

Chemical Coordination in Plants (Plant Hormones)

Chapter 7: Chemical Coordination in Plants (Plant Hormones) · Topic 1

Key Concept

Auxins promote cell elongation and are responsible for phototropism (growth towards light) and apical dominance (suppressing side branch growth).

Gibberellins promote stem elongation, seed germination, and flowering, often used commercially to increase fruit size.

Cytokinins promote cell division and delay ageing (senescence) in plant parts, often working together with auxins to regulate growth.

Absciscic acid (ABA) is often called the 'stress hormone,' promoting seed dormancy and closing stomata during water stress conditions.

Quick Revision Notes

- Auxins promote cell elongation.
- They cause phototropism and apical dominance.
- Gibberellins promote stem elongation, germination.
- They're used commercially to increase fruit size.
- Cytokinins promote cell division.
- They delay senescence (ageing).
- Absciscic acid (ABA): the 'stress hormone'.
- ABA promotes dormancy, closes stomata under stress.

Practice Questions

- 1 Explain how auxins cause phototropism.
- 2 Discuss the commercial use of gibberellins.
- 3 Research how cytokinins delay senescence.
- 4 Explain the role of absciscic acid during drought.
- 5 Compare the functions of different plant hormones.
- 6 Explain plant hormone coordination in your own words.