



PLANT HORMONES

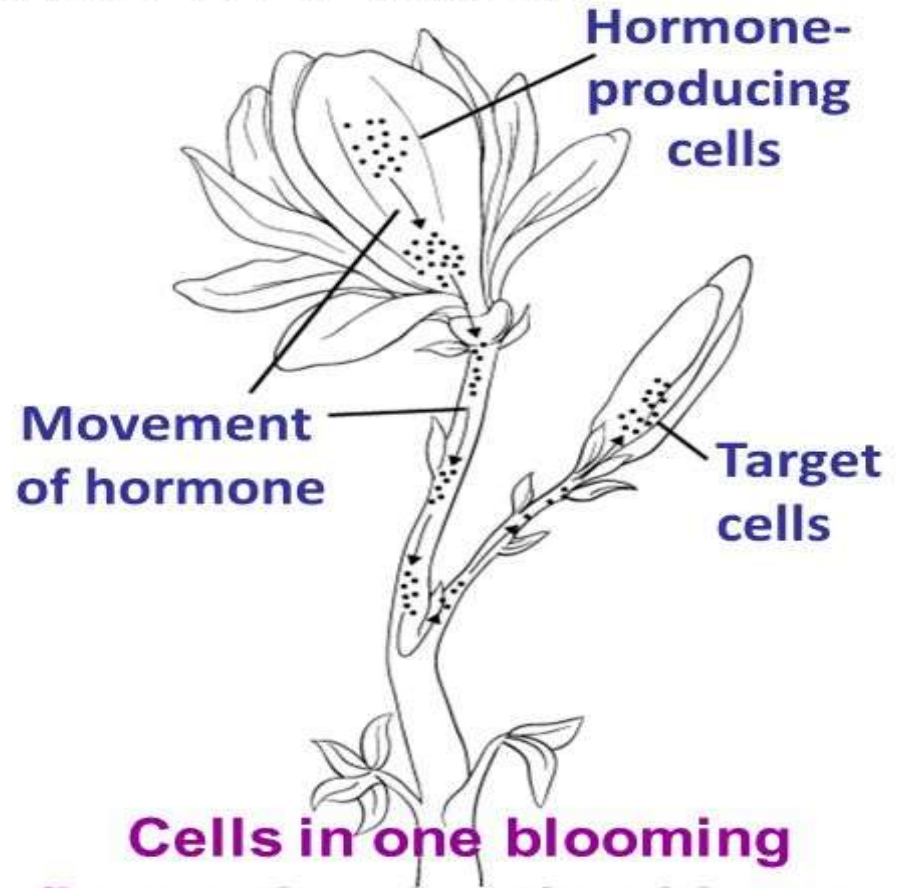


- Plant hormones are produced **where they act**.
- There are **five** main plant hormones:
 1. Auxins – Growth: speeds it up in stems; slows it down in roots. Can be used in herbicides.
 2. Gibberellins – Seed germination & development of fruit.
 3. Cytokinins – Thickening of shoot.
 4. Ethylene – Ripening of the fruit.
 5. Abscisic Acid – Stops growth (in winter).



Hormone Action in Plants

- Plants produce hormones
 - Chemical messengers that travel throughout the plant causing target cells to respond
- In plants, hormones control:
 - Plant growth and development
 - Plant responses to environment



Cells in one blooming flower signals other blooms using hormones to open.



. . . and FINALLY



Tropism = *plant response to a stimulus:*

- PhotoTropism = response to light. *In stems, Auxins move away from light, so growth is quicker on the dark side – stem grows towards light.* In roots, Auxins move down (gravity), so growth is slower here – roots grow downwards.
- GeoTropism = response to gravity. (Stems respond negatively, roots respond positively.)
- HydroTropism – response to water. (Stems respond negatively, roots respond positively.)

Plants defend themselves with **thorns**, or by producing bad-tasting **chemicals** – which can be poisonous.

HOW PHOTOTROPISM WORKS

IT'S ALL ABOUT THE AUXIN



Auxin gathers at bottom side of the root

