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Shaping Lives...
Empowering Communities...

BIO-REGULATORS, IRRIGATION AND FERTILISER APPLICATION



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PLANT GROWTH REGULATORS:

These are organic compound synthesized in one part of plant and translocated to another parts, wherein very low concentration causes a physiological response.

❖ The plant hormones are identified as promoters (auxins, gibberellin, cytokinins), inhibitors (abscisic acid and ethylene) and other hypothetical growth substances (Florigen, death hormone, etc.).



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Auxin:

- Site of synthesis- stem tips
- Eg. IAA, 4, Chloro indole acetic acid (CIAA), Phenylacetic acid (PAA), Indole butyric acid (IBA)
- Role-Cell division and enlargement, Tissue culture, Breaking dormancy and apical dominance (inhibition of lateral buds), Shortening internodes, Rooting of cutting, Flower initiations

Gibberellic Acid:

- site of synthesis-apical tissues
- Eg. GA3, GA4, GA7
- Role- cell division, Enhance metabolic activity, Shoot elongation, Delay senescence, Promote flowering in Long Day Plants



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Cytokinin

- Site of synthesis- roots
- Eg. Kinetin, Benzyladenine and Ethoxy ethyladenine.
- Role: Cell division, elongation and enlargement.,tissue culture morphogenesis.,induction of flowering and fruit development., parthenocarpy, apical dominance overcoming, breaking dormancy.

Ethylene:

- Site of synthesis- synthesized naturally in mature fruits
- Role- Breaking dormancy,induce ripening of fruits,induce abscission of leaves,inhibit elongation and lateral bud growth



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Abscissic Acid:

- site of synthesis- root
- Role- to stop elongation, induce dormancy, delay germination, inhibit growth process



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Irrigation

Types:

- Flood Irrigation
- Check basin
- Ridge and furrow
- Ring system
- Pitcher system
- Drip irrigation
- Sprinkler irrigation



FLOOD IRRIGATION

BASIN METHOD





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RIDGE AND FURROW METHOD

RING METHOD





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DRIP IRRIGATION



SPRINKLER IRRIGATION



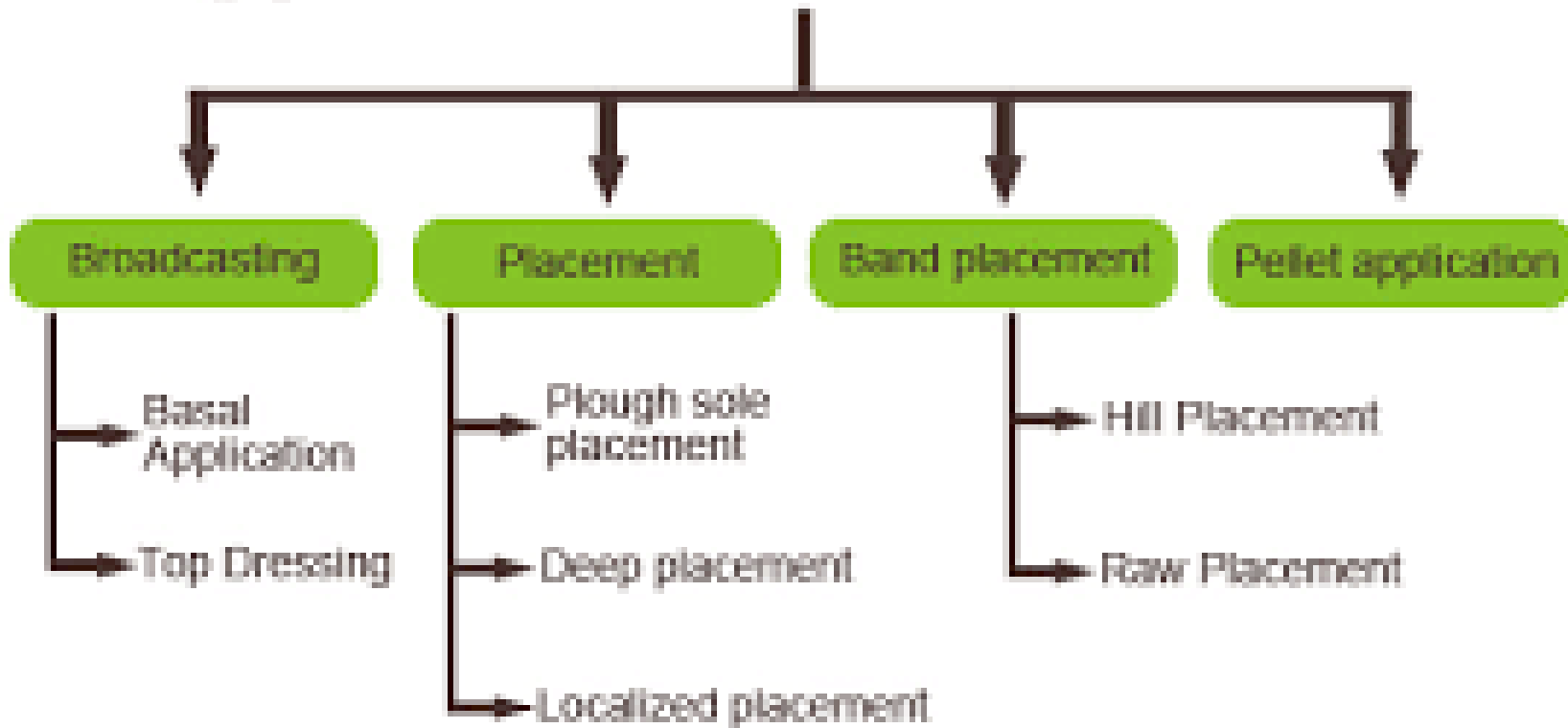


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FERTILISER APPLICATION

Application of solid Fertilizer





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Application of liquid fertilisers

- 1. Starter solution**
- 2. Foliar application**
- 3. Fertigation**
- 4. Injection into soil**
- 5. Aerial application**



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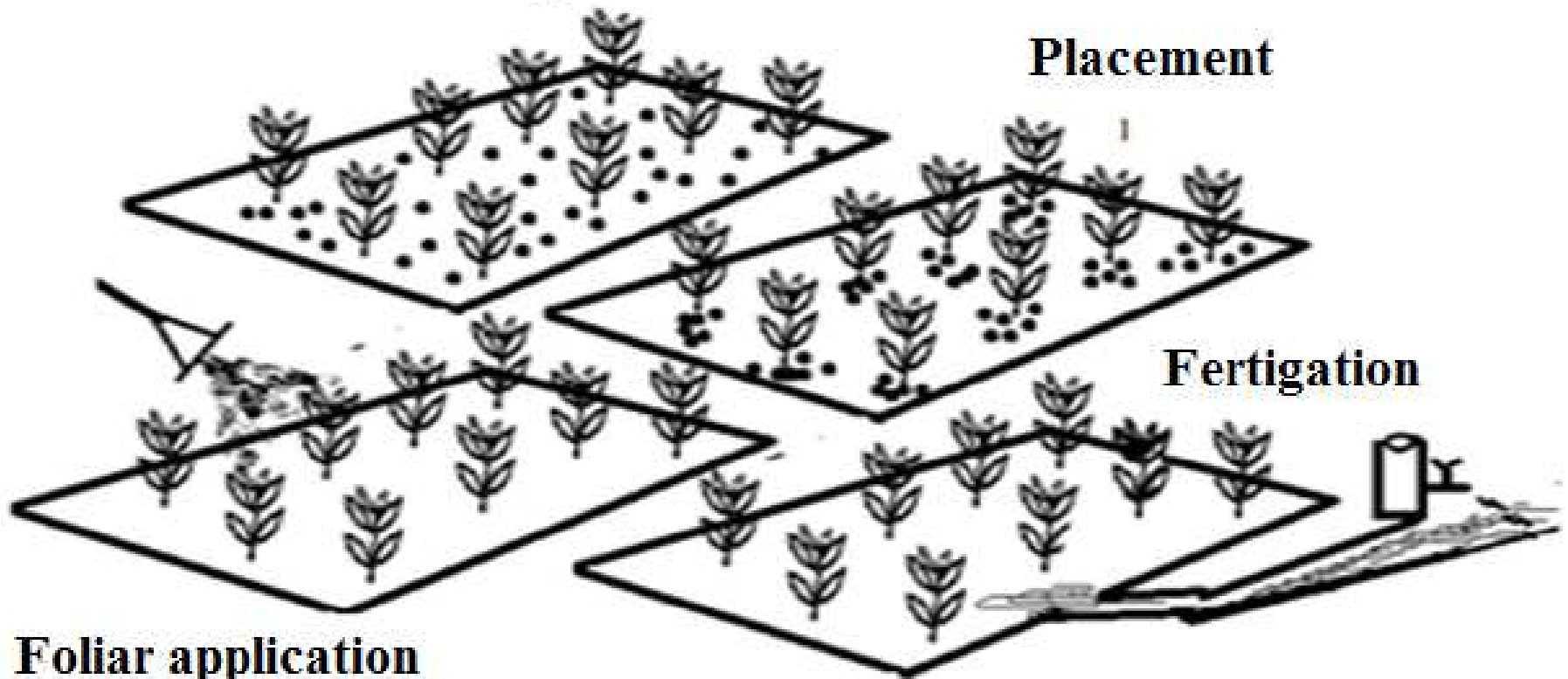
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Broadcasting

Placement

Fertigation

Foliar application





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Incorrect

Correct





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THANK YOU