

IGCSE Biology (9-1) Specification 5(a)

(a) Food production

Students should:

Crop plants

- 5.1** describe how glasshouses and polythene tunnels can be used to increase the yield of certain crops
- 5.2** understand the effects on crop yield of increased carbon dioxide and increased temperature in glasshouses
- 5.3** understand how the use of fertiliser can increase crop yield
- 5.4** understand the reasons for pest control and the advantages and disadvantages of using pesticides and biological control with crop plants

Micro-organisms

- 5.5** understand the role of yeast in the production of food including bread
- 5.6 practical:** investigate the role of anaerobic respiration by yeast in different conditions
- 5.7** understand the role of bacteria (*Lactobacillus*) in the production of yoghurt
- 5.8** understand the use of an industrial fermenter and explain the need to provide suitable conditions in the fermenter, including aseptic precautions, nutrients, optimum temperature and pH, oxygenation and agitation, for the growth of microorganisms

Fish farming

- 5.9B** understand the methods used to farm large numbers of fish to provide a source of protein, including maintaining water quality, controlling intraspecific and interspecific predation, controlling disease, removing waste products, controlling the quality and frequency of feeding, and selective breeding

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