Digging into the long-term trends for the British potato industry

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Motivation

- The purpose of this presentation is to provide an overview of **major long term trends for the sector** to link them with its **sustainability and resilience.**
- **Why this is important?**
  - **Growing concern** that **food supply should be more resilient to a variety of shocks** (e.g., economic, originating from climate change).
- It is expected that in the future, the food supply will have to combine 4 characteristics, namely:
  1. **resilience,**
  2. **sustainability,**
  3. **competitiveness, and the**
  4. **ability to meet and manage consumer expectations**.

Resilience and sustainability

- For a crop**, resilience** refers to the **ability of its supply to resist a damaging event** (e.g., from economic origin).
- In that context, for a grower the **sustainability** of a crop involves the ability to continue farming and producing it.
- Despite the continues talk of resilient **supply chains not much has been written about** what it means for the agricultural supply, **except in cases related to outbreaks** such as the (Foot and Mouth or the BSE crises).
- The **agricultural supply is resilient** if it is capable:
  1. To respond to **disruptions due to unexpected events** and recover from them, and
  2. To **adapt to long term trends** in society.

Why potato is an interesting case

- Potatoes is an interesting case due to three reasons:
  1. it was **not subject to** a Common Agricultural Policy's 'Common Market Organisation', i.e., **evolution has been more subject to market forces**.
  2. Potatoes are **one of the most important crops** in the UK agriculture. Its value as of 2013 was estimated by Defra in £940 million (£287 million in Scotland) and for the same year the production 5.6 million tonnes (1.1. million tonnes in Scotland);
  3. **Weather conditions are a constant source of short term shocks** as they affect significantly **yields**, total **production**, prices and crop **profitability**.

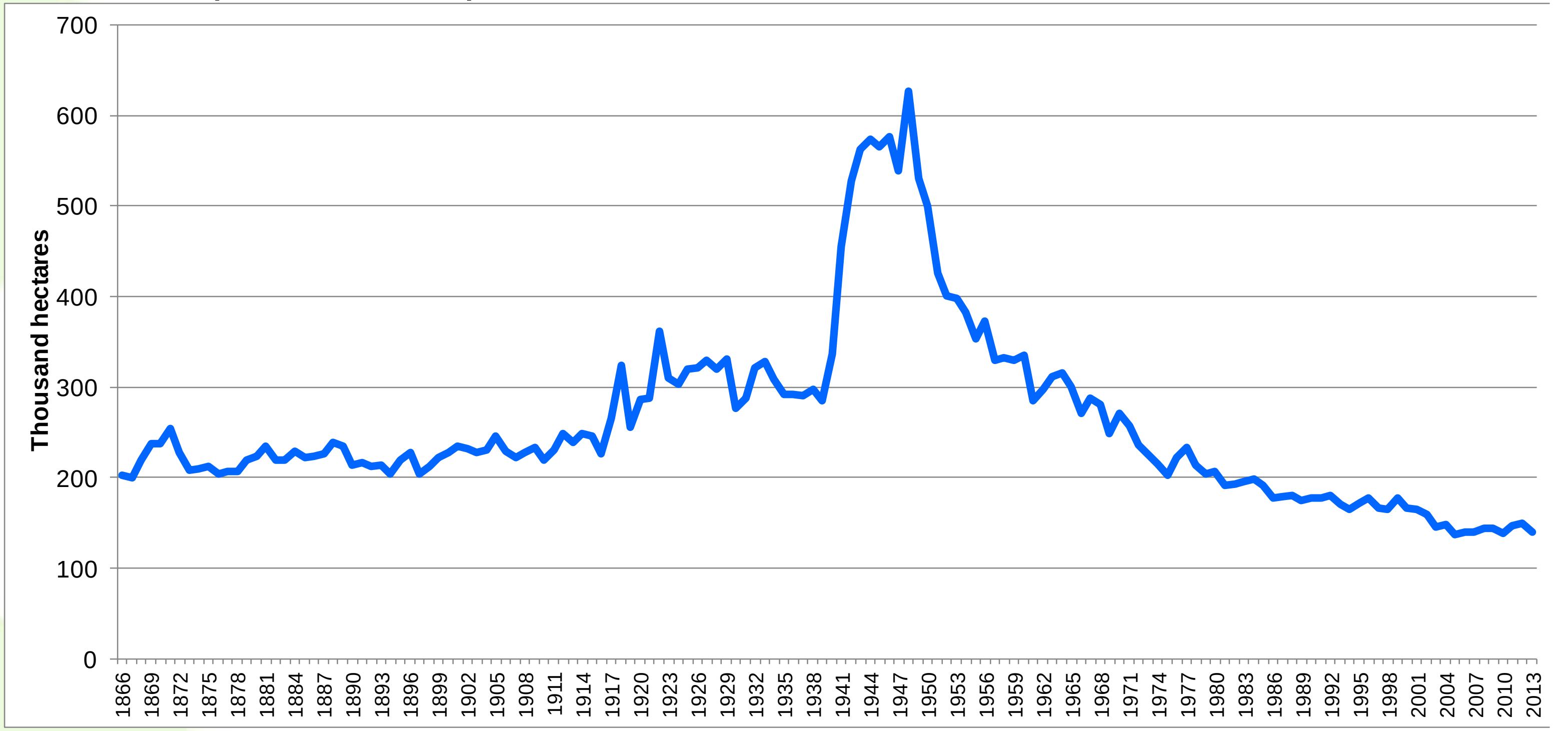
Drivers affecting a crop sustainability

1. Factors affecting the **choice of potatoes** by farmers
   – High **input costs** (e.g., high fertiliser and energy costs) and low **output prices**.
   – Better profit margins on **other crops**.
2. Factors deriving **from the downstream supply chain**
   – Demand for products **derived** from potatoes.
   – **Quality, traceability and food safety** assurance requirements.
   – **Sustainability concerns** amongst downstream supply chain participants.
3. **Legislation**
   – Affecting the **use of inputs** as their use regulated by EU legislation.

Long term trends – Supply side

Planted area under potatoes

Total area planted with potatoes in the UK 1866-2013



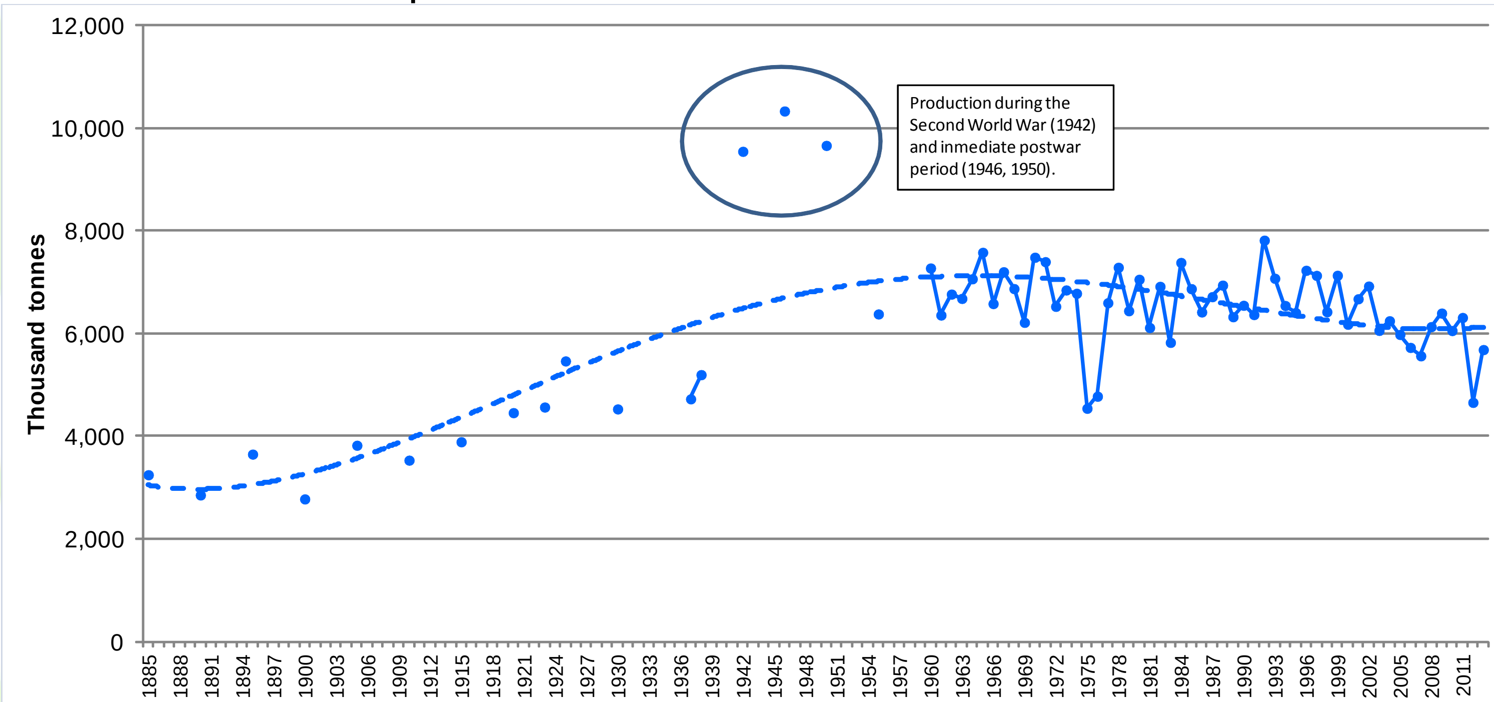
Source: Defra

Note: Data before 1922 correspond to Great Britain.

The area planted has been recorded in Britain since 1866. Even if one abstract from the massive increase in potato areas due to the Second World War, the area planted has been decreasing, reaching in 1975 the same planted area than in 1897.

Potato production

Volume of harvested production in the UK 1885-2013

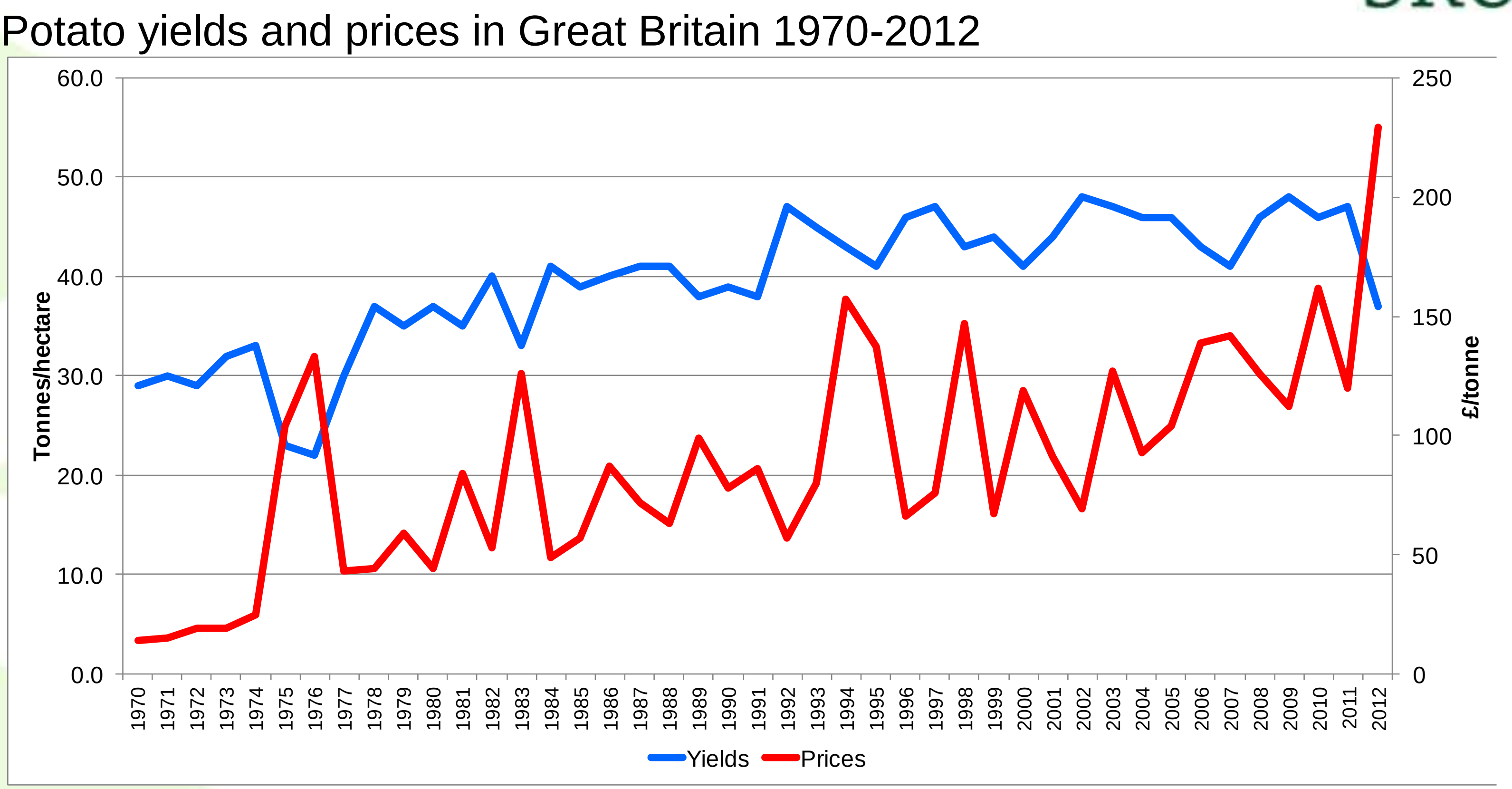


Source: Defra. Agriculture in the UK.

Note: Data before 1922 correspond to Great Britain. Dotted line represents a trend.

Despite the contraction in the area under potatoes production of potatoes is at levels much higher than in 1897. In fact, the average production for the period 1960-2013 was about 61% higher than the average for the period 1885-1938.

Potato: Yields and prices



Source: Potato Council.

The reason for the increase in production, of course, is the higher production per hectare (i.e., yields) attained due largely to the adoption of irrigation, improvements in soil management, and more effective machinery for seedbed preparation.

Consolidation of the industry

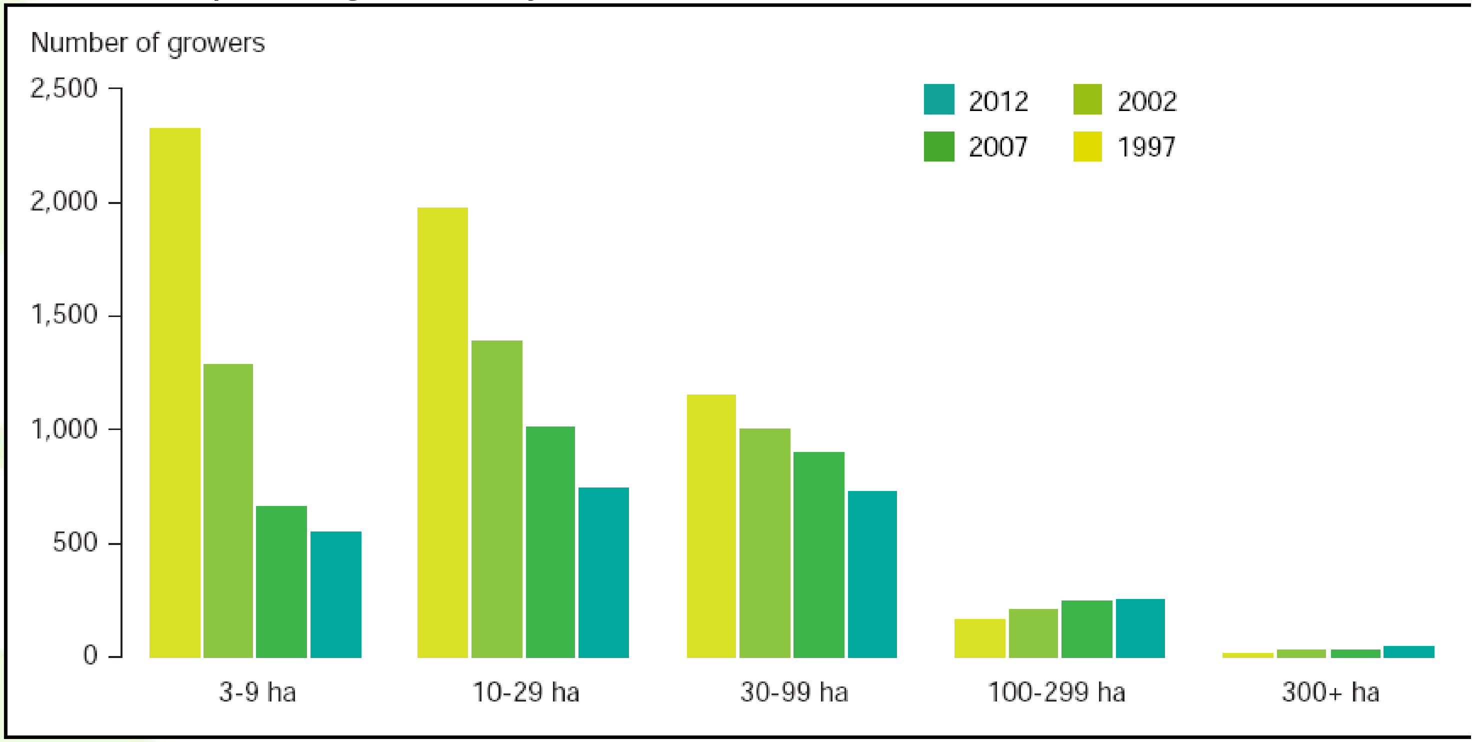
- Like other farming enterprises the **number of potato growers has also decreased**.

- In fact, the number of registered growers has decreased from **76,830 in 1960 to 2,190 in 2013**. However, as seen, the level of production has not followed that trend.

- The reason for this has been the **consolidation of the industry due to higher capital investment** (AHDB).

Increasingly production is in the hands of bigger farms

Number of potato growers by size band in hectares



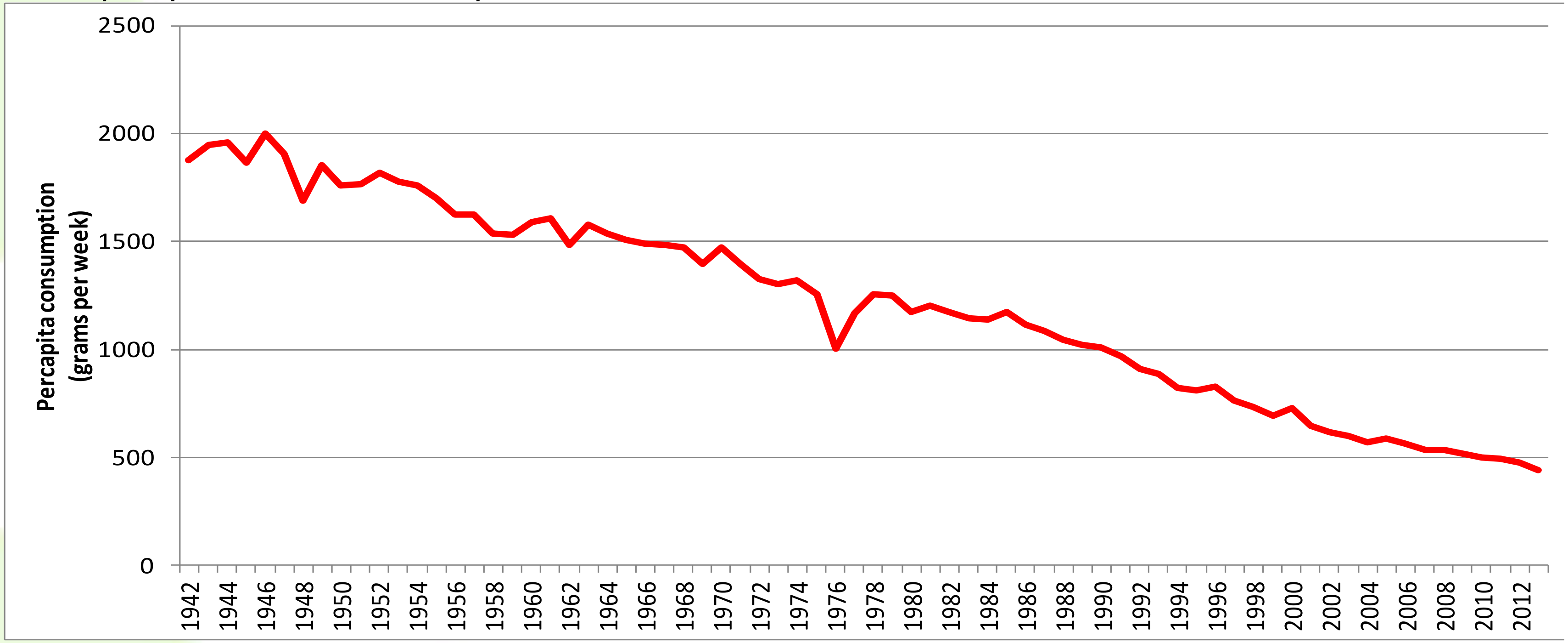
Source: AHDB/Potato Council Planting Returns

In 2012, 13% of all registered growers planted 100 ha of potatoes or more, which represented more than 50% of the total planted area. Growers planting 3-9 ha used to be 41% of growers in 1997 while in 2012 they were less than 25%.

Long term trends – Demand side

Changes in consumer demand for fresh potatoes

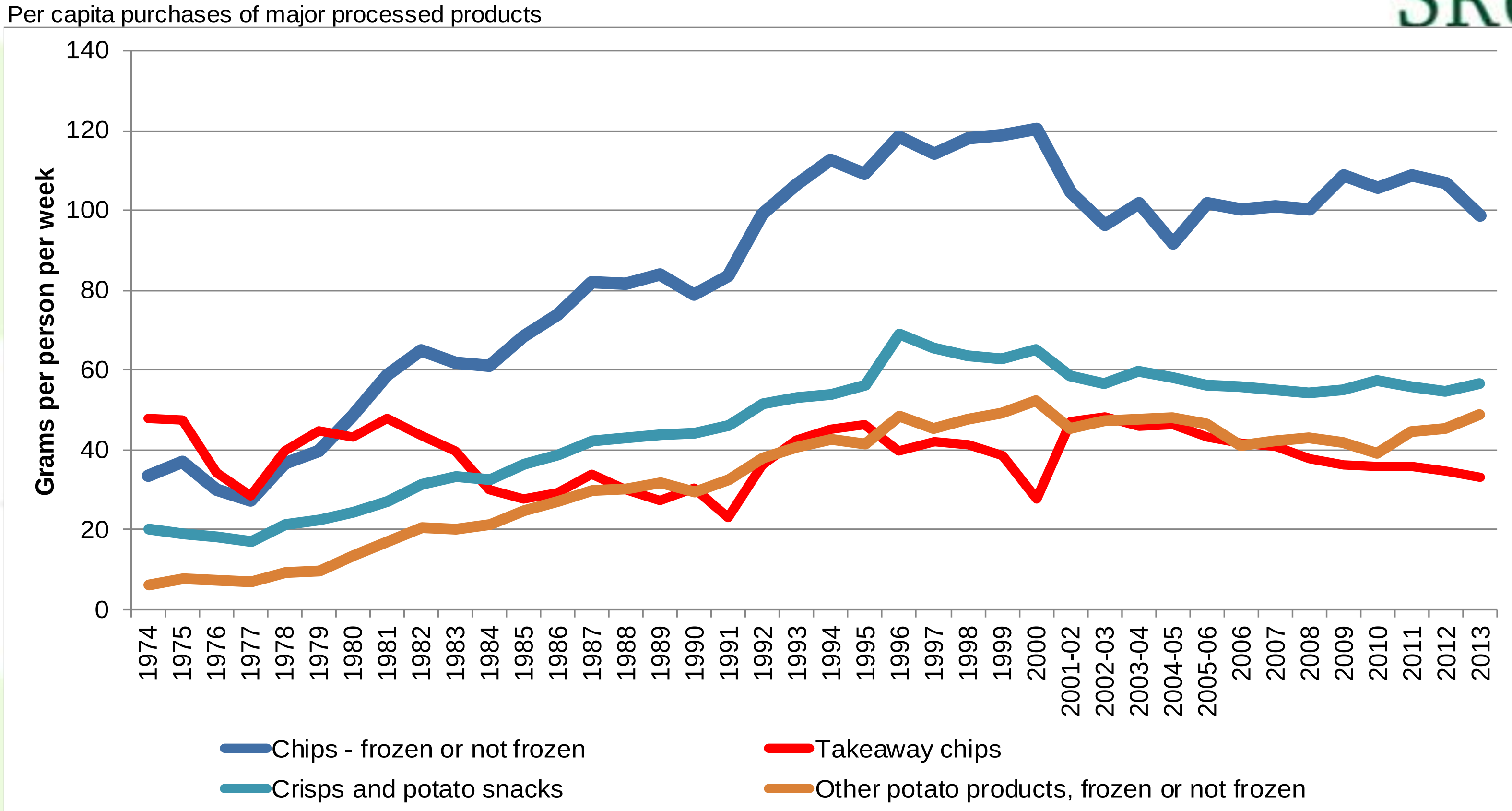
Per capita purchases of fresh potatoes, 1940-2013



Source: Defra. Family Food.

Per capita consumption of fresh potatoes has declined, this has to do with many factors related to changes in lifestyle (e.g., preferences for convenience, diets becoming more 'sophisticated').

Changes in consumer demand for processed potatoes

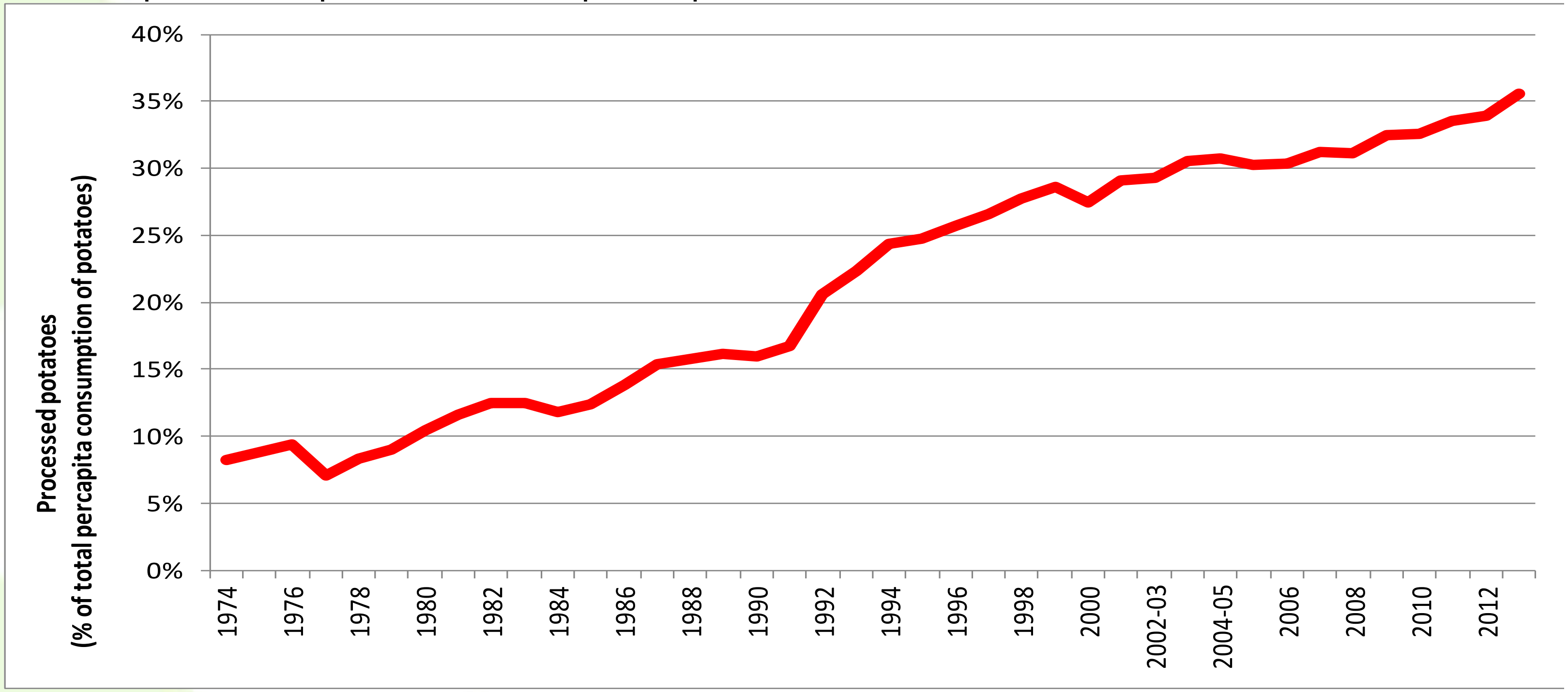


Source: Defra, Family food.

The range of potato uses has expanded enormously. Traditional categories (chips and crisps) have grown until late 1990s and then remain at similar level. However, 'Other potato products' have shown slightly increase.

Increasing share for processed potato products in purchases

Share of processed products in total potato purchases, 1974-2013



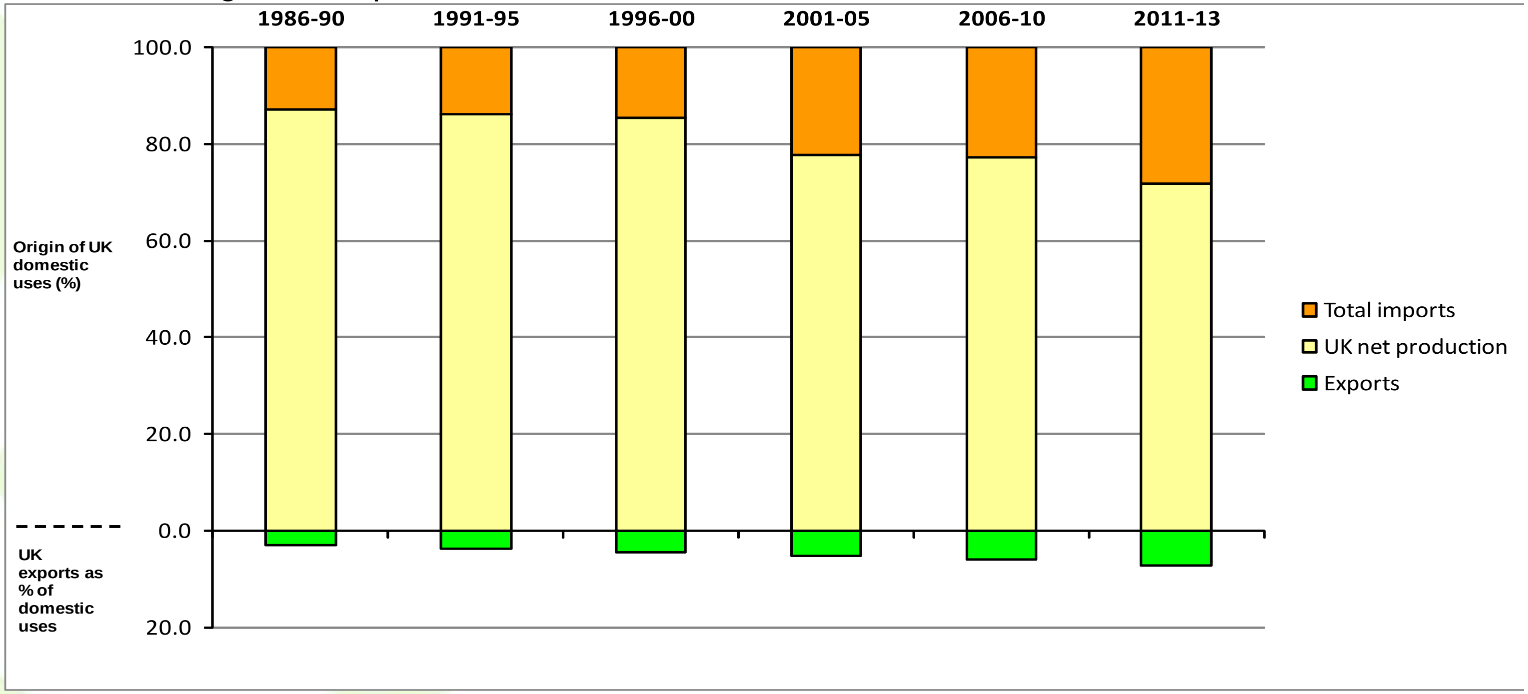
Source: Defra. Family Food.

Purchased processed potato products as a proportion of the total purchases of potato products has continue increasing. The implication is that the farm product is becoming less of a final product and more of a raw material with increasing value created downstream the supply chain.

Long term trends – Summing up

Increasing penetration of imported potatoes

What is the origin of the potatoes used in the UK?



Source: Based on data from Defra's Agriculture in the UK.
Note: Net production = Production - Exports - Change in stocks.

Imports (either directly but mostly as part of imported processed food) explain an increasing proportion. Most of these imports come from the EU principally Belgium, France, Germany and Holland.

Final remarks

- The evolution of potato farming is the result of different short term pressures or long term trends.
- Its current structure responds to the **need of delivering quality and value in more competitive and volatile agricultural markets**.
- A challenge for the British potato sector (particularly those offering fresh potatoes) might be to **make products more attractive to increase profitability**.
- To increase profitability **be aware:**
  - of farming practices (to minimise yield variations)
  - of costs
  - <u>of marketing opportunities to differentiate their produce</u>.

Final remarks

- **On fresh potatoes** cases like Albert Bartlett's Rooster potato and Greenvale's Farm Fresh are potential examples to follow.
- What about potatoes sold within a supply chain?
- To increasing the resilience to competition from abroad there is the need to **establish collaborative and sustainable relationships with the various stages of the supply chain**.
- Within such arrangements, **domestic farmers can offer processors a stable supply of raw material of traceable high quality**, which complies with all the required specifications, including strong sustainability attributes.

Final remarks

- In response to a commitment for a stable supply of the required quality, **processors should ensure a reward expressed in terms of adequate payment reflecting changes in the costs of production and stable demand** that is essential for investment and sustainable production.
- Achieving collaborative and sustainable relationships :
  - **requires reward (commercial benefit) for each partner** in the chain
  - **good communication** between them which will reinforce the trust between the parties concerned.

Thank you for your attention

Acknowledgement

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Additional material

Why to care about trends?

- In mature, slow growth food markets such as in European countries, businesses find it difficult to build sales and margins.
- Some features of consumers and producers important to consider (Hughes, 2009a):
  - **On the demand side**, consumers are more sophisticated and their purchasing power gives them the possibility to be more exacting about their food requirements – e.g., ‘I want affordable, safe, tasty food, high in omega-3 and locally produced, too’;
  - **On the supply side**, food producers search for niche markets. e.g., in the past, eggs were eggs, now, there are from battery, barn, free range, organic, from specially fed and bred animals under high animal welfare conditions and specific farm provenance.