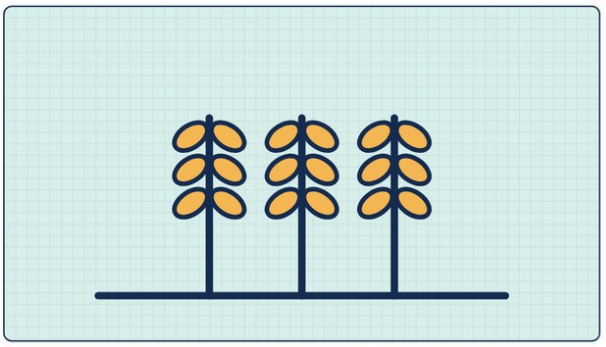
Earlier NCERT Class 8 Science · From preparing the soil to storing the harvest

Crop Production and Management



Crop Production and Management

Teacher notes

Hold up a roti or a handful of rice and ask: how many steps did this take before it reached your plate? Collect guesses, then tell the class that today they will follow a crop from the empty field to the storehouse.

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By the end of this lesson you can

Teacher notes

Read the objectives aloud and ask if anyone has helped on a farm or seen one up close. Invite them to share one farm tool they know; it will come up later in the lesson.

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What is a crop?

Teacher notes

Explain that settled farming began when people learnt to grow food instead of only gathering it. Ask students to name one crop grown near their home. Mention that animals reared on farms for food, called animal husbandry, are another source of food.

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Two main crop seasons

Teacher notes

The months are approximate and shift a little from region to region. Paddy needs standing water, which is why it is grown when the monsoon brings rain. Ask: what would happen if wheat were sown in the rainy season? It would not grow well, because it needs a cool, drier season.

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The agricultural practices, in order

Teacher notes

Write the seven steps down one side of the board and keep them there for the whole lesson. Tick each one as you teach it. Ask students which step they think takes the longest; irrigation and weed control continue for most of the season.

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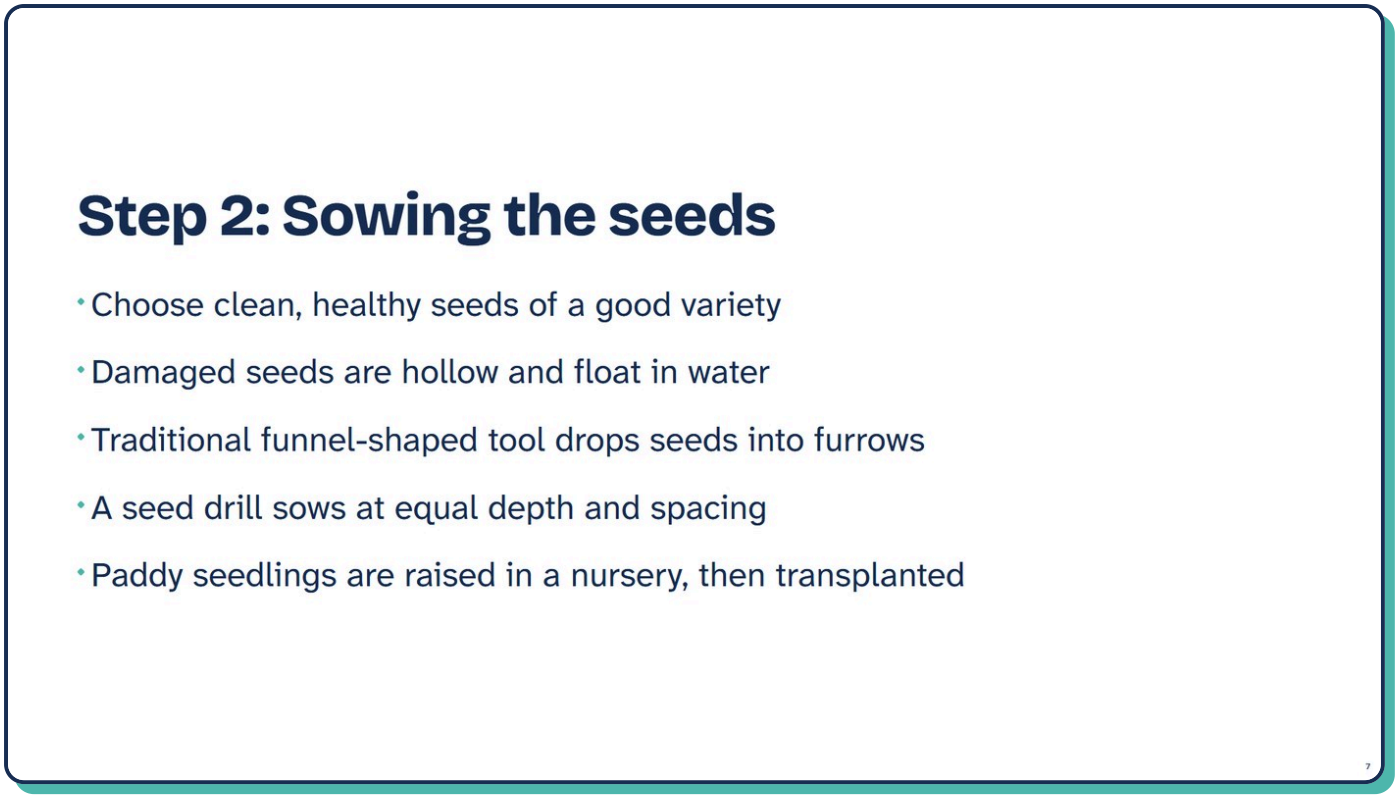


Step 1: Preparing the soil

Teacher notes

Nutrient-rich soil from below is brought up to the surface when the soil is turned. If the soil is very dry, farmers may water it before ploughing. Ask why earthworms are called the farmer's friends.

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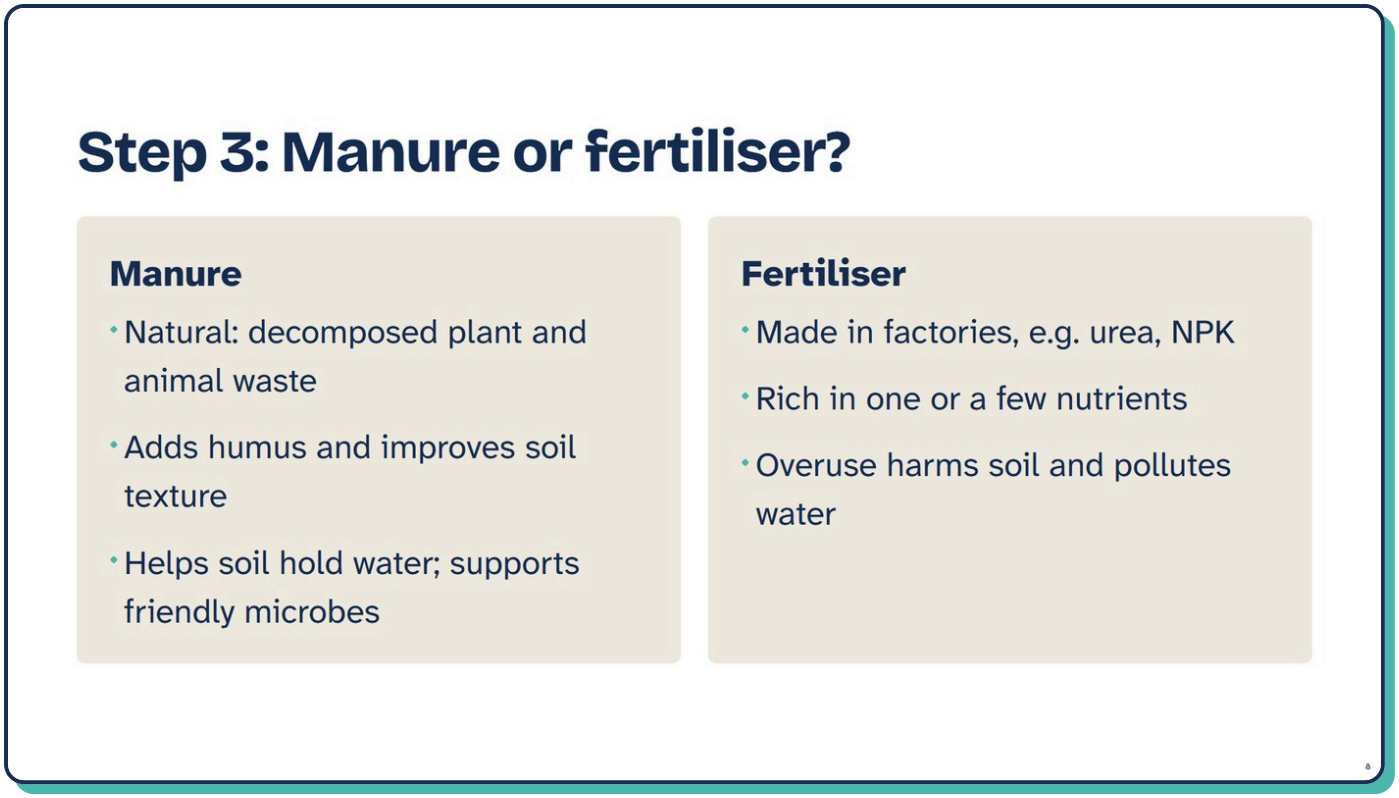


Step 2: Sowing the seeds

Teacher notes

Try the float test in class with a bowl of water and a handful of gram or wheat seeds. Explain that the seed drill covers seeds with soil, which protects them from birds. Correct spacing stops overcrowding, so every plant gets enough sunlight, water and nutrients.

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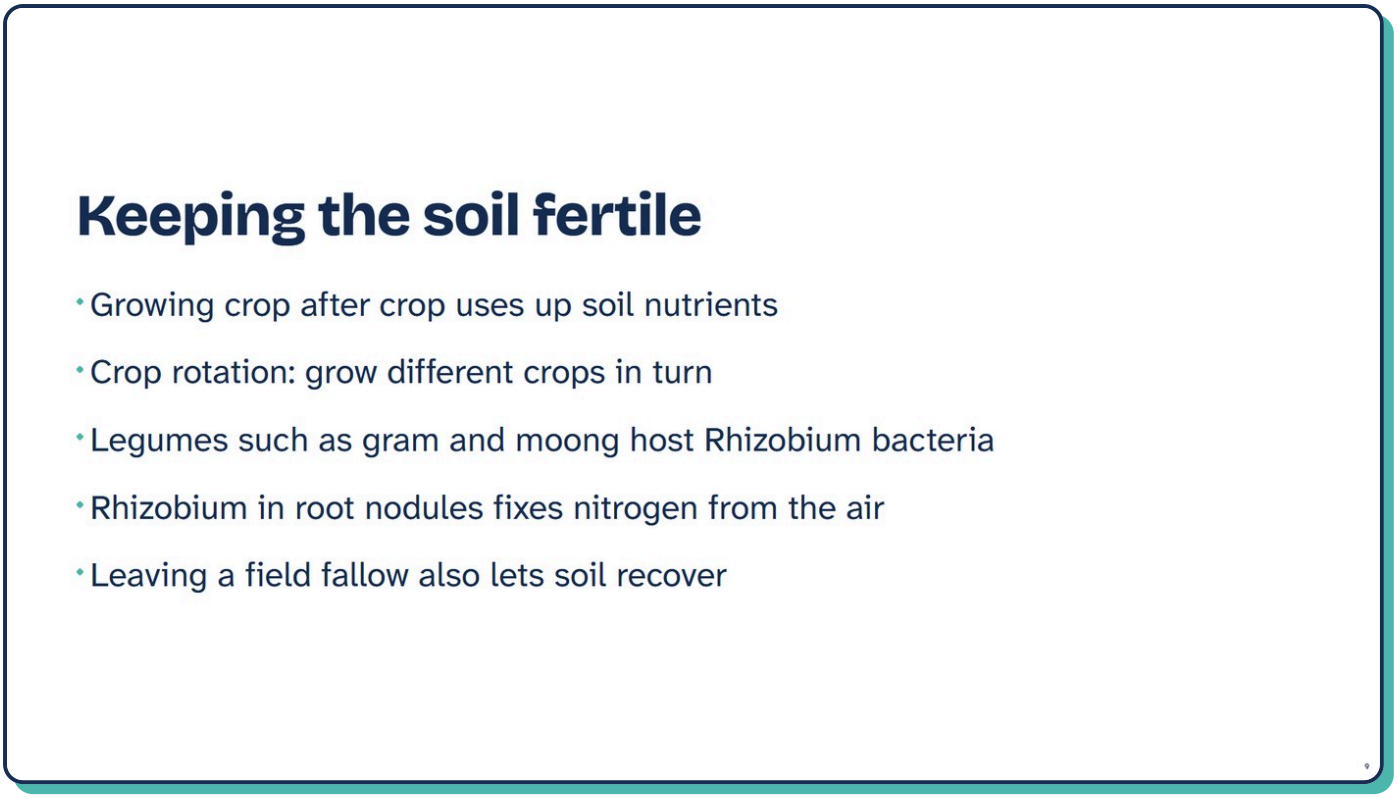


Step 3: Manure or fertiliser?

Teacher notes

NPK stands for nitrogen, phosphorus and potassium. Fertilisers helped increase yields of wheat, paddy and maize, but using too much reduces soil fertility over time. Ask students which they would choose for a kitchen garden and why.

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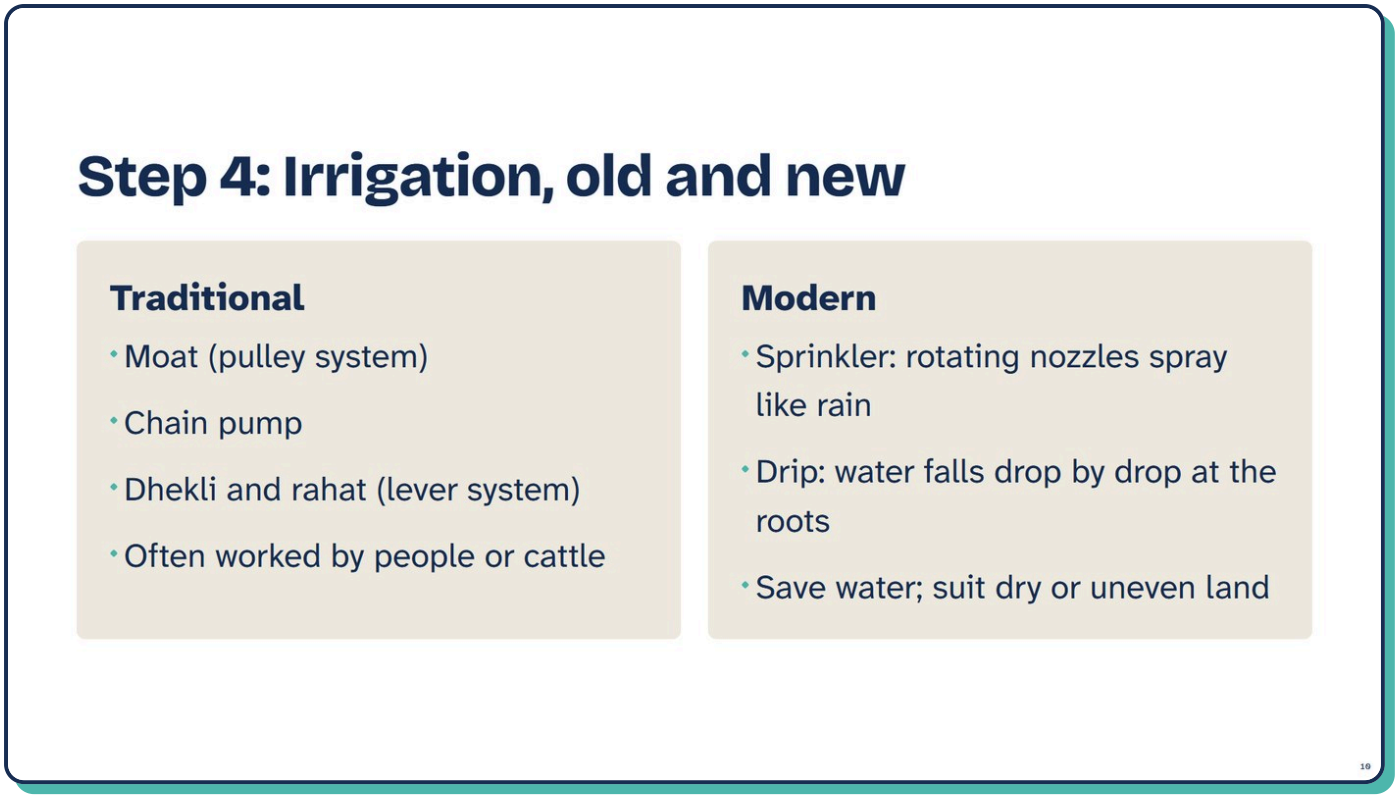


Keeping the soil fertile

Teacher notes

A field left fallow is left uncultivated for a season. Rotating a cereal with a legume adds nitrogen back naturally, reducing the need for fertiliser. Ask students to explain in one sentence why a pulse crop is good for the next wheat crop.

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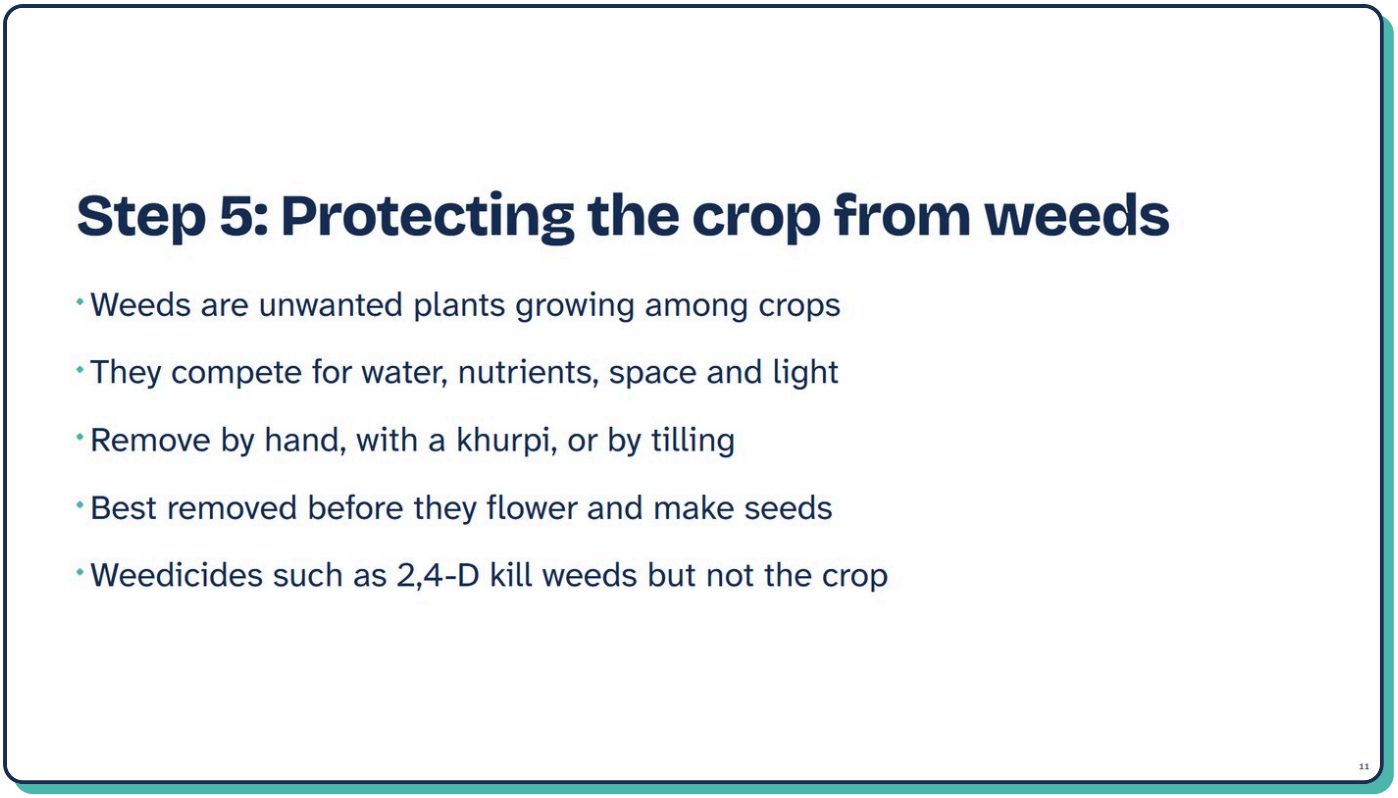


Step 4: Irrigation, old and new

Teacher notes

Sources of irrigation water include wells, tubewells, ponds, lakes, rivers, dams and canals. The government's 'Per Drop More Crop' programme promotes drip and sprinkler irrigation to use water efficiently. Ask why fields need watering more often in summer: more water evaporates in the heat.

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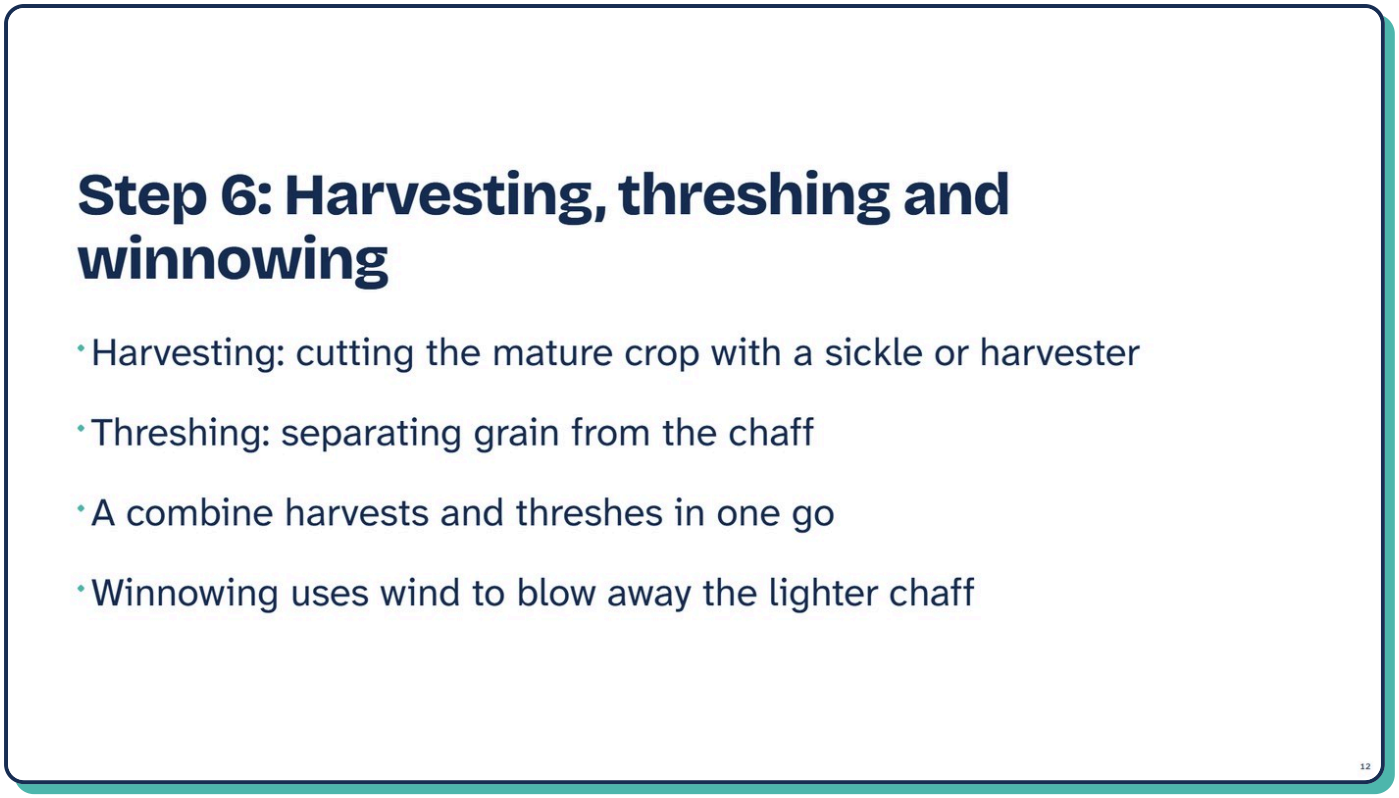


Step 5: Protecting the crop from weeds

Teacher notes

Farmers spraying weedicides should cover their nose and mouth, because the chemicals can harm their health. Crops also need protection from pests and diseases, which farmers control with pesticides. Ask: why remove weeds before they make seeds?

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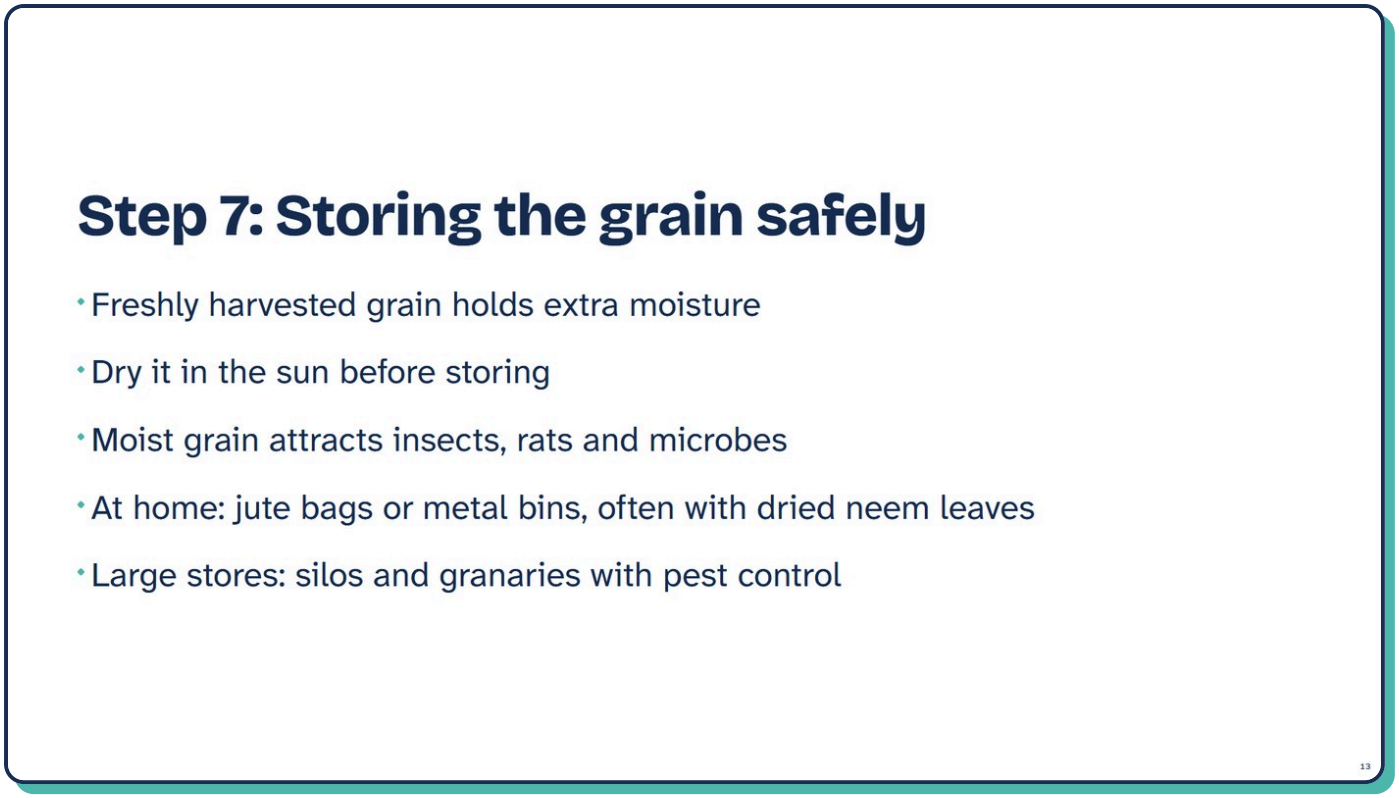


Step 6: Harvesting, threshing and winnowing

Teacher notes

Small farmers often winnow by hand, pouring grain from a height so the wind carries the husk away. Connect this to harvest festivals celebrated across India, such as Pongal, Baisakhi and Bihu. Ask students which harvest festival their family celebrates.

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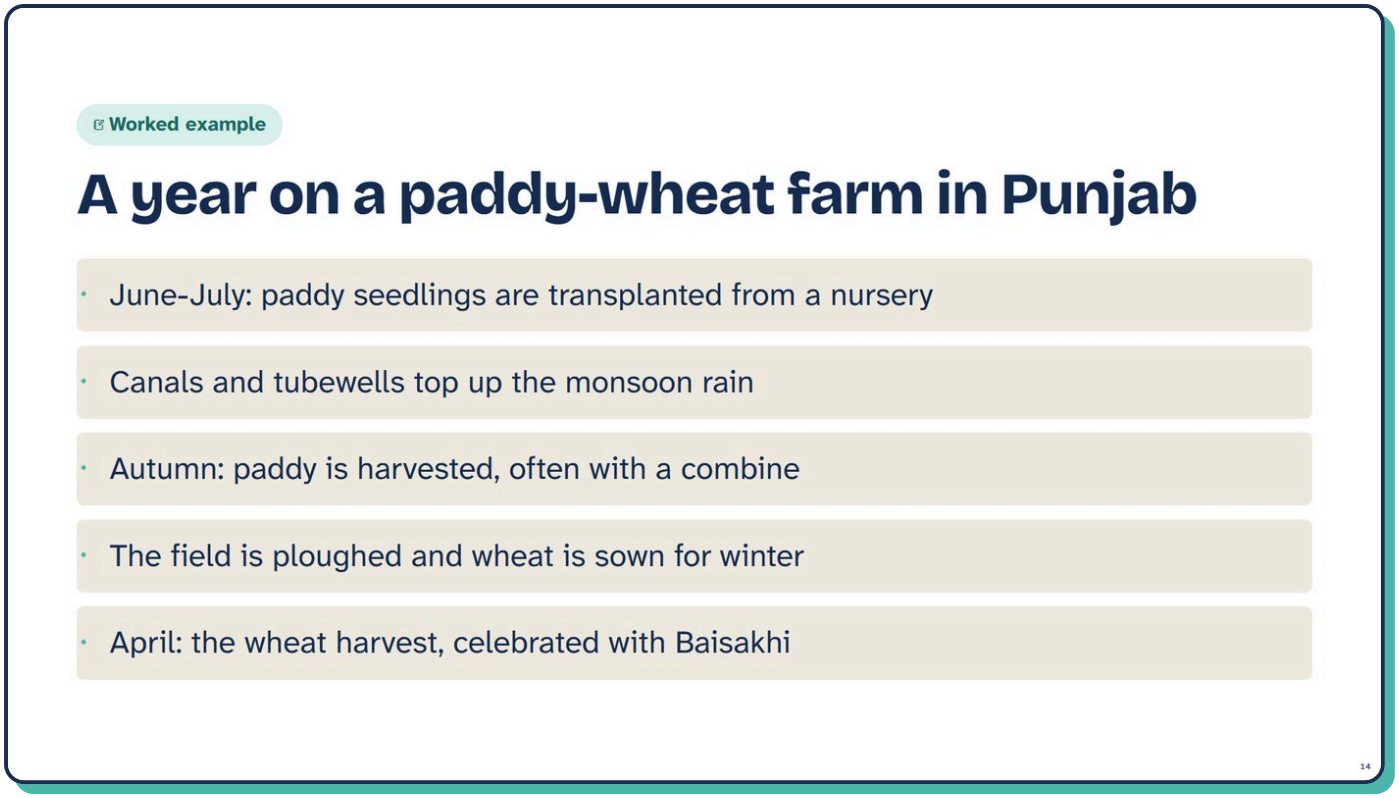


Step 7: Storing the grain safely

Teacher notes

Explain that stored grain must stay safe for months, so both drying and pest control matter. Ask students how their family stores rice, wheat or dal at home. Big godowns use specific chemical treatments, which must be handled by trained workers.

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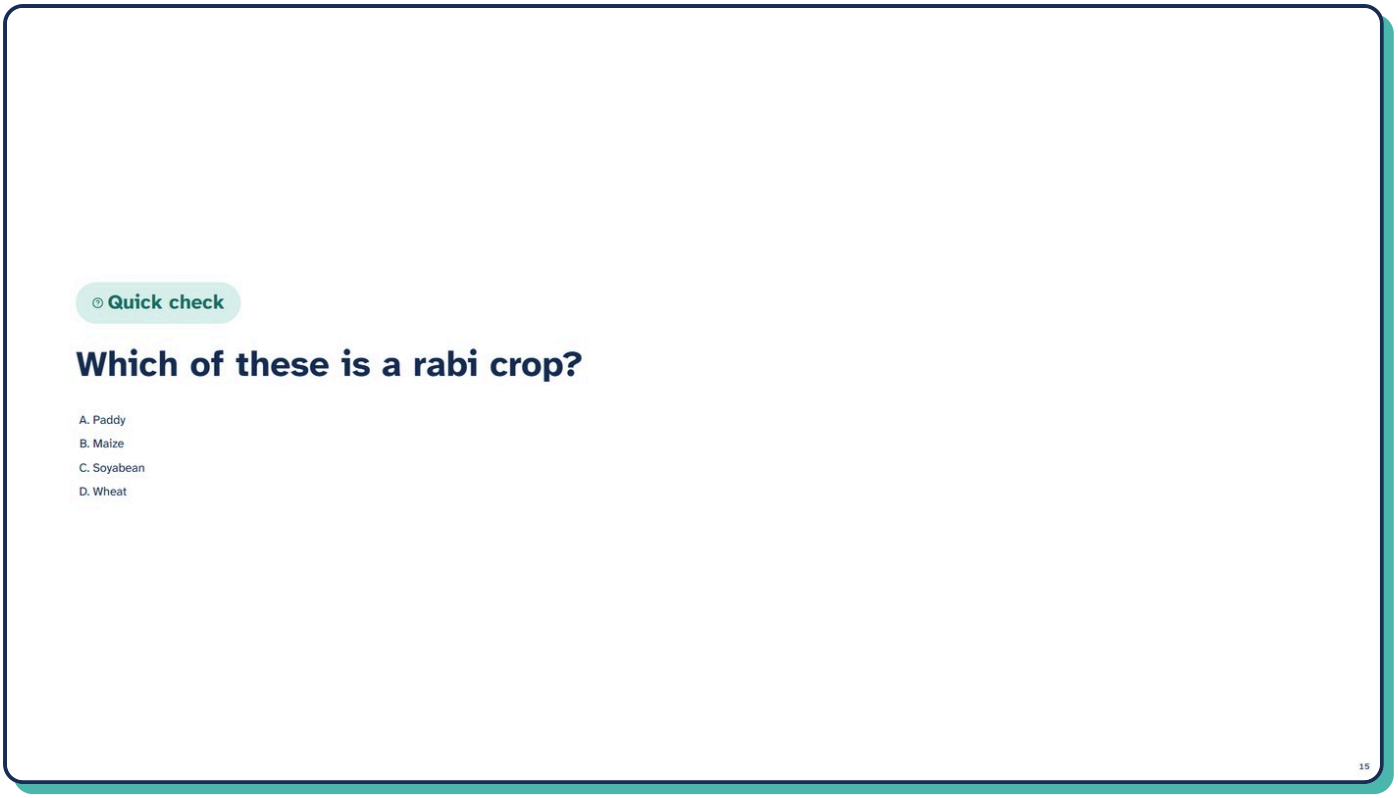


A year on a paddy-wheat farm in Punjab

Teacher notes

Punjab grows paddy in kharif with the help of canals and tubewells, and wheat is its main rabi crop. Ask students to map each bullet to one of the seven agricultural practices. Point out that growing only paddy and wheat year after year uses up soil nutrients and a lot of water, which is why crop rotation and water-saving irrigation matter.

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Quick check

Teacher notes

Answer: D, wheat, which is grown in the cool winter season. Paddy, maize and soyabean are kharif crops sown with the monsoon. Ask a student to name one more rabi crop, such as gram, pea or mustard.

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Key takeaways

Teacher notes

Ask students to recall the seven practices in order without looking at the board. Then move to the five-question quiz. Homework: interview a family member or neighbour about how grain is stored at home.

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