in 2008, and only 115 in 2014).

Chart 7: Contribution of Top 50 Growers to Total Field Vegetable Production Area 2002-2014 (Hectares)



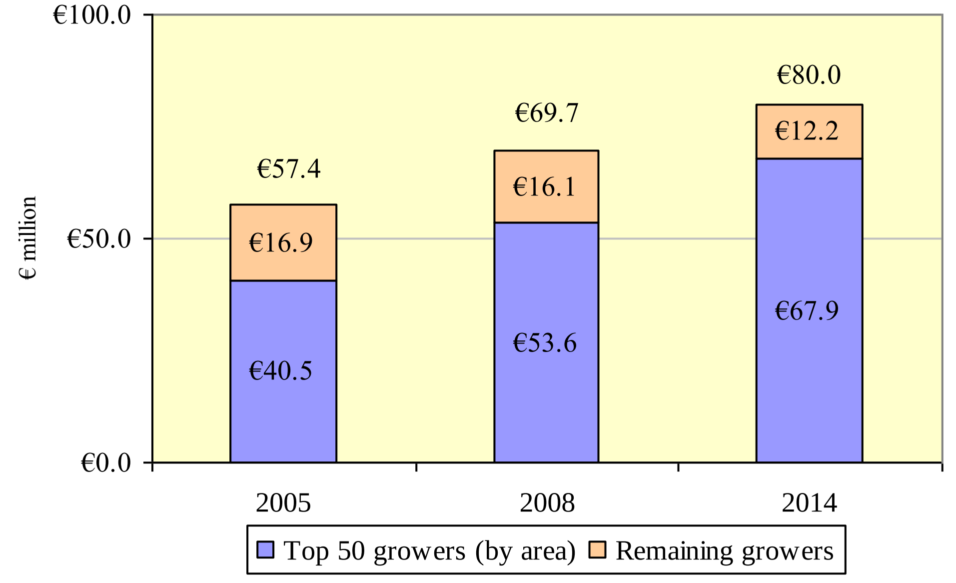
The top 50 growers in 2014 have a combined production area of 3,595 hectares, representing 84% of total production area.

The share of total production area accounted for by top 50 growers has increased over the last four censuses, from 54% in 2002, to 69% in 2005, to 74% in 2008 and 84% in 2014.

The combined production area of the top 50 growers is up 6% since 2008 (3,390 hectares in 2008 versus 3,595 hectares in 2014).

Note: the fall in the production area among 'remaining growers' is partly due to a declining numbers of these growers (i.e. there were 244 'remaining growers' in 2002, 188 in 2005, 162 in 2008, and only 115 in 2014).

Chart 8: Contribution of Top 50 Growers to Total Field Vegetable Farmgate Value (€ million) 2005-2014

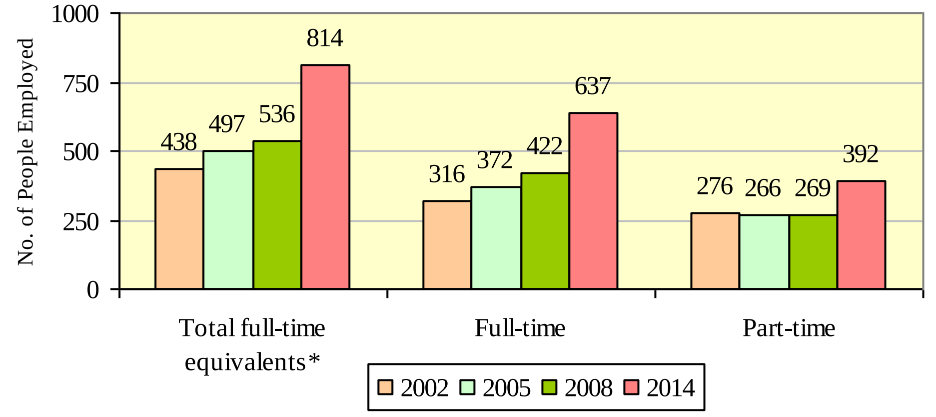


Data for 1999 and 2002 is not available.

The farmgate value of the top 50 growers has increased by 68% overall since 2005, from €40.5 million in 2005, to €53.6 million in 2008, to €67.9 million in 2014.

The production value of the top 50 growers accounts for 85% of the total farmgate value of all growers (€80.0 million) in 2014. In 2005, the top 50 growers accounted for 71% of total production value, while in 2008 they account for 77%. Apart from the issue of falling overall grower numbers, the increasing concentration of farmgate value produced by the larger growers is due to almost all of the larger growers now producing a shelf ready product. While this has increased the value of output it also has resulted in increased employment levels (see Chart 9) and increased cost/investments for these growers.

Chart 9: Top 50 Growers Employment 2002-2014



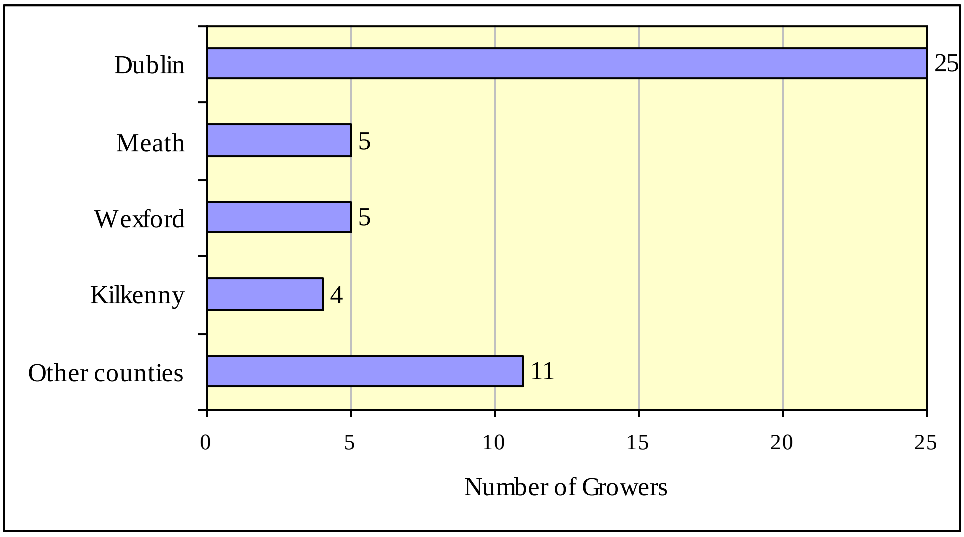
* Full-time jobs plus part time jobs aggregated to the number of full-time jobs they would represent. Data for 1999 not available.

The top 50 growers provide 814 full-time equivalent jobs in 2014, which is 74% of the total of 1,106 full-time equivalents provided by the sector. It is also a 52% increase since the last census (536 full-time equivalent jobs in 2008). As outlined above, increased scale, specialisation and increased market preparation activity among the larger growers is considered responsible for the increase in employment among the 50 largest growers.

Employment provided by the top 50 growers represents:

- 74% of full-time equivalent jobs provided by all growers
- 76% of full-time jobs provided by all growers
- 58% of part-time jobs provided by all growers

Chart 10: Number of Top 50 Growers by County 2014



Of the top 50 growers in 2014, 25 are in Dublin, 5 are in Meath, 5 are in Wexford, 4 are in Kilkenny, and the remaining 11 growers are in other counties.

Section 2: Crops Grown

This section provides a breakdown of census information by type of crop grown. The charts show data for the most important crops grown in terms of production area.

Carrot production has remained stable in terms of production area and farmgate value, while there are significant increases in farmgate value for broccoli, swedes and parsnips.

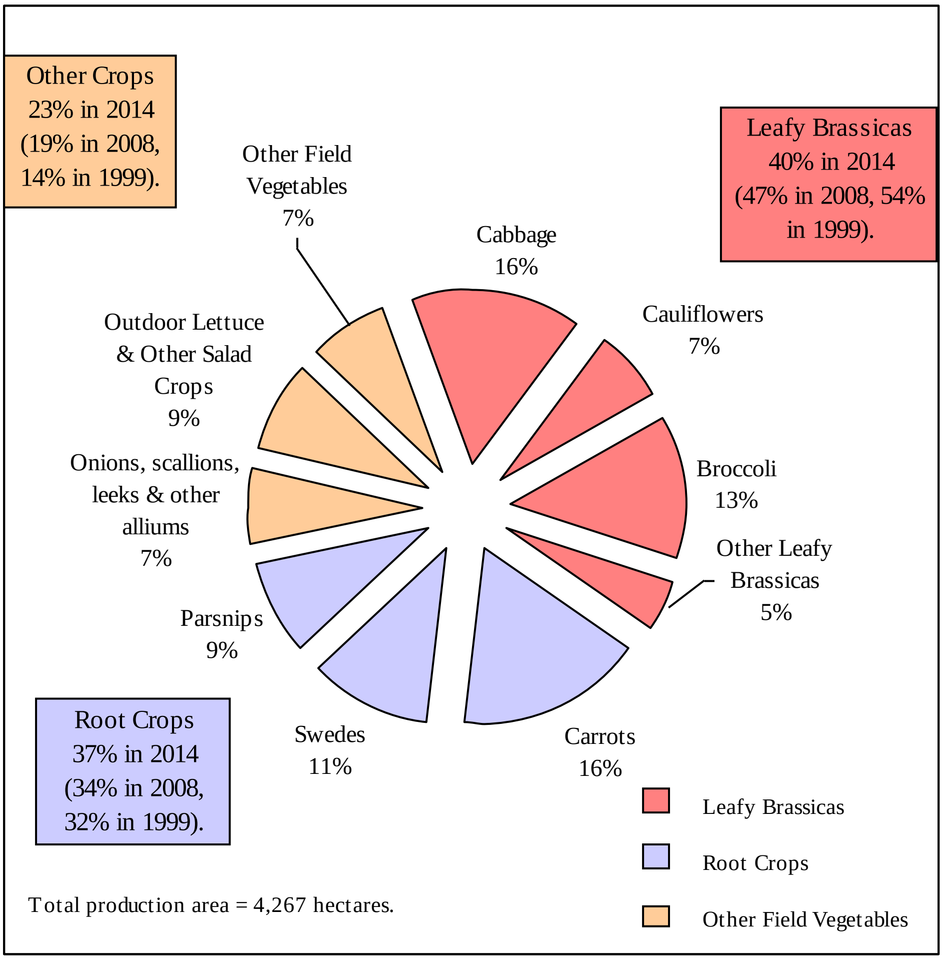
This section also shows that Dublin has the highest production area for many crops, the one exception being carrots for which Laois and Wexford are the most important counties.

In terms of sales channels, this section shows that 60% of field vegetable output is sold through retailers/discounters and 21% through wholesalers.

Finally, this section shows average yield per hectare and average farmgate value per unit for the most important crops.

Note: Swedes are included in the root crop category even though, technically, they are a member of the Brassica family.

Chart 11: Field Vegetable Production Area 2014



Leafy brassicas account for 40% of all field vegetable production area in Ireland. Cabbage is the most important brassica (by area) representing 16% of total field vegetable production area.

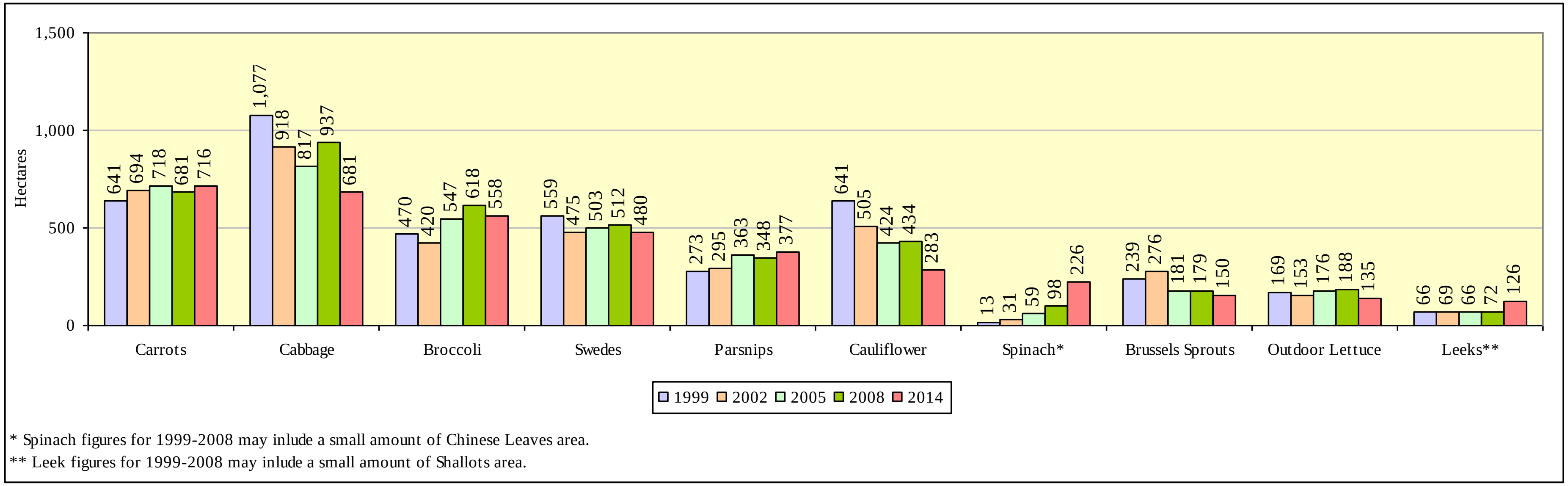
Root crops account for 37% of the total production area. Carrots are the most important root crop vegetable (by area) representing 16% of total production area.

The remaining 23% of production area is made up of onions and other alliums (7%), lettuce and other salad crops (9%) and other vegetables (7%).

Six crops (cabbage, carrots, broccoli, swedes, parsnips and cauliflowers) account for 72% of total production area. Appendix Table 2.1 shows a more detailed breakdown of production area, value and grower numbers for each crop type.

In comparison to the 2008 census, the proportion of production area accounted for by leafy brassicas has decreased (from 47% in 2008 to 40% in 2014). The share of root crops has increased (from 34% in 2008 to 37% in 2014), while the share of 'other crops' has also increased (from 19% in 2008 to 23% in 2014). In terms of individual crops, the main changes are declines in the proportion of total production area accounted for by cabbage and cauliflower and an increase for spinach (see next chart).

Chart 12: Production Area of the 10 Most Important Field Vegetables (by area) 1999-2014 (Hectares)

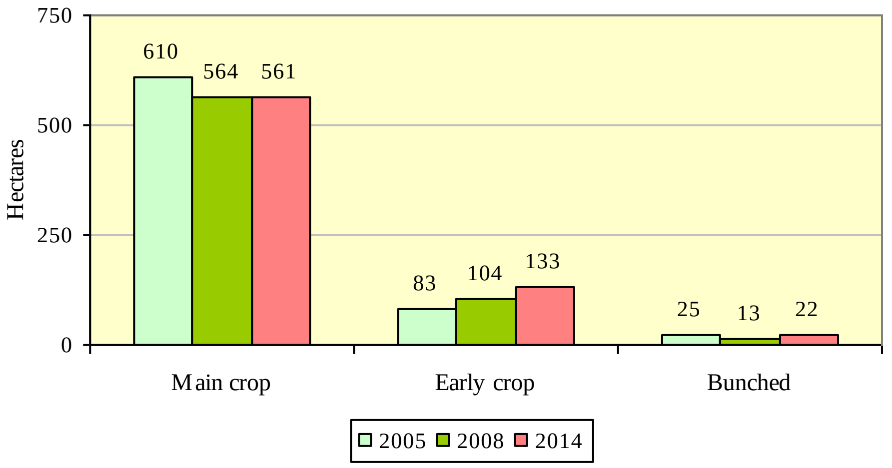


As seen in Chart 1, total production area of field vegetable crops has declined 7% since the 2008 census. Chart 12 shows the changes in production area for the major individual crops:

- production area of carrots has been relatively stable at around 700 hectares over the last four censuses
- the production area of cabbage is down by over a quarter (27%) since 2008 (from 937 hectares in 2008 to 681 hectares in 2014). However, the trend in production area of cabbage since 1999 indicates that the 2014 area is indicative of a gradual decline in production area overtime

- production area of broccoli has declined by 10%, from 618 hectares in 2008 to 558 hectares in 2014
- production area of swedes has decreased 6%, from 512 hectares in 2008 to 480 hectares in 2014
- production area of parsnips has increased 8%, from 348 hectares in 2008 to 377 hectares in 2014
- production area of cauliflowers has decreased by over a third (35%) since 2008, from 434 hectares in 2008 to 283 hectares in 2014
- production area for spinach has more than doubled, from 98 hectares in 2008 to 226 hectares in 2014
- production area of brussels sprouts decreased 16%, from 179 hectares in 2008 to 150 hectares in 2014
- production area of outdoor lettuce has decreased 28%, from 188 hectares in 2008 to 135 hectares in 2014
- production area of leeks has increased 75%, from 72 hectares in 2008 to 126 hectares in 2014

Chart 13: Breakdown of Production Area of Carrot Crops 2005-2014 (Hectares)

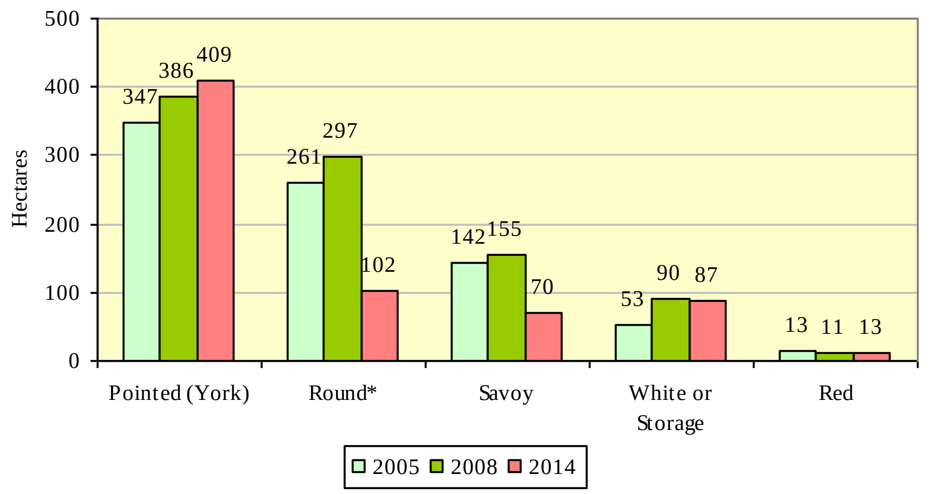


Total production area for carrots = 718 ha. in 2005; 681 ha. in 2008; 716 ha. in 2014.
Data for 1999 and 2002 not available.

Carrots are the most important field vegetable (by area) with 716 hectares grown in 2014. The production area of main-crop carrots is virtually unchanged since 2008 (564 hectares in 2008, 561 hectares in 2014). The production area of early crop carrots has increased 28%, from 104 hectares in 2008 to 133 hectares in 2014.

Bunched carrots account for 3% of total carrot production area, with 22 hectares grown in 2014.

Chart 14: Breakdown of Production Area of Cabbage Crops 2005-2014 (Hectares)

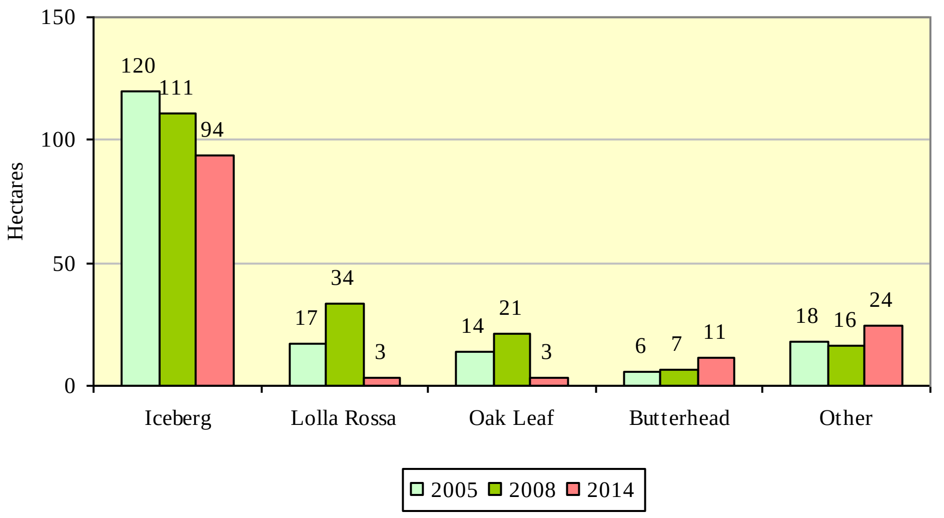


* Round green all year around (e.g. Primo, Tundra and Stallion). Data for 1999 and 2002 not shown as censuses used different category definitions.
Total production area for cabbage = 817 ha. in 2005; 937 ha. in 2008; 681 ha. in 2014.

Cabbage is the second most important field vegetable in terms of area with 681 hectares grown in 2014.

- production area of pointed (York) cabbage has increased by 6%, from 386 hectares in 2008 to 409 hectares in 2014
- there are 102 hectares of round type cabbage (e.g. Primo, Tundra, Stallion) in 2014. Comparison to previous years is difficult as censuses used different category definitions.
- production area of Savoy cabbage has decreased by 55%, from 155 hectares in 2008 to 70 hectares in 2014
- production areas for white/storage and red cabbage are similar to the 2008 census

Chart 15: Breakdown of Production Area of Outdoor Lettuce Crops 2005-2014 (Hectares)



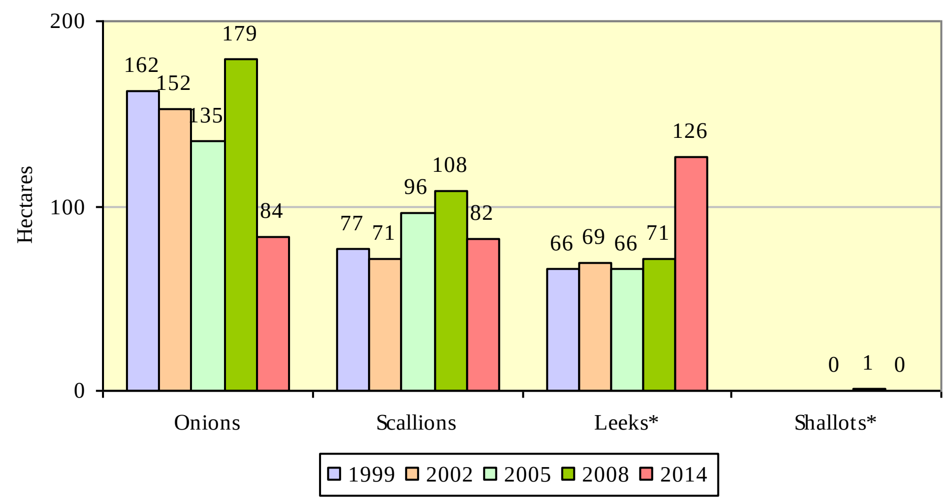
Total production area for outdoor lettuce = 176 ha. in 2005; 188 ha. in 2008; 135 ha. in 2014.
Data for 1999 and 2002 not shown as censuses used different category definitions.

135 hectares of outdoor lettuce were grown in 2014. The production areas of Lolla Rosa and Oak Leaf have declined significantly since 2008, with only 3 hectares grown for each in 2014. The production area of iceberg lettuce has decreased by 15% since 2008, from 111 hectares in 2008 to 94 hectares in 2014.

In 2014 the production area of butterhead lettuce is 11 hectares, and 24 hectares for other lettuce types grown.

It should be noted that almost half of lettuce production now takes place under protection. The 2013 Outdoor Soft Fruit and Protected Crop Census showed that 118 hectares of lettuce were grown under protection. This was a small increase from the previous census (113 hectares in 2008).

Chart 16: Production Area of Alliums 2005-2014 (Hectares)



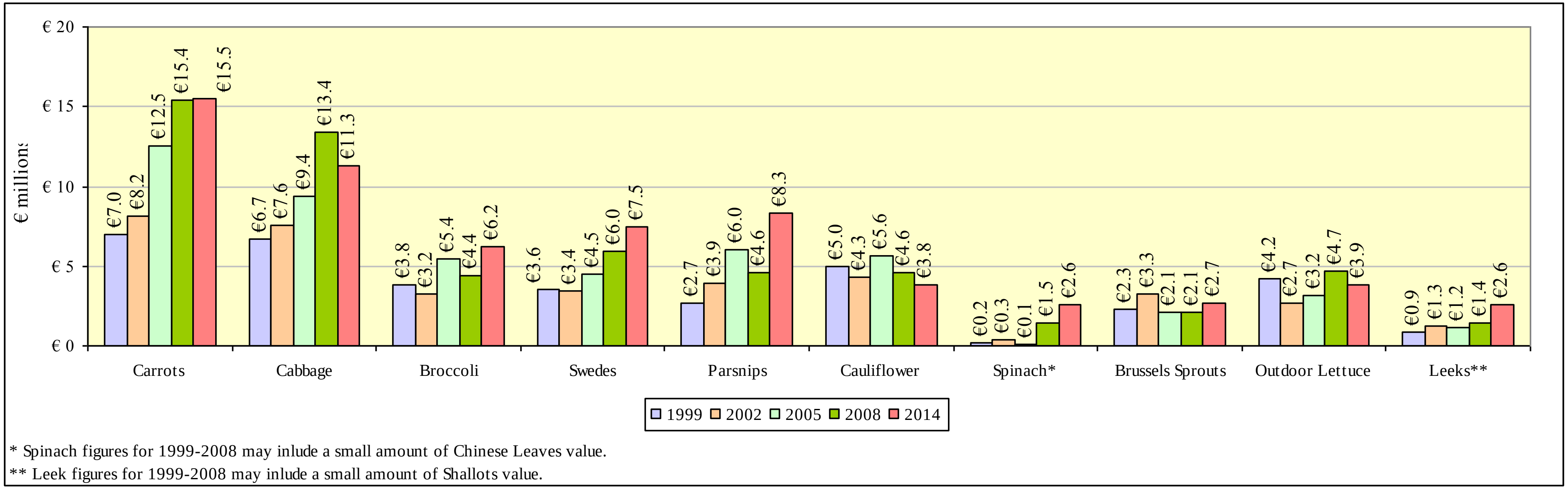
* Shallots included in leeks for 1999 and 2002 censuses.
Total production area for alliums = 305 ha. in 1999; 292 ha. in 2002; 297 ha. in 2005; 359 ha. in 2008; 292 ha. in 2014.

292 hectares of alliums were grown in 2014. Onions are the most important alliums crop but their production has fallen in the period between 2008 and 2014 while that of leeks has increased.

- production area of onions has fallen by more than half (53%) between 2008 and 2014, from 179 hectares to 84 hectares. This change is due to a number of key growers ceasing onion production between 2008 and 2014.
- production area of scallions has decreased by 24%, from 108 hectares in 2008 to 82 hectares in 2014
- production area of leeks has increased by 77%, from 71 hectares in 2008 to 126 hectares in 2014

The production area of shallots is less than 0.5 hectares in 2014.

Chart 17: Farmgate Value of the 10 Most Important Field Vegetables (by area) 1999-2014 (€ million)

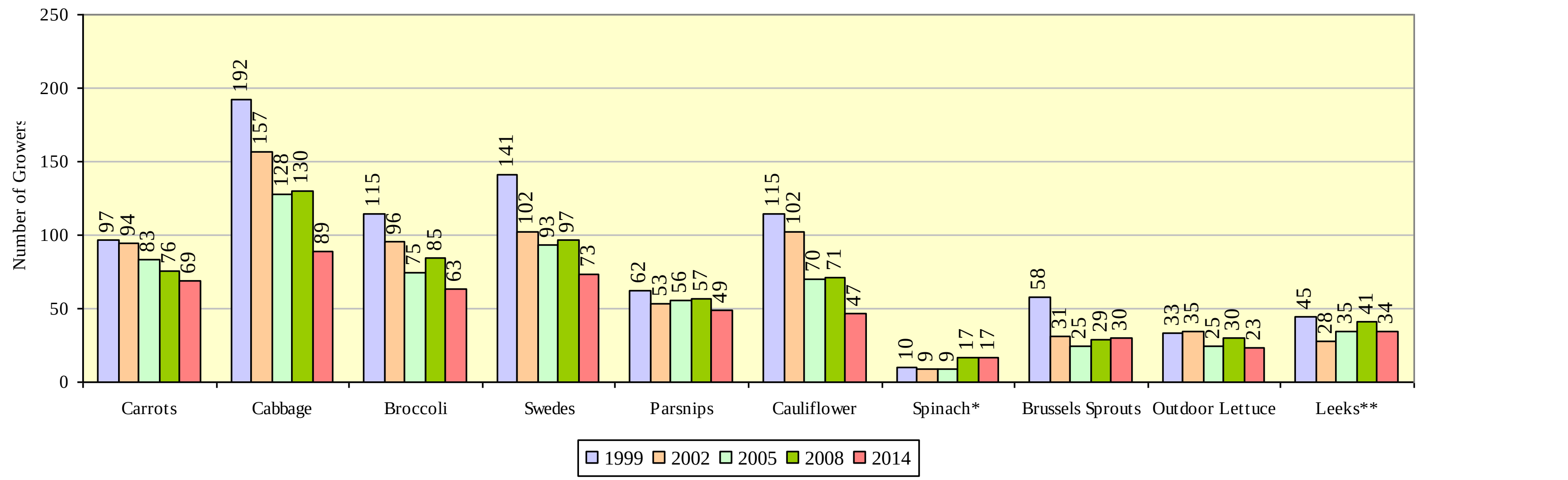


The total farmgate value of field vegetables is €80.0 million in 2014, which is a 15% increase since 2008 (see Chart 2). This increase in total farmgate value is mostly accounted for by increases in the production values achieved for broccoli, swedes and parsnips. The individual increases of these three vegetables can be explained by better yields in 2014 due to unfavourable weather negatively impacting on the crop in 2008 (note: price per tonne figures for these crops in 2014 and 2008 are not significantly different). Chart 17 shows the changes in farmgate value for the major individual crops:

- farmgate value of carrots is almost unchanged since 2008 (€15.4 million in 2008, €15.5 million in 2014)
- farmgate value of cabbage has decreased by 16%, from €13.4 million in 2008 to €11.3 million in 2014
- farmgate value of broccoli has increased by 41%, from €4.4 million in 2008 to €6.2 million in 2014
- farmgate value of swedes has increased by 25%, from €6.0 million in 2008 to €7.5 million in 2014
- farmgate value of parsnips has increased 80%, from €4.6 million in 2008 to €8.3 million in 2014
- farmgate value of cauliflower has decreased by 17%, from €4.6 million in 2008 to €3.8 million in 2014
- farmgate value of spinach has increased by 73%, from €1.5 million in 2008 to €2.6 million in 2014
- farmgate value of brussels sprouts has increased by 29%, from €2.1 million in 2008 to €2.7 million in 2014
- farmgate value of outdoor lettuce has decreased by 17%, from €4.7 million in 2008 to €3.9 million in 2014.
- farmgate value of leeks has increased by 86%, from €1.4 million in 2008 to €2.6 million in 2014

The farmgate value for each field vegetable grown in 2014 can be viewed in Appendix Table 2.1.

Chart 18: Number of Growers of the 10 Most Important Field Vegetables (by area) 1999-2014



* Spinach figures for 1999-2008 may inlude a small number of Chinese Leaves growers.

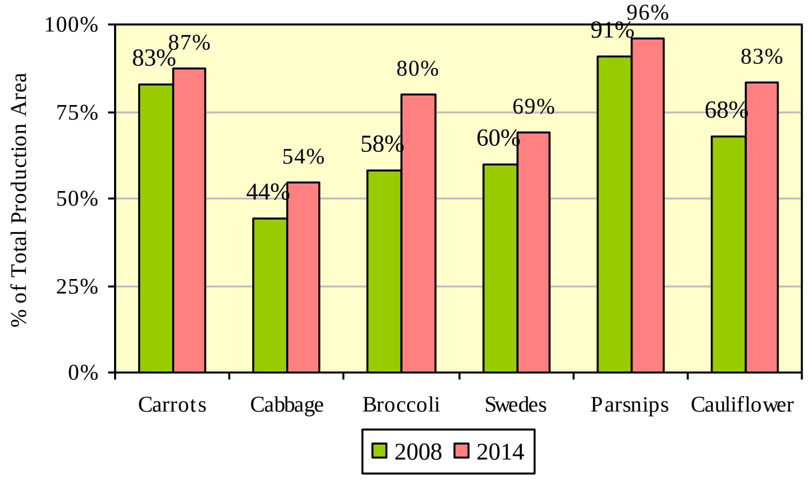
** Leek figures for 1999-2008 may inlude a small number of Shallots growers.

There are 165 field vegetable growers in 2014, a decrease of 22% since 2008 (see Chart 3). Within the 10 main crop types, the biggest decrease in grower numbers are:

- number of cauliflower growers has decreased by 34% since 2008, from 71 growers in 2008 to 47 growers in 2014
- number of cabbage growers has decreased by 32% since 2008, from 130 growers in 2008 to 89 growers in 2014
- number of swede growers has decreased by 25% since 2008, from 97 growers in 2008 to 73 growers in 2014

Note: many growers produce more than one crop.

Chart 19: Percentage of Total Area Produced by the Top 10 Growers of the Most Important Field Vegetables (by area*) 2008-2014



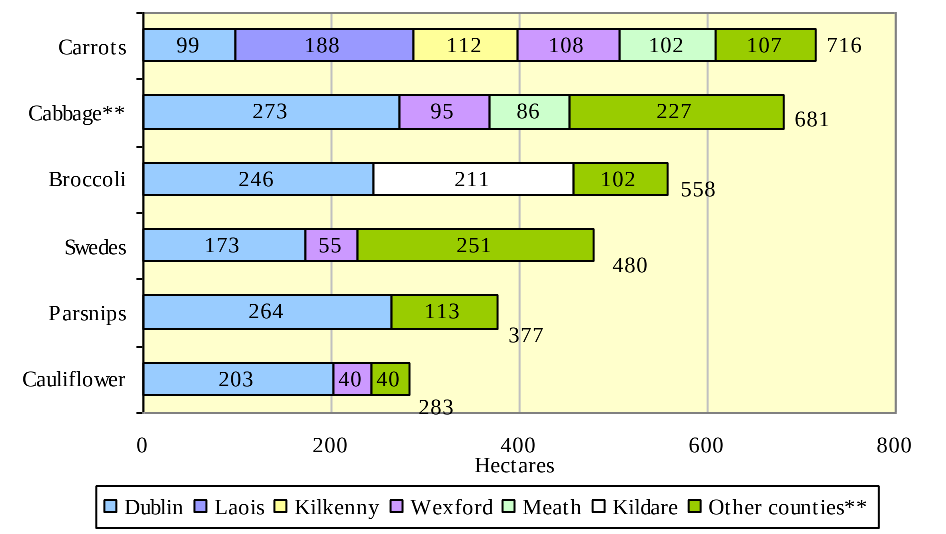
* Top 10 crops by area with at least 40 growers.
Data not available for 1999, 2002 and 2005.

Production of most of the main field vegetable crops is dominated by a small number of growers. This chart displays the percentage of total production area accounted for by the top 10 growers of that particular vegetable.

The top 10 growers of parsnips account for 96% of the total production area of parsnips, while the top 10 growers of carrots account for 87% of the total production area of carrots. Cabbage production is less dominated by growers with large production area, with the top 10 cabbage growers accounting for 54% of total cabbage production area.

The top 10 growers (in terms of area) across all field vegetables account for 37% of total production area in 2014.

Chart 20: Production Area of the 10 Key Field Vegetables (by area*) 2014 by County



* Top 10 crops by area with at least 40 growers producing the crop. ** All cabbage types combined.
Note: where a county's share of a crop is below 12% it is included in 'Other counties'. All counties shown have at least 3 growers producing the crop in that county.

Dublin accounts for a high proportion of production area for many of the important crops. The other main counties are all also in Leinster.

- Laois has the highest production area of carrots, with 188 hectares of carrots, representing 26% of total carrot production area
- Dublin has the highest production area of cabbage with 273 hectares of cabbage, representing 40% of total cabbage production area
- Dublin and Kildare together account for 82% of broccoli production area
- Dublin also has the largest production area for swedes, parsnips and cauliflower

Table 1 on the following page shows field vegetable crops average yield per hectare and average farmgate value per unit achieved by growers.

Table 1: Yield and Farmgate Value 2014

(excluding organic vegetables & vegetables for prepared vegetable sector)

	Average Yield per Hectare		Average Farmgate Value per Unit	
Leafy Brassicas				
Cabbage - Pointed	42,250	heads per ha.	€0.45	per head
Cabbage - Savoy	35,500	heads per ha.	€0.45	per head
Cabbage - White or Storage	58	tonnes per ha.	€263	per tonne
Cabbage - Red	40	tonnes per ha.	€290	per tonne
Cabbage - Round types	39,000	heads per ha.	€0.45	per head
Cauliflowers	19,500	heads per ha.	€0.70	per head
Broccoli	8	tonnes per ha.	€1,200	per tonne
Brussels Sprouts	14	tonnes per ha.	€1,050	per tonne
Kale*	15	tonnes per ha.	€1,200	per tonne
Root Crops				
Carrots (maincrop)	55	tonnes per ha.	€360	per tonne
Swedes	38	tonnes per ha.	€390	per tonne
Parsnips	24	tonnes per ha.	€830	per tonne
Beetroot	17	tonnes per ha.	€900	per tonne
White Turnips	15	tonnes per ha.	€450	per tonne
Salad Crops/Leafy Vegetables				
Lettuce - Iceberg	50,000	heads per ha.	€0.56	per head
Lettuce - Lollo Rossa types	48,000	heads per ha.	€0.48	per head
Lettuce - Butterhead	45,000	heads per ha.	€0.50	per head
Lettuce - Oak Leaf	39,500	heads per ha.	€0.43	per head
Lettuce - Other	45,000	heads per ha.	€0.52	per head
Spinach*(1)	7	tonnes per ha.	€4,023	per tonne
Alliums				
Onions	40	tonnes per ha.	€270	per tonne
Scallions	170,000	bunches of 6/ha.	€0.39	per bunch of 6
Leeks	25	tonnes per ha.	€780	per tonne
Stalk Crops				
Celery	70,000	heads per ha.	€0.50	per head
Other Minor Field Vegetables				
Rhubarb	32,500	bunches of 6/ha.	€0.56	per bunch of 6
Squashes				
Pumpkins	5,000	pumpkins per ha.	€1.75	per pumpkin
Courgettes	12	tonnes per ha.	€1,180	per tonne
Herbs				
Parsley	9	tonnes per ha.	€2,350	per tonne
Legumes				
Beans - French*	7	tonnes per ha.	€6,625	per tonne
Beans - Broad*	6	tonnes per ha.	€4,500	per tonne
Peas - Green*	6	tonnes per ha.	€5,000	per tonne

Average figures shown are the median averages (i.e. the midpoint).

* Figures based on fresh, processed and organic growers as only a small number of fresh growers.

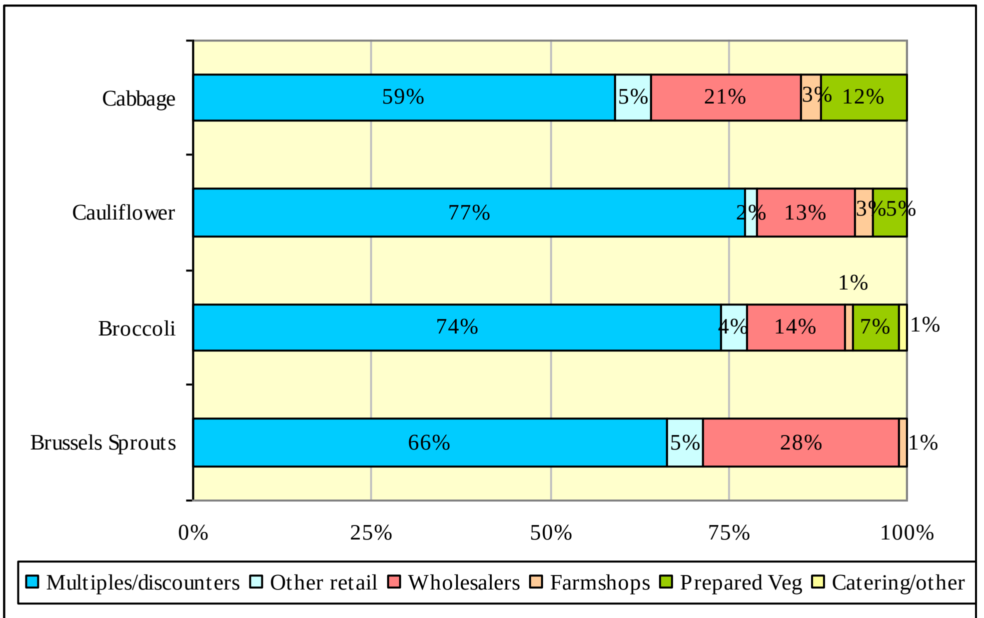
(1) Value figure inflated by several organic spinach growers with very small production area receiving high prices.

Note: there can be significant variations in yield and farmgate value per unit depending on the production year and the level of market preparation that takes place on the farm.

Section 3: Market Outlets

This section shows the volume of output going through each sales channel. It shows that almost two-thirds (64%) of output volume is sold to retail multiples/discounters.

Chart 21: Market Outlets for Brassica Crops 2014 (by volume)



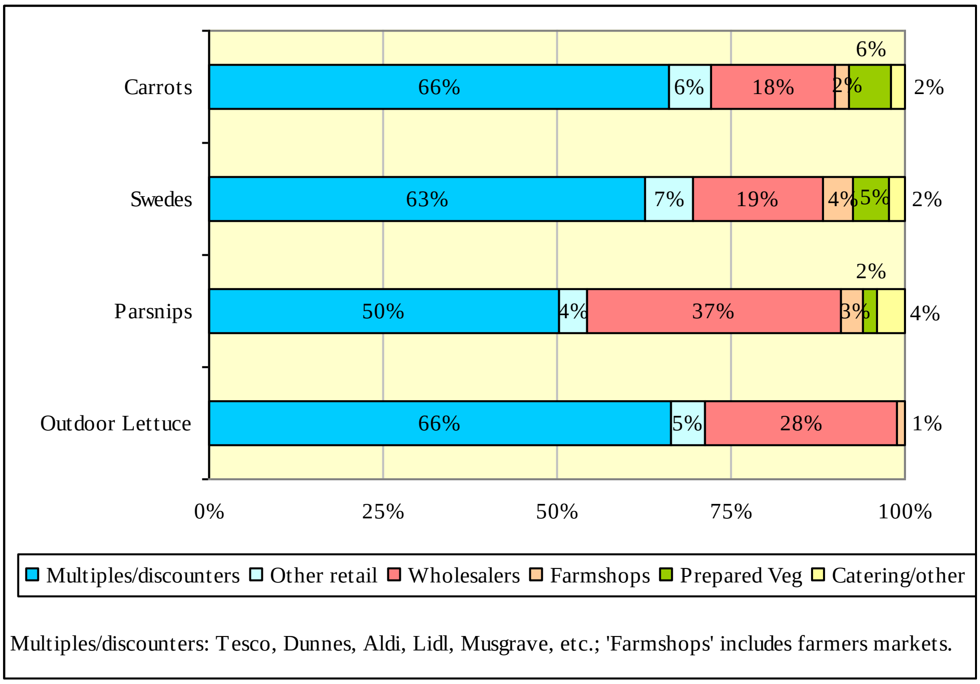
Multiples/discounters: Tesco, Dunnes, Aldi, Lidl, Musgrave, etc.; 'Farmshops' includes farmers markets.

Each grower was asked to record the percent of sales through various market channels for each type of vegetable grown. This information was combined with the grower's output (total yield) for that vegetable to determine the percent of total output of each vegetable by channel.

The vast majority of brassica output goes through retail multiples/discounters (i.e. Dunnes, Musgrave, Tesco, Lidl, Aldi, etc.) and wholesalers.

From the national crop, the prepared vegetable sector directly utilises 12% of cabbage output, 7% of broccoli output, 5% of cauliflower output and (see following page) 5% of swede output.

Chart 22: Market Outlets for Root Crops & Outdoor Lettuce 2014 (by volume)



Among root crops and outdoor lettuce, most output is also sold through retail multiples/discounters and wholesalers.

Though many small-scale growers (and particularly organic growers), may sell directly through farmshops/farmers markets, the channel accounts for only a small percentage (3%) of overall production output of most crops.

The crops listed in Charts 21 and 22 are the top 8 crops in terms of farmgate value. Combining all eight crops together the share in volume by channel is as follows:

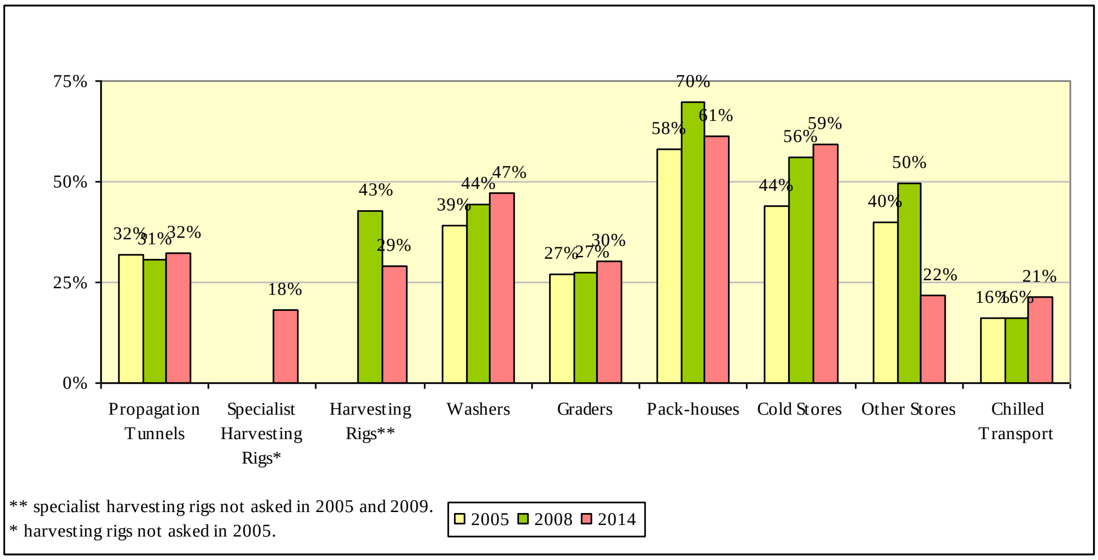
- multiples (e.g. Dunnes, Tesco, Musgrave, M&S) 40%
- discounters (e.g. Lidl, Aldi) 24%
- other retail (e.g. greengrocers) 5%
- wholesalers 21%
- farmshops/farmers markets 3%
- prepared vegetables/peelers 6%
- direct to catering 1%.

Section 4: Farm Facilities & Business Development

This section provides a breakdown of various farm facilities such as propagation tunnels, pack-houses, storage and transportation. As many field vegetable growers are involved in other farming activities, only those farm facilities that are used for field vegetable production are listed in this analysis.

The section also covers grower comments regarding business development issues. These clearly show that profitability issues (achievable prices as against input costs) are the major concern for growers.

Chart 23: Number of Field Vegetable Growers with Various Facilities 2005-2014



Overall, the proportion of growers with various types of equipment and facilities has remained relatively stable since 2005.

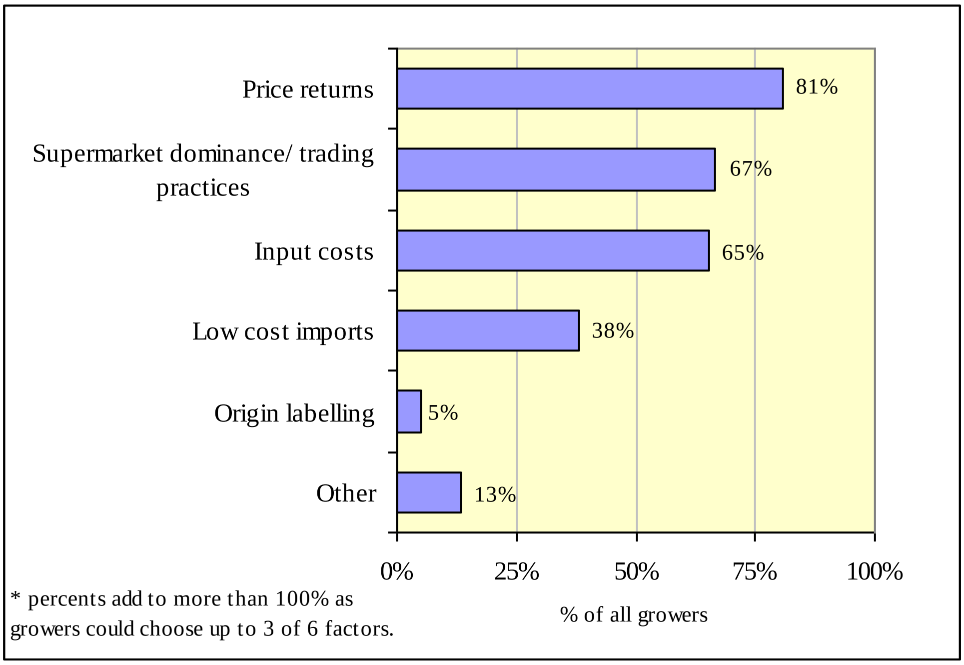
- 61% of growers have pack-houses
- 59% of growers have refrigerated/cold storage
- 47% of growers have washers
- 30% have graders
- 18% of growers have specialist harvesting rigs for at least one of the crops they grow

The field and vegetable sector has a growing need for investment in specialist equipment to meet market demands / achieve greater value added for vegetables. Many of these investments are supported by grant aid from DAFM (under the Scheme of Investment Aid for the Development of the Commercial Horticulture Sector). While a number of growers have invested significantly, a number of others have exited the industry over recent years.

Appendix Table 3.1 provides a breakdown of field vegetable facilities by county.

Appendix Table 3.2 provides a breakdown of propagation tunnels, pack-houses and storage facilities by area/volume.

Chart 24: Grower Opinions on the Most Significant Factors Currently Affecting Development of Their Field Vegetable Business 2014



Profitability issues are by far the most significant issues for growers. Growers cite price returns, input costs, trading practices of multiples/discounters and competition from low cost imports as the key issues affecting development of their businesses. The highly competitive retail environment for fresh vegetables is considered a key factor influencing grower returns. The increased costs/investments incurred at farm level over recent years may not always be matched by price returns for the produce.

There were no separate recurrent issues identified within the “other” responses above.

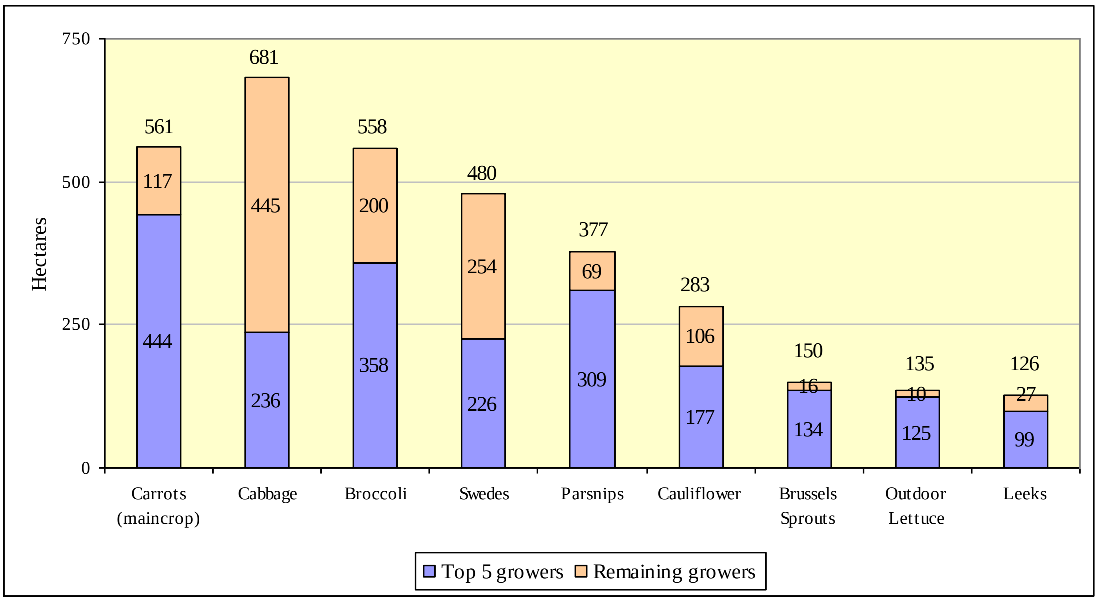
Section 5: Analysis of the Top 5 Growers of Each of the Most Important Crops

Production of many of the main field vegetables is dominated by a small number of growers. This section looks at the proportion of production area and production value accounted for by the top 5 growers (by area) of each of the most important crops. This section also shows yield, average production value per unit and sales channels used.

Note: the top 5 growers for each crop can differ. For example, the top 5 growers of cabbage and the top 5 growers of carrots are not necessarily the same growers.

Note: in this section, cabbage refers to all cabbage types (i.e. pointed, winter, Savoy, white/storage and red). However, Table 1 refers to pointed cabbage only.

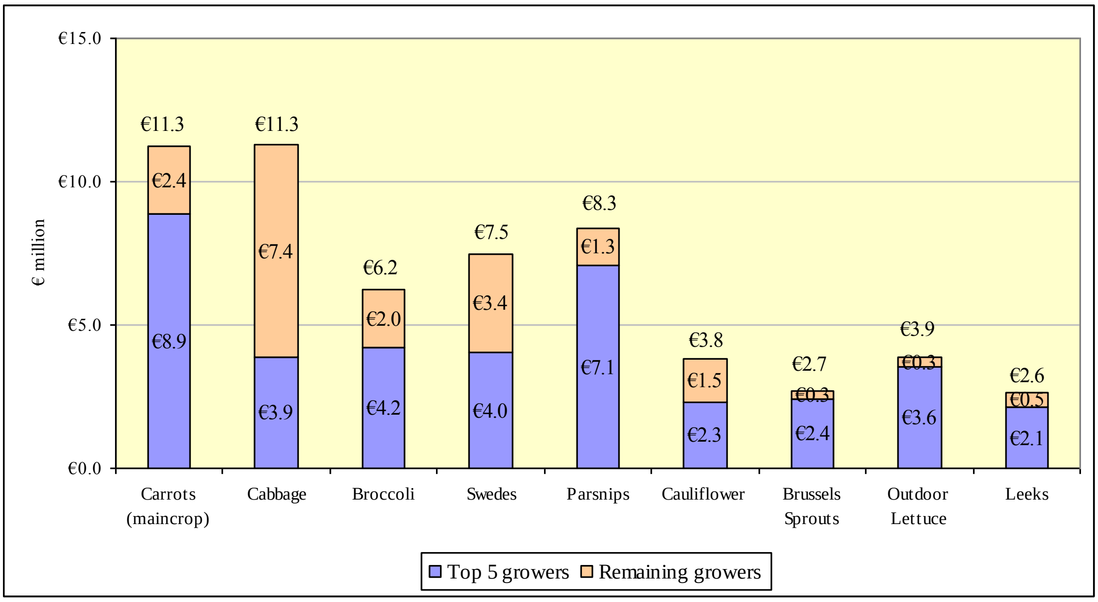
Top 5 Growers Chart 1: Contribution of Top-5 Growers to Production Area of the Most Important Field Vegetables (by area) 2014



The top 5 growers account for over half of the total production area of many of the most important field vegetable crops (cabbage and swedes being the two exceptions):

- the top 5 growers of carrots account for 79% of total carrot area
- the top 5 growers of cabbage account for 35% of total cabbage area
- the top 5 growers of broccoli account for 64% of total broccoli area
- the top 5 growers of swedes account for 47% of total swede area
- the top 5 growers of parsnips account for 82% of total parsnip area
- the top 5 growers of cauliflower account for 63% of total cauliflower area
- the top 5 growers of brussels sprouts account for 89% of total brussels sprouts area
- the top 5 growers of outdoor lettuce account for 93% of total outdoor lettuce area
- the top 5 growers of leeks account for 79% of total leek area

Top 5 Growers Chart 2: Contribution of Top-5 Growers to the Production Value of the Most Important Field Vegetables (by area) 2014



The top 5 growers also account for over half of production value for many crops (cabbage being the one exception):

- the top 5 growers of carrots account for 79% of total carrot value
- the top 5 growers of cabbage account for 35% of total cabbage value
- the top 5 growers of broccoli account for 68% of total broccoli value
- the top 5 growers of swedes account for 53% of total swede value
- the top 5 growers of parsnips account for 86% of total parsnip value
- the top 5 growers of cauliflower account for 61% of total cauliflower value
- the top 5 growers of brussels sprouts account for 89% of total brussels sprouts value
- the top 5 growers of outdoor lettuce account for 92% of total outdoor lettuce value
- the top 5 growers of leeks account for 81% of total leek value

Top 5 Growers Table 1: Top-5 Grower Yield and Farmgate Value per Unit for Most Important Crops (by area) 2014

	Average Yield per Hectare		Average Farmgate Value per Unit	
Cabbage - Pointed (York) (spring/summer/autumn)	39,100	heads per ha.	€0.45	per head
Cauliflowers (summer/autumn)	27,000(1)	heads per ha.	€0.65	per head
Broccoli	9	tonnes per ha.	€1,250	per tonne
Brussels Sprouts	14	tonnes per ha.	€1,090	per tonne
Carrots (maincrop)	58	tonnes per ha.	€353	per tonne
Swedes	49	tonnes per ha.	€359	per tonne
Parsnips	25	tonnes per ha.	€861	per tonne
Lettuce - Butterhead	55,250	heads per ha.	€0.57	per head
Leeks	21	tonnes per ha.	€970(2)	per tonne

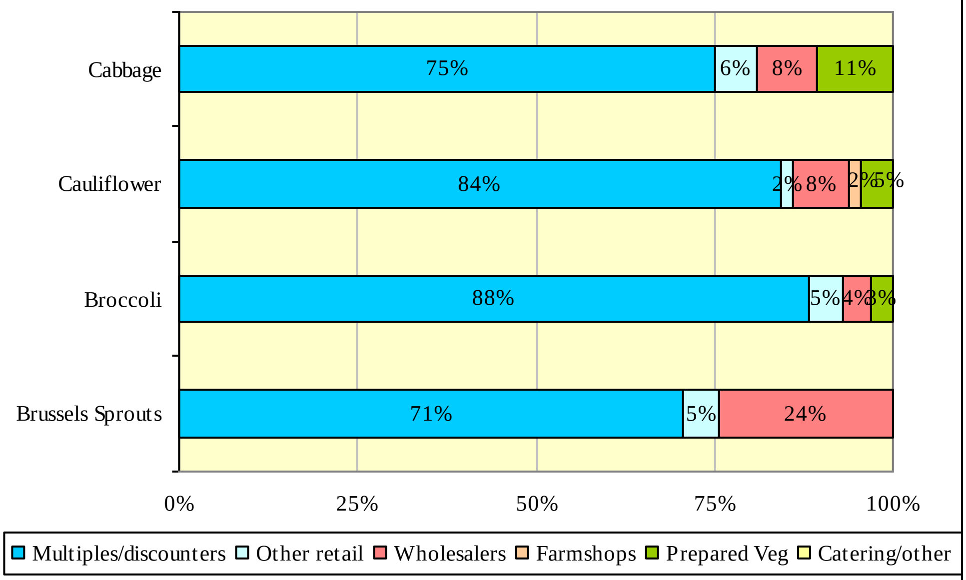
Average figures shown are mean averages.
(1) One grower with high yield, 20,000 tonnes/ha is a more typical yield.
(2) One grower with high price, €800 per tonne is a more typical price.
Note: there can be variations in yield and farmgate value per unit depending on the production year and the level of market preparation that takes place on the farm.

The above table shows the average yield per hectare and the average farmgate value per unit achieved by the top 5 growers of each of the most important crops.

Yield figures are broadly similar to yields achieved by all growers (see Table 1 in Section 2). The main exceptions are swedes where the average yield of the top 5 growers was 49 tonnes per hectare (compared to 38 tonnes per hectare for all growers) and outdoor butter-head lettuce where the average yield of the top 5 growers was 55,250 head per hectare (compared to 45,000 head per hectare for all growers).

Farmgate value figures are also broadly similar to those achieved by all growers (again see Table 1 in Section 2).

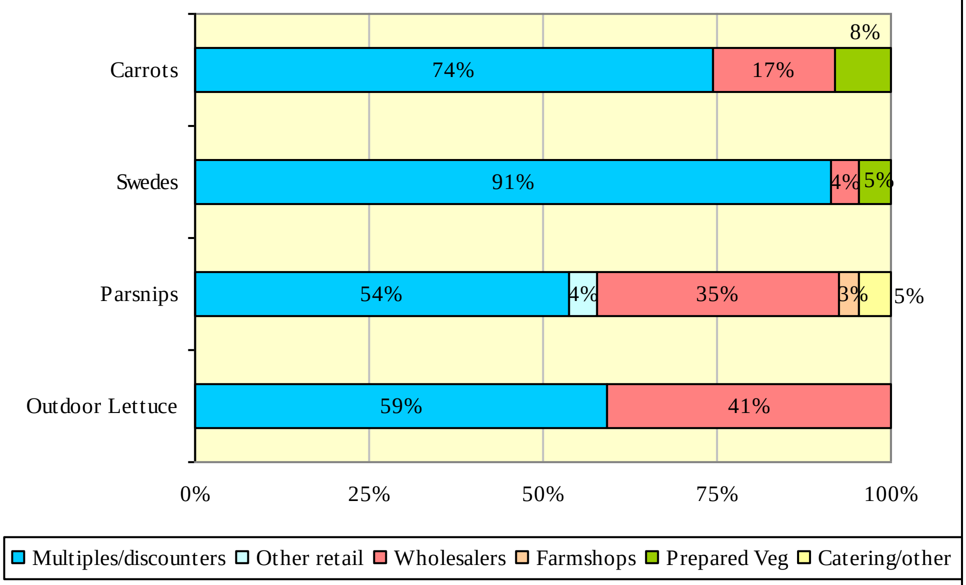
Top 5 Growers Chart 3: Market Outlets for Top-5 Growers of Brassica Crops 2014



Multiples/discounters: Tesco, Dunnes, Aldi, Lidl, Musgrave, etc.; 'Farmshops' includes farmers markets.

The top 5 growers for each type of brassica sell their output primarily through multiples/discounters. The main exception is brussels sprouts where wholesalers account for 24% of sales volume.

Top 5 Growers Chart 4: Market Outlets for Top-5 Growers of Main Root Crops and Outdoor Lettuce 2014



Multiples/discounters: Tesco, Dunnes, Aldi, Lidl, Musgrave, etc.; 'Farmshops' includes farmers markets.

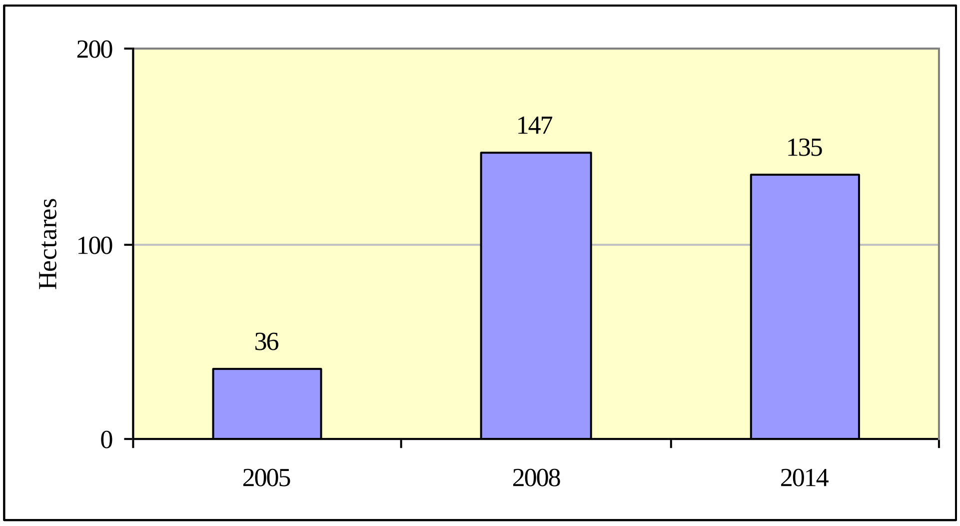
The top 5 growers of the main root crops and outdoor lettuce also sell their output primarily through multiples/discounters. The main exceptions are outdoor lettuce (where 41% of sales volume is through wholesalers) and parsnips (where 35% of sales volume is through wholesalers).

Section 6: Analysis of Organic Field Vegetable Production

This section provides information on certified organic field vegetable growers who have a minimum of 0.8 hectares of organic vegetables. The main finding is that, in 2014, there are 135 hectares of organic field vegetables with a production value of €3.5 million.

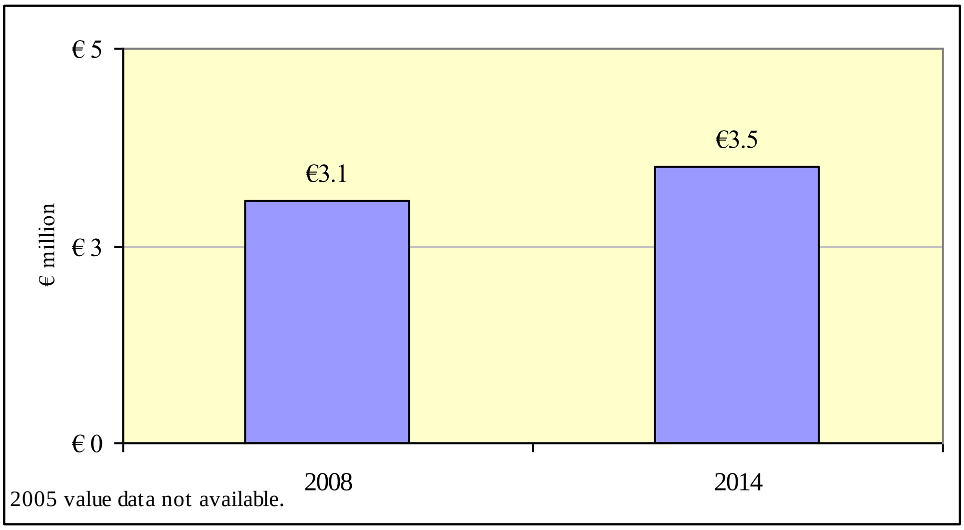
Note: previous sections included organic production. For example, figures for production area shown in previous section are combined totals for organic and non-organic growers.

Organic Chart 1: Organic Field Vegetable Production Area 2005-2014 (Hectares)



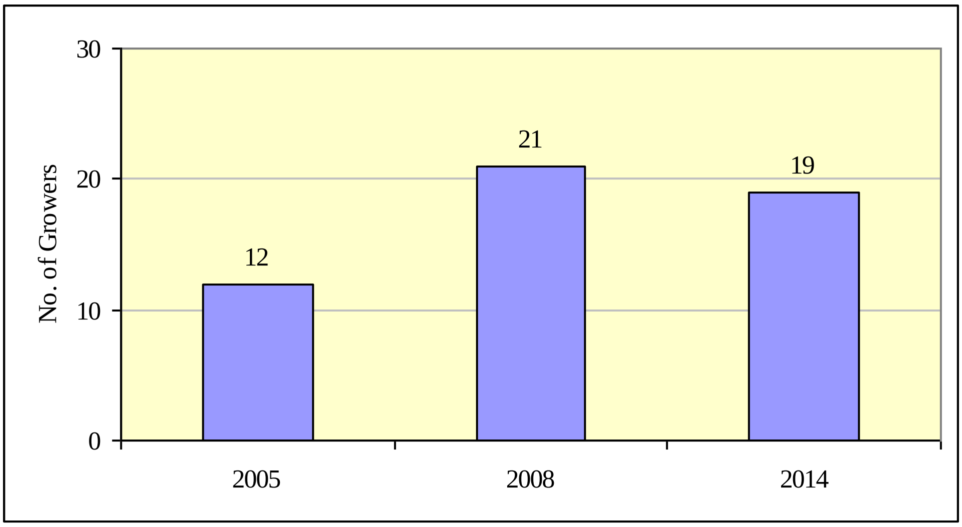
Organic field vegetable production area is 135 hectares in 2014, down from 147 hectares in 2008 (i.e. an 8% reduction).

Organic Chart 2: Organic Field Vegetable Farmgate Value 2008-2014 (€ million)



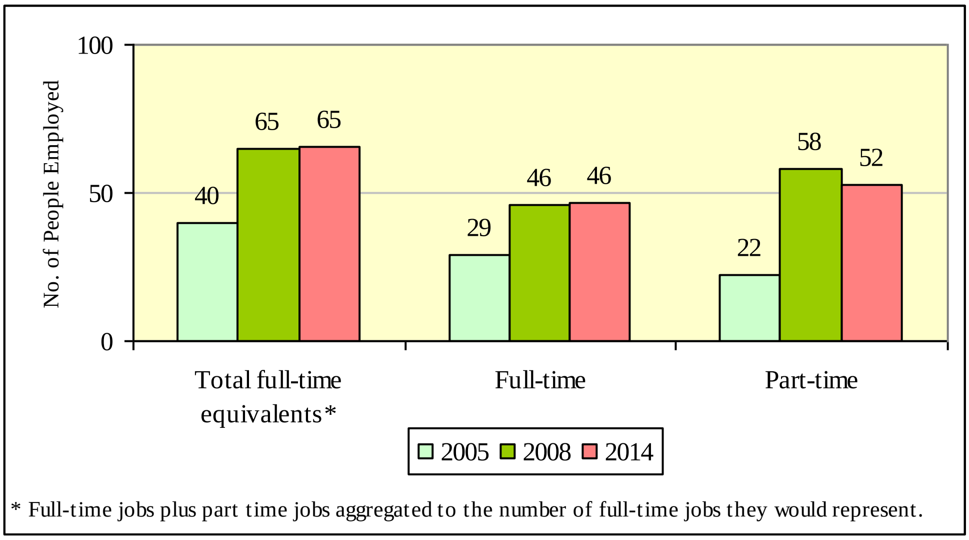
The farmgate value of organic field vegetable production is €3.5 million in 2014, up from €3.1 million in 2008 (i.e. a 13% increase in production value).

Organic Chart 3: Number of Organic Field Vegetable Growers 2005-2008



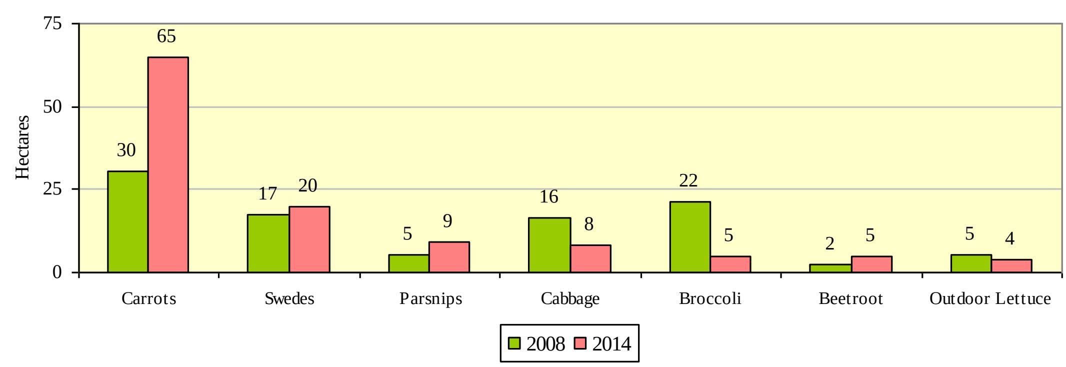
There are 19 organic field vegetable growers (with at least 0.8 hectares of organic field vegetables) in 2014. This compares with 21 organic growers in 2008 and 12 organic growers in 2005.

Organic Chart 4: On-Farm Organic Field Vegetable Sector Employment 2005-2014



Organic field vegetable growers provide 65 full-time equivalent jobs in 2014, which is unchanged from the 2008 census. The 65 full-time equivalent jobs provided by organic growers represents 6% of the total full-time equivalent jobs provided by the field vegetable sector overall. However, organic growers account for only 3% of total production area and 4% of total farmgate value. This indicates that organic production is more labour intensive.

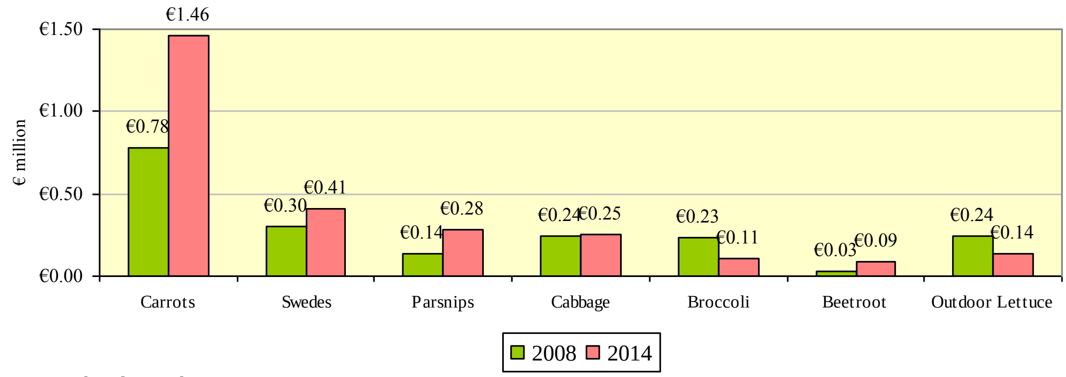
Organic Chart 5: Production Area of the Most Important* Organic Field Vegetables 2008-2014 (Hectares)



* crops with at least 4 hectares grown in 2014.

There are 65 hectares of organic carrots grown in 2014, representing almost half (48%) of the total organic field vegetable production area (135 hectares). Other crops with significant organic production area include swedes (20 hectares in 2014), parsnips (9 hectares) and cabbage (8 hectares). However, the production area of cabbage, as well as broccoli, has decreased significantly since 2008.

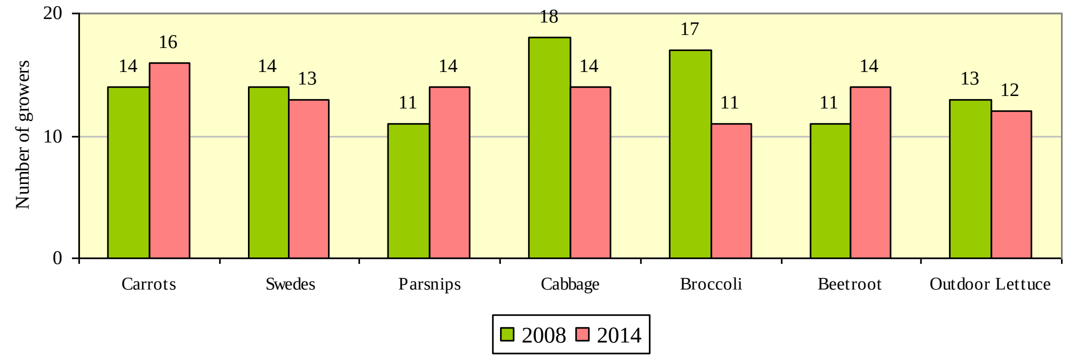
Organic Chart 6: Farmgate Value of the Most Important* Organic Field Vegetables 2008-2014 (€ million)



* crops with at least 4 hectares grown in 2014.

The farmgate value of organic carrots is €1.46 million in 2014, representing 42% of the total farmgate value of organic field vegetables (€3.5 million). The next highest production values are swedes (€0.41 million in 2014), parsnips (€0.28 million) and cabbage (€0.25 million).

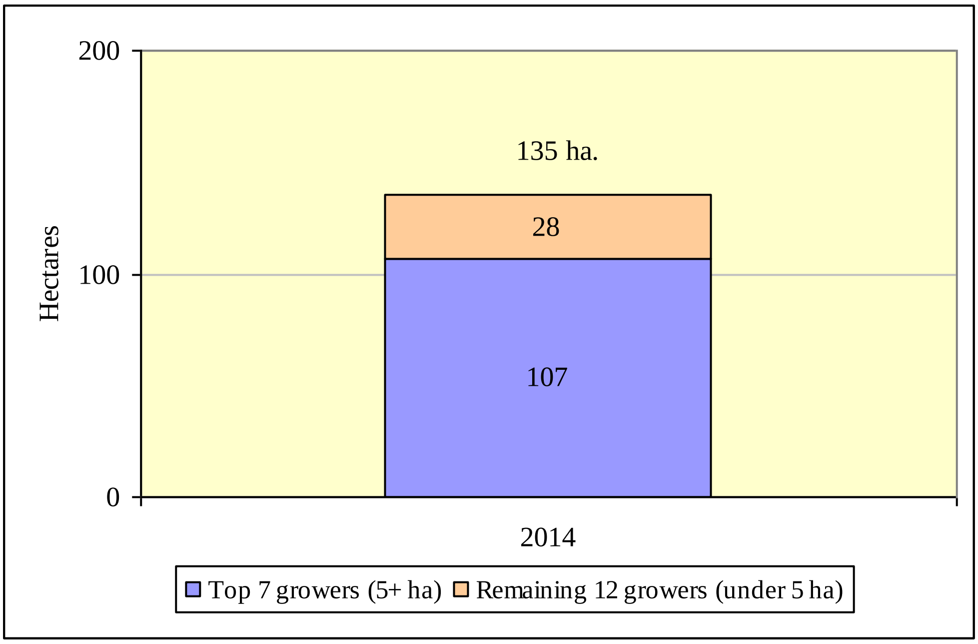
Organic Chart 7: Number of Growers of the Most Important* Organic Field Vegetables 2008-2014



* crops with at least 4 hectares grown in 2014.

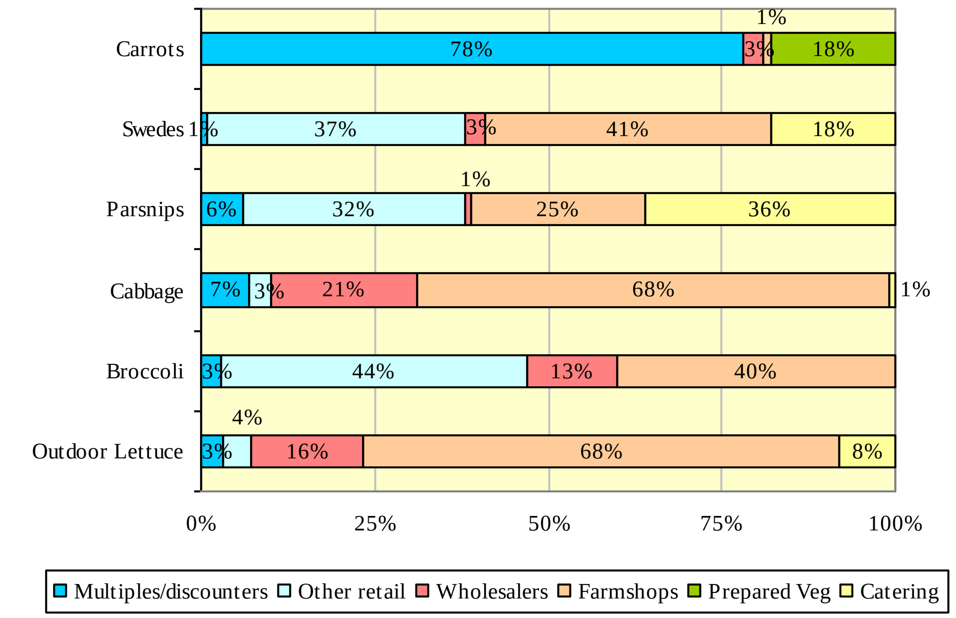
Carrots are also the most commonly grown organic field vegetable, with 16 growers producing organic carrots in 2014. The numbers of growers of cabbage and broccoli have decreased since 2008, while grower numbers for the other main organic crops are relatively stable.

Organic Chart 8: Contribution of Largest Organic Growers (by area) 2014 (Hectares)



Of the 19 organic growers, the top 7 growers in terms of production area account for 79% of total organic production area (the top 7 growers have 107 hectares of organic vegetables, compared to 28 hectares for the remaining growers).

Organic Chart 9: Market Outlets for Most Important* Organic Crops 2014



* crops with at least 4 hectares grown in 2014. Figures for beetroot not available.
Multiples/discounters: Tesco, Dunnes, Aldi, Lidl, Musgrave, etc.; 'Farmshops' includes farmers markets.

In comparison to non-organic field vegetables where most output is sold to multiples/discounters, organic output tends to be sold at farmshops and other retail (potentially local retails shops). The one exception is carrots where 78% of organic carrots are sold to multiples/discounters.

Appendix Tables

Appendix One: Production Area, Value, Number of Growers & Employment

Table 1.1: Field Vegetable Production 1999-2014 by County

	1999				2002				2005			
	Number of Growers	Hectares	Total Farmgate Value (€m)	Average Value per Hectare	Number of Growers	Hectares	Total Farmgate Value (€m)	Average Value per Hectare	Number of Growers	Hectares	Total Farmgate Value (€m)	Average Value per Hectare
Clare	3	6	€ 0.08	€ 14,443	3	6	€ 0.11	€ 17,621	*	*	*	*
Cork	35	449	€ 3.14	€ 6,988	24	415	€ 3.31	€ 7,974	26	529.0	€6.2	€11,720
Donegal	6	13	€ 0.08	€ 6,189	6	9	€ 0.05	€ 5,528	4	16.0	€0.2	€12,500
Dublin	127	1,924	€ 18.98	€ 9,864	94	1,764	€ 21.98	€ 12,459	68	1,739.0	€23.7	€13,629
Galway	19	89	€ 0.37	€ 4,166	12	44	€ 0.17	€ 3,851	10	51.0	€0.6	€11,765
Kerry	16	86	€ 0.59	€ 6,821	11	81	€ 0.47	€ 5,844	8	70.0	€0.9	€12,857
Kildare	3	62	€ 0.51	€ 8,186	4	79	€ 0.31	€ 3,913	*	*	*	*
Kilkenny	10	210	€ 1.94	€ 9,218	8	158	€ 1.56	€ 9,898	7	130.0	€1.8	€13,846
Laois	4	108	€ 1.62	€ 15,035	4	152	€ 1.99	€ 13,071	4	125.0	€2.0	€16,000
Limerick	5	20	€ 0.14	€ 7,078	4	10	€ 0.07	€ 6,620	3	14.0	€0.2	€14,286
Louth	11	118	€ 1.20	€ 10,135	8	96	€ 1.36	€ 14,166	10	99.0	€1.4	€14,141
Meath	30	589	€ 4.80	€ 8,146	22	551	€ 5.00	€ 9,064	21	618.0	€8.6	€13,916
Monaghan	*	*	*	*	*	*	*	*	4	7.0	€0.0	€1,429
Offaly	14	193	€ 1.13	€ 5,871	11	131	€ 0.47	€ 3,574	9	118.0	€1.4	€11,864
Roscommon	14	20	€ 0.08	€ 3,775	8	12	€ 0.04	€ 3,324	8	14.0	€0.2	€14,286
Sligo	8	31	€ 0.19	€ 6,082	6	9	€ 0.04	€ 4,145	3	19.0	€0.2	€10,526
Tipperary	8	46	€ 0.43	€ 9,334	4	38	€ 0.32	€ 8,341	*	*	*	*
Waterford	14	109	€ 1.28	€ 11,764	16	104	€ 0.89	€ 8,478	12	94.0	€1.5	€15,957
Westmeath	2	14	€ 0.12	€ 8,859	3	6	€ 0.05	€ 7,340	3	5.0	€0.1	€10,000
Wexford	35	408	€ 4.37	€ 10,711	35	533	€ 5.13	€ 9,625	25	447.0	€6.1	€13,647
Wicklow	*	*	*	*	4	17	€ 0.28	€ 16,838	5	15.0	€0.2	€13,333
Other Counties *	13	58	€ 0.41	€ 7,195	7	55	€ 0.35	€ 6,255	8	156.5	€2.1	€13,287
Total	**377**	**4,554**	**€ 41.47**	**€ 9,107**	**294**	**4,272**	**€ 43.93**	**€ 10,284**	**238**	**4,267**	**€57.4**	**€13,446**

* only a small number of growers. Production figures added to 'Other counties' for this census year in order to protect grower confidentiality.

Table 1.1: Field Vegetable Production 1999-2014 by County (continued)

	2008				**2014**			
	Number of Growers	**Hectares**	**Total Farmgate Value (€m)**	**Average Value per Hectare**	**Number of Growers**	**Hectares**	**Total Farmgate Value (€m)**	**Average Value per Hectare**
Carlow	-	-	-	-	*	*	*	*
Clare	*	*	*	*	*	*	*	*
Cork	27	409.3	€4.8	€11,678	22	232.1	€3.7	€15,776
Donegal	4	15.7	€0.5	€28,662	*	*	*	*
Dublin	63	2,156.8	€32.2	€14,939	51	1,846.9	€37.0	€20,041
Galway	11	75.5	€1.1	€14,299	8	93.3	€1.5	€16,102
Kerry	8	144.3	€1.5	€10,256	6	103.3	€1.7	€16,329
Kildare	4	118.8	€1.3	€10,691	5	254.5	€3.2	€12,429
Kilkenny	8	151.2	€2.6	€17,331	10	207.9	€3.9	€18,739
Laois	4	132.3	€2.7	€20,189	3	244.0	€4.9	€19,917
Leitrim	-	-	-	-	-	-	-	-
Limerick	3	19.7	€0.3	€17,303	*	*	*	*
Longford	-	-	-	-	*	*	*	*
Louth	11	152.3	€3.1	€20,028	5	94.9	€1.9	€20,144
Mayo	-	-	-	-	-	-	-	-
Meath	15	508.7	€8.5	€16,710	10	578.6	€12.2	€21,072
Monaghan	*	*	*	*	*	*	*	*
Offaly	8	139.5	€2.1	€14,691	8	115.2	€1.7	€14,891
Roscommon	7	10.7	€0.1	€10,280	*	*	*	*
Sligo	*	*	*	*	-	-	-	-
Tipperary	*	*	*	*	3	11.4	€0.2	*
Waterford	10	87.5	€1.3	€14,977	7	71.3	€1.3	€17,879
Westmeath	*	*	*	*	-	-	-	-
Wexford	16	403.9	€6.4	€15,919	13	347.3	€5.8	€16,621
Wicklow	5	29.2	€0.7	€25,377	4	18.8	€0.5	€26,320
Other Counties *	8	34.3	€0.6	€18,076	10	47.1	€0.7	€15,348
Total	**212**	**4,590**	**€69.7**	**€15,191**	**165**	**4,267**	**€80.0**	**€18,761**

* only a small number of growers. Production figures added to 'Other counties' for this census year in order to protect grower confidentiality.

Table 1.2: Field Vegetable Employment 1999-2014 by County

	1999				2002				2005			
	Full time employees	Part time employees	Part time employees as full time equivalents	Total full-time employment	Full time employees	Part time employees	Part time employees as full time equivalents	Total full-time employment	Full time employees	Part time employees	Part time employees as full time equivalents	Total full-time employment
Cork	58	182	44.9	103	51	58	14.6	66	55	63	25.9	81
Donegal	1	8	3.3	4	1	6	3.0	4	4	3	0.5	5
Dublin	258	414	126.4	384	266	340	105.8	372	258	208	87.6	346
Galway	4	66	20.1	24	6	13	5.1	11	2	12	5.8	8
Kerry	20	43	16.3	36	7	11	5.5	13	15	9	3.5	18
Kildare	*	*	*	*	*	*	*	*	*	*	*	*
Kilkenny	72	107	34.2	106	24	52	19.3	43	19	24	10.3	29
Laois	8	24	12.5	21	9	26	14.2	23	30	5	2.0	32
Limerick	4	9	2.8	7	3	9	3.0	6	18	50	19.0	37
Louth	14	32	11.9	26	17	34	14.5	32	2	0	0.0	2
Meath	76	122	42.9	119	50	58	31.2	81	59	71	27.8	87
Offaly	11	64	20.3	31	23	5	10.0	33	28	16	6.2	34
Roscommon	2	26	7.2	9	2	8	2.0	4	1	7	2.3	3
Sligo	3	18	8.5	12	4	6	2.5	7	4	0	0.0	4
Waterford	14	39	14.8	29	25	5	2.0	27	18	22	5.3	23
Westmeath	1	11	3.4	4	1	1	2.8	4	4	0	0.0	4
Wexford	27	133	46.4	73	54	61	52.2	106	51	96	38.4	89
Wicklow	*	*	*	*	6	4	8.0	14	12	8	2.8	15
Other Counties*	24	74	18.6	43	27	44	17.2	45	18	23	9.8	28
Total	**597**	**1372**	**434.5**	**1,032**	**577**	**741**	**312.7**	**890**	**598**	**617**	**246.8**	**844**

* only a small number of growers. Employment figures added to 'Other counties' for this census year in order to protect grower confidentiality.

Table 1.2: Field Vegetable Employment 1999-2014 by County (Continued)

	2008				2014			
	Full time employees	Part time employees	Part time employees as full time equivalents	Total full-time employment	Full time employees	Part time employees	Part time employees as full time equivalents	Total full-time employment
Carlow	-	-	-	-	*	*	*	*
Clare	*	*	*	*	*	*	*	*
Cork	51	39	11.3	62	69	38	13.2	82
Donegal	5	8	4.0	9	1	7	2.5	4
Dublin	314	186	85.1	399	332	306	136.2	468
Galway	16	7	3.0	19	27	9	2.1	29
Kerry	15	7	3.5	19	12	16	5.6	18
Kildare	22	20	9.4	31	17	52	13.1	30
Kilkenny	45	58	20.0	65	65	51	21.8	87
Laois	29	2	1.0	30	35	17	8.3	43
Leitrim	-	-	-	-	-	-	-	-
Limerick	6	1	0.3	6	*	*	*	*
Longford	-	-	-	-	*	*	*	*
Louth	23	62	15.8	38	22	60	29.7	52
Mayo	-	-	-	-	-	-	-	-
Meath	42	52	25.5	68	131	13	3.1	134
Monaghan	*	*	*	*	*	*	*	*
Offaly	25	11	4.5	30	22	17	5.8	28
Roscommon	9	1	0.5	10	*	*	*	*
Sligo	*	*	*	*	-	-	-	-
Tipperary	*	*	*	*	4	2	0.3	4
Waterford	17	17	7.4	24	14	23	6.6	21
Westmeath	*	*	*	*	-	-	-	-
Wexford	44	63	26.8	71	63	36	7.7	71
Wicklow	8	26	7.5	16	18	18	6.6	25
Other Counties*	13	5	2.5	16	8	9	3.3	11
Total	**683**	**565**	**228.0**	**911**	**840**	**674**	**265.7**	**1106**

* only a small number of growers. Employment figures added to 'Other counties' for this census year in order to protect grower confidentiality.

Appendix Two: Details of Field Vegetable Crops Grown

Table 2.1: Field Vegetable Production by Crop 1999-2014

	1999				2002				2005			
Leafy Brassicas	**Growers**	**Hectares**	**Total Farmgate Value (€m)**	**Value Per Hectare (1)**	**Growers**	**Hectares**	**Total Farmgate Value (€m)**	**Value Per Hectare (1)**	**Growers**	**Hectares**	**Total Farmgate Value (€m)**	**Value Per Hectare (1)**
Cabbage - Pointed (York)	170	452	€ 2.68	€ 5,939	118	379	€ 2.93	€ 7,717	102	347	€4.72	€13,600
Cabbage - Savoy	-	-	-	-	113	375	€ 3.14	€ 8,379	63	142	€1.45	€10,200
Cabbage - White or Storage	37	175	€ 1.33	€ 7,579	48	157	€ 1.47	€ 9,330	16	53	€0.67	€12,550
Cabbage - Red	-	-	-	-	9	6	€ 0.07	€ 11,206	8	13	€0.22	€16,805
Cabbage - Round types***	146	450	€ 2.73	€ 6,051	-	-	-	-	60	261	€2.35	€9,000
Cauliflowers	115	641	€ 5.02	€ 7,821	102	505	€ 4.33	€ 8,580	70	424	€5.61	€13,250
Broccoli	115	470	€ 3.84	€ 8,174	96	420	€ 3.24	€ 7,712	75	547	€5.41	€9,893
Brussels Sprouts	58	239	€ 2.28	€ 9,534	31	276	€ 3.27	€ 11,854	25	181	€2.09	€11,591
Kale	5	10	€ 0.06	€ 6,157	6	13	€ 0.15	€ 11,477	9	11	€0.03	€3,050
Root Crops												
Carrots	97	641	€ 6.97	€ 10,878	94	694	€ 8.16	€ 11,754	83	718	€12.52	€ 17,439
Swedes	141	559	€ 3.55	€ 6,351	102	475	€ 3.40	€ 7,156	93	503	€4.54	€9,030
Parsnips	62	273	€ 2.65	€ 9,706	53	295	€ 3.92	€ 13,289	56	363	€5.99	€16,500
Beetroot	3	0	€ 0.00	€ 4,534	7	21	€ 0.11	€ 5,187	15	3	€0.01	€4,000
White Turnips	4	4	€ 0.02	€ 4,895	9	17	€ 0.18	€ 10,640	**	**	**	**
Salad Crops/Leafy Vegetables												
Lettuce - Iceberg	20	131	€ 3.50	€ 26,793	14	99	€ 1.82	€ 18,311	12	120	€2.69	€22,370
Lettuce - Lollo Rossa types	23	30	€ 0.39	€ 13,300	22	27	€ 0.35	€ 13,021	19	17	€0.20	€11,700
Lettuce - Butterhead	7	6	€ 0.25	€ 40,753	11	24	€ 0.46	€ 18,866	10	6	€0.02	€3,520
Lettuce - Oak Leaf*	-	-	-	-	-	-	-	-	16	14	€0.12	€8,550
Lettuce - Other*	3	2	€ 0.04	€ 16,864	9	2	€ 0.04	€ 17,403	8	18	€0.16	€9,000
Spinach/Chinese Leaves	10	13	€ 0.17	€ 13,687	9	31	€ 0.35	€ 11,197	9	59	€0.10	€ 1,650
Alliums												
Onions	26	162	€ 1.09	€ 6,703	24	152	€ 1.12	€ 7,369	20	135	€2.12	€15,750
Scallions	40	77	€ 1.70	€ 22,116	30	71	€ 1.53	€ 21,388	15	96	€2.16	€22,499
Leeks and Shallots	45	66	€ 0.90	€ 13,621	28	69	€ 1.28	€ 18,646	35	66	€1.16	€ 17,640
Stalk Crops												
Celery	28	42	€ 0.97	€ 23,377	22	47	€ 1.18	€ 25,006	19	50	€1.92	€38,500
Other Minor Field Vegetables												
Rhubarb	23	54	€ 0.50	€ 9,242	19	38	€ 0.38	€ 9,980	14	44	€0.33	€7,500
Squashes												
Pumpkins	-	-	-	-	10	18	€ 0.06	€ 3,161	11	22	€0.08	€3,540
Courgettes and Marrows	17	8	€ 0.06	€ 7,320	6	2	€ 0.03	€ 12,767	15	11	€0.13	€ 11,571
Herbs												
Parsley	22	27	€ 0.50	€ 18,544	13	25	€ 0.42	€ 16,982	15	26	€0.26	€10,000
Thyme	9	2	€ 0.02	€ 8,457	6	3	€ 0.04	€ 13,508	4	3	€0.04	€13,800
Other Herbs	5	2	€ 0.06	€ 29,365	9	9	€ 0.23	€ 26,818	5	7	€0.21	€30,000
Legumes												
Beans - French	-	-	-	-	3	0	€ 0.01	€ 23,476	**	**	**	**
Beans - Broad	-	-	-	-	4	0	€ 0.00	€ 15,651	**	**	**	**
Peas - Green	3	1	€ 0.01	€ 6,746	-	-	-	-	**	**	**	**
Mange Tout*	-	-	-	-	-	-	-	-	-	-	-	-
Other Legumes*	-	-	-	-	5	9	€ 0.14	€ 15,289	-	-	-	-
Other												
Other	27	15	€ 0.15	€ 10,628	7	7	€ 0.10	€ 14,471	0	0	-	-
Total	**377**	**4,554**	**€ 41.47**	**€ 9,106**	**294**	**4,272**	**€ 43.93**	**€ 10,283**	**238**	**4,267**	**€57.37**	**€13,446**

Table 2.1: Field Vegetable Production by Crop 1999-2014 (continued)

	2008				2014			
Leafy Brassicas	**Growers**	**Hectares**	**Total Farmgate Value (€m)**	**Value Per Hectare (1)**	**Growers**	**Hectares**	**Total Farmgate Value (€m)**	**Value Per Hectare (1)**
Cabbage - Pointed (York)	109	386	€ 6.75	€ 17,496	78	409	€ 7.12	€ 17,389
Cabbage - Savoy	73	155	€ 2.43	€ 15,718	33	70	€ 1.15	€ 16,427
Cabbage - White or Storage	19	90	€ 1.17	€ 13,073	12	87	€ 1.31	€ 15,031
Cabbage - Red	21	11	€ 0.13	€ 12,717	15	13	€ 0.15	€ 11,493
Cabbage - Round types***	74	297	€ 2.91	€ 9,798	31	102	€ 1.60	€ 15,627
Cauliflowers	71	434	€ 4.62	€ 10,642	47	283	€ 3.79	€ 13,419
Broccoli	85	618	€ 4.39	€ 7,100	63	558	€ 6.25	€ 11,195
Brussels Sprouts	29	179	€ 2.13	€ 11,887	30	150	€ 2.69	€ 17,868
Kale	15	10	€ 0.12	€ 11,147	20	51	€ 1.31	€ 25,716
Root Crops								
Carrots	76	681	€ 15.40	€ 22,616	69	716	€ 15.47	€ 21,596
Swedes	97	512	€ 5.97	€ 11,661	73	480	€ 7.47	€ 15,573
Parsnips	57	348	€ 4.63	€ 13,311	49	377	€ 8.35	€ 22,114
Beetroot	14	3	€ 0.04	€ 12,684	25	26	€ 0.39	€ 14,851
White Turnips	9	10	€ 0.04	€ 4,489	6	6	€ 0.05	€ 8,525
Salad Crops/Leafy Vegetables								
Lettuce - Iceberg	13	111	€ 2.75	€ 24,797	4	94	€ 3.05	€ 32,609
Lettuce - Lollo Rossa types	22	34	€ 0.91	€ 26,928	6	3	€ 0.08	€ 25,285
Lettuce - Butterhead	11	7	€ 0.14	€ 20,558	15	11	€ 0.23	€ 20,265
Lettuce - Oak Leaf*	23	21	€ 0.53	€ 25,095	12	3	€ 0.09	€ 32,064
Lettuce - Other*	13	16	€ 0.36	€ 22,564	10	24	€ 0.41	€ 16,980
Spinach/Chinese Leaves	17	98	€ 1.48	€ 15,049	19	231	€ 2.73	€ 11,839
Alliums								
Onions	29	179	€ 2.34	€ 13,058	27	84	€ 0.90	€ 10,806
Scallions	20	108	€ 5.50	€ 50,864	16	82	€ 3.81	€ 46,497
Leeks and Shallots	41	72	€ 1.43	€ 19,842	35	127	€ 2.63	€ 20,723
Stalk Crops								
Celery	17	46	€ 1.41	€ 30,584	19	71	€ 2.25	€ 31,534
Other Minor Field Vegetables								
Rhubarb	19	46	€ 0.54	€ 11,672	13	44	€ 0.69	€ 15,664
Squashes								
Pumpkins	11	24	€ 0.19	€ 7,666	14	19	€ 0.28	€ 14,442
Courgettes and Marrows	20	14	€ 0.13	€ 8,885	16	16	€ 0.27	€ 16,661
Herbs								
Parsley	19	58	€ 0.91	€ 15,746	16	112	€ 4.66	€ 41,777
Thyme	10	8	€ 0.16	€ 20,221	3	1	€ 0.01	€ 12,197
Other Herbs	9	8	€ 0.16	€ 18,939	3	2	€ 0.06	€ 29,847
Legumes								
Beans - French	4	0	€ 0.00	€ 34,286	6	1	€ 0.02	€ 29,148
Beans - Broad	4	0	€ 0.00	€ 19,375	8	1	€ 0.02	€ 20,122
Peas - Green	4	2	€ 0.04	€ 22,692	7	1	€ 0.01	€ 16,854
Mange Tout* (2)	3	0	€ 0.00	€ 17,083	3	0	€ 0.02	€ 77,505
Other Legumes* (3)	-	-	-	-	-	-	-	-
Other								
Other	5	4	€ 0.03	€ 7,790	8	12	€ 0.74	€ 63,913
Total	**212**	**4,590**	**€69.7**	**€ 15,191**	**165**	**4,267**	**80**	**€ 18,761**

* there were some differences in the definitions of categories between censuses.
** value witheld to protect grower confidentiality (only a small number of growers in category).
*** Round green all year around (e.g. Primo, Tundra and Stallion). Previous censuses may have used different definitions.
(1) Average value per hectare was calculated by dividing total farmgate value by total hectares.
(2) High value per hectare figure due to some organic growers with small production area achieving high price.
(3) High value per hectare figure due to one grower with large production area of specialist vegetable achieving high price.
Note: many growers produce more than one crop.

Table 2.2: Yield and Farmgate Value 2014
(excluding organic vegetables & vegetables for prepared vegetable sector)

	Average Yield per Hectare		Average Farmgate Value per Unit	
Leafy Brassicas				
Cabbage - Pointed	42,250	heads per ha.	€0.45	per head
Cabbage - Savoy	35,500	heads per ha.	€0.45	per head
Cabbage - White or Storage	58	tonnes per ha.	€263	per tonne
Cabbage - Red	40	tonnes per ha.	€290	per tonne
Cabbage - Round types	39,000	heads per ha.	€0.45	per head
Cauliflowers	19,500	heads per ha.	€0.70	per head
Broccoli	8	tonnes per ha.	€1,200	per tonne
Brussels Sprouts	14	tonnes per ha.	€1,050	per tonne
Kale*	15	tonnes per ha.	€1,200	per tonne
Root Crops				
Carrots (maincrop)	55	tonnes per ha.	€360	per tonne
Swedes	38	tonnes per ha.	€390	per tonne
Parsnips	24	tonnes per ha.	€830	per tonne
Beetroot	17	tonnes per ha.	€900	per tonne
White Turnips	15	tonnes per ha.	€450	per tonne
Salad Crops/Leafy Vegetables				
Lettuce - Iceberg	50,000	heads per ha.	€0.56	per head
Lettuce - Lollo Rossa types	48,000	heads per ha.	€0.48	per head
Lettuce - Butterhead	45,000	heads per ha.	€0.50	per head
Lettuce - Oak Leaf	39,500	heads per ha.	€0.43	per head
Lettuce - Other	45,000	heads per ha.	€0.52	per head
Spinach*(1)	7	tonnes per ha.	€4,023	per tonne
Alliums				
Onions	40	tonnes per ha.	€270	per tonne
Scallions	170,000	bunches of 6/ha.	€0.39	per bunch of 6
Leeks	25	tonnes per ha.	€780	per tonne
Stalk Crops				
Celery	70,000	heads per ha.	€0.50	per head
Other Minor Field Vegetables				
Rhubarb	32,500	bunches of 6/ha.	€0.56	per bunch of 6
Squashes				
Pumpkins	5,000	pumpkins per ha.	€1.75	per pumpkin
Courgettes	12	tonnes per ha.	€1,180	per tonne
Herbs				
Parsley	9	tonnes per ha.	€2,350	per tonne
Legumes				
Beans - French*	7	tonnes per ha.	€6,625	per tonne
Beans - Broad*	6	tonnes per ha.	€4,500	per tonne
Peas - Green*	6	tonnes per ha.	€5,000	per tonne

Average figures shown are the median averages (i.e. the midpoint).
* Figures based on fresh, processed and organic growers as only a small number of fresh growers.
(1) Value figure inflated by several organic spinach growers with very small production area receiving high prices.
Note: there can be significant variations in yield and farmgate value per unit depending on the production year and the level of market preparation that takes place on the farm.

Appendix Three: Farm Facilities

Table 3.1: Number of Growers with Field Vegetable Facilities 2005-2014 by County (see next page for 2014)

	2005								2008							
	Propagation Tunnels	**Harvesting Rigs**	**Washers**	**Graders**	**Packhouse Stores**	**Cold stores**	**Other Stores**	**Chilled Transport**	**Propagation Tunnels**	**Harvesting Rigs**	**Washers**	**Graders**	**Packhouse Stores**	**Cold stores**	**Other Stores**	**Chilled Transport**
Cork	10	**	12	8	13	11	9	26	4	10	14	5	20	15	16	6
Donegal	1	**	2	1	3	0	1	4	1	0	2	2	2	1	0	0
Dublin	26	**	20	14	39	34	32	48	22	37	19	14	38	37	28	9
Galway	0	**	5	1	5	3	8	3	5	1	2	0	8	3	9	1
Kerry	2	**	5	1	2	3	0	5	1	2	5	3	4	3	2	2
Kildare	*	**	*	*	*	*	*	*	4	1	2	3	4	2	3	1
Kilkenny	2	**	3	2	2	3	0	1	4	3	4	2	8	6	5	1
Laois	1	**	3	2	4	3	1	4	1	3	3	3	4	3	1	1
Limerick	8	**	6	7	10	4	5	6	1	0	2	1	2	1	1	0
Louth	1	**	1	0	0	0	1	1	8	4	5	4	8	7	7	1
Meath	5	**	9	10	17	10	14	8	2	11	9	9	14	12	14	2
Offaly	4	**	3	3	7	8	2	4	1	5	4	2	6	6	6	3
Roscommon	1	**	3	1	5	3	6	0	0	0	2	0	1	0	0	0
Sligo	0	**	3	2	3	0	0	1	*	*	*	*	*	*	*	*
Waterford	0	**	8	7	8	6	6	0	1	6	8	4	8	7	1	1
Westmeath	1	**	1	0	0	0	0	0	*	*	*	*	*	*	*	*
Wexford	2	**	5	4	11	7	3	2	2	6	5	4	11	10	5	2
Wicklow	5	**	2	0	4	5	4	2	5	1	4	2	5	4	4	3
Other Counties *	6	**	6	5	6	4	3	5	3	1	4	0	5	2	3	1
Total	75	**	97	68	139	104	95	120	65	91	94	58	148	119	105	34

* only a small number of growers. Figures added to 'Other counties' for this census year in order to protect grower confidentiality.

** not asked in 2005 census.

Table 3.1: Number of Growers with Field Vegetable Facilities 2005-2014 by County (continued)

	2014								
	Propagation Tunnels	**Specialist Harvesters**	**Harvesting Rigs**	**Washers**	**Graders**	**Packhouse Stores**	**Cold Stores**	**Other Stores**	**Chilled Transport**
Cork	8	3	2	11	5	15	15	7	6
Donegal	0	0	1	1	1	0	0	1	1
Dublin	17	10	24	20	16	32	32	11	6
Galway	3	0	1	3	1	4	5	0	3
Kerry	1	0	1	5	1	4	3	2	1
Kildare	4	2	1	4	2	4	2	0	2
Kilkenny	5	4	1	4	3	6	6	5	3
Laois	1	0	1	1	1	1	1	0	0
Limerick	1	0	0	1	1	1	1	0	0
Louth	1	2	2	1	2	1	2	1	0
Meath	3	4	5	5	4	6	8	2	3
Offaly	1	1	3	3	3	4	4	1	3
Roscommon	0	0	0	0	0	0	0	0	0
Waterford	2	0	0	6	6	6	5	1	1
Wexford	1	2	5	7	3	9	8	3	3
Wicklow	4	2	1	4	1	4	3	1	3
Other Counties *	1	0	0	2	0	4	3	1	0
Total	53	30	48	78	50	101	98	36	35

* only a small number of growers. Figures added to 'Other counties' in order to protect grower confidentiality.

Table 3.2: Number of Growers with Field Vegetable Facilities 2008-2014 by Area/Volume

	2008											
	Propagation Tunnels (sqare metres)			Pack-house (square metres)			Cold Store (cubic metres)			Other Store (cubic metres)		
	<300m^2	301-900m^2	>900m^2	<100m^2	101-300m^2	>300m^2	<150m^3	151-400m^3	>400m^3	<200m^3	201-1,000m^3	>1,000m^3
Number of growers	33	14	18	57	59	32	72	26	21	35	46	24

Total number of growers = 212.

	2014											
	Propagation Tunnels (sqare metres)			Pack-house (square metres)			Cold Store (cubic metres)			Other Store (cubic metres)		
	<300m^2	301-900m^2	>900m^2	<100m^2	101-300m^2	>300m^2	<150m^3	151-400m^3	>400m^3	<200m^3	201-1,000m^3	>1,000m^3
Number of growers	31	10	12	45	29	27	59	21	18	19	12	5

Total number of growers = 165.

Table 3.3: Area (hectares) that are Irrigated 2014 by County

	2014		
	Hectares irrigated	**Production area in county**	**% of production area that is irrigated**
Carlow	-	**	
Clare	-	**	
Cork	*	**	
Donegal	-	**	
Dublin	300	1,847	16%
Galway	*	**	
Kerry	*	**	
Kildare	*	**	
Kilkenny	185	208	89%
Laois	-	**	
Leitrim	-	-	
Limerick	-	**	
Longford	-	**	
Louth	*	**	
Mayo	-	-	
Meath	*	**	
Monaghan	-	**	
Offaly	-	**	
Roscommon	-	**	
Sligo	-	-	
Tipperary	-	**	
Waterford	*	**	
Westmeath	-	-	
Wexford	200	347	58%
Wicklow	*	**	
Other Counties	330	1,864	18%
Total	**1,015**	**4,267**	**24%**

* only a small number of growers. Figures added to 'Other counties' in order to protect grower confidentiality.
** figues added to Other Counties for calculation purposes.
Note: The need for irrigation is significantly influenced by crop type, geographic location, soil type and prevailing weather conditions.