

LECKFORD ESTATE RAPESEED OIL

External influences worksheets' answers

The Leckford Estate is a LEAF Demonstration Farm, well known for their sustainable farm management practices. A culture of continuous improvement is at the very centre of their approach to countryside management and food production, as they strive to minimise their impact upon the environment through the careful use of new and traditional approaches. Regularly audited, all producers who hold the LEAF Marque meet the rigorous standards set out by the Integrated Farm Management' standards which ensure that food produced on that farm has been done so ethically and conscientiously.

Private costs and benefits

Private costs of an activity are the costs paid for by a business or the consumer of a product

Private benefits of an activity are the gains to a business or the consumer of the product

Private costs of rapeseed oil production by the Leckford Estate	Private benefits of rapeseed oil production by the Leckford Estate
Labour Electricity and water Bottles Raw materials – seeds grown on the farm Machinery and its maintenance	Adding value to the rapeseed crop which would otherwise have been sold to the open market via local grain merchants

External costs and benefits

External costs are costs paid for by the rest of society, other than the business, as a result of business activity

External benefits are the gains to the rest of society, other than the business, as a result of business activity

External costs of rapeseed oil production by the Leckford Estate	External benefits of rapeseed oil production by the Leckford Estate
Waste: Plastic shrink wrapping (minimalist packaging being investigated) Cardboard packaging (can be recycled) Impact of the production of electricity and water used (Smart meters are used to carefully monitor energy usage whilst water use is carefully monitored and minimised)	Using the rapeseed crop on site means that there are minimal environmental issues associated with transportation Small scale production unit is sited within an existing unit on the farm utilising space Employment of Zoe and her colleague

Social cost = external costs + private costs

Social benefit = external benefit + private benefit

The new automated bottling system means that the bottling and labelling no longer has to be done by hand. Whilst the implementation of the new machinery has been three years in the planning, it has meant that the output of the 500ml bottles can be tripled.

Which stakeholders will benefit from the increased output of the rapeseed oil production unit and which will not:

- Customers of Waitrose stores
- Competitors who grow and produce their own rapeseed oil to be sold direct to large retail outlets
- The partners working on the farm growing and storing the rapeseed
- The partners working within the rapeseed oil production unit
- British Government
- Suppliers of the recycled bottles
- Label suppliers

Consider the social costs and benefits of the investment to determine whether the new automated bottling system has been environmentally worthwhile.

Social costs = external costs + private costs	Social benefit = external benefit + private benefit
Increased output requires an additional member of staff Increased use of electricity and water Having to use plastic wrapping rather than just cardboard, increased use of packaging Increased output means increased transportation of bottles to the NDC at Milton Keynes	Increased output will enable the unit to operate more profitably and once the investment has been repaid, the increased profitability will mean greater dividends for all partners of John Lewis Partnership Able to use more of the rapeseed crop on the farm so less sold via local grain merchants

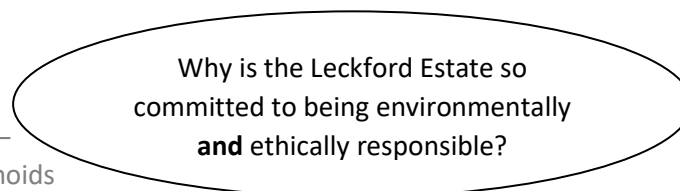
Why is the Leckford Estate so committed to being ethically and environmentally conscious?

To achieve the LEAF Marque for its products and become a LEAF Demonstration Farm requires a great deal of commitment in terms of time, effort and resources. Not only is the annual auditing process thorough, but implementing the necessary approaches to integrated farming also requires a great deal of commitment. Watch [Andrew Ferguson](#) explain how the Farm applies principles of Integrated Farm Management across its different operations and consider why considerate environmental management is so important for the partners.

The Waitrose Way

Legal restrictions –
e.g. non-GM products

Pressure groups –
i.e. ban of neonicotinoids



Market pressures

Optimising opportunities
for growth e.g. Non-food
uses for rapeseed oil

LEAF Marque

Business and the International Economy

The rapeseed oil production unit on the Leckford Estate is proving to be a profitable venture, yet it is still a long way from utilising all of the rapeseed crop that is grown each year. For the foreseeable future, the majority of the harvested rapeseed will continue to be sold on the global commodities market through local grain merchants. The role of the merchants is to study the demand and supply of rapeseed across the world and to ensure that they (and the Leckford Estate) profit, as the value of rapeseed can vary greatly.

The market for rapeseed oil:

Refined rapeseed oil has become increasingly popular with food manufacturers as an alternative to imported refined oils and as such, the growing of rapeseed as a crop has increased dramatically since the 1970s. As well as being a popular cooking oil, it is also a major ingredient in many foods such as mayonnaise and a component of less obvious products such as toothpaste, plastic, a popular lubricant and biodiesel. As such rapeseed (and rape meal – the by-product of rapeseed oil production) are bought and sold within the global commodities market*, with only non-genetically modified seeds permitted for human consumption within Europe.

The European Union does not permit the use of genetically modified seeds in any food related products which will be consumed within the EU. This means that only non-GM rapeseed can be grown within Europe, restrictions that are unlikely to be lifted although Britain is no longer a member state.

How does the inability to grow and sell GM rapeseed impact UK producers and their crop yields?

Rapeseed Oil: Regional Segmentation

The geographical coverage for the global rapeseed oil market includes North America, Latin America, Europe, Asia Pacific and China (APAC) and Middle East and Africa (MEA). Europe accounts for the maximum production of rapeseed oil. UK accounts for the third-largest cultivator of rape plant. Asia-Pacific accounts for the second fastest growing market in the global rapeseed oil market. India and China are expected to be the major rapeseed oil consumers in APAC region thereby boosting up the global rapeseed oil market

www.transparencymarketresearch.com

The market research extract identifies three different segments within the global rapeseed market:

- **Cultivators of rapeseed plant – UK is the third largest grower**
- **Producers of rapeseed oil – Europe (including the UK) is the largest producer**
- **Consumers of rapeseed oil – APAC is the 2nd fastest growing (especially India and China)**

Whilst Europe is noted as being a prolific cultivator and producer of rapeseed and its oil, demand for the oil within Asia – Pacific is rapidly increasing. It is therefore reasonable to assume that much of the rapeseed oil consumed across the globe has been imported. Why do so many countries find it necessary to import rapeseed oil rather than growing and producing it themselves?

What are the implications of this for:

- a) the countries exporting rapeseed oil?** Expanding market provides growth opportunities
- b) the countries importing rapeseed oil?** Own rapeseed less competitive, impose import tariffs?

*The Global Commodities Market is a physical or virtual marketplace for the buying and selling of raw physical assets whether related to food, energy or metals, all play an important part of everyday life.

Read through the article below from Farmers Weekly and consider the following issues:

- **Why may there have been a global shortage of the rapeseed crop during the harvest of 2019?** Weather; and neonicotinoids have been banned; so many crops affected by flea beetle
- **Who are the consumers of the rapeseed crop and where might they be located?** Users of products containing OSR within the UK and abroad
- **UK Crushers are those businesses that buy in the seeds from the farm and crush them on a large scale producing a lower quality oil used by large scale manufacturers. Why would they need to separate GM and non-GM crops?** EU legislation
- **What does the article mean when it refers to the 'harvested area' and why may the North of England and Scotland have maintained good yields compared to other areas of the UK?** Different weather and impact of flea beetle infestations
- **How would a no-deal Brexit have impacted the value of the pound against the euro, and what would such fears have meant for UK rapeseed exports to Europe?** Uncertainty about Brexit meant the value of the pound dropped, making UK rapeseed more expensive abroad
- **Why would the value of rapeseed that hadn't been planted increase by almost £10 per tonne whilst the value of seeds being delivered to the crushing plant drop?** Future sales are worth less than current values, whilst increasing demand for the seeds encourages increases
- **What should Andrew do with his rapeseed harvest in 2019?** Student's own response



Rapeseed prices set to rise further in the new year

Andrew Meredith

25 September 2019

Arable farmers are holding on to rapeseed crops as a global shortage is set to help prices rise in the new year, according to traders. Prices have slumped for other combinable crops, such as wheat and barley, but growers who have managed to get the difficult and expensive break crop into the shed should see a return for their effort.

Consumers of the crop are set to have ample supply until the end of the year, but prices could move higher in 2020, as they will have to choose between importing troublesome GM crops from Canada or buying locally, said United Oilseeds trading manager Owen Cligg. UK crushers are currently being well supplied by Ukrainian imports, but these are predicted to decline by the end of the year.

Importing GM rapeseed is tricky, as not all plants have the ability to keep supplies of GM and non-GM crops separate, with a flow of non-GM rapeseed oil essential to meet demand for human consumption, Mr Cligg said. There is also only a small domestic market for GM rape meal, meaning much of it has to be exported, and these factors are likely to encourage increased demand for UK product.

United Oilseeds estimates a domestic crop this year of 1.75m tonnes – down from about 1.9m tonnes last year. Yields held steady but the harvested area fell to about 520,000ha from a planted area of 590,000ha. This puts UK average yields at 3.3t/ha, although there has been a widespread between good yields in the north of England and Scotland and poorer yields in flea beetle-affected areas.

First estimates of the 2019-20 cropping area are not expected until November, with agronomists again reporting establishment issues following dry weather and pest attacks, causing some farmers to rip up failing fields already.

Poor crops across Europe

A poor harvest 2019 across Europe will mean a low output of 17.1m tonnes will have to be supplemented by 5m tonnes from Ukraine, Canada and Australia, said Mr Cligg

Sterling has strengthened as fears of a no-deal Brexit at the end of October have, for the time being, receded.

This was the main factor for delivered prices for November into Erith – one of the UK's main crushing plants – falling by £7/t between 23 August and 20 September. This was despite the Paris oilseed rape futures price rising by €11.25/t (£9.97), according to AHDB analysis.

Farmgate rapeseed prices have fallen by just £1.20/t from a two-year high at the end of August, with the UK average price standing at £328.30/t on Wednesday (25 September). This compares with £316/t in the same week last year.

Global factors

Global shortages of rapeseed mean its price is not likely to follow other oilseed prices as closely as normal, said Mr Cligg, but AHDB analysts said US soya prices are also set to increase.

The rapeseed price is also linked to crude oil, as it is used in biodiesel production. Prices for both briefly spiked last week following the drone attack on Saudi Arabian oil-production facilities.

A crop price forecast published this week (25 September) by agricultural finance specialist Rabobank said the attack rippled through energy markets and into the vegetable oil and ethanol complexes.

It warned that geopolitical risk in the Middle East is at its highest in a long time, with the consequences of the attack not yet fully known.