

CLASS C.

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Prize
FIRST PRIZE

ROYAL EMPIRE SOCIETY

ESSAY COMPETITION

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A Sack THE STORY OF WHEAT.

Here is a sack of wheat grain. It is just like thousands of other sacks which are seen going into flour mills. Let us trace the origin of this sack of wheat. The story starts about 2 years ago in August.

At this time the farmer begins to plow his field for next year's crop. As the plough is drawn across the field it cuts out a strip of earth 4 to 6 inches deep and turns it over into the adjacent furrow. Usually gang ploughs are used on the large farms. These are a number of disc or mould board ploughs arranged at the side of and a little behind each other on the one frame. Often gang ploughs turn five furrows at a time.

After ploughing, the large clods are broken up by harrowing. Harrows have discs or teeth which break up the clods and loosen the soil. In "dry farming" the top soil is continually loosened by harrowing to prevent loss of moisture from lower layers.

After rains the soil is also harrowed to prevent hardening. While the field is lying in this fallow state it is necessary to fertilize it for the next crop. There are two ways of fertilizing the field, the direct and indirect methods. The wheat crop takes from the soil nitrogen and mineral manures containing phosphorus, calcium and potassium. These must be replaced by fertilizers. Suitable fertilizers are chosen and introduced into the soil with a seed drill. Superphosphates is an important direct fertilizer. There are two ways of fertilizing the soil by the indirect method: crop rotation and animal grazing. Animals are turned into the field to keep it clear of weeds and enrich the soil with manure. In the crop rotation method three different crops are used. The first is a root crop, the second oats or barley and the third wheat.

Before sowing, the field is thoroughly harrowed to loosen the soil for the drill. After the first Autumn rains drills are seen planting wheat in all the fields. The seed drill consists of a large steel or wooden box to carry the wheat seed fastened between the wheels. Small tubes extend from the box to the ground. On these tubes are devices for opening and closing them so that the flow of seed can be regulated. In front of the tubes small ploughs open up furrows and when the seeds are deposited in them a small wheel closes the soil over the seeds. Sometimes two or three drills are drawn by one tractor, thus enabling a large area to be sown at the one time. Before planting the right type of wheat for the soil and climate must be chosen. About one and a quarter bushels of seed are planted in every acre together with an amount of superphosphate.

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Once the grain is planted there is nothing the farmer can do to help his crop. He just waits and anxiously watches the weather. Soon a multitude of green spikes appear and the field looks like a bright green carpet. The green shoots grow and the stems form. During the Winter the plants make little progress above the ground but underneath the roots continue to grow. When Spring comes the head appears; small flowers grow from the head and after a few days they disappear. Gradually the green head begins to swell and becomes yellow. Soon the wheat stems are bending with the weight of the deep golden heads and the farmer knows it is time to harvest his grain.

To do his harvesting the farmer may use either a reaper and binder or a combine harvester. The reaper and binder is used on most of the small farms as it is not so expensive and requires less power to pull it than a large combine. The binder has a large, sharp-toothed edge set at right angles to the direction of movement. This edge moves through the field of wheat not far above the ground. A large device resembling a paddle wheel forces the stems against the sharp teeth. The cut wheat is taken on a conveyor belt into the machine where the stems are stacked with the heads all the one way. When enough stems are collected to complete a sheave they are bound with string and tied. The sheaves are then pushed onto a platform from which they are dropped into the field. Men who follow the binder collect the sheaves, and stack them into shocks where they are left until the wheat is dry enough to be threshed.

Threshing machines are usually taken around to the smaller farms and hired out to the farmer. Sometimes the thresher is built into a building, and the wheat has to be taken to the building in a cart or truck. The thresher is usually powered by a tractor or a steam engine. As soon as the sheaves enter the thresher the strings which hold them together are cut. In the first part of the machine the grain is beaten from the heads. In the next part of the machine the grain is separated from the husks and straw. From here the grain goes down a chute into bags which are then sewn up. The straw is blown out a pipe into a heap. It is either kept for animal feed or turned into the field.

The combine harvester is known by a number of names. It is often called an auto-header or stripper. In 1843 Australia evolved a machine known as a stripper. This machine has been improved and now we have the combine harvester. The harvester resembles a reaper and binder in the cutting part, but the sharp edge is set higher so that the heads only are cut off.

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The heads are taken on a conveyor belt into the machine where the grain is threshed from the husks. In another part of the machine the grain is separated from the waste, which is dropped into the field to be ploughed in. The grain falls down a chute into bags which, when filled are sewn up and dropped into the field to be picked up by a truck. In times when cattle feed is scarce the stalks left standing are cut for this purpose.

There are a number of ways of marketing the grain. The farmer first selects the amount of seed he requires for planting and feed, and sells the rest. Most wheat is sold by the bag, but on the large farms in New South Wales the grain is often sold in bulk. In the bulk handling method the grain is taken to a silo near a railway line, where it is stored until it can be tipped into trucks and taken by train to a port. At the port it is stored in similar silos until it is ready for export. In the bag handling method the bags of wheat are taken by truck or train to a port where they are loaded on a ship to be exported or taken to a flour mill.

Thus wheat, an important food, is delivered to the mouths of the World.

BOOKS USED FOR REFERENCE:

Geography of Commerce and Industry.
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Intermediate Commercial Geography (part 2)
What the World Eats.
Wheat Production in New Zealand.