Crops Environment & Land Use Programme

eProfit Monitor Analysis

Tillage Farms 2017

teagasc
Agriculture and Food Development Authority

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Contents

Foreword

The Teagasc eProfit Monitor (ePM) is an online financial analysis tool available to all Teagasc clients. Tillage farmers work with their Teagasc Tillage Adviser to gather the data required. Once the data is entered, a range of reports for each enterprise (tillage crops, drystock, dairy) or the overall farm can be produced. If the farmer has carried out an ePM analysis on a yearly basis, multiple year reports tracking performance over a number of years can be generated. In addition, if the farmer is a member of a discussion group, a group report can be produced allowing each individual farmer to benchmark their performance with other group members. The purpose of this publication is to provide a range of benchmarks for both individual farmers and farmer groups. The analyses in this publication are based on data provided by Teagasc Tillage farmer clients relating to the 2017 production year and entered onto the ePM system prior to 19th September 2018.

A range of tables are provided with a summary of the key figures included in the main tables and a more detailed breakdown of costs contained in the later tables. Where 'Top ⅓' results are presented, the dataset was initially ranked on the basis of Gross Margin per hectare. The Gross Margin referred to in this publication refers to the tillage enterprise only and not the whole farm. Other enterprises on the farm may generate some additional profit for the farm business. In addition Basic Farm Payments, **other than** Direct Payments (Protein payment), are excluded from this analysis.

Finally, I would like to acknowledge the work of all Teagasc Tillage Advisers in promoting, completing and using ePM and to tillage farmers for providing the data required for analysis. Without their support, this publication would not be possible. I would also like to acknowledge the work of Teagasc Tillage Specialists and Kevin Connolly in extracting the data necessary for this publication.

Michael Hennessy

Michael Hennessy,
Head of Crops Knowledge Transfer

Overall performance

The ePM is filled out by farmers in conjunction with their advisor. All of the farmers are self-selecting with the majority actively participating in Discussion Groups and could be classified as progressive farmers. Of the farmers who filled in data, 342 growers successfully completed all elements of the ePM for the production year 2017. All of the participants were allocated to broad farming type categories as follows:

Table 1: Categories of farms and farmed area

Tillage - Production Type	No. of Farmers	Total Land area in group (hectares)
1. Winter Cereals	38	2,032
2. Spring Cereals	57	1,433
3. W. + S. Cereals	178	15,889
4. Cereals + Beet	14	1023
5. Cereals + Potatoes	3	149
6. Cereals + Other	51	4,584
7. Crops + Contractor	1	43
Total	**342**	**25,154**

The advisor categorises the farmer depending on the predominance of the crop mix on the farm. For a farmer, to be categorised as a Cereals and Beet farmer, the farmer should have at focus on beet production year on year. Similarly a farmer categorised as Winter Cereal farmer will have a focus on winter cereals year on year with the majority of the crops are sown are winter cereals.

The Winter and Spring category of farmer were by far the largest group with 178 farmers. Comparisons of groups with less than 10 farmers should be treated with caution.

The overall performances of these groups are as follows:

Table 2: Returns from farmer categories

	Average (per ha)		Average (€/ha)							
Tillage - Production Type	**Total Tillage area (ha)**	**Average Leased Land area**	**Gross Output**	**Variable Costs**	**Machinery Costs***	**Gross Margin**	**Land Lease costs****	**Fixed Costs/ha**	**Other Direct Paymets *****	**Net Margin (inc DP)**
1. Winter Cereals	2021	27	1670	608	385	677	104	258	1	316
2. Spring Cereals	1443	3	1306	479	339	489	47	210	30	261
3. W. + S. Cereals	15889	44	1535	568	319	648	107	222	13	332
4. Cereals + Beet	1024	43	2006	686	512	808	104	308	8	405
5. Cereals + Potatoes	149	20	1940	731	389	819	156	267	13	410
6. Cereals + Other	4584	26	1659	573	358	728	103	181	25	470
7. Crops + Contractor	43	25	1322	607	196	519	231	194	170	265
Average		**32**	**1553**	**564**	**344**	**645**	**97**	**221**	**16**	**343**

**Average Machinery costs include contractor, machinery running, machinery leases and finance and machinery depreciation, **Average cost of Land Lease (includes conacre and short & long term leased Land) incurred divided over owned and leased land, ***Other Direct Payments only refer to Protein Payments*

- The ePM average Net Margin for all farmers analysed is €343/ha which is a substantial increase on 2016 ePM figure of €106/ha. The top 1/3 of farms in the ePM averaged a Net margin of €661/ha

  This compared to the Teagasc NFS figure for Net Margin for the specialist tillage farm of €208/ha in 2016 (Dillon et al, 2018[1]). The equivalent Teagasc, NFS figure for the top 1/3 of farmers was €556 per hectare.

- Farmers categorised as predominately winter and spring cereal growers were the most profitable of the cereal categorised farms (€332/ha) by €29/ha compared to the average of the cereals group, despite this group having a relatively high land rental cost of €107/ha.

- Spring Cereal growers had the lowest returns (€261/ha) reflecting the reduced output however the group still retain similar machinery, fixed costs but lower land lease costs

1 Teagasc National farm Survey Results 2017, https://www.teagasc.ie/media/website/publications/2018/NFS2017_web.pdf

- Cereal farmers with either beet or potatoes were at least €62/ha more profitable than average while they paid roughly similar or more for rented land and incurred higher machinery costs
- Cereal farmers expect fixed costs to reduce as the farm size increases. Analysis of farms in the ePM categorised farms by size shows a relatively similar profitability between the largest and smallest groups. Although the larger growers had lower fixed costs, this was offset by much higher land lease costs (3.8 times higher than the smaller farm group) reflecting the increase proportion of rented land in the overall farm (22% of the total area in the smaller holdings compared to 73% in the larger holdings).

Farm Size (ha)	Number of Farms	Fixed Costs €/ha*	Land lease costs €/ha	Land leased area as % of total tillage area	Net Margin €/ha
0-100	282	228	74	22%	335
101-200	38	198	159	44%	404
201+	22	178	284	73%	331

*Fixed costs exclude Land Lease and Machinery

Rented land

Of the 341 farmers 144 had (42%) had leased land (conacre or leased land).

Table 3: Farmer categories – utilisation of rented land

Tillage - Production Type	All Farms No. of Farmers	No. of Farmers with leased land	No. of Farmers with leased land %	Leased Land (% total) (ha)	Average area of leased land per farmer (ha)	Average Gross Margin €/ha	Average Net Margin excluding leased land €/ha**	Average Cost of leased land €/ha*
1. Winter Cereals	38	15	39%	50%	68	677	420	354
2. Spring Cereals	57	13	22%	10%	11	489	309	372
3. W. + S. Cereals	178	81	45%	50%	97	648	439	376
4. Cereals + Beet	14	8	57%	59%	75	808	509	299
5. Cereals + Potatoes	3	3	100%	39%	20	819	566	377
6. Cereals + Other	51	24	47%	29%	54	728	573	422

**Leased land only (owned land not included), only from farms with Leased land, **Net Margin excluding land rental*

- The Spring Cereal group had the lowest number of farmers with leased land at 22% which represented only 10% of the total farmed area by this group. Whereas all other farmer groups farmed there were at least 39% of farmers renting land which accounted for 29% or more of the farmed area.

- Spring Cereal group of farmers had the lowest overall profitability and continued to pay close to the average for rented land

- Farmers classified as spring cereal are the group with the lowest profitability per hectare (excluding land rental) of the cereals based groups (Group 1,2,3) at €309/ha, this is €120/ha (28%) lower than the average of Group 1 and 3.

- All groups has a positive differential between Gross Margin and Land Lease (i.e. when land was leased this area made a positive income) with the surplus contributing to the Fixed Costs on these farms. This was not the case in 2016 with Groups 2 and 5 not contributing to fixed costs.

Comparison of eProfit Monitor to the National Farm Survey (NFS) data.

Teagasc produces an analysis of tillage costs on an annual basis using both the eProfit Monitor (ePM) and the National Farm Survey (NFS). These results tend to vary somewhat, which can be the source of some confusion. The ePM typically reports lower costs of production and higher profits.

The National Farm Survey (NFS) involves the collection of data on an annual basis from a random, nationally representative sample of approximately 900 farms (of which about 75 are classed as specialist tillage farmers). The NFS is a member of the pan-EU Farm Accountancy Data Network (FADN) which uses a harmonised system to collect national statistics on farming across Europe. Data validation is by the Teagasc data recorder with reference to financial documents.

The Teagasc eProfit Monitor (ePM) is a financial benchmarking tool that is available to all Teagasc clients via the Teagasc advisor or can be accessed online. Data (both technical and financial) are provided by the farmer through the completion of an Input Sheet and can be entered directly by the farmer or (as is more likely) by his/her Teagasc Adviser. Farmers volunteer are encouraged by the adviser to complete the benchmarking analysis and farmers are encouraged to repeat the analysis over a number of years to establish trends on the farm. The results generated are not nationally representative as the farms included in the annual dataset are self-selecting and do not proportionally represent the entire farming population.

While there are some differences in the cost headings used and the calculation of depreciation, the results generated for an individual cereal farmer will be similar for both analyses. This suggests that the methodology employed by both systems is similar and that methodological differences do not account for the differing results from the two systems. Given the relatively small differences in the methodologies of the two systems, it is most likely that the difference in the results is due to sample issues.

Analysis of ePM Crops

The following section compares the main tillage crops across all farm categories. Comparisons are made between the **Average** of the group and the **Top 1/3** of growers in the group. (Top 1/3 ranked on the basis of Gross Margin).

For the purposes of comparison the following is included in each category.

Table 4: Explanation of terms

Term	Included
Gross output	Sales of Grain and Straw (includes all moisture and related bonuses)
Material Costs	Seed, Fertiliser, Agrochemicals, etc
Machinery Costs	Machinery Costs*(Repairs, diesel, depreciation, leases, HP interest) + contractor charges
Other Variable Costs	Levies and Transport
Gross Margin	Gross Output minus (Material Costs + Machinery Costs +other Variable Costs)
Fixed Costs	Land Lease, light, heat, telephone, professional fees, land maintenance, etc.
Net Margin	Gross Margin minus Fixed Costs
Net Margin (inc DP)	Net Margin including Direct Payments (Protein Payments **not** Basic Payment Scheme)

**Machinery Costs are treated as a variable cost (Strictly speaking these costs are Fixed Costs) to help farmers compare costs to the Teagasc Costs and Returns which is published each year*

Fixed costs (including Machinery costs but not Contractor Costs) are automatically calculated by the ePM software based on the relative proportion of gross output for each crop compared to the total output for all crops in the tillage enterprise i.e. winter wheat has a higher output than spring barley therefore it will attract more fixed costs than spring barley

The information from Table 5 onwards outlines the Output and Costs associated with the major crops grown. The tables outline the major cost and key figures for each crop. Comparisons are possible between the average of the group and the top one third of farmers in the group.

Farmers are ranked based on the Gross Margin of each farmer compared to the Gross Margin for all other farmers.

Figures may not match exactly due to rounding.

Winter Wheat

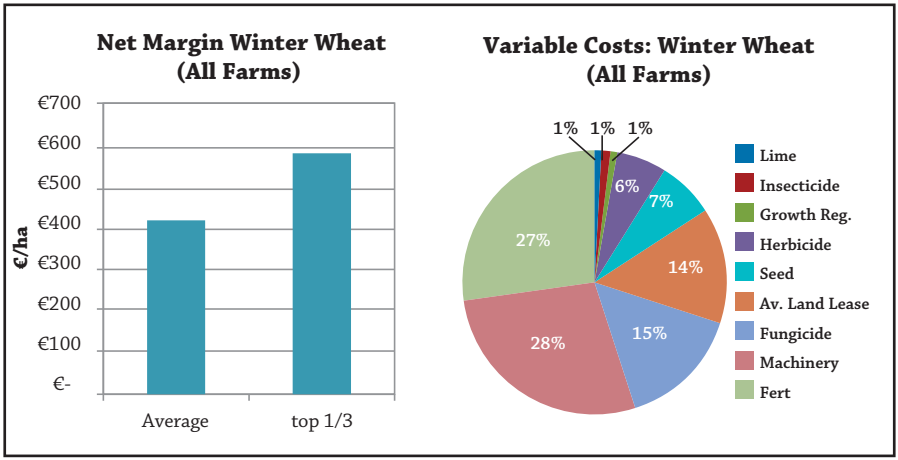
Table 5: Winter Wheat Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	5263		
No. Of Farms	154	51	
Tillage Adj. Ha	34	28	- 6
Yield t/Ha	10.6	11.2	+ 0.60
Financial			
Crop Sales €/tonne	€ 163	€ 164	+ 1
Gross Output /ha	**€ 1,915**	**€ 2,085**	**+ 171**
of which is straw/ha	*€ 189*	*€ 250*	*+ 60*
Material Costs/ha	€ 686	€ 677	- 8
Total Machinery Costs/ha	€ 335	€ 337	+ 2
of which are contractor/ha	*€ 139*	*€ 35*	*- 104*
Other Variable Costs/ha	€ 57	€ 51	- 6
Gross Margin/Ha	**€ 837**	**€ 1,020**	**+ 183**
Fixed Costs/Ha	€ 404	€ 431	+ 27
Net Margin/ha	**€ 433**	**€ 589**	**+ 156**
Key Figures			
Break Even Costs €/ton*	€ 140	€ 134	- 6
Land Lease Costs/ha	€ 166	€ 171	+ 5
Net Margin/ha (exc. Land Rental)	*€ 599*	*€ 760*	*+ 161*

** Cost per ton excluding straw*

- Average yields are 0.2 t/ha (1.9%) above the CSO national average, with the top 1/3 of farmers producing 0.8 t/ha (7.6%) above the CSO national average
- The top farms grew more area and produced 0.6t/ha more yield than the ePM average which delivered a higher Gross Output of €171/ ha or 8.9% higher than the average

- Despite achieving a higher yield the top group spent marginally less on variable costs compared to the average
- Fixed costs are 6% higher on the top group compared to average
- The Net Margin of the top 1/3 was €156/ha (36%) higher than the average group.
- The average Net Margin was €170/ha higher in 2017 compared to 2016 due to a 10% increase in grain price and 16% increase in straw income and a slight reduction of 2% on variable costs



Spring Wheat

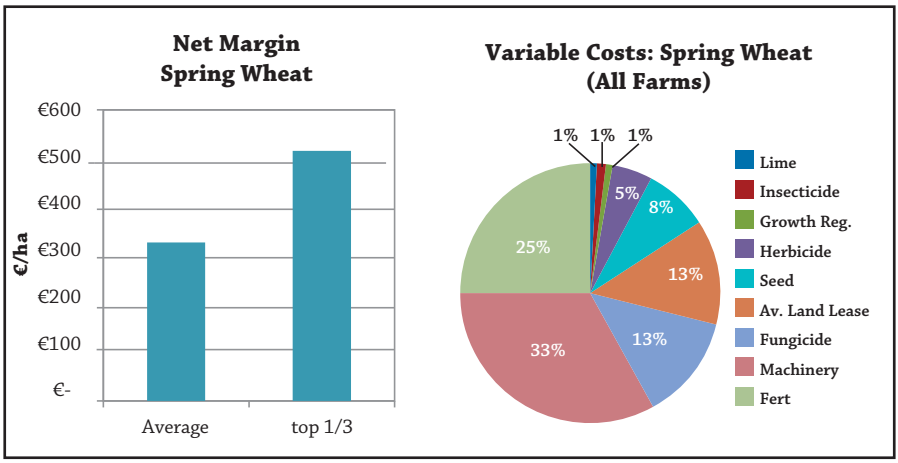
Table 6: Spring Wheat Returns

2017	Average	top 1/3	Top v Average
Physical			
Total No. hectares	410		
No. Of Farms	39	13	
Tillage Adj. Ha	11	10	- 1
Yield t/Ha	8.2	9.3	+ 1.11
Financial			
Crop Sales €/tonne	€ 163	€ 170	+ 7
Gross Output /ha	**€ 1,545**	**€ 1,877**	**+ 331**
of which is straw/ha	*€ 213*	*€ 298*	*+ 85*
Material Costs/ha	€ 550	€ 567	+ 17
Total Machinery Costs/ha	€ 333	€ 323	- 10
of which are contractor/ha	*€ 189*	*€ 107*	*- 82*
Other Variable Costs/ha	€ 14	€ 1	- 13
Gross Margin / Ha	**€ 648**	**€ 985**	**+ 337**
Fixed Costs / Ha	€ 311	€ 437	+ 125
Net Margin/ha	**€ 337**	**€ 549**	**+ 212**
Key Figures			
Break Even Costs €/ton*	€ 148	€ 143	- 5
Land Lease Costs/ha	€ 139	€ 203	+ 65
Net Margin/ha (exc. Land Rental)	*€ 476*	*€ 752*	*+ 276*

** Cost per ton excluding straw*

- Average yields are similar to the CSO average at 8.2t/ha, with the top 1/3 of farmers producing 1.1t/ha (13%) above the CSO national average
- The top group increased gross output by €331/ha compare to the ePM average
- The top 1/3 group incurred marginally lower material cost of €10/ha compared to the average but achieved a higher Gross Margin of €337/ha compared to the average group

- Fixed costs were higher in the top group but the net margin of the group was €125/ha (40%) higher than the average group. Higher land rental costs of €65/ha accounted for 52% of this difference
- The average Net Margin was €229/ha higher in 2017 compared to 2016 due to a 14% increase in gross output (Grain prices increased by 12% in 2017 compared to 2016) and a slight reduction of 1% on variable costs



Spring Feed Barley

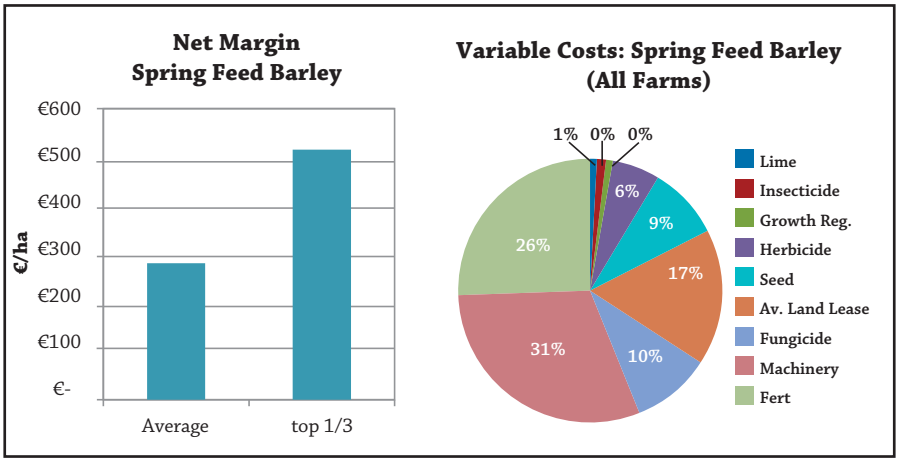
Table 7: Spring Barley Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	5032		
No. Of Farms	180	60	
Tillage Adj. Ha	28	34	+ 6
Yield t/Ha	7.8	8.3	+ 0.50
Financial			
Crop Sales €/tonne	€ 153	€ 158	+ 5
Gross Output /ha	**€ 1,409**	**€ 1,591**	**+ 182**
of which is straw/ha	*€ 214*	*€ 269*	*+ 55*
Material Costs/ha	€ 477	€ 462	- 15
Total Machinery Costs/ha	€ 283	€ 263	- 20
of which are contractor/ha	*€ 128*	*€ 59*	*- 69*
Other Variable Costs/ha	*€ 15*	*€ 4*	*- 11*
Gross Margin / Ha	**€ 634**	**€ 861**	**+ 226**
Fixed Costs / Ha	€ 357	€ 352	- 5
Net Margin/ha	**€ 277**	**€ 509**	**+ 232**
Key Figures			
Break Even Costs €/ton*	€ 146	€ 131	- 15
Land Lease Costs/ha	€ 158	€ 183	+ 25
Net Margin/ha (exc. Land Rental)	*€ 436*	*€ 692*	*+ 256*

** Cost per ton excluding straw*

- Average yields are 0.1t/ha (1%) below the CSO national average, with the top 1/3 of farmers producing 0.4 t/ha (5%) above the CSO national average.
- The top group grew more area and produced 0.5t/ha more yield and also had a higher gross output of €182 per hectare or 13% higher than the ePM average.

- Despite achieving a higher yield the top group spent €15/ha less on material costs and €20/ha less on machinery costs compared to the average.
- Fixed costs are similar for both groups.
- Net Margins in the top group are €232/ha or 84% higher than the average.
- The average Net Margin was €134/ha higher (94%) in 2017 compared to 2016 due to a €173 increase in gross output.



Spring Malting Barley

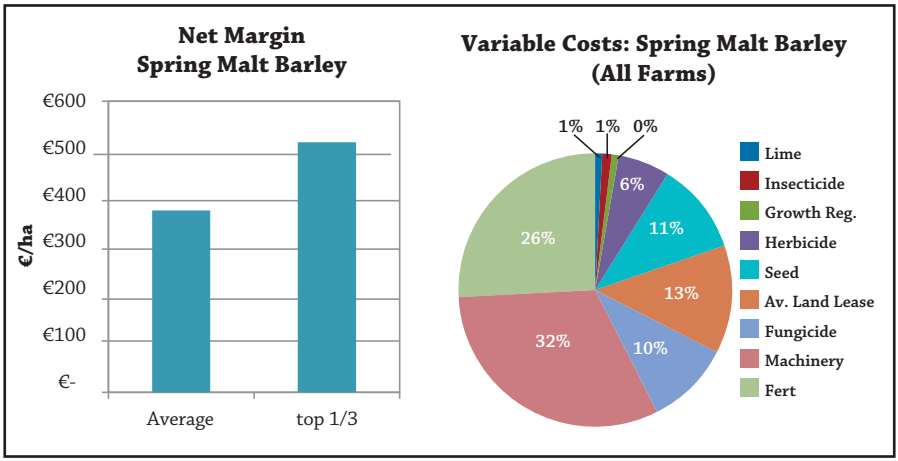
Table 8: Spring Malting Barley Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	3374		
No. Of Farms	107	36	
Tillage Adj. Ha	32	34	+ 2
Yield t/Ha	7.8	8.1	+ 0.33
Financial			
Crop Sales €/tonne	€ 159	€ 160	+ 1
Gross Output /ha	**€ 1,445**	**€ 1,552**	**+ 106**
of which is straw/ha	*€ 208*	*€ 252*	*+ 44*
Material Costs/ha	€ 496	€ 491	- 6
Total Machinery Costs/ha	€ 291	€ 264	- 26
of which are contractor/ha	*€ 108*	*€ 25*	*- 83*
Other Variable Costs/ha	*€ 6*	*€ 1*	*- 6*
Gross Margin / Ha	**€ 652**	**€ 796**	**+ 144**
Fixed Costs / Ha	*€ 284*	*€ 288*	*+ 3*
Net Margin/ha	**€ 367**	**€ 508**	**+ 141**
Key Figures			
Break Even Costs €/ton*	€ 138	€ 129	- 10
Land Lease Costs/ha	€ 117	€ 133	+ 15
Net Margin/ha (exc. Land Rental)	*€ 485*	*€ 641*	*+ 156*

** Cost per ton excluding straw*

- Average yields are 0.1 t/ha (1%) below the CSO national average, with the top group of farmers producing 0.2 t/ha (2.5%) above the CSO national average.
- The top group grew more area and produced 0.33 t/ha (4%) more yield than the ePM average. Average yield for feed and malting growers was the same.

- The gross output of the top group was €106/ha higher than the average group resulting in a gross margin of €144 more than average group.
- Fixed costs were 3% lower in the top group compared to average.
- Net Margins were €141/ha (38%) higher in the top group compared to average group.
- Average net margin increased by €144/ha (64.5%) compared to 2016.



Winter Barley

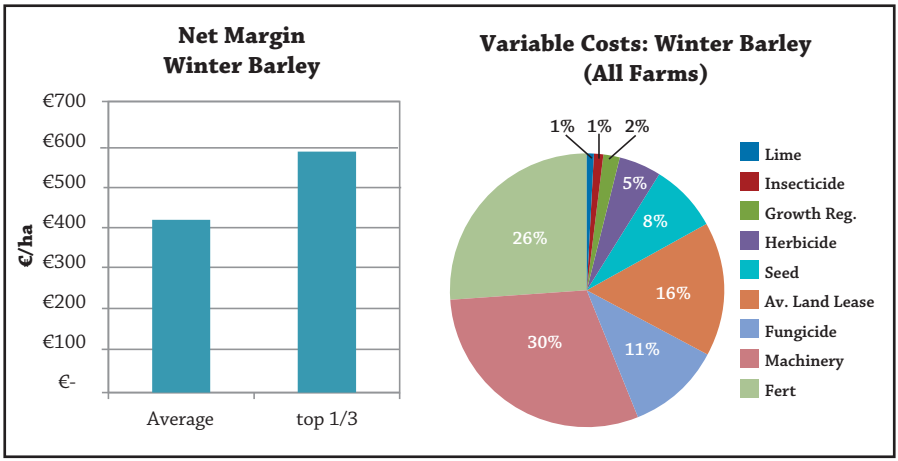
Table 9: Winter Barley Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	6145		
No. Of Farms	226	75	
Tillage Adj. Ha	27	33	+ 6
Yield t/Ha	9.3	9.5	+ 0.23
Financial			
Crop Sales €/tonne	€ 156	€ 162	+ 6
Gross Output /ha	**€ 1,742**	**€ 1,887**	**+ 145**
of which is straw/ha	*€ 288*	*€ 337*	*+ 49*
Material Costs/ha	€ 598	€ 581	- 18
Total Machinery Costs/ha	€ 329	€ 310	- 19
of which are contractor/ha	*€ 143*	*€ 50*	*- 93*
Other Variable Costs/ha	*€ 24*	*€ 14*	*- 10*
Gross Margin / Ha	**€ 791**	**€ 982**	**+ 191**
Fixed Costs / Ha	€ 383	€ 390	+ 7
Net Margin/ha	**€ 408**	**€ 592**	**+ 184**
Key Figures			
Break Even Costs €/ton*	€ 144	€ 136	- 8
Land Lease Costs/ha	€ 171	€ 165	- 6
Net Margin/ha (exc. Land Rental)	*€ 579*	*€ 757*	*+ 178*

** Cost per ton excluding straw*

- Average yields are 0.2 t/ha (2%) above the CSO national average, with the top group of farmers producing 0.4 t/ha (4%) above the CSO national average.
- The top farms grew a larger area and produced 0.23 t/ha more yield resulting in a higher gross output of €145/ha (8% higher) compared to the ePM average group.

- Despite having higher yield the top group spent €18/ha less on material costs compared to the average group. The contractor costs were significantly lower at €93/ha in the top group compared to the average group
- Fixed costs are marginally higher in the top group (7%) compared to average.
- Net margin was €184/ha (45%) higher in the top group compared to the average.
- Average net margin was €197/ha (93%) higher than 2016.



Analysis of Barley Crops (Average)

Table 10: Barley Returns - Average growers summary

Average	Av. Winter Barley	Av. Spring Barley	Av. Spring Malt Barley
Physical			
Total No. hectares	6145	5032	3374
No. Of Farms	226	180	107
Tillage Adj. Ha	27	28	32
Yield t/Ha	9.3	7.8	7.8
Financial			
Crop Sales €/tonne	€156	€153	€159
Gross Output /ha	**€1,742**	**€1,409**	**€1,445**
of which is straw/ha	*€288*	*€214*	*€208*
Material Costs €/ha	€598	€478	€496
Total Machinery Costs €/ha	€329	€283	€291
of which are contractor €/ha	*€143*	*€128*	*€108*
Other Variable Costs €/ha	*€24*	*€15*	*€6*
Gross Margin €/ Ha	**€791**	**€634**	**€652**
Fixed Costs €/ Ha	€383	€357	€284
Net Margin €/ha	**€408**	**€277**	**€367**
Key Figures			
Break Even Costs €/ton*	€144	€145	€138
Land Lease Costs €/ha	€171	€158	€117
Net Margin/ha (exc. Land Rental) €/ha	€579	€436	€485

** Cost per ton excluding straw*

- The Crop sales figures per ton of each of the barley categories are quite similar and it would be expected malting barley would have a much higher differential over the feed categories. There are a number of reasons for this

- Where a crop of barley was grown as malting barley (under contract) all the returns are entered under this category (as malting barley) regardless of whether it was sold as malt or feed
- It was reported Malting barley was harvested earlier than feed at a higher moisture content compared to the later feed crops
- Many of the feed buyers added bonus payments to grain narrowing the gap to the malting grain price

- The net margin between spring malting barley and winter barley is €41/ha (+11%) which is larger than 2016 (+5%). This may be driving some growers towards maximising winter barley on farm
- Malting barley offers the best opportunity to increase profitability for the average spring barley grower with returns from malting barley €90/ha (32%) higher than spring feed barley
- Costs of production of malting barley (€138/ton) are lower than 2016 (€149) and are marginally lower than the other barley crops.

Analysis of Barley Crops (Top 1/3)

Table 11: Barley Returns – Top 1/3 growers summary

Average	Top Winter Barley	Top Spring Feed Barley	Top Spring Malt Barley
Physical			
Total No. hectares			
No. Of Farms	75	60	36
Tillage Adj. Ha	33	34	34
Yield t/Ha	9.5	8.3	8.1
Financial			
Crop Sales €/tonne	€162	€158	€160
Gross Output €/ha	**€1,887**	**€1,591**	**€1,552**
of which is straw €/ha	*€337*	*€269*	*€252*
Material Costs €/ha	€581	€462	€491
Total Machinery Costs €/ha	€310	€263	€264
of which are contractor €/ha	*€50*	*€59*	*€25*
Other Variable Costs €/ha	*€14*	*€4*	*€1*
Gross Margin €/ Ha	**€982**	**€861**	**€796**
Fixed Costs €/ Ha	€390	€352	€288
Net Margin €/ha	**€592**	**€509**	**€508**
Key Figures			
Break Even Costs €/ton*	€136	€131	€129
Land Lease Costs €/ha	€165	€183	€133
Net Margin/ha (exc. Land Rental) €/ha	€757	€692	€641

** Cost per ton excluding straw*

- See the comments in the analysis of barley crops (average) regarding the Crop Sales figures

- Winter barley has a higher margin of €84/ha or 16% higher Net Margin compared to spring malting barley
- The top 1/3 of malting barley growers have similar net margins to Spring Feed barley despite a lower costs per ton.
- The top 1/3 of spring feed barley growers return a higher margin of €141/ha than the average malting barley grower despite having almost identical material cost

Winter Oats

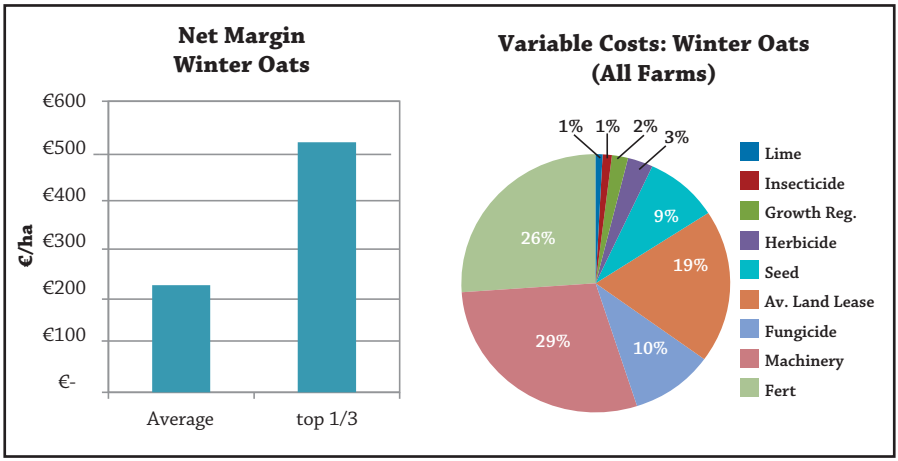
Table 12: Winter Oats Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	1021		
No. Of Farms	69	23	
Tillage Adj. Ha	15	14	- 0
Yield t/Ha	8.2	8.9	+ 0.77
Financial			
Crop Sales €/tonne	€145	€155	+ 10
Gross Output /ha	**€1,360**	**€ 1,634**	**+ 274**
of which is straw/ha	*€175*	*€ 246*	*+ 71*
Material Costs/ha	€496	€493	- 3
Total Machinery Costs/ha	€279	€287	+ 8
of which are contractor/ha	*€145*	*€46*	*- 100*
Other Variable Costs/ha	€10	€1	- 9
Gross Margin / Ha	**€576**	**€853**	**+ 277**
Fixed Costs / Ha	€342	€319	- 23
Net Margin/ha	**€234**	**€534**	**+ 300**
Key Figures			
Break Even Costs €/ton*	€ 138	€123	- 15
Land Lease Costs/ha	€175	€124	- 51
Net Margin/ha (exc. Land Rental)	*€409*	*€658*	*+ 248*

** Cost per ton excluding straw*

- Average yields are 0.7t/ha (8%) below the CSO national average, with the top 1/3 of farmers producing 8.9 t/ha which is the CSO national average.
- The top farms produced 0.77 t/ha (9%) more yield and achieved a far higher price for grain than the ePM average grower.

- The top group had a higher gross output of €274/ha (20%) higher than the average.
- The gross margin for the top group was €277/ha higher due to the increased output but material and machinery costs were similar.
- The Net Margin of the top growers was €300/ha or 128% higher than the average group.
- Average net margin is identical to 2016 because grain price was the same at €146/t.



Spring Oats

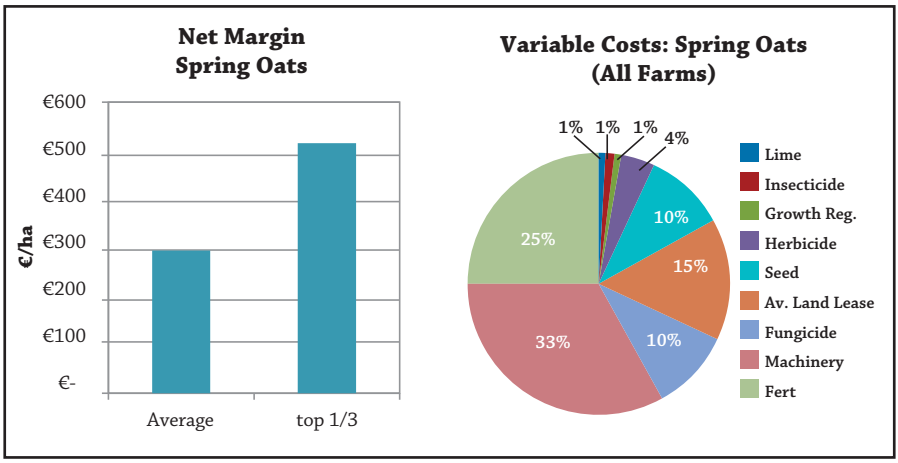
Table 13: Spring Oats Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	531		
No. Of Farms	54	18	
Tillage Adj. Ha	10	8	- 2
Yield t/Ha	8.0	8.4	+ 0.4
Financial			
Crop Sales €/tonne	€ 152	€ 166	+ 15
Gross Output /ha	**€ 1,368**	**€ 1,561**	**+ 193**
of which is straw/ha	*€ 152*	*€ 172*	*+ 20*
Material Costs/ha	€ 455	€ 408	- 47
Total Machinery Costs/ha	€ 292	€ 293	+ 1
of which are contractor/ha	*€ 139*	*€ 78*	*- 61*
Other Variable Costs/ha	*€ 13*	*€ 2*	*- 10*
Gross Margin / Ha	**€ 608**	**€ 857**	**+ 249**
Fixed Costs / Ha	€ 308	€ 305	- 3
Net Margin/ha	**€ 300**	**€ 552**	**+ 252**
Key Figures			
Break Even Costs €/ton*	€ 133	€ 121	- 12
Land Lease Costs/ha	*€ 133*	*€ 135*	*+ 2*
Net Margin/ha (exc. Land Rental)	*€ 433*	*€ 687*	*+ 254*

** Cost per ton excluding straw*

- Average yields are 0.4t/ha (5%) above the CSO national average, with the top 1/3 of farmers producing 0.8 t/ha (8%) above the CSO national average.
- The top farms had 0.4 t/ha more yield and achieved €15/t more for the grain over the average.

- The gross margin for the top group was €249/ha (41%) higher than the average. This was achieved by higher gross output, +€193/ha and lower material costs of -€47/ha.
- The top farmers Net Margin was €252 (84%) higher than the average group.
- Average net margin of €300 represents a 209% increase over 2016 and was achieved through a combination of increased gross output and lower costs.



Winter Oilseed Rape

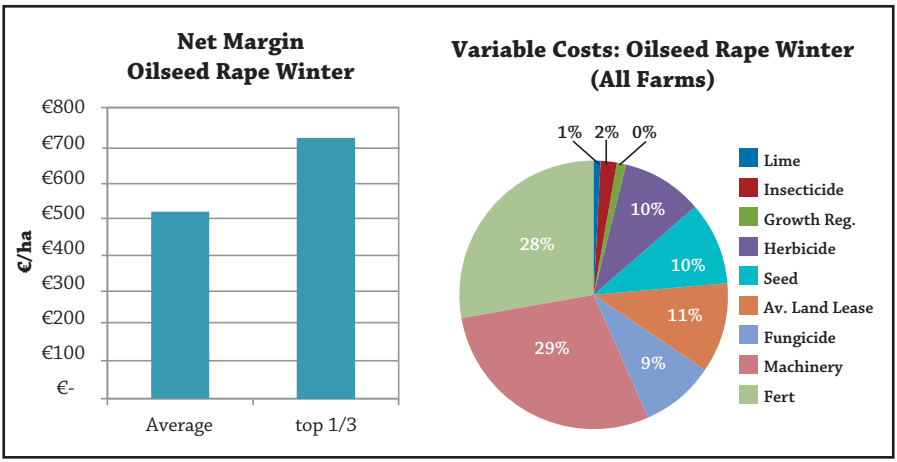
Table 14: Winter Oilseed Rape Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	625		
No. Of Farms	34	11	
Tillage Adj. Ha	18	25	+ 7
Yield t/Ha	4.7	5.1	+ 0.40
Financial			
Crop Sales €/tonne	€369	€ 372	+ 3
Gross Output /ha	**€ 1,745**	**€ 1,911**	**+ 166**
of which is straw/ha	*€ 14*	*€ 19*	*+ 5*
Material Costs/ha	€ 619	€ 600	- 19
Total Machinery Costs/ha	€ 300	€ 272	- 28
of which are contractor/ha	*€ 85*	*€ 2*	*- 83*
Other Variable Costs/ha	*€ 4*	*€ 1*	*- 3*
Gross Margin / Ha	**€ 822**	**€ 1,038**	**+ 216**
Fixed Costs / Ha	€ 311	€ 290	- 22
Net Margin/ha	**€ 511**	**€ 748**	**+ 238**
Key Figures			
Break Even Costs €/ton*	€ 263	€ 228	- 35
Land Lease Costs/ha	€ 119	€ 86	- 33
Net Margin/ha (exc. Land Rental)	*€ 630*	*€ 834*	*+ 204*

** Cost per ton excluding straw*

- Winter oilseed rape average yields are 0.2 t/ha (4%) above the Teagasc harvest report average yield of 4.5t/ha. The top group produced 0.6t/ha over the Teagasc Harvest Report yield.
- The top farms grew more area and produced 0.4 t/ha more yield than the ePM average. This is hugely significant given the relatively low number of tonnes produced from the crop.

- The top group spent €19/ha less on material costs and €28/ha less on machinery costs compared to the average.
- Average net margin was €511/ha but the top group achieved a 47% increase, returning a margin of €748/ha.
- Average yield increased by 1.3t/ha over 2016 which resulted in substantial change in net margin from -€47/ha in 2016 to €511 in 2017.



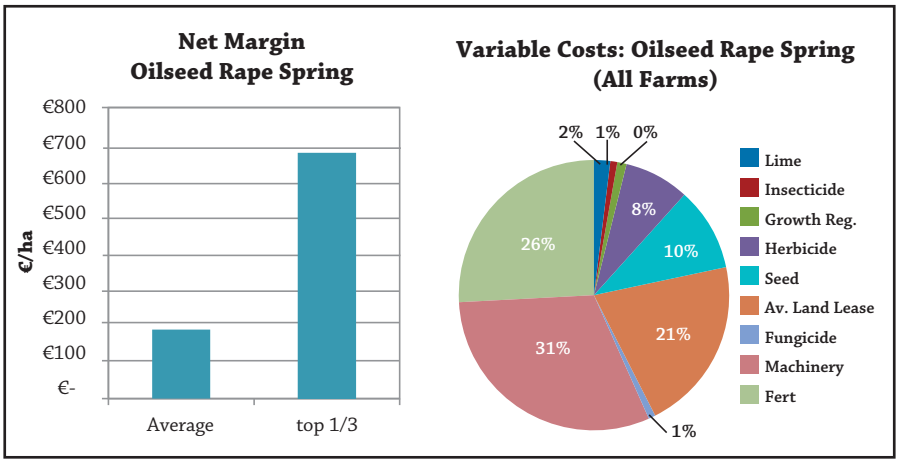
Spring Oilseed Rape

Table 15: Spring Oilseed Rape Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	92		
No. Of Farms	8	3	
Tillage Adj. Ha	12	14	+ 2
Yield t/Ha	2.5	2.7	+ 0.15
Financial			
Crop Sales €/tonne	€ 360	€ 355	- 5
Gross Output /ha	**€ 1,175**	**€ 1,545**	**+ 370**
of which is straw/ha	*€ -*	*€ -*	*+ 0*
Material Costs/ha	€ 388	€ 385	- 3
Total Machinery Costs/ha	€ 255	€ 279	+ 25
of which are contractor/ha	*€ 33*	*€ 11*	*- 22*
Other Variable Costs/ha	€ -	€ -	+ 0
Gross Margin / Ha	**€ 532**	**€ 880**	**+ 348**
Fixed Costs / Ha	€ 364	€ 201	- 163
Net Margin/ha	**€ 168**	**€ 679**	**+ 511**
Key Figures			
Break Even Costs €/ton*	€ 399	€ 324	- 75
Land Lease Costs/ha	€ 168	€ 10	- 158
Net Margin/ha (exc. Land Rental)	*€ 336*	*€ 689*	*+ 353*

** Cost per ton excluding straw*

- Both groups contain small numbers therefore any comparisons should be treated with caution
- The top farms grew more area and produced 0.2 t/ha more yield which increased output by €370/ha compared to the average.
- Average net margin was €168/ha compared to -€17 in 2016.


Net Margin
Oilseed Rape Spring
€/ha
€800
€700
€600
€500
€400
€300
€200
€100
€-
Average
top 1/3
Variable Costs: Oilseed Rape Spring
(All Farms)
2%
1%
0%
8%
10%
26%
21%
31%
1%
Lime
Insecticide
Growth Reg.
Herbicide
Seed
Av. Land Lease
Fungicide
Machinery
Fert

Spring Beans

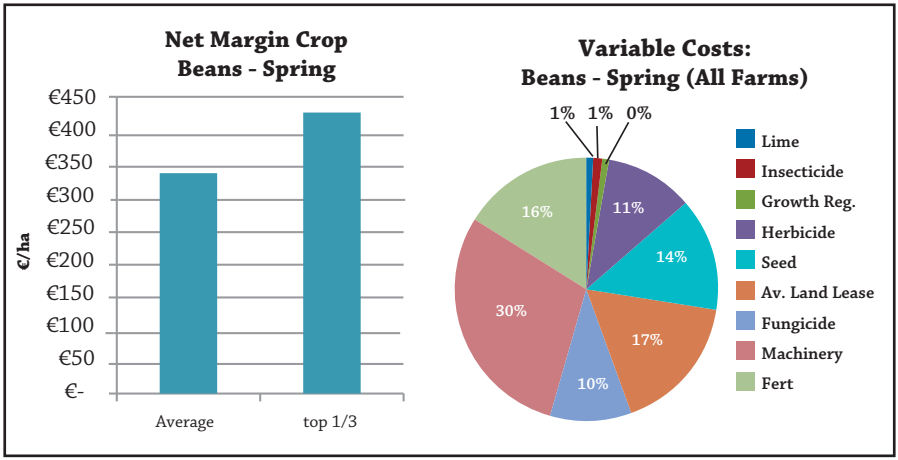
Table 16: Spring Beans Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	1298		
No. Of Farms	94	31	
Tillage Adj. Ha	14	14	+ 0
Yield t/Ha	6.9	7.3	+ 0.4
Financial			
Crop Sales €/tonne	€ 160	€ 161	+ 1
Gross Output /ha	**€ 1,114**	**€ 1,194**	**+ 81**
of which is straw/ha	*€ 12*	*€ 24*	*+ 12*
Material Costs/ha	€ 450	€ 416	- 34
Total Machinery Costs/ha	€ 252	€ 229	- 23
of which are contractor/ha	*€ 100*	*€ 27*	*- 73*
Other Variable Costs/ha	*€ 9*	*€ 5*	*- 5*
Gross Margin / Ha	**€ 402**	**€ 545**	**+ 142**
Fixed Costs / Ha	€ 272	€ 331	+ 60
Net Margin/ha	€ 131	€ 213	+ 83
Net Margin including DP	**€ 337**	**€ 428**	**+ 91**
Key Figures			
Break Even Costs €/ton*	€ 143	€ 135	- 8
Land Lease Costs/ha	€ 145	€ 203	+ 58
Net Margin/ha (exc. Land Rental)	*€ 482*	*€ 631*	*+ 149*

** Cost per ton excluding straw*

- Spring beans average yields are 0.2 t/ha (3%) above the Teagasc harvest report yield of 6.7t/ha. The top group produced 0.6t/ha (9%) over the Teagasc harvest report average.

- The top farms produced 0.4 t/ha more yield than the average group.
- Despite achieving a higher yield the top group spent less on materials (-€34/ha) and machinery (-€23/ha)
- Average net margin including protein payment was €337 and the top group achieved a net margin including protein payment of €428/ha (+27%).
- Average net margin increased by 50% from 2016 mainly due to a 0.8t/ha increase in yield.



Beef (Fodder)

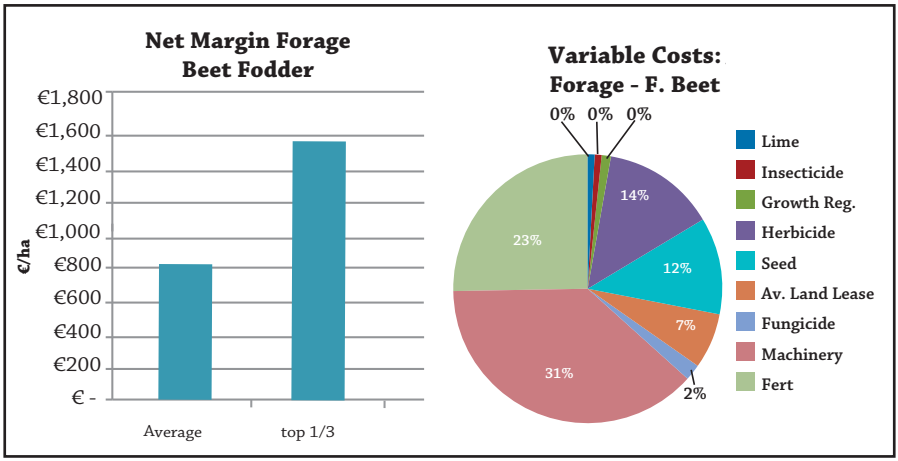
Table 17: Beet Fodder Returns

	Average	top 1/3	Top v Average
Physical			
Total No. hectares	402		
No. Of Farms	43	14	
Tillage Adj. Ha	9	12	+ 2
Yield t/Ha	78.5	82.4	+ 3.90
Financial			
Crop Sales €/tonne	€ 38	€ 42	+ 4
Gross Output/ha	**€ 2,962**	**€ 3,472**	**+ 510**
of which is straw/ha	*€ 14*	*€ 20*	*+ 6*
Material Costs/ha	€ 841	€ 830	- 12
Total Machinery Costs/ha	€ 594	€ 585	- 9
of which are contractor/ha	*€ 296*	*€ 219*	*- 76*
Other Variable Costs/ha	€ 25	€ 13	- 12
Gross Margin / Ha	**€ 1,502**	**€ 2,045**	**+ 543**
Fixed Costs / Ha	€ 392	€ 443	+ 51
Net Margin/ha	**€ 1,110**	**€ 1,601**	**+ 491**
Key Figures			
Break Even Costs €/ton*	€ 24	€ 23	- 1
Land Lease Costs/ha	€ 102	€ 113	+ 10
Net Margin/ha (exc. Land Rental)	*€ 1,212*	*€ 1,714*	*+ 502*

** Cost per ton excluding straw*

- Yields on the top group were 5% higher than the average group which combined with a higher price (+4/t) resulted in a higher gross output per hectare of 510/ha.
- Despite the lower yields the average group spent more on materials (+€12/ha) and machinery (+€9/ha).

- The average net margin is €1,110/ha with the top group achieving a 44% increase in net margin to €1,601/ha.
- Average net margin increased by 3% over 2016 and remains the most profitable crop in this analysis.



Break Crops compared (Average)

Table 18: Break Crops - Average grower returns compared

Average	Av. Winter Oats	Av. Spring Oats	Av. Winter Oilseed Rape	Av. Spring Oilseed Rape	Av. Beans Spring	Av. Beet
Physical						
Total No. hectares	1021	531	625	92	1298	402
No. Of Farms	69	54	34	8	94	43
Tillage Adj. Ha	15	10	18	12	14	9
Yield t/Ha	8.2	8	4.7	2.5	6.9	78.5
Financial						
Crop Sales €/tonne	€145	€152	€369	€360	160	€38
Gross Output €/ha	**€1,360**	**€1,368**	**€1,745**	**€1,175**	**€1,114**	**€2,962**
of which is straw €/ha	*€175*	*€152*	*€14*	*€ -*	*12*	*€14*
Material Costs €/ha	€496	€455	€619	€388	450	€841
Total Machinery Costs €/ha	€279	€292	€300	€255	252	€594
of which are contractor €/ha	*€145*	*€139*	*€85*	*€33*	*100*	*€296*
Other Variable Costs €/ha	€10	€13	€4	€ -	9	€25
Gross Margin €/ Ha	**€576**	**€608**	**€822**	**€532**	**402**	**€1,502**
Fixed Costs €/ Ha	€342	€308	€311	€364	272	€392
Net Margin €/ha	**€234**	**€300**	**€511**	**€168**	**€337****	**€1,110**
Key Figures						
Break Even Costs €/ton*	138	133	263	399	143	24
Land Lease Costs €/ha	€175	€133	€119	€168	145	€102
Net Margin/ha (exc. Land Rental) €/ha	€409	€433	€630	€336	€482**	€1,212

**Costs per ton excluding straw, **Spring Bean Net Margin also includes the Protein Payment (Direct Payment)*

- Winter oats preformed quite poorly in our results compared to other years with Winter Oilseed Rape the stand out performer of the non-root crop break crops.
- There is a wide variation on land lease costs of €73/ha or 71% however this in many cases reflects the rotation position of the crop with differences in the proportion of each crop sown on owned or leased land.

- Spring beans continues to be one of the most profitable break crops with a substantially higher net margin than spring oil seed rape.
- Both winter and spring oilseed rape have performed better than 2016. Winter oilseed rape has a higher margin than 2016 by €558/ha which is mostly from increased yields of 1.3t/ha. Costs were similar in both years

Break Crops compared (Top 1/3)

Table 19: Break Crops - Top 1/3 growers returns compared

Average	Winter Oats	Spring Oats	Winter Oilseed Rape	Spring Oilseed Rape	Beans Spring	Beet
Physical						
Total No. hectares						
No. Of Farms	23	18	11	3	31	14
Tillage Adj. Ha	14	8	25	14	14	12
Yield t/Ha	8.9	8.4	5.1	2.7	7.3	82.4
Financial						
Crop Sales €/tonne	€155	€166	€372	€355	€161	€42
Gross Output €/ha	**€1,634**	**€1,561**	**€1,911**	**€1,545**	**€1,194**	**€3,472**
of which is straw €/ha	*€246*	*€172*	*€19*	*€ -*	*€24*	*€20*
Material Costs €/ha	€493	€408	€600	€385	€416	€830
Total Machinery Costs €/ha	€287	€293	€272	€279	€229	€585
of which are contractor €/ha	*€46*	*€78*	*€2*	*€11*	*€27*	*€219*
Other Variable Costs €/ha	€1	€2	€1	€ -	€5	€13
Gross Margin €/ Ha	**€853**	**€857**	**€1,038**	**€880**	**€545**	**€2,045**
Fixed Costs €/ Ha	€319	€305	€290	€201	€331	€443
Net Margin €/ha	**€534**	**€552**	**€748**	**€679**	**€428****	**€1,601**
Key Figures						
Break Even Costs €/ton*	123	121	228	324	135	23
Land Lease Costs €/ha	€124	€135	€86	€10	€203	€113
Net Margin/ha (exc. Land Rental) €/ha	*€658*	*€687*	*€834*	*€689*	*€631***	*€1,714*

**Costs per ton excluding straw, **Spring Bean Net Margin also includes the Protein Payment (Direct Payment)*

- Beet is by far the most profitable of these break crops @€1,601/ha. However sales of the crop are on the basis of farm to farm trade. It is generally for a limited/defined quantity and to farms with an existing trading relationship. Growing significant quantities of beet may not be possible for every farmer and a market should be secured before planting

- Winter Oilseed Rape margins of €748/ha is a star performer in 2017 but some €579/ha higher than the net margin achieved in 2016, which is mostly due to an increased yield of 1.4t/ha.
- Although winter oats appears to have performed towards the bottom of the pack it has similar to returns to 2016 (€505/ha)
- Spring beans net margins struggles to compete with these break crop options however where land rental is excluded the crop is only 9% below the average of all non-root crops.

All Crops (Average)

Table 20: All Crops: Average grower returns compared

Average	Winter Wheat	Winter Barley	Spring Feed Barley	Spring Malting barley	Spring Wheat	Winter Oats	Spring Oats	Winter Oilseed Rape	Spring Oilseed Rape	Beans Spring	Fodder Beet
Physical											
Total No. hectares	5263	6145	5032	3374	410	1021	531	625	92	1298	402
No. Of Farms	154	226	180	107	39	69	54	34	8	94	43
Tillage Adj. Ha	34	27	28	32	11	15	10	18	12	14	9
Yield t/Ha	10.6	9.3	7.8	7.8	8.2	8.2	8	4.7	2.5	6.9	78.5
Financial											
Crop Sales €/tonne	€163	€156	€153	€159	€163	€145	€152	€369	€360	160	€38
Gross Output €/ha	**€1,915**	**€1,742**	**€1,409**	**€1,445**	**€1,545**	**€1,360**	**€1,368**	**€1,745**	**€1,175**	**€1,114**	**€2,962**
of which is straw €/ha	*€189*	*€288*	*€214*	*€208*	*€213*	*€175*	*€152*	*€14*	*€ -*	*12*	*€14*
Material Costs €/ha	€686	€598	€478	€496	€550	€496	€455	€619	€388	450	€841
Total Machinery Costs €/ha	€335	€329	€283	€291	€333	€279	€292	€300	€255	252	€594
of which are contractor €/ha	*€139*	*€143*	*€128*	*€108*	*€189*	*€145*	*€139*	*€85*	*€33*	*100*	*€296*
Other Variable Costs €/ha	*€57*	*€24*	*€15*	*€6*	*€14*	*€10*	*€13*	*€4*	*€ -*	*9*	*€25*
Gross Margin €/ Ha	**€837**	**€791**	**€634**	**€652**	**€648**	**€576**	**€608**	**€822**	**€532**	**402**	**€1,502**
Fixed Costs €/ Ha	€404	€383	€357	€284	€311	€342	€308	€311	€364	272	€392
Net Margin €/ha	**€433**	**€408**	**€277**	**€367**	**€337**	**€234**	**€300**	**€511**	**€168**	**€337****	**€1,110**
Key Figures											
Break Even Costs €/ton*	€140	€144	€146	€138	€148	€138	€133	€263	€399	143	€24
Land Lease Costs €/ha	€166	€171	€158	€117	€139	€175	€133	€119	€168	145	€102
Net Margin/ha (exc. Land Rental) €/ha	*€599*	*€579*	*€436*	*€485*	*€476*	*€409*	*€433*	*€630*	*€336*	*€482***	*€1,212*

**Costs per ton excluding straw, **Spring Bean Net Margin also includes the Protein Payment (Direct Payment)*

All Crops (top 1/3)

Table 21: All Crops: Top 1/3 grower returns compared

Top 1/3	Winter Wheat	Winter Barley	Spring Barley	Spring Malting barley	Spring Wheat	Winter Oats	Spring Oats	Winter Oilseed Rape	Spring Oilseed Rape	Beans Spring	Beet
Physical											
No. Of Farms	51	75	60	36	13	23	18	11	3	31	14
Tillage Adj. Ha	28	33	34	34	10	14	8	25	14	14	12
Yield t/Ha	11.2	9.5	8.3	8.1	9.3	8.9	8.4	5.1	2.7	7.3	82.4
Financial											
Crop Sales €/tonne	€164	€162	€158	€160	€170	€155	€166	€372	€355	€161	€42
Gross Output €/ha	**€2,085**	**€1,887**	**€1,591**	**€1,552**	**€1,877**	**€1,634**	**€1,561**	**€1,911**	**€1,545**	**€1,194**	**€3,472**
of which is straw €/ha	*€250*	*€337*	*€269*	*€252*	*€298*	*€246*	*€172*	*€19*	*€ -*	*€24*	*€20*
Material Costs €/ha	€677	€581	€462	€491	€567	€493	€408	€600	€385	€416	€830
Total Machinery Costs €/ha	€337	€310	€263	€264	€323	€287	€293	€272	€279	€229	€585
of which are contractor €/ha	€35	€50	€59	€25	€107	€46	€78	€2	€11	€27	€219
Other Variable Costs €/ha	€51	€14	€4	€1	€1	€1	€2	€1	€ -	€5	€13
Gross Margin €/ Ha	**€1,020**	**€982**	**€861**	**€796**	**€985**	**€853**	**€857**	**€1,038**	**€880**	**€545**	**€2,045**
Fixed Costs €/ Ha	€431	€390	€352	€288	€437	€319	€305	€290	€201	€331	€443
Net Margin €/ha	**€589**	**€592**	**€509**	**€508**	**€549**	**€534**	**€552**	**€748**	**€679**	**€428****	**€1,601**
Key Figures											
Break Even Costs €/ton*	€134	€136	€131	€129	€143	€123	€121	€228	€324	€135	€23
Land Lease Costs €/ha	€171	€165	€183	€133	€203	€124	€135	€86	€10	€203	€113
Net Margin/ha (exc. Land Rental) €/ha	*€760*	*€757*	*€692*	*€641*	*€752*	*€658*	*€687*	*€834*	*€689*	*€631***	*€1,714*

**Costs per ton excluding straw, **Spring Bean Net Margin also includes the Protein Payment (Direct Payment)*

Matched Farm Analysis 2016 and 2017

A large group of farmers complete the e-PM each year however as this is voluntary not every farmer opts to complete the figures each year.

For a farmer looking at their own profit monitor figures there is good value in comparing crops within a year however different years suit different crops (see oilseed rape and winter oat differences in 2016 and 2017). Therefore it would not be prudent to make many decisions based on one years data for any one crop. The trend on the farm over at least 3 years or ideally 5 years will help the farmer to decide on the best crop or enterprise mix on the farm.

A group of 121 farms completed the e-PM analysis in 2016 and 2017. These farms were analysed and compared on the profitability of the tillage enterprise only. Many of these farms had other enterprises on the farm which were not looked at in this analysis. Farms were categorised into the top, middle and bottom performers according to Net Margin per hectare.

Net margin on any farm is highly influenced by fixed costs, land rental and machinery. This ranking is different to individual crop ranking previously seen in this report, as crop yield is one of the most important drivers of profit therefore ranking on a Gross Margin basis is appropriate at that level.

The following section will look at the differences in these farms over the period of 2016 and 2017.

Calculation of the figures

For the purposes of comparison of farms following calculations are completed on each farm.

Table 22: Explanation of terms

Term	Included
Fixed Costs	Land Lease, light, heat, telephone, professional fees, land maintenance, etc.
Net Margin	Gross Margin minus Fixed Costs
Net Margin (inc DP)	Net Margin including Direct Payments (Protein Payments not Basic Payment Scheme)

**Machinery Costs are treated as a variable cost (Strictly speaking these costs are Fixed Costs) to help farmers compare costs to the Teagasc Costs and Returns which is published each year*

Fixed costs (including Machinery costs but not Contractor Costs) are automatically calculated by the ePM software based on the relative proportion of gross output for each crop compared to the total output for all crops in the tillage enterprise i.e. winter wheat has a higher output than spring barley therefore it will attract more fixed costs than spring barley

Land Lease (or rental) can be shown as:

- Land Lease (all) which is the land rented costs to the tillage enterprise spread over owned and leased land
- Land Leased (only) which is the cost of land rental spread over land rental only

Overall Farm profitability

The 121 growers were ranked by net margins per hectare into top 1/3, middle 1/3 and bottom 1/3 of farms according to net margin.

Table 23: Average area farmed by each category of farme (n=121 representing 10,211 ha) for 2016 & 2017

	Net Margin			
	Average	Top1/3	Middle 1/3	Bottom 1/3
2016 Average Tillage area (ha)	83	74	101	77
2017 Average Tillage area (ha)	85	79	131	76

- The average size of farms is 83 hectares which is 26 hectares or 45% larger than the average specialist tillage farms in Ireland in the CSO Farm Structure Survey 2013[1]
- The middle preforming group increased their area significantly (39%) in 2017 compared to 2016.

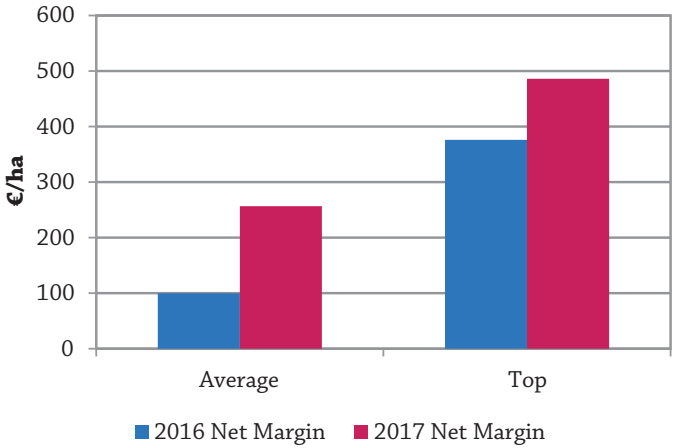
Table 24: Net margins for farms in each category

	Net Margin			
	Average	Top 1/3	Middle 1/3	Bottom 1/3
2016 Net Margins(All Crops) €/ha	€100	€376	€ 85	-€177
2017 Net Margins (All Crops) €/ha	€257	€ 486	€ 285	€ 53

Note: The net margin figures do not include the Basic Payment or Greening Payment.

1 https://www.cso.ie/en/releasesandpublications/ep/p-fss/farmstructuresurvey2013/detailedanalysis/farmstructure/

– Overall there was a large increase in the net margins between 2016 and 2017 within all categories
– The overall increase is a reflection of an increase in outputs (mostly grain price) from almost all crops. The difference between the top and the bottom one third of farmers was €533/ha in 2016 but reduced to €433/ha in 2017.
– The bottom 1/3 of farmers increased net margins substantially to above break-even level (€53/ha).



Fixed Costs and other major costs

The differences in net margin is down to a number of factors including yield, sales price, input levels and costs, and also fixed costs such as machinery, depreciation, interest, etc. Yields, sales prices, input costs, etc. have been discussed at their individual level so far in this document. This next section will look at the major Fixed Costs which impact on the net margin or bottom line for the tillage enterprise on the matched farms.

The total Fixed Costs on farms represent the following

– Fixed costs (light, heat, telephone, professional fees, land maintenance, etc)
– Other costs which must be considered and are largely a fixed cost are
  - Machinery costs (excluding contractor)
  - Land lease (rental)

Table 25: Average Fixed Costs for each farm category

	Net Margin			
	Average	Top 1/3	Middle 1/3	Bottom 1/3
2016 Fixed costs (€/ha)	€179	€140	€167	€228
2017 Fixed costs (€/ha)	€184	€147	€167	€230

Note: Fixed costs exclude Machinery and Land Lease

- There was a slight increase of 2.7% in average fixed costs from 2016 to 2017 but this increase was confined to the top and bottom preforming farm.
- There is a 60% difference between the fixed costs incurred by the top and bottom preforming groups (Average 2016 and 2017)
- The higher fixed costs incurred by the middle and bottom one third of farms adversely affected profitability, hence the lower profitability ranking. However other major costs also have a bearing on the Net Margins of these farms

Machinery Costs Calculator

Teagasc developed a Microsoft Excel based Machinery Cost Calculator (MCC) over the past number of years.

The MCC is filled out by the advisor with the farmer. The farmer lists all machinery on the farm under various headings; owned or leased, purchase price, usage, length of time on the farm, yearly repairs, fuel usage, etc. The resulting output allows a farmer to assess the costs of the machine in that year in cash costs (looking at HP repayments but not depreciation) and also in longer term costs (Depreciation included). Each machine is allocated costs according to the time dedicate to tillage operations, other enterprises and also contracting. This gives a more accurate figure for machinery costs for the machine on the tillage enterprise than broad figures used in farm tax accounts where assumptions vary from accountant to accountant.

How it works

The calculator divides the machinery into two categories those with repayments outstanding and with no debt outstanding.

For machines with repayments outstanding the programme uses the actual repayment figures for the machine each year. This figure is used to calculate the cash exposure of the farmer each year and also the cost of financing the machines. The depreciation figure is calculated based on a declining balance based on the original cost of each machine, including any trade in as part payment, the length of time the machine is expected to be on the farm and also the predicted residual value of the machine at disposal (at today's value). Repairs, maintenance and diesel are allocated according to the machine usage to the tillage enterprise, other enterprises or contracting.

For machines with no debt outstanding, the same procedures are followed in calculating the depreciation costs and the proportional costs to other enterprises or contracting. Repairs and maintenance can also be associated with each machine or a total figure can be added in at this stage.

Diesel costs are recorded from receipts on the farm. Other costs such as machine insurance, road tax and contractor charges are recorded.

Analysing Results

The results are presented to the farmer under the following headings:

- tillage costs,
- costs to other enterprises, and
- Costs for contracting.

The costs associated with the other enterprises and contracting can then be used to compare against the income from each activity.

The tillage costs are further broken down in cash costs and long term tillage costs.

The cash costs are recorded as all payments made by the farmer in that particular calendar year such as repayments, repairs, diesel, leases and machine hire, it does not include depreciation.

The longer term cost include repairs, diesel, depreciation and interest (but does not include the capital part of the repayment). These costs better reflect the longer term machine costs on the farm and are useful in assessing the replacement strategy on the farm.

Other costs which are recorded are the overall amount invested in machinery on the farm and the residual value of the machinery.

The MCC reflects a one year view of the machinery on the farm and all farmers are encourages to continually update the figures to establish trends on the farm over time. An alternative program is available which can be used to develop longer term machinery policy on the farm

The MCC generates output for farmers to use in the e-Profit Monitor. The key figures are: Machinery running (diesel, repairs, insurance, etc.), Machinery Leases (leases or HP interest) and Machinery Depreciation. The figures are specific to the tillage enterprise on the farm. These figures classed as a Fixed Cost and are allocated to each crop based on the relative gross output per hectare of the crop compared to the total output per hectare of all the crops.

Machinery Costs in 2017

The analysis of the machinery costs here are the longer term costs associated with tillage machinery which were generated from the MCC.

Table 26: Machinery costs of the different groups (2016 &2017)

	Net Margin			
	Average	Top 1/3	Middle 1/3	Bottom 1/3
2016 Machinery	€311	€286	€295	€394
of which is Contractor	*€ 110*	*€79*	*€ 77*	*€213*
2017 Machinery	€303	€ 316	€294	€357
of which is Contractor	*€115*	*€133*	*€94*	*€215*

- The average machinery costs over the two years is €307/ha (124/ac) but these costs decreased marginally by €8/ha from 2016 to 2017. These costs are not directly comparable to contractor costs as the contractor costs include labour, other fixed costs and profit.
- In 2016 the difference in machinery costs between the top and bottom (ranked by net margin) is €108/ha (or 37%). This difference narrowed in 2017 to €41/ha or 13%.
- There is a wide difference in contracting costs between the top and bottom (ranked by net margin) of €134/ha in 2016 and €82/ha in 2017.

Land Lease

The challenge facing all specialised tillage farmers is to maintain a viable business and in many instances increasing land areas through lease or rental is seen as a way of achieving this.

Land lease is a part of most farms in this e-PM analysis and is a significant part of their entire acreage on many farms.

Table 27: Total leased land as a percentage of total tillage land farmers in each year

	Net Margin			
	Average	Top 1/3	Middle 1/3	Bottom 1/3
2016 Leased land as % total	44%	26%	45%	57%
2017 Leased land as % total	45%	26%	47%	62%

- The growers with the lower profitability (Bottom 1/3) have substantially more rented land than the average (or the top 1/3).
- Growers achieving the most margin i.e. Top1/3 (ranked on Net Margin per hectare) have almost three times less than leased land than the bottom 1/3

Costs of Land Leased (conacre and longer term lease) can be expressed over the entire tillage area (owned and leased land) or the costs spread over leased land only. In the table below the total cost of Land Lease is spread over the leased area only, reflecting the price paid by the farmer for the land.

Table 28: Cost of land lease on the land lease only (2016 &2017)

	Net Margin			
	Average	Top 1/3	Middle 1/3	Bottom 1/3
2016 Tillage - Land Lease (only)	€ 352	€ 398	€386	€295
2017Tillage - Land Lease	€ 416	€ 381	€372	€478

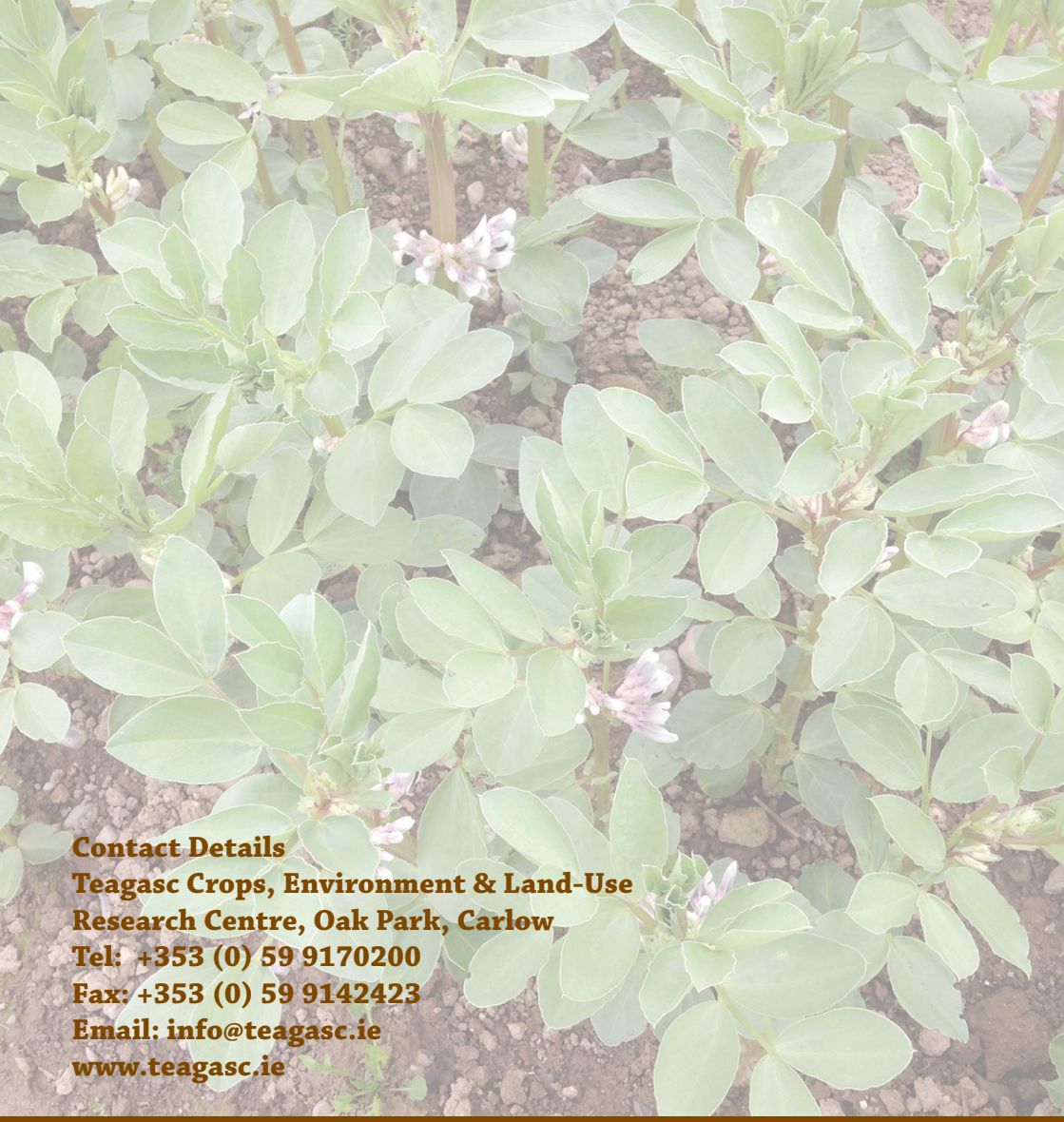
- The average cost of leased land in 2016 and 2017 is €384/ha but has increased over the two years. A high proportion (45%) of land is leased

on these farms therefore these costs represent a substantial fixed cost commitment to these farms. This fixed commitment substantial the risk to the farm business in years where a weather or price shock occurs.

– The costs of land within these two years is a short time span to look at trends as land can cycle in and out of the systems with can reflect varying costs of land from year to year.

Notes

Notes



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