

As about 80% of the land in Essex is used for agriculture, mostly for growing crops, arable farming is a key activity as far as wildlife is concerned. Abbotts Hall Farm is a medium-sized arable farm where the Essex Wildlife Trust aims to demonstrate how a farm can be profitable while taking practical steps to farm in an environmentally sustainable way.

### Farming at Abbotts Hall

The dry climate and heavy soils of Essex are suitable for growing cereal crops such as wheat, oats and barley. At Abbotts Hall beans and oil seed rape are also grown as part of the crop rotation plan. The arable area is 189 hectare, in 18 fields of between 3 and 36 hectares.

Decisions on what crops to grow take many factors into account, including the control of soil fertility, the build up of diseases, the timing of operations and their suitability to local conditions as well as their potential financial contribution.

Two fields have been converted to organic crops. Oats are currently grown under Conservation Grade. Otherwise the farm produces crops conventionally while supporting wildlife in a variety of ways.

### The Farm Business

The farm is run as a separate business from the Trust. The financial objective is to maintain the farm in profit so that it is self-financing. The farm does not receive any special support from government or other bodies and faces the same conditions as other farms.

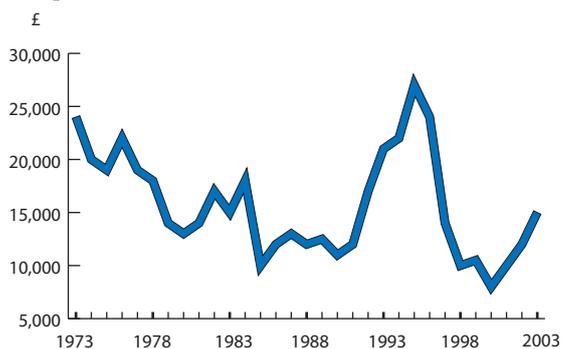
The Farm Manager and Farm Warden undertake all the farming operations. The Farm Warden is also responsible for visitors to the farm and environmental work, with help from volunteers for tasks such as wildlife surveys and the maintenance of paths and hides. Volunteers are not used for farming work. Apart from issues of skills and health and safety, this is to keep Abbotts Hall Farm comparable to other farms.

Abbotts Hall Farm is a member of the local farmers' marketing cooperative, Dengie Farmers, through whom supplies are purchased and crops are sold.

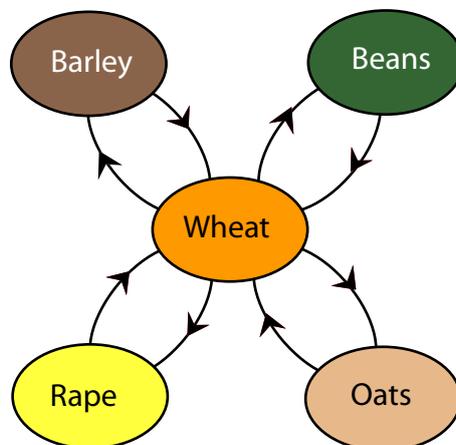
### Changes in farming

Farming is subject to changes in the UK, EU and world markets and economies as well as the uncertainties of the weather, pests and diseases.

Farm incomes in the UK are in long-term decline. Within this trend there are large variations due to changing exchange rates and world commodity prices, and problems such as BSE and Foot and Mouth Disease.



Income from farming per full-time person at 2003 prices  
Economic position of the farming industry, DEFRA 2004



Examples of crop rotation

Changes in crops in the last 50 years include a decline in oats, mixed corn and rye, and increases in oilseed rape and wheat. Wheat now covers over one sixth of farmland. Historically Essex farming was centred on sheep but this changed in the last 60 years and now less than 10% of agricultural land is used for animals.

Farm sizes have increased as higher productivity can be achieved with modern farm machinery and less labour. Many small and medium sized farms are unprofitable and have been forced to seek other ways of gaining a return from their land, such as tourism. Others are considering new possibilities such as growing energy crops for use as fuels.

Crops sold into world markets are in competition with highly mechanised million-acre farms in South America, Canada and the US, as well as farms in countries with lower labour costs and environmental standards. The enlargement of the EU and greater liberalisation of agricultural markets are likely to make it even more difficult for UK farmers to compete on price.

### Farming strategies

There are two main views on the best way forward for farmers. Some feel that the answer is to have fewer, larger, more intensive farms producing high yield crops that can compete on price in world markets. Others see a future in higher value-added specialist crops aimed at more local markets. Specialist markets where farmers can earn a premium include high quality cereals for baking and brewing, organic and conservation grade cereals, and direct sales to local customers through individual contracts and farmers' markets.

Neither approach is certain to succeed. Many people feel that fundamental changes are needed if farming is to become part of a more resilient rural economy.

The strategy being followed at Abbotts Hall Farm is to achieve premium prices by producing crops for higher value uses.



**ESSEX**  
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DEFRA support the  
environmental schemes  
on the farm

## Income

Farm income comes from sales of crops, subsidies and grants. Subsidies and grants are fixed for each year but income from crop sales depends on external factors such as the weather.

## Crop sales

For each crop the income depends on the quantity produced (the yield) and the market price. For some cereals there is a market for the straw as well as the grain.

Some crops from Abbotts Hall are sold through individual contracts, such as that for conservation grade oats to Jordans, but most are sold through the Dengie Farmers cooperative. After the crops have been harvested the cooperative finds suitable customers, agrees the sale and arranges collection from the farm and delivery to the customer.

## Subsidies

The EU subsidises the cost of food production. Before 2005 the subsidies were made by Arable Area Payments based on the area of land under production. To reduce over-production cereal farmers must set aside part of their land each year (5% in 2003/4).

## Grants

The government provides grant schemes to achieve its environmental and rural development objectives. Most grants have a one-off payment to implement the scheme and annual payments to compensate farmers for loss of income. All grant schemes have a limited life, after which payments may cease.

Agri-environment grants are funded by holding back a proportion of the subsidy payments, currently 4%. This means that farmers who do not participate in these schemes suffer a reduction in their income.

## Reform of the Common Agricultural Policy

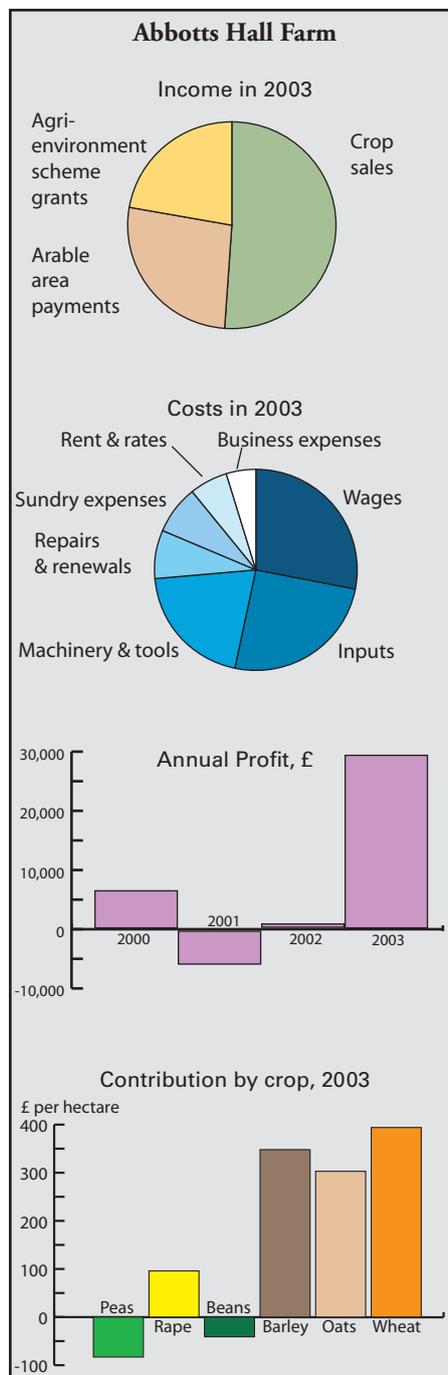
The Common Agricultural Policy (CAP) was introduced in 1962 to increase EU food production. EU food markets are managed through subsidies, production quotas and price controls, and protected by import taxes and export subsidies.

The CAP largely achieved its aims but at the cost of expensive funding, chronic surpluses, problems for less developed countries, and environmental damage. The CAP is now being reformed.

**The Single Farm Payment (SFP)** replaces area subsidies. The SFP is only linked to the land area, not to production. Farmers have to comply with codes of practice on the environment, public and animal health and animal welfare. The **Environmental Stewardship** scheme replaces agri-environment grants.

**The Entry Level Scheme** provides a grant for environmental management such as hedgerow management, buffer strips round fields, low input grassland, and organic farming. Payment is automatic for farmers whose plans reach the qualifying target.

**The Higher Level Scheme** targets the maintenance, restoration or recreation of high quality environmental features, mostly in specific areas. Farmers compete for the available grants.



## Costs

The cost structure of a farm is similar to that of any other production business, with fixed costs and variable production costs. Each crop has different costs for seed, fertilizer and spays, called input costs. It is important to know the input costs to work out the contribution that each crop makes to the overall profitability of the farm.

Fixed costs have to be paid whatever crops are grown. The major items are buildings and land, labour, farm machines, the maintenance of farm roads, ditches, hedges and buildings, and registration for quality assurance schemes. Abbotts Hall has higher labour costs than farms of a similar size because of the conservation work undertaken by the Farm Warden. Land rent or mortgage interest charges are a major cost for many farmers.

## Profit

The overall profit or loss is the difference between the total income and total costs in one year. The financial cycle for a crop may span 2 years from buying seed to receiving the final income from sale of the crop.

The contribution to profit made by different crops can be calculated from their sales income minus the cost of inputs. This shows the financial effects of farming decisions. To compare crops we work out the contribution per hectare.

Farm incomes and profit go up and down from year to year. Variations are largely due to the effects of the weather, pests and diseases and changes in world prices, all of which are difficult to predict. Many farmers try to reduce these risks by concentrating on their most reliable crop, such as winter wheat.

Without subsidies or substantial increases in food prices British farming would not be financially viable.

## Environmental costs

The quality and yield of crops are reduced by weeds, insects and plant diseases. Spraying can control these pests and although sprays are expensive, the cost is small compared to the possible losses of a serious attack. To reduce this financial risk many farmers spray crops according to a pre-set timetable as well as at the first signs of a pest being present.

There is a cost to the environment from the use of sprays, though this is greatly reduced if a selective spray can be used. Every spraying decision has to balance the effect on the environment with the effect on farm income.

The crop damage from a pest is difficult to predict as it depends on weather conditions. For example, wheat can be badly damaged by larvae of the orange blossom midge but there is no targeted insecticide available. In June 2004 it was decided not to spray to remove the midge at Abbotts Hall farm as this would have harmed other insects at a critical time of year. Unfortunately the summer weather was very favourable for the midges and both the yield and quality of the crop suffered badly, resulting in a £6000 loss in income.