

9Ca – A farmer's life/Plant reactions

Word	Pronunciation	Meaning
aerobic respiration	<i>air-O-bic ress-per-ay-shun</i>	Process that uses up oxygen to release energy from food. Carbon dioxide is produced as a waste gas.
chlorophyll	<i>klor-O-phil</i>	Green substance found inside chloroplasts. It traps light energy from the Sun to power photosynthesis.
chloroplast	<i>klor-O-plast</i>	Green disc containing chlorophyll, found in plant cells. This is where the plant makes food using photosynthesis.
criteria	<i>kry-teer-ee-a</i>	A set of rules that are used to judge how good or bad something is. Singular = criterion.
limiting factor		Something that stops a process from increasing any further.
organic farming		Producing foods without the use of lots of artificial chemicals.
phloem vessel	<i>flow-em</i>	Tube made of living phloem cells which transports dissolved substances (e.g. sugars) around plant.
photosynthesis	<i>fO-tO-syn-thes-sis</i>	Process that plants use to make their own food. It needs light to work. Carbon dioxide and water are the raw materials. Glucose and oxygen are the products.
raw materials		Substances from which other substances are made.
reactant		Chemical that is used as a raw material in a chemical reaction.
vein	<i>vane</i>	In plants, a vein contains phloem and xylem tissue.
word equation		A way of writing out what happens in a chemical reaction.

9Cb – Sun, soil and air

Word	Pronunciation	Meaning
absorb		To take in, for example when water passes from the soil into a root.
adapted		When something has certain features to do a particular function.
diffusion	<i>diff-you-shun</i>	When particles spread and mix with each other without anything moving them. They move from areas where there are lot of them to areas where there are fewer of them.
function		Something's job.
guard cell		A cell that helps to open and close stomata.
mineral salt		Chemical found in soil that plants need to grow healthily.
nitrate	<i>ny-trate</i>	Mineral salt needed by plants to make proteins.
organ		A group of tissues all working together to carry out an important function.
palisade cell	<i>pal-is-aid sell</i>	Cell found in leaves that contains many chloroplasts.
root hair cell		Cell found in roots. It has a large surface area to help the cell to absorb water quickly.

9Cb – Sun, soil and air (continued)

Word	Pronunciation	Meaning
stomata	<i>stO-mart-a</i>	Holes in leaves through which gases diffuse. They are opened and closed by guard cells. Singular = stoma.
tissue		A group of the same cells all working together.
wilting		When a plant droops because it has too little water.

9Cc – Crop farming

Word	Pronunciation	Meaning
amino acid	<i>am-een-O ass-id</i>	The building blocks of proteins.
biomass		The mass of material that an organism makes itself (i.e. not the water it contains or the food it has just eaten). A biomass fuel is a fuel that comes directly from plants, animals, or their wastes (e.g. wood, methane from rotting plants).
cellulose		Insoluble substance made from glucose, which is used to make plant cell walls.
compete		When two or more organisms struggle against one another to get the same things, for example food.
decomposer		Microbes and other smaller organisms that break down dead plants and animals, and animal waste. Examples include bacteria, fungi and earthworms.
fat		Substance that is used as a store of energy and is important in making cell surface membranes.
fungicide	<i>fung-giss-ide</i>	Pesticide that kills fungi.
herbicide	<i>herb-iss-ide</i>	Pesticide that kills plants. Also called a weedkiller.
insecticide	<i>in-sect-iss-ide</i>	Pesticide that kills insects.
pest		Any organism that damages a crop.
pesticide	<i>pest-iss-ide</i>	Chemical that kills pests.
protein	<i>pro-teen</i>	Chemical that is used for growth and repair.
selective herbicide	<i>herb-iss-ide</i>	Chemical pesticide that kills only some types of plants.
starch		Type of insoluble carbohydrate found in plants and made from glucose. Used as a storage material.
variety		A species of plant may be divided into different varieties, and each variety has a certain set of characteristics making it different from the other varieties.
weedkiller		Another name for a herbicide.

Word	Pronunciation	Meaning
yield	<i>yeeld</i>	The amount of useful product that is obtained from a crop.

9Cc – Focus on: Hydroponics

Word	Pronunciation	Meaning
hydroponics		Growing plants without soil.

9Cc – Focus on: Plant hormones

Word	Pronunciation	Meaning
hormone	<i>hor-moan</i>	A chemical messenger produced by some cells in an organism. It travels around the organism and changes what certain cells do.
plant hormone	<i>hor-moan</i>	A hormone found in plants.
wilting		When a plant droops because it has too little water.

9Cd – Farming problems

Word	Pronunciation	Meaning
biological control		Using an organism to keep the numbers of another organism under control.
carbon cycle		A model showing how carbon is cycled between living organisms and air.
characteristics		The features of an organism.
food web		A way of showing what eats what in a habitat.
genetic modification		Adding or removing characteristics from an organism by changing its genetic material (material stored inside the nuclei of its cells).
global warming		A theory that says that the Earth is getting hotter because of the activities of humans. It may be caused by too much carbon dioxide in the air.
GM		Short for 'genetic modification' or 'genetically modified'.
greenhouse gas		Gas that keeps the atmosphere warm. Too much could cause global warming.
persistent		A chemical is persistent if it does not get broken down in nature very quickly. It stays around for a long time.
population		The number of a certain organism found in a certain area.
soil erosion	<i>er-O-shun</i>	The removing of soil from an area, usually by water or wind.