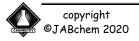
Section 10 Summary

10.1 Using Chemicals to Save Plants

- a) The yield of healthy crops can be reduced in the following ways:
 - o crops are eaten by **pests** like insects and slugs
 - o bacteria and fungi can cause plants to become diseased
 - weeds can inhibit growth of plants by using up essential substances in the soil. This stops crops from growing as well as they can.
- b) Crops can be treated with chemicals to improve the yield produced:
 - Pesticides are used to control/kill pests like insects and slugs
 - o Fungicides prevent diseases in plants
 - Herbicides kill weeds.
- c) Pesticides are toxic and so must be used with care.
 - o vegetables are fruit should be washed before being eaten
- d) Natural predators can also be used to safely control pests. This means less chemicals need to be used to grow crops.
 - o greenfly are eaten by ladybirds
 - o slugs are eaten by hedgehogs





10.2

Section 10 Summary

10.2 Fertilisers

a) Essential elements for healthy plant growth are:

nitrogen	phosphorus	potassium

- b) Plants absorb the elements Nitrogen, Phosphorus and Potassium
 - o taken in through the roots
 - o soluble compounds of these elements in fertilisers (not free elements)
- c) In areas of natural vegetation, decay of vegetable and animal remains returns all essential elements to the soil.
 - o in woodlands leaves fall to ground and return essential elements back to soil.
 - harvesting of crops for food prevents the natural return of essential elements to the soil.
- d) Fertilisers are added to the soil to restore essential elements.
 - o fertilisers must contain nitrogen, phosphorus or potassium
- e) Examples of natural fertilisers are:

compost	manure	dung	slurry
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- f) Use of artificial fertilisers has increased because there is
 - increased demand for food
 - o more people to feed on the planet
 - o not enough natural fertiliser available to restore essential elements in soil.
- g) Artificial fertilisers are made by the chemical industry
 - The major artificial fertilisers are compounds with ammonium, potassium, nitrate or phosphate in their name.
 - o fertilisers must be soluble in water to be effective
- h) The extensive use of **nitrate fertilisers** may have increased the levels of nitrate in rivers, lochs and the public water supply
 - the presence of large quantities of nitrates can leave the water lifeless.

i)	Some plants such as conitrogen from air is co			
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