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# Center for Smart Agriculture

## Protected floriculture



**Module 2:** Components Pre-requisites for protected cultivation of flower crops

**Session 13:** Fertigation system used in protected structure



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# Introduction

Fertigation is a precise, controlled and tested method of applying fertilisers, nutrients and other water-soluble products through drip lines and sometimes by micro sprinkler irrigation systems as per crop requirements, its stage, canopy size, soil or season, etc.



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# Advantages of Fertigation

- (i) Helps supply of both water and fertiliser simultaneously.
- (ii) Increases yield by 25–30 per cent.
- (iii) Saving in fertilisers by 25–30 per cent.
- (iv) Application and distribution of fertilisers uniformly and accurately.
- (v) Modifications in nutrient requirement as per crop.



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**Cont...**

- (vi) Lower pH can help in avoiding clogging of drippers.
- (vii) Major and micro nutrients can be supplied together with irrigation.
- (viii) Requisite amount of fertilisers can be injected in concentration.
- (ix) Saves time, labour and energy.



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# Points to remember for adopting Fertigation

- Gravitational fertiliser tank or injection pump such as venturi (a short piece of narrow tube between wider sections for measuring flow rate or exerting suction) are utilised to inject the fertiliser as per plant requirements.
- Pressure compensating drippers or inline drippers instead of micro tubes may be used for precision.
- Feeding frequency depends on crop, its stage of growth and season.



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- Stock solution should preferably not be above 10 per cent.
- The fertiliser solution should be compatible with other ingredients detailed in subsequent session. Compatibility means mixing ability without precipitation.
- Do not inject fertilisers in combination with pesticides or chlorine.
- The time taken by fertiliser supply should not exceed the time given for water supply.
- Avoid excess water supply, which may cause the leaching (drain away from soil) of fertilisers.



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**THANK YOU**