The world oilseed crops

Oilseeds are crushed to produce oil and meal. Seed, oil and meal are all major world commodities. Usually, oil is the most economically important part of the crush, key oils being soya, palm, rapeseed and sunflower.

Often both oil and meal from different oilseeds can substitute for one another, or even for non-crop oils. This leads to very volatile markets.

Globally, soya bean accounts for by far the biggest oilseed crop area, and so the largest share of both oil and meal markets. The meal has considerable value as a protein source for animal feeds. This means soya oil and meal can affect the prices of rapeseed, oil and meal. The main producers are the US, Brazil and Argentina. China, by far the largest importer, plays a key role in the market.

In the EU, buyers are becoming increasingly discerning about oil quality. Oilseed rape is regarded as a healthy option for human nutrition because it is high in unsaturated fats and omega-3s. UK producers have the advantage of assurance schemes to meet consumers’ quality demands.

The major producers of oilseed rape are China, the EU, Canada and India. Some countries, eg China and India, though big producers, offer little for export. Australia, although a small producer, is the world’s second largest exporter.

The UK produces around 1.4–1.7M tonnes of rapeseed each year. The UK is typically a net exporter of rapeseed, but a net importer of rape oil with quantities traded depending on relative prices. However, biodiesel development could alter this.

In 2003, the UK imported around 1.3M tonnes of oilseeds, 1.6M tonnes of oils and fats and 3.7M tonnes of meal.

### Oil in seed and protein in meal contents compared

<table>
<thead>
<tr>
<th></th>
<th>Oil</th>
<th>Protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soya</td>
<td>20%</td>
<td>42%</td>
</tr>
<tr>
<td>Palm</td>
<td>49–50%</td>
<td>*</td>
</tr>
<tr>
<td>Rapeseed</td>
<td>42%</td>
<td>35%</td>
</tr>
<tr>
<td>Sunflower</td>
<td>44%</td>
<td>28%</td>
</tr>
</tbody>
</table>

* % protein not relevant

Source: www.cyberlipid.org

### World oilseed rape production

The world’s major oilseed rape producing countries

Source: HGCA

In 2003, the UK imported around 1.3M tonnes of oilseeds, 1.6M tonnes of oils and fats and 3.7M tonnes of meal.
The UK oilseed crops

Oilseed rape is the largest UK oilseed crop. Linseed is of minor importance, while a few others, eg sunflower, soya bean, evening primrose and borage, have niche markets.

Oilseed rape has become a major UK arable crop over the past three decades with production support from the UK government and the EU.

The winter crop has a higher yield and accounts for the bulk of the area sown to oilseeds. The spring-sown proportion varies annually, being largely affected by the success of establishing winter crops.

HGCA funding has been used to explore a wide range of potential uses of oils. These include: biodiesel, either as a replacement for, or for inclusion in, mineral diesel (this market is increasing rapidly due to market demand and government incentives); heating fuel from cold-pressed oil produced on farm; polymers, lubricants, printing inks and pharmaceuticals produced using oilseed rape oil; and feed for farmed salmon as a partial replacement for fish oils.

HGCA funding has also been used to explore potential alternative uses for meal including: composting, fuel use, turf fertiliser and livestock bedding; and feeding meal or whole seeds to dairy cows, pigs and poultry.

Crop marketing

Demand for all vegetable oils is currently increasing globally, especially in China. However, the price of rapeseed oil is directly related to that of soya bean oil. Soya bean markets are influenced by weather in the main production areas and currency fluctuations. The result is an increasingly volatile market for vegetable oils, including that of rapeseed.

There are three main crushing plants in the UK plus many small users and growing export outlets.

Growers can adopt risk management strategies. For instance, many buyers operate pools to average prices across increasingly volatile selling seasons.

Trade between farmers and crushers is usually based on the FOSFA 26A contract which sets a legally binding framework for both buyers and sellers. Terms and conditions include minimum quality specifications, maximum residue levels, payment terms, delivery requirements and arbitration procedures. Good husbandry, to minimise admixture, will avoid penalties for reduced quality.

“New markets exist, but take care with previous cropping and be aware of the effects of volunteers.”

Richard Elsdon
United Oilseeds

The UK oilseed rape area

* No split for spring-winter available before 1993.

UK crop utilisation

Most oil from UK crops is used for human consumption, through food manufacture, catering and retail sales. Three-quarters of this market uses refined oil direct from the crush; the remainder undergoes hydrogenation and is destined for margarine and other “solid” uses.

The meal is used predominantly in compound animal feeds. A small market exists in certain regions for cracked whole oilseed rape seed for use by feed manufacturers.

Industrial/niche/novel uses of oilseed rape

Some crop output is used for a range of industrial purposes including lubricants, paints and surface coatings, surfactants and oleochemicals (including polymers). Lubricants and hydraulic fluids are increasingly being used in environmentally-sensitive situations, eg chainsaws.

Around 20,000ha (less than 5%) of the UK crop area is sown to high erucic acid rape (HEAR) varieties, to produce specific industrial oils.