

Fertigation and Fumigation

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Fertigation

- Fertigation is a method of fertilizer application in which fertilizer is incorporated within the irrigation water by the drip system. In this system fertilizer solution is distributed evenly in irrigation.
- The availability of nutrients is very high therefore the efficiency is more.
- In this method liquid fertilizer as well as water soluble fertilizers are used.
- By this method, fertilizer use efficiency is increased from 80 to 90 per cent.

Advantages of fertigation

- Nutrients and water are supplied near the active root zone through fertigation which results in greater absorption by the crops.
- As water and fertilizer are supplied evenly to all the crops through fertigation there is a possibility for getting 25-50 per cent higher yield.
- Fertilizer uses efficiency through fertigation ranges between 80-90 per cent, which helps to save a minimum of 25 percent of nutrients.
- By this way, along with less amount of water and saving of fertilizer, time, labour and energy use is also reduced substantially.

Fertilizer used in fertigation

- Urea, potash and highly water soluble fertilizers are available for applying through fertigation.
- Application of super phosphorus through fertigation must be avoided as it makes precipitation of phosphate salts. Thus phosphoric acid is more suitable for fertigation as

it is available in liquid form.

- Special fertilisers like mono ammonium phosphate (Nitrogen and Phosphorus), poly feed (Nitrogen, Phosphorus and Potassium), Multi K (Nitrogen and Potassium), Potassium sulphate (Potassium and Sulphur) are highly suitable for fertigation as they are highly soluble in water. Fe, Mn, Zn, Cu, B, Mo are also supplied along with special fertilisers.

What is Fumigation?

- Fumigation for control of infestation can be employed in two ways: prophylactic, where a treatment is carried out routinely, usually shortly after intake, even if no insects or mites are found on inspection; or tactically when it is carried out at the first signs of infestation.
- Good fumigation used with good hygiene and adequate sealing should not need repeating as the recommended application procedures are designed to give a total kill of all insects.
- Where a reinfestation appears after fumigation, it is most probable that either the fumigation was not carried out adequately or reinfestation pressures are high.
- Fumigation only works properly if adequate concentration can be maintained for an adequate exposure period.
- These conditions can only be achieved in a well-sealed system for a single application of fumigant or by "continuous fumigant addition" in an adequately sealed system.