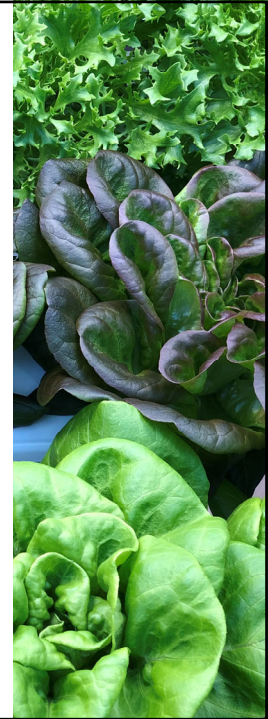




Nutrient delivery: NFT

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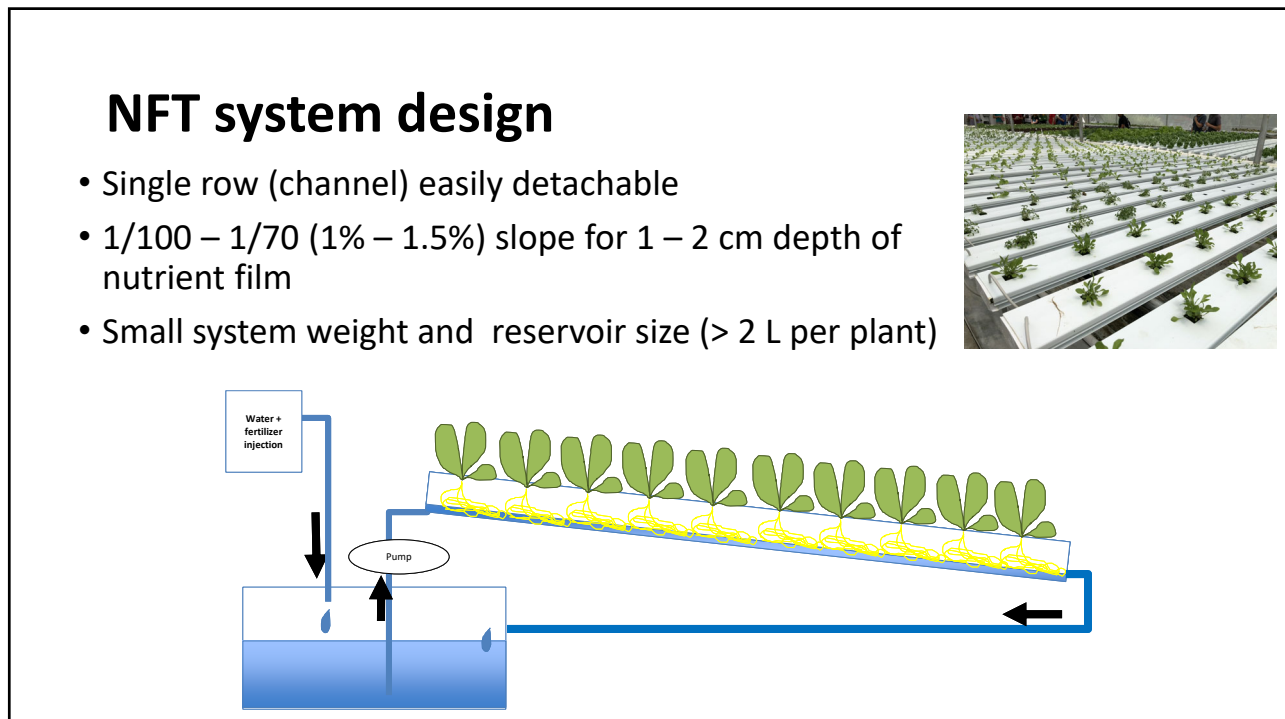
What is NFT?

- Nutrient Film Technique – a hydroponic system
- Developed in England in late 1960s (Dr. Allen Cooper, Glasshouse Crops Research Institute, Sussex)
- Turnkey systems
- Most widely used hydroponics system for leafy greens in North America
- Buck-up power needed for circulation pumps
- Channel cleaning system needed

2



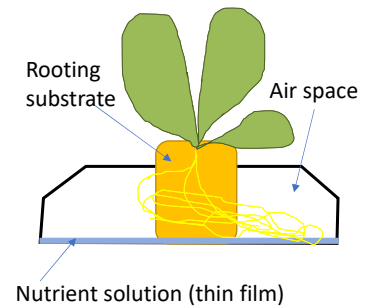
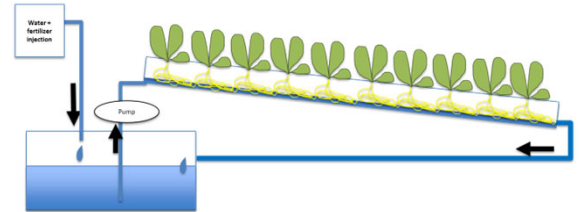
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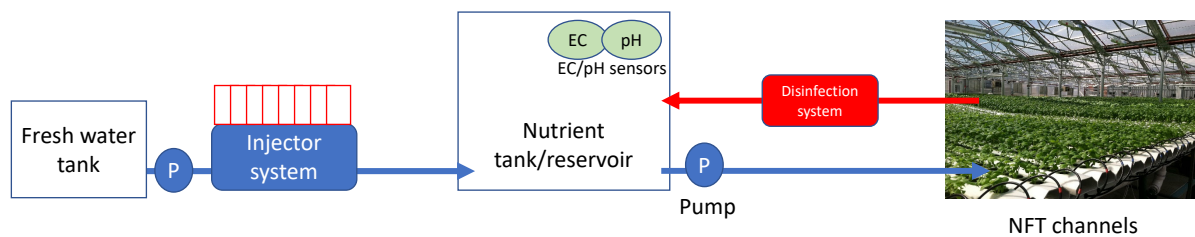
Components of NFT

- NFT channels with planting holes
 - 1/100 – 1/70 (1% – 1.5%) slope for <1 cm depth of nutrient film
- A nutrient reservoir tank (> 2 L per plant)
- A water pump
- A catchment (drain) pipe to bring back the outlet solution
- EC, pH, and water level sensors
- Injectors for stock solutions



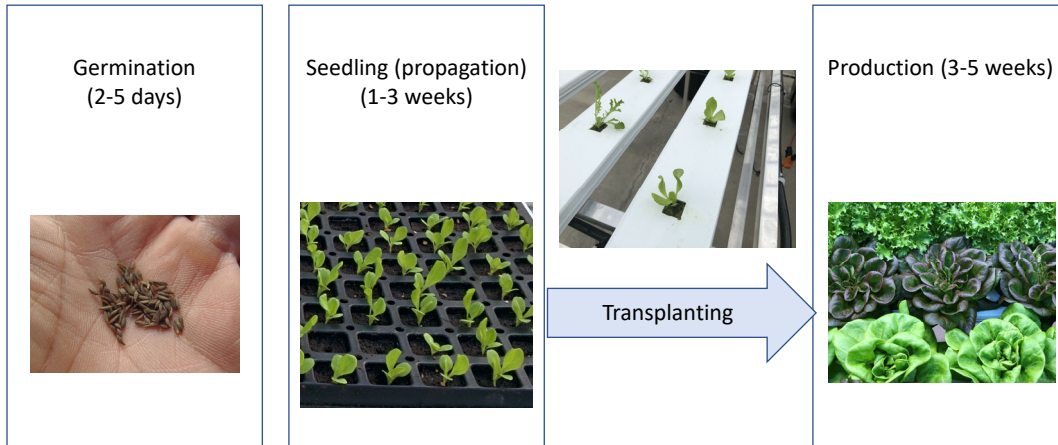
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NFT system setup



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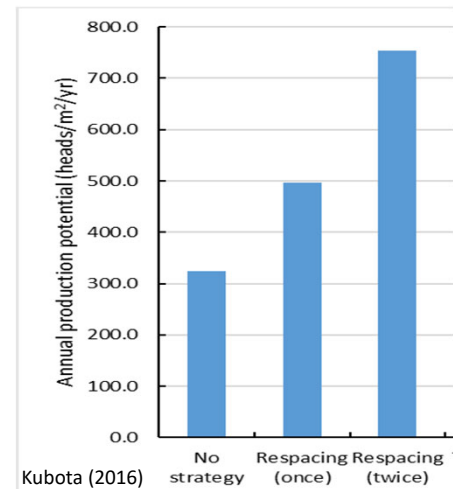
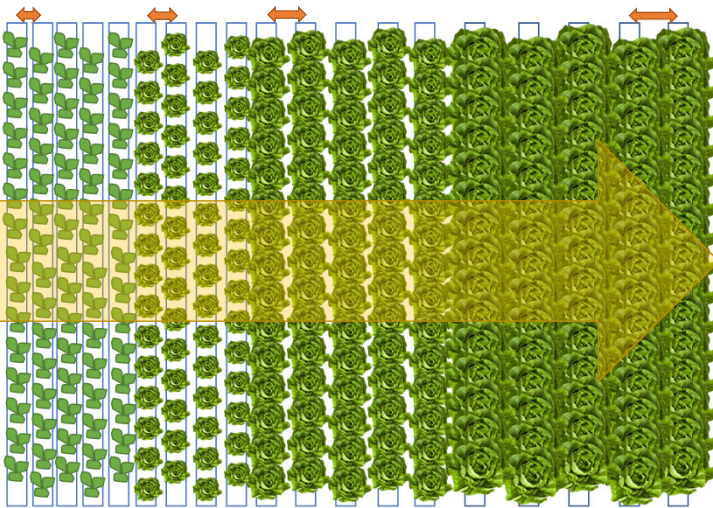
Leafy green production stages



7

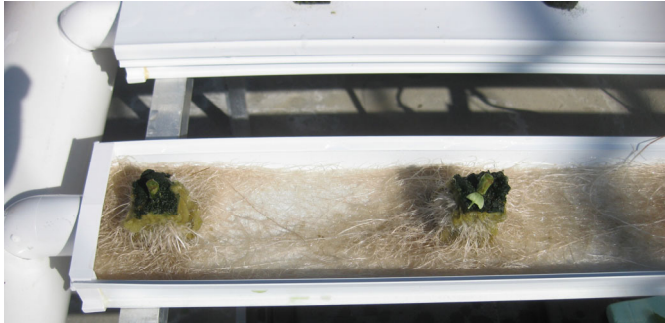
Respacing in NFT

- Respacing increases light use efficiency and the production capacity (annual yield).



8

Multiple harvest or long cycle crops need a large size of NFT channels



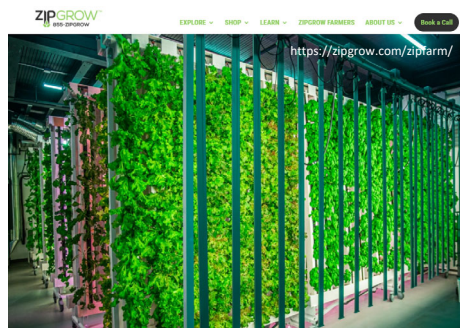
Roots of sweet basil plants observed after harvest (~6 weeks after transplanting)



9

NFT in indoor farms

- Some indoor farms use NFT in multi-tiered racks (shallow water culture is more common)
- Vertical version (vertical channel system)

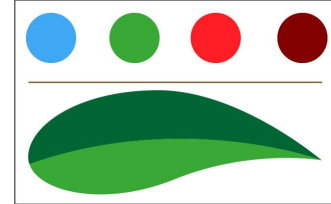


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Thank you!

For questions, please contact:
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OptimIA



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