



LEGumes for the
Agriculture of TOMorrow



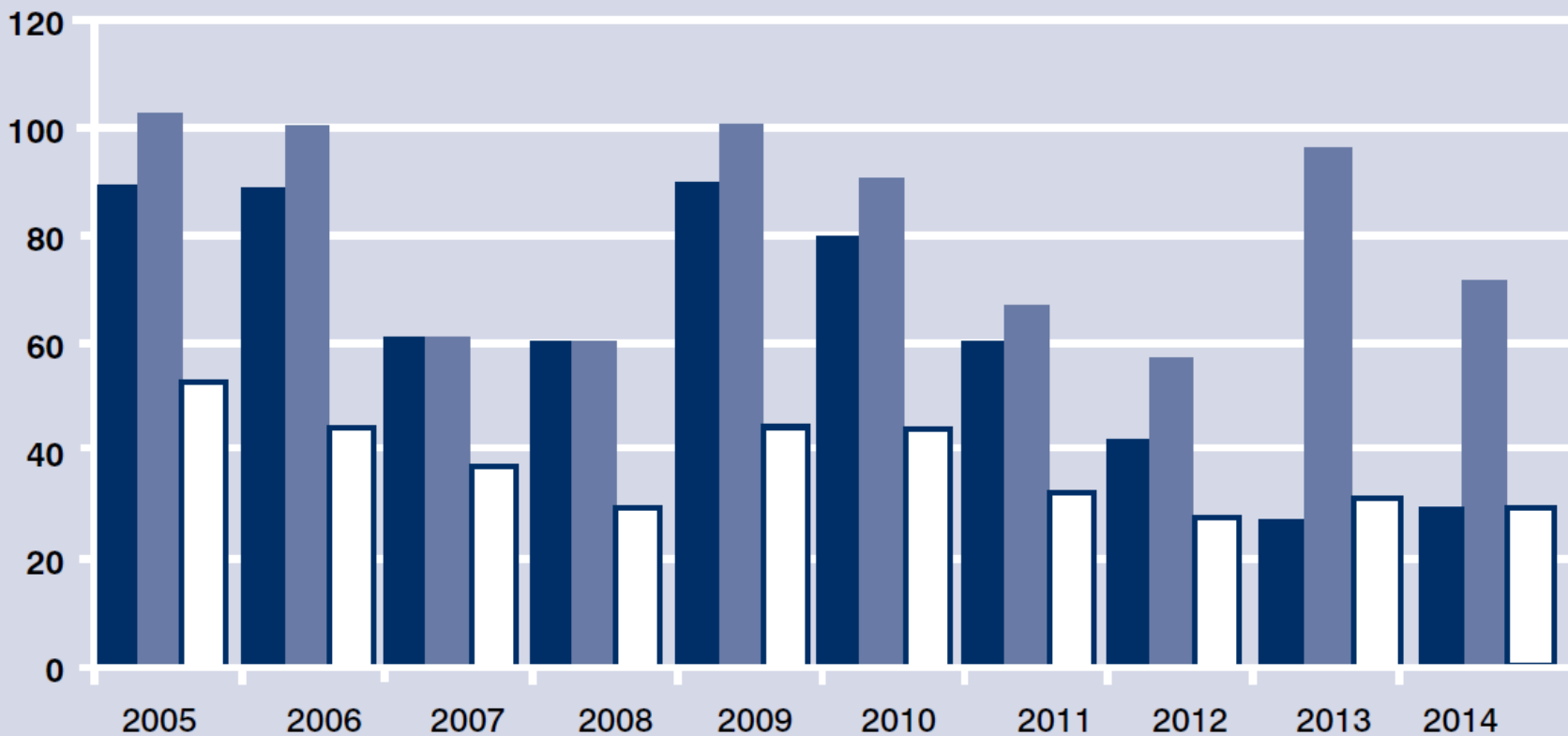
Brakes & Levers on GL Production for Feed & Food - A UK Perspective

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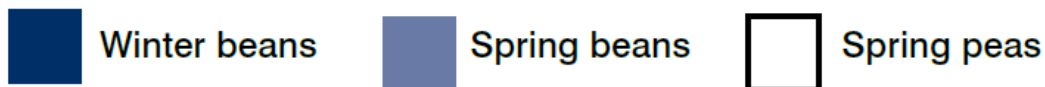
Processors and Growers Research Organisation,
UK



UK Pulse Crop ('000ha)



Source: Defra / PGRO





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UK Bean production

	2010/11	2011/12	2012/13	2013/14	2014/15
Area Winter	82	58	41	25	30
Area Spring	86	67	50	87	70
Yield Winter	2.9	3.1	3.4	3.5	4
Yield Spring	2.0	3.4	3.4	3.8	5
Production Winter	237	179	140	88	120
Production Spring	249	227	170	330	280
TOTAL ('000s tonnes)	486	406	320	418	400

Source: British Edible Pulse Association





Grower's Concerns

Leaf and pod spot

(*Ascochyta fabae*)



Rust

(*Uromyces fabae*)



Downy mildew

(*Peronospora viciae*)



Chocolate spot

(*Botrytis fabae*,
B. cinerea)



Sclerotinia

(*S. trifoliorum*,
S. sclerotiorum)



Foot and root rots

(*Fusarium culmorum*, *F. solani*,
Phoma medicaginis var.
pinodella)



Black bean aphid

(*Aphis fabae*)



P&B Weevil

(*Sitona lineatus*)



Bean seed beetle

(*Bruchus rufimanus*)



Pea aphid

(*Acyrtosiphon pisum*)



Stem nematode

(*Ditylenchus*
gigas, & *dipsaci*)





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- A UK report by commissioned the NFU, the AIC and the CPA, looked at the economic impact of plant protection products (PPPs) on UK agriculture and the wider economy.



- The Andersons' report assessed that 40 active substances are deemed likely to be lost or restricted in their use.
 - This includes: 10 insecticides, 12 fungicides, 16 herbicides and two molluscicides.
- This represents a drop of 20 per cent on the five-year average from 2009-2013.
- UK farming profit (Total Income From Farming) would drop by £1.73billion in monetary terms.



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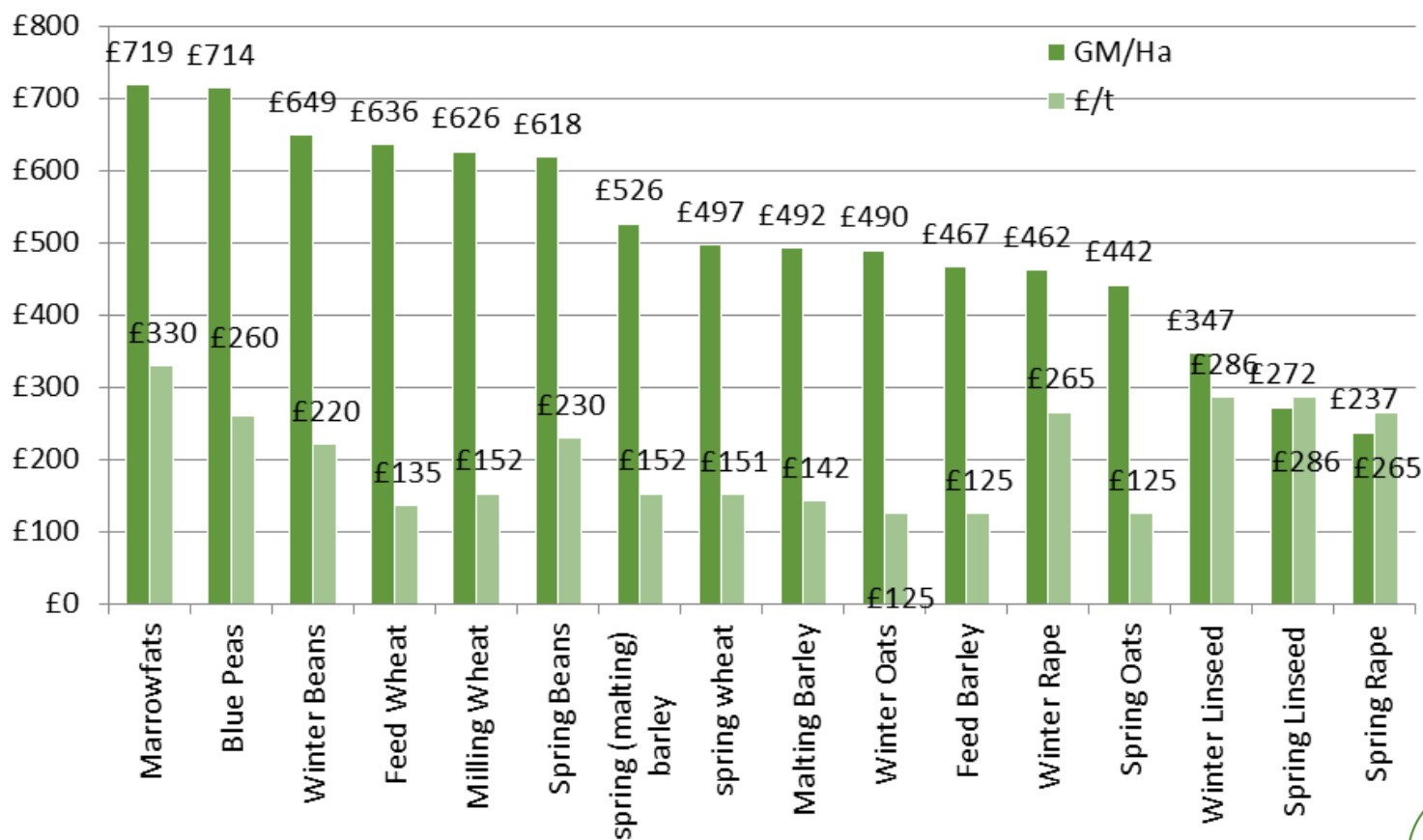
- Not all doom and gloom though



- The UK pulse crop is likely to expand between 25% and 50% over the next five years . We could be looking at over a million tonnes compared to lows of 450k two years ago : Reasons
 - CAP reform and the Three Crop Rule
 - CAP reform and Ecological Focus Areas
 - Low values for oilseed rape forecast
 - Increase problem with black grass (*Alopecurus myosuroides*)
 - A wider rotation and a move away from wheat rape wheat rape
- Consumption will increase as premiums to wheat are reduced. This demand will be seen in Norway, Southern Europe and North Africa



Profitability





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- Fundamental research will have long-term benefits
- Near market research shorter term benefits

BUT

- More immediate impacts can be seen from changes in Policy Eg CAP reform and Greening



However, policy can change.

- The current CAP reform started in 2010, with new CAP 2014 – 2020 coming into effect on 1 January 2015
- So what happens at the end of the Current CAP ?
- Markets feed or food
 - need sustained product and grower commitment
- Growers need
 - stable markets and prices
 - indications of policy direction

Brakes & Levers

- Increasing production through increased area
- But also productivity
 - yield per unit area
- This where research comes in
- -Both short and long-term

Brakes & Levers

- Agronomics.....
- Economics.....
- Policy.....
- Markets.....
- Uses.....
- Sustainability.....
- GHG Emissions.....