family farms

About half the Earth’s population mainly eats food that they grow themselves. This is called subsistence farming. Subsistence farmers live in the countryside in less-developed countries, such as many parts of Africa and Asia.

Farming methods

Subsistence farmers tend to the land using simple tools. For example, they use oxen instead of tractors to pull ploughs. Fertile land is usually shared between lots of people. This means that fields are small. Many subsistence farmers can only grow enough food if the whole family, from young children to grandparents, helps.

In good years, with enough rain and sun, subsistence farmers might harvest many crops or raise lots of livestock. They may be able to sell some of their produce. Often families go hungry. Too much rain can flood their fields, whereas not enough rain may make crops wither and die and leave livestock thirsty.

In many countries, children fetch wild plants to feed livestock, collect animal dung to fertilize soil, or water crops before and after school. These children are picking cotton balls from cotton plants at their family farm.
Poverty

Subsistence farmers usually have too little money to go out and buy food, medicines, or new clothes, so in bad years they may go without altogether. They rarely have enough money to buy fertilizers to make the land more fertile and increase the amount of crops they can grow. Some children do so many farm chores that they do not have time to go to school. Then they do not learn to read and write and find it more difficult to learn new skills.

FACT!

In Chad and many other African countries 80 percent or more of the population relies on subsistence farming and livestock raising for food and life. That is eight out of every ten people.

Subsistence farming around the world

This world map shows the areas where there are subsistence farmers, people who rely on farming to make a living. The lighter colours are where fewer people rely on farming. The darkest colours are areas where most people (80 to 100 percent) live on family farms. The horizontal lines across areas show where people go hungry.

This map shows areas of the world where people rely on farming for a living.
the changing face of farming

In richer parts of the world, such as the USA or Europe, subsistence farming is rare. In these places, most food is grown using modern machines and techniques. These allow farmers to produce large amounts, more quickly. This is called intensive farming and farmers who use this method grow food to sell, not to eat themselves.

Modern crop growing

Intensive farming is farming on a big scale. Crops are grown in immense fields or giant greenhouses. Farmers use new varieties of plants that can produce more food, for example maize that makes more corn cobs or spinach plants that grow more leaves. As the plants grow, farmers spray on water, fertilizers, and other chemicals. These include pesticides, which kill insects that may eat the crop, and herbicides, which kill weeds growing among the crops. Sometimes farmers hire aeroplanes to spray crops because this is the quickest way to cover enormous fields.

In intensive farming, farmers use large, expensive machines. Here a giant combine harvester is being used to harvest crops of grain.
Livestock production

Livestock can also be farmed intensively. Farmers keep lots of animals together in one place. Farmers carefully control what the livestock eat to make sure they produce lots of the meat, eggs, and milk customers want. They feed the animals with grain but also special foods containing chemicals. These chemicals help the animals grow faster and with bigger muscles. These muscles become the meat we eat. The farmers inject animals with medicines to prevent illness. They make sure the animals have just enough heat, light, water, and bedding to be comfortable.

More intensive

Since 1960, the percentage of people involved in farming around the world has dropped. One of the main reasons is the move towards intensive farming, because one machine can do the work of many people. In this graph we can see that in North America the proportion has dropped from 7 percent in 1960 to 3 percent in 2000. In Africa, it has dropped from 80 to 55 percent over the same period.

This graph shows the proportion of population involved in agriculture in different parts of the world.
Problems with intensive farming

Intensive farming has changed the world of farming. Many farmers now produce more food, more quickly and more cheaply than ever before. Modern chemicals have helped prevent failed crops, for example by making soil more fertile and by getting rid of insect pests. However, there are lots of problems with intensive farming.

Water problems

Some of the fertilizers that farmers spray on crops fall on the soil. When rain falls, it washes soil containing fertilizers into rivers, lakes, and seas. These fertilizers help tiny, plant-like algae in the water grow fast. When the algae die, bacteria that feed on them use up most of the oxygen in the water. This process is called eutrophication. Without oxygen in the water, animals, such as fish, cannot breathe and so they die.

FACT!

Nearly three-quarters of all the freshwater that people use in the world is taken by farmers to put on crops or give to livestock.

If agricultural chemicals get into rivers they can encourage a growth of algae that may kill river wildlife.
Pesticides and people

Traces of the chemicals that are sprayed on crops and fed to animals are often found on the food that we eat. In the USA, water in 6 percent of all wells contains unsafe amounts of fertilizer. In the UK, pesticides are found in nearly half of all milk and potatoes. Some scientists believe that these chemicals can be bad for our health.

Habitat problems

Farmers create massive fields by chopping down woodland and hedges between smaller fields. When they do this, they destroy important habitats where wildlife lives. For example, in the UK the loss of hedgerows has led to a decline in dormice, a hedgerow animal.

Farmers also drain wetlands, such as marshes, to farm the fertile soil beneath. Animals such as frogs and alligators need wet places to survive. When wetlands are destroyed, these animals may die because they cannot find new homes.

About one-fifth of the planet's farmland is irrigated to grow crops. This irrigation system uses sprinklers to water fields.