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# Diversification or Specialisation?

## What to do?

# Diversification or Specialisation?

## What to do?

- What is farm diversification?
- What does the evidence tell us?
  - Research conducted on farm diversification in the last decades
  - Farm Business Survey in England and Wales
    - Same farms during period 2011-2017

Nt=1,446 N=10,122	2011	2012	2013	2014	2015	2016	2017
Cereals	186	201	197	201	211	211	205
Dairy	262	254	255	252	250	248	243
Lowland	119	110	110	106	109	110	110
LFA	386	387	387	390	387	386	384
Horticulture	198	208	209	199	206	212	222
Mixed	117	113	110	116	114	106	109
Pigs	40	43	44	42	43	45	45
Poultry	44	44	42	41	41	42	41
General cropping	94	86	92	99	85	87	87



## What is farm diversification?

- Farm diversification has been interpreted in different ways and may refer to a wide range of activities (e.g. retailing, tourism and recreation)
  - “adoption of income-earning activities outside the range of conventional crop and livestock enterprises associated with agriculture” (McInerney et al., 1989)
  - “the reallocation and recombination of farm resources away from its original farming activity to generate another form of income” (Ilbery, 1991)
- Diversification activities are varied and numerous, which poses difficulties for analysis (i.e. how to group them?)



## Research on farm diversification?

- Farm diversification has been increasingly used by farmers since the 80s
  - Adjust to contextual changes in the agricultural sector
  - Redirect the use of resources from crop and livestock production that were leading to surpluses to produce other goods and services that contributed to **keeping farm business activity** (McInerney et al., 1989)
  - Generate extra income while reducing risks by widening their income portfolio (McNally, 2001; Mishra et al., 2014)
  - Expectation that farm income to continue to be less dependent on agriculture output in the future (Lobley and Potter, 2004)
    - *Reapeasantisation process* (Ploeg, 2008): Transition of the farm from producing raw materials to being a multi-product enterprise



## What are the contextual changes in the agricultural sector?

- Diversification is a normal process driven from changes in consumers' demands including new demands for the use of the rural environment (McInerney et al., 1989)
- Policy makers acknowledge past policies aiming at production intensification had negative consequences on both farmer's income and the environment
  - a) internalise/reduce to "optimum" levels the negative environmental externalities associated with agricultural production while
  - b) generating extra income for farmers (Ilbery, 1991)



## What are the contextual changes in the agricultural sector?

- Government intervention for the provision public goods is required on welfare efficiency grounds
  - Financial support
- The **Single/Basic Payment Scheme (SPS/BPS)** is the main agricultural subsidy scheme in the EU to help farming industry. The SPS was replaced by the Basic Payment Scheme (BSP) in 2015
  - Arable farmers might need to grow 3 different crops and use 5% of their land to do specific things that are good for the environment
  - Cross compliance: public, animal and plant health; environment, climate change and good agricultural condition of land; and animal welfare

# What are the contextual changes in the agricultural sector?

## Post-Brexit – Agriculture bill

**2021– 2027: Phase-out current system**, a direct payment will be made and reduced each year to zero by 2027

Agriculture Bill states that “*the Secretary of State **may give financial assistance** for or in connection with*

- (a) *managing land or water in a way that protects or improves the environment;*
- (b) *supporting public access to and enjoyment of the countryside, farmland or woodland and better understanding of the environment;*
- (c) *managing land or water in a way that maintains, restores or enhances cultural heritage or natural heritage;*
- (d) *mitigating or adapting to climate change;*
- (e) *preventing, reducing or protecting from environmental hazards;*
- (f) *protecting or improving the health or welfare of livestock;*
- (g) *protecting or improving the health of plants.*

# What are the contextual changes in the agricultural sector?

## Post-Brexit – Agriculture bill

It continues specifying that “*The Secretary of State **may also give financial assistance** for or in connection with the purpose of starting, or **improving the productivity** of, an agricultural, horticultural or forestry activity*”

**“improving productivity” means...**

(a) *improving the quality of any products deriving from the activity*

(b) *improving the efficiency of the activity in terms of the resources used in, or in connection with, it*

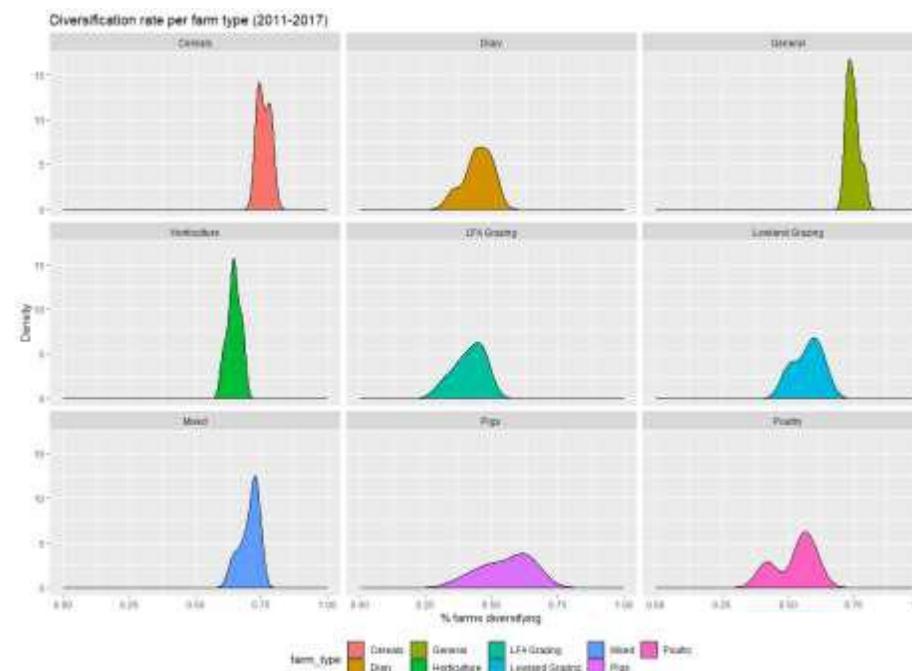


# Analysis: Farm Business Survey in England and Wales

- Diversification rates per farm type and year
- Ratio of farms obtaining a positive income from diversification per farm type and year
- Income from diversification per farm type and year
  - Winners and losers
- Contribution of diversification to FBI
- Single and Basic Farm Payment contribution to FBI

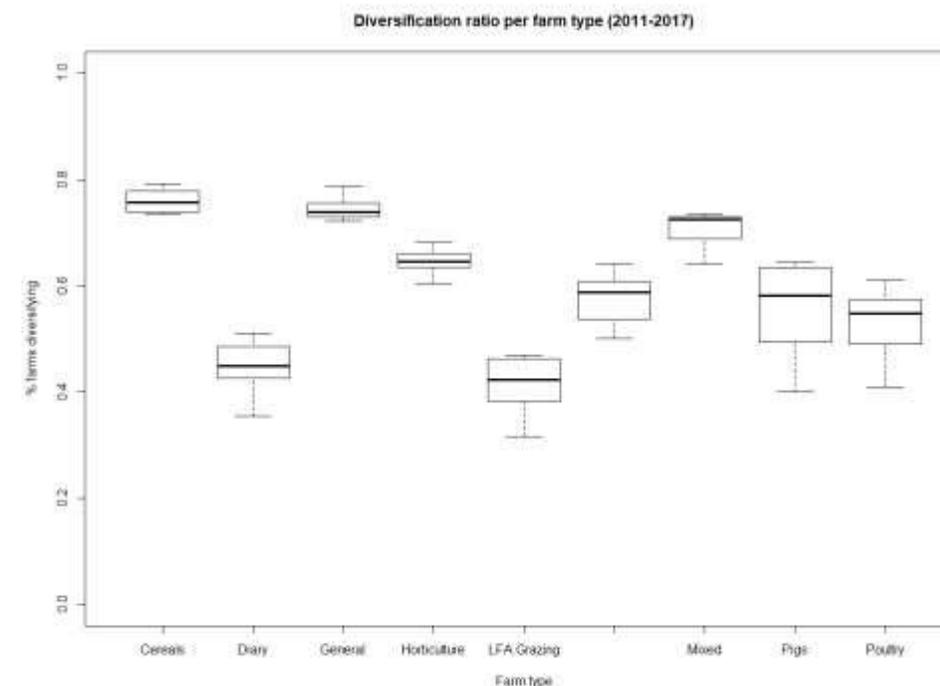
## Diversification rates (2011-2017)

- Diversification rates vary per farm type
  - Highest diversification rates for cereals, mixed, general cropping and horticulture farms
  - Intermediate with large variation in pigs and poultry
  - Lowest diversification rate for dairy and LFA grazing livestock



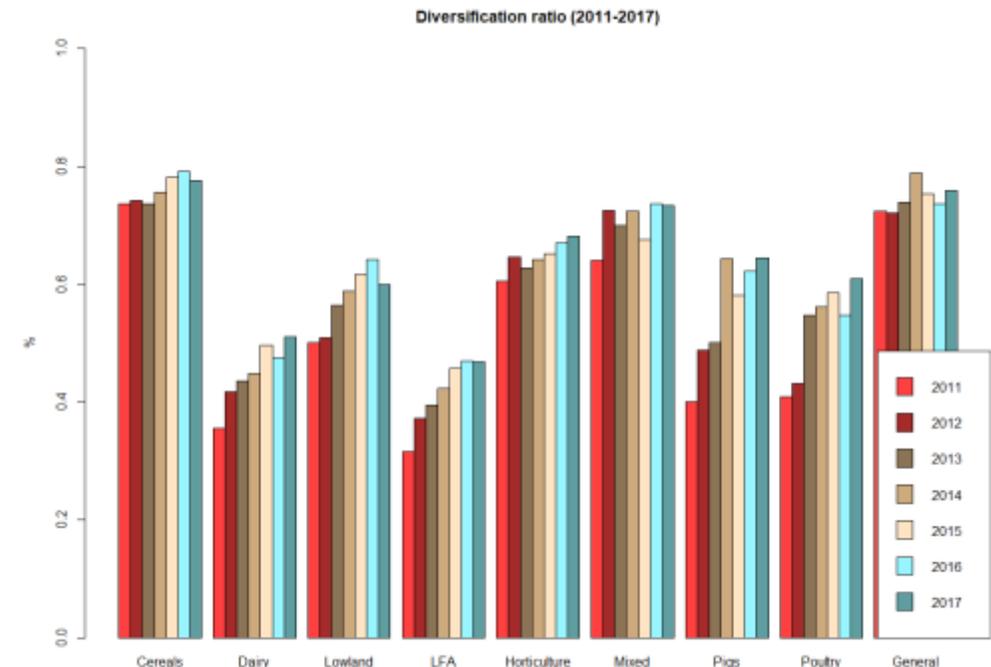
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## Diversification rates: trends (2011-2017)

- Positive trend in diversification rate for dairy, lowland and LFA grazing livestock, horticulture, pigs and poultry
- Small positive diversification rate trend for cereals, mixed and general cropping farms (*already relatively high rates*)



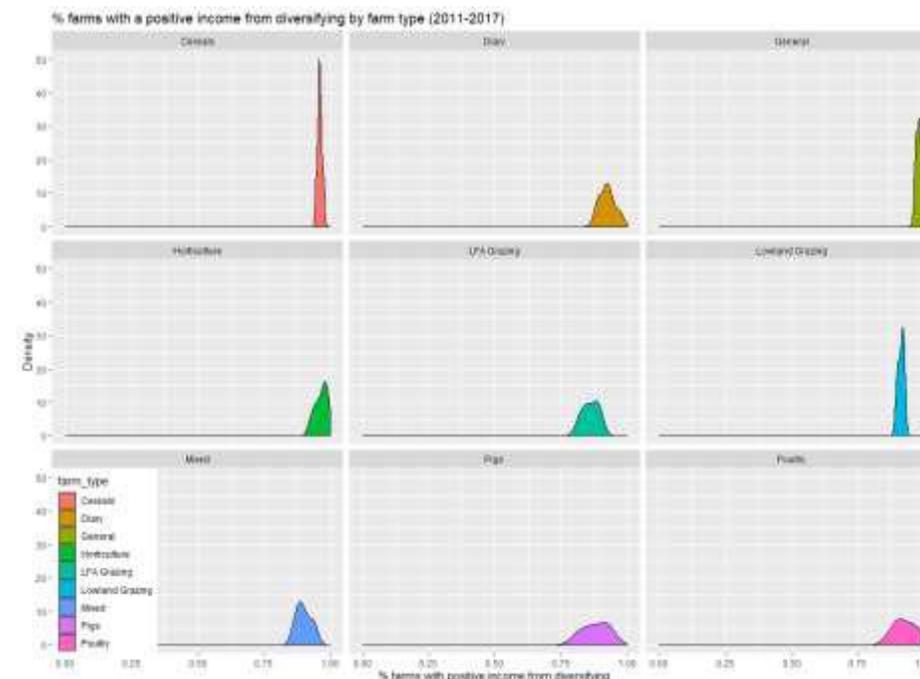


## Some questions?

- What percentage of farms have a positive income from diversifying activities?
- What is the average income obtained by farms from diversification?

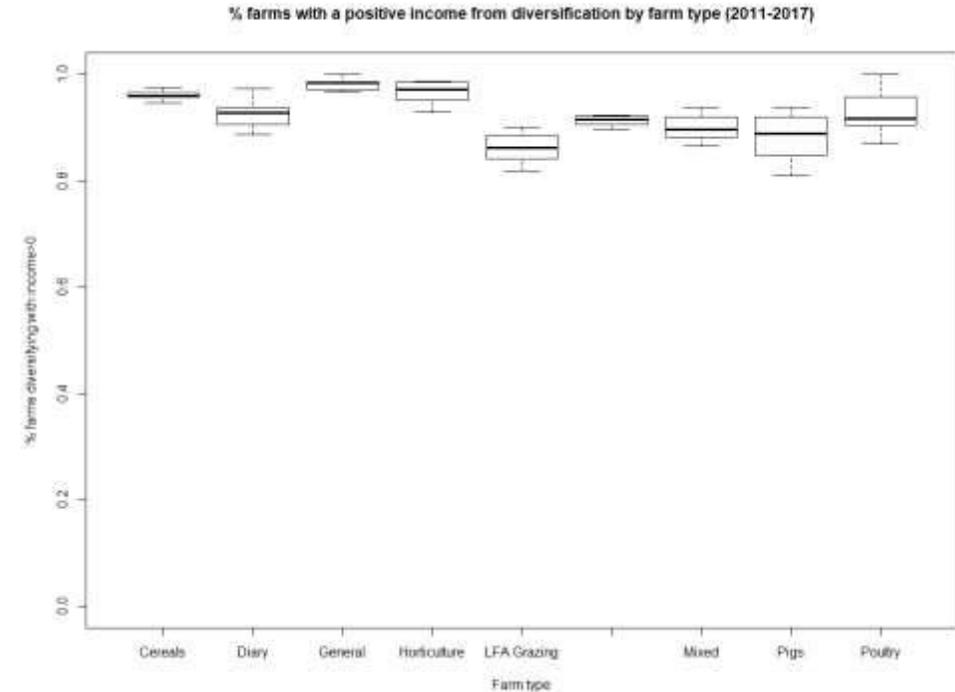
## % farms with positive income from diversifying activities

- Most diversifying farms have a positive income from diversification between 2011-2017
- More certainty on “success” for cereal, horticulture and general cropping farms



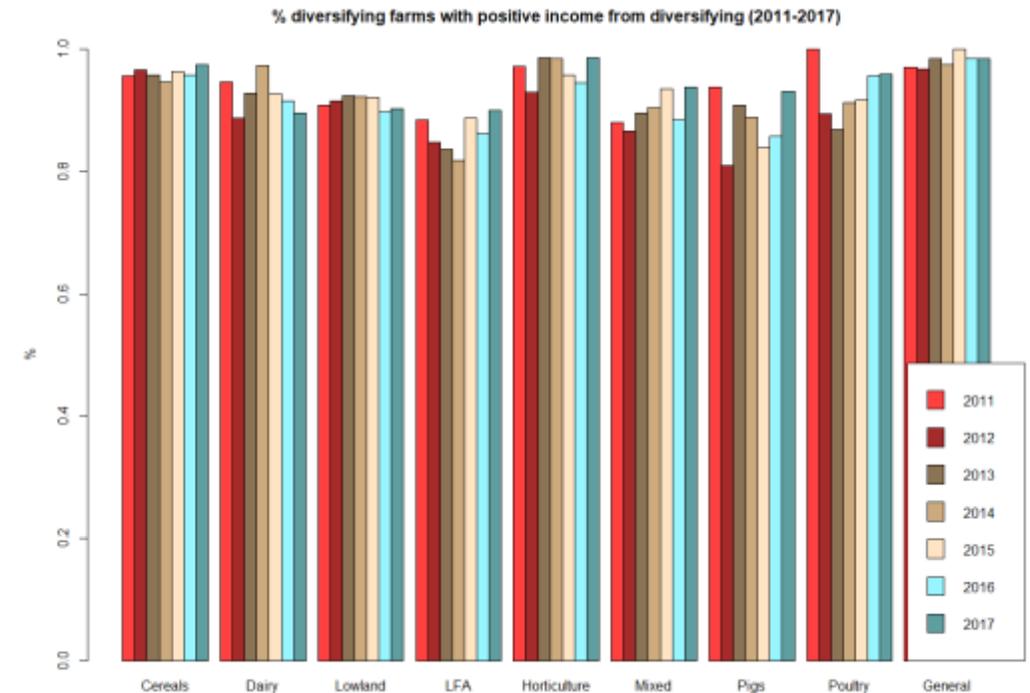
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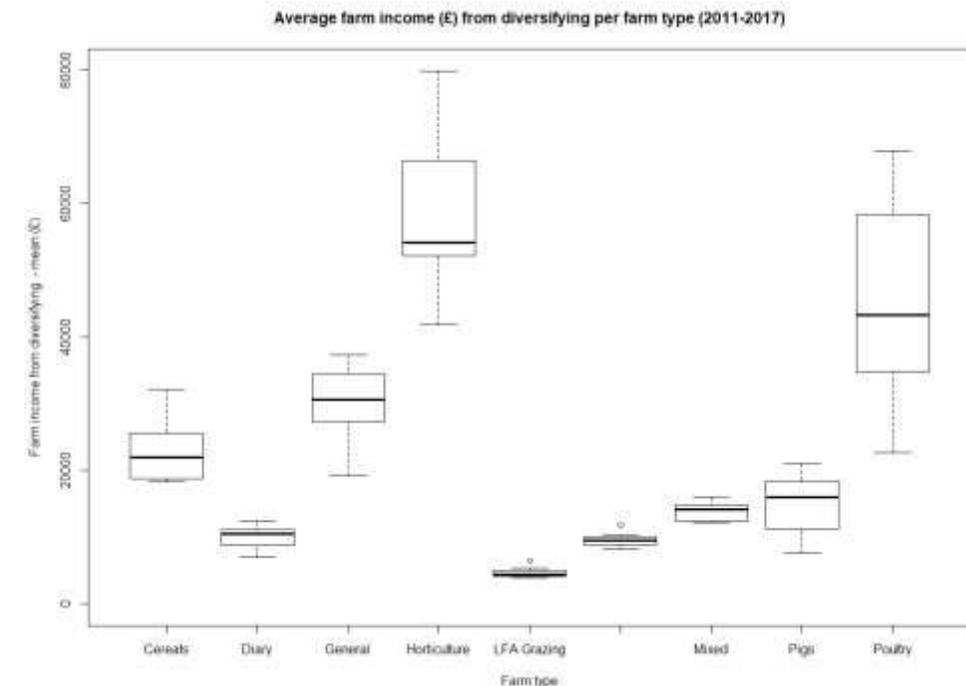
# % farms with positive income from diversifying activities: trends

- No significant trends
- High rates of success



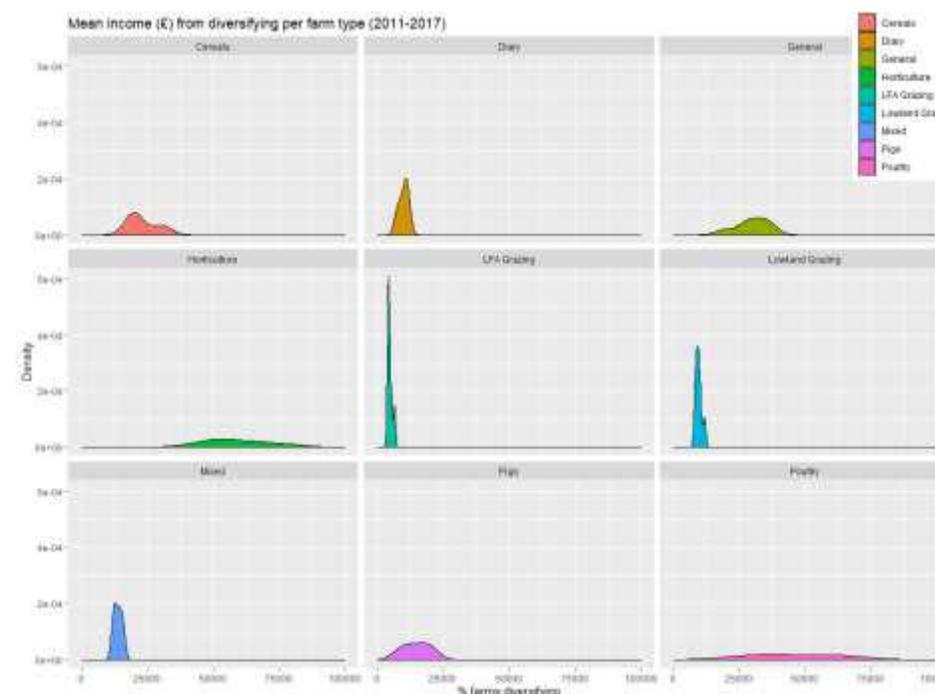
# Average income from diversification

- The income obtained from diversification varies by farm type
  - Poultry and horticulture farms obtained over £40k (average per year) as income from diversification activities, but there is high variability
  - Cereal farms obtained more than £20k from diversification activities (on average per year)
  - LFA lowland grazing livestock and dairy obtained less than £10k from diversification activities (on average per year)
  - Mixed and pig farms obtained between £10k and £20k from diversification activities (on average per year)



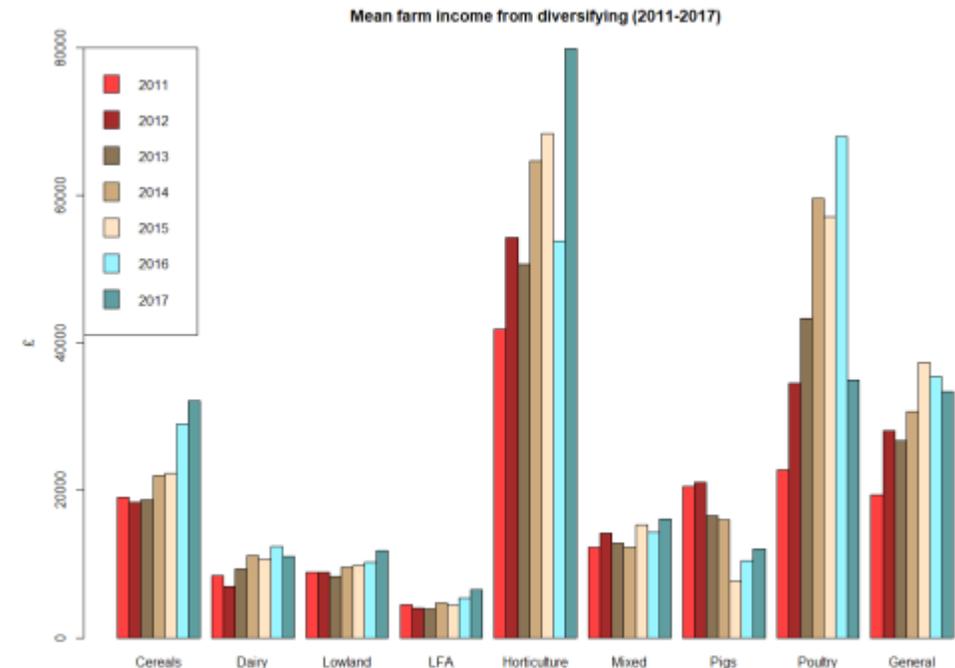
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## Average income from diversification: trends

- There seems to be some positive trends in income obtained from diversification for
  - Cereal farms
  - Horticulture farms
  - General cropping
- There seems to be a negative trend in income obtained from diversification for pig farms





## What is the contribution of diversification to farmer's income?

- Diversification can lead to positive or negative income (i.e. winners and losers from diversifying)
- Do diversified farms obtain a higher income than non-diversified farms?

# Diversification – Mean income

- Average income from diversification activities tends to be positive
- But varies by type of diversification and farm type
  - Retailing: Horticulture farms
  - Renting: Cereal, general cropping, poultry and horticulture farms
  - Other diversification (e.g. renewable energy)

**Retailing - Mean income (£K)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cereals	1	1	1	0	20	-0	0	5	1	
Dairy	0	1	1	0	24	0	0	2	1	
Lowland	0	2	1	0	20	-0	0	3	1	
LFA	0	2	1	0	18	0	1	2	2	
Horticulture	0	2	1	0	81	1	0	1	2	
Mixed	1	2	1	0	32	1	0	1	1	
Rpa	1	1	1	0	18	1	0	2	2	
Poultry										
General										

**Recreation - Mean income (£K)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cereals	1	1	1	1	-0	0	0	0	0	
Dairy	1	0	2	1	1	-0	0	0	2	
Lowland	1	1	2	0	1	0	1	0	1	
LFA	1	0	2	1	1	-0	0	0	4	
Horticulture	1	0	2	0	1	-0	0	0	1	
Mixed	1	1	2	1	1	1	1	0	1	
Rpa	1	1	2	1	1	1	1	0	1	
Poultry	1	1	2	1	1	1	1	0	1	
General	1	1	2	1	1	1	1	0	1	

**Tourism - Mean income (£K)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cereals	0	0	1	0	3	1	0	0	2	
Dairy	0	0	1	0	1	0	-0	0	2	
Lowland	0	0	1	0	1	1	0	0	1	
LFA	1	0	1	1	2	1	0	0	2	
Horticulture	-0	0	1	0	2	1	0	0	2	
Mixed	1	0	1	0	1	1	0	0	2	
Rpa	1	1	1	1	1	1	0	0	2	
Poultry										
General										

**Rent - Mean income (£K)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cereals	17	5	5	3	12	11	4	17	16	
Dairy	16	4	5	3	15	13	5	24	21	
Lowland	17	5	5	2	15	11	4	25	21	
LFA	18	5	5	2	12	10	5	41	22	
Horticulture	20	4	5	3	13	13	7	36	29	
Mixed	23	6	5	3	16	11	7	55	29	
Rpa	26	6	7	4	16	12	8	22	26	
Poultry										
General										

**Other diversification - Mean income (£K)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cereals	1	1	0	0	8	0	15	1	2	
Dairy	1	1	0	0	13	1	15	9	2	
Lowland	1	2	1	1	13	1	11	5	2	
LFA	1	4	1	1	12	1	10	17	2	
Horticulture	1	3	1	1	12	1	0	19	3	
Mixed	3	3	2	1	5	1	2	12	1	
Rpa	3	2	2	1	17	2	3	10	4	
Poultry										
General										

**Renewable - Mean income (£K)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cereals	1	3	1	0	10	0	0	18	2	
Dairy	2	2	1	0	2	1	1	12	3	
Lowland	2	2	1	1	14	1	1	10	3	
LFA										
Horticulture										
Mixed										
Rpa										
Poultry										
General										

# Winners from diversification

- Diversification success can happen in all diversification and farm types
  - Retailing: Horticulture farms
  - Renting: Cereal, general cropping, poultry and horticulture farms
  - Other diversification (e.g. renewable energy)

**Retailing - Mean income (£K)**

Year (2011-2017)	Cereals	Dairy	Livestock	LFA	Horticulture	Mixed	Rpa	Poultry	General
2011	17	18	6	3	51	4	3	21	8
2012	10	22	5	3	62	4	3	11	7
2013	3	25	5	3	63	5	2	19	12
2014	2	19	9	3	103	2	4	8	13
2015	5	27	8	3	86	4	1	9	22
2016	14	38	8	4	111	9	3	6	15
2017	11	37	12	4	122	9	0	7	22

**Recreation - Mean income (£K)**

Year (2011-2017)	Cereals	Dairy	Livestock	LFA	Horticulture	Mixed	Rpa	Poultry	General
2011	4	4	6	4	4	2	1	0	2
2012	5	3	8	5	8	2	3	NA	11
2013	4	4	9	3	7	3	2	0	4
2014	5	4	8	5	19	2	2	2	16
2015	4	3	7	3	9	4	2	4	3
2016	5	5	11	4	7	5	4	5	8
2017	4	4	8	4	9	7	3	10	3

**Tourism - Mean income (£K)**

Year (2011-2017)	Cereals	Dairy	Livestock	LFA	Horticulture	Mixed	Rpa	Poultry	General
2011	4	4	7	6	25	15	3	NA	21
2012	4	2	5	3	21	8	NA	NA	26
2013	4	4	5	7	14	7	NA	NA	33
2014	27	6	10	7	17	8	NA	NA	24
2015	3	7	10	7	20	7	NA	NA	25
2016	12	6	9	8	15	5	NA	NA	23
2017	36	11	8	8	17	6	NA	NA	23

**Rent - Mean income (£K)**

Year (2011-2017)	Cereals	Dairy	Livestock	LFA	Horticulture	Mixed	Rpa	Poultry	General
2011	19	7	9	5	21	17	6	25	20
2012	19	7	10	5	29	21	9	46	28
2013	21	7	9	5	30	16	10	30	25
2014	22	8	9	6	21	16	11	116	27
2015	24	7	10	6	26	20	13	87	35
2016	29	10	10	7	28	18	14	115	34
2017	33	10	12	9	30	17	15	43	31

**Other diversification - Mean income (£K)**

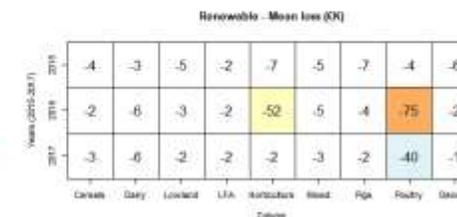
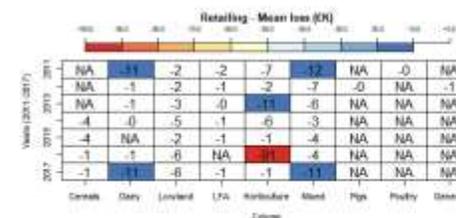
Year (2011-2017)	Cereals	Dairy	Livestock	LFA	Horticulture	Mixed	Rpa	Poultry	General
2011	6	6	3	2	32	3	83	8	10
2012	6	6	3	3	46	4	46	19	9
2013	5	7	3	3	33	4	37	12	6
2014	6	9	3	3	20	4	26	27	6
2015	7	9	4	2	26	4	3	29	9
2016	11	9	5	3	13	4	7	22	7
2017	9	8	5	3	32	5	5	35	7

**Renewable - Mean income (£K)**

Year (2011-2017)	Cereals	Dairy	Livestock	LFA	Horticulture	Mixed	Rpa	Poultry	General
2011	6	11	3	3	37	4	3	32	9
2012	8	8	3	3	14	4	4	25	10
2013	6	8	3	3	38	4	4	36	9

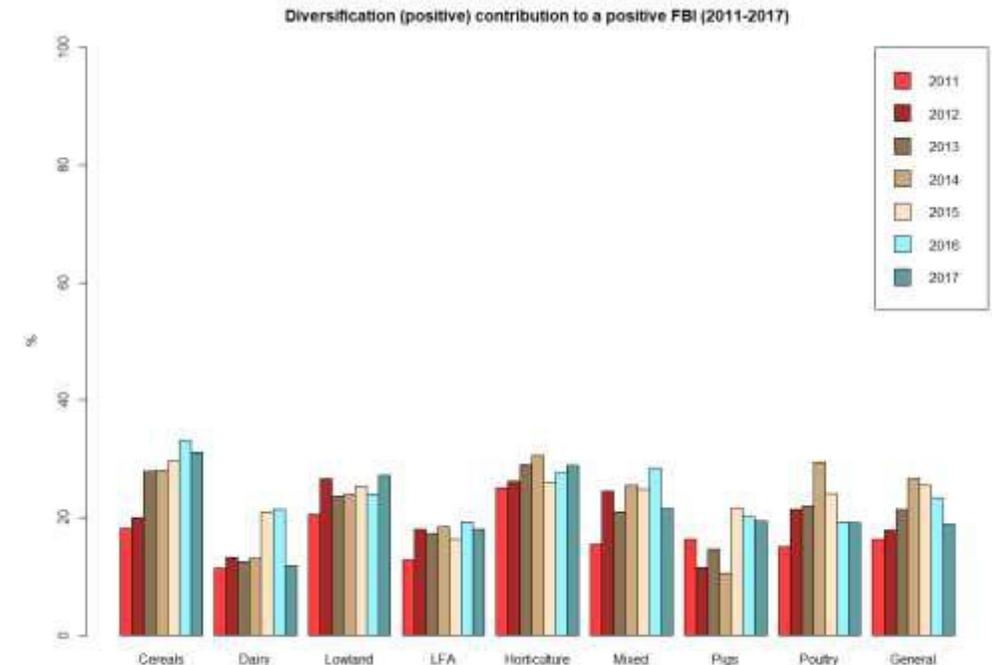
# Losers from diversification

- Losses occurred in all types of diversification and all farm types
  - Retailing: Cereal, general cropping, poultry and horticulture farms
  - Retailing: Horticulture farms



# % farms contributing positively to a positive FBI through diversification

- When diversification yield positive income contributes to 10-35% of FBI
- Diversification has become more important for cereals since 2011



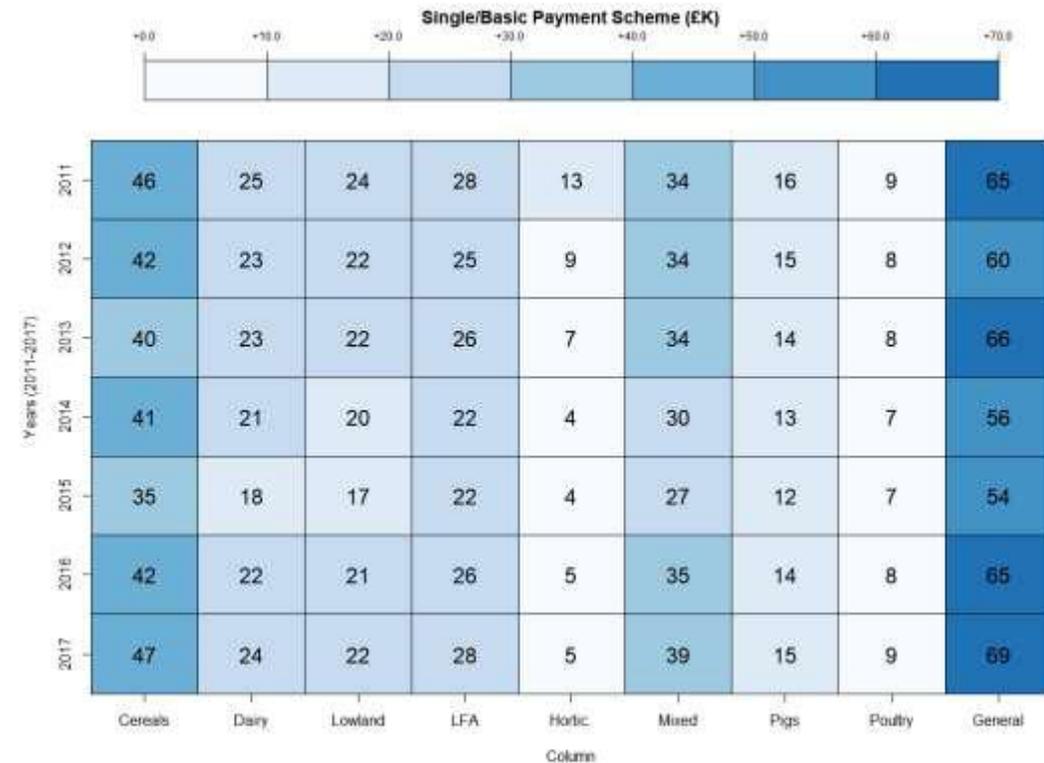
## Diversification vs. non diversification

- Diversified farms have higher FBI than no-diversified farms

	FBI_div	FBI_nondiv	FBI diff	FBI ratio
Cereals	76,731	43,426	33,305	1.77
Dairy	78,330	61,002	17,329	1.28
Lowland	33,609	29,324	4,285	1.15
LFA	37,236	25,474	11,762	1.46
Horticulture	71,178	28,200	42,978	2.52
Mixed	49,218	26,190	23,028	1.88
Pigs	127,027	60,432	66,595	2.10
Poultry	143,274	54,746	88,528	2.62
General	155,300	50,223	105,078	3.09

# Single and Basic payments

- Single/Basic payment scheme
  - General cropping ~60k
  - Cereals ~40k
  - Mixed ~35k
  - Dairy, lowland and LFA livestock grazing ~25k
  - Pigs ~15k
  - Horticulture ~5k





## What factors are associated to being successful when diversifying?

- Age, gender, education, region, farm type, area
- Preliminary results from econometric analysis suggest that
  - Horticulture and cereal and general cropping farms tend to do relatively well diversifying
    - More likely to obtain a positive income from diversifying



## Wrapping up

- New policy context may mean that farmers need to look for diversification opportunities
  - Diversification contributes to higher FFI
  - Not all farm types nor all diversification activities lead to same outcome
    - Horticulture and cereal and general cropping farms tend to do relatively well
    - Can diversification fill any potential gap in financial support by the government?
  - Provision of environmental goods may be financially rewarded by government
    - Some farmers already getting financial support; what will change?
    - Will farmers received the same financial support from government in the future?
    - Different locations and farm types lead to different environmental outputs; will this affect financial support?

**Thank you!**