

EU Green Week
PARTNER EVENT

La giornata green del dottorato | Acqua, resilienza ed oltre

@Distal multicampus
30 Maggio 2024

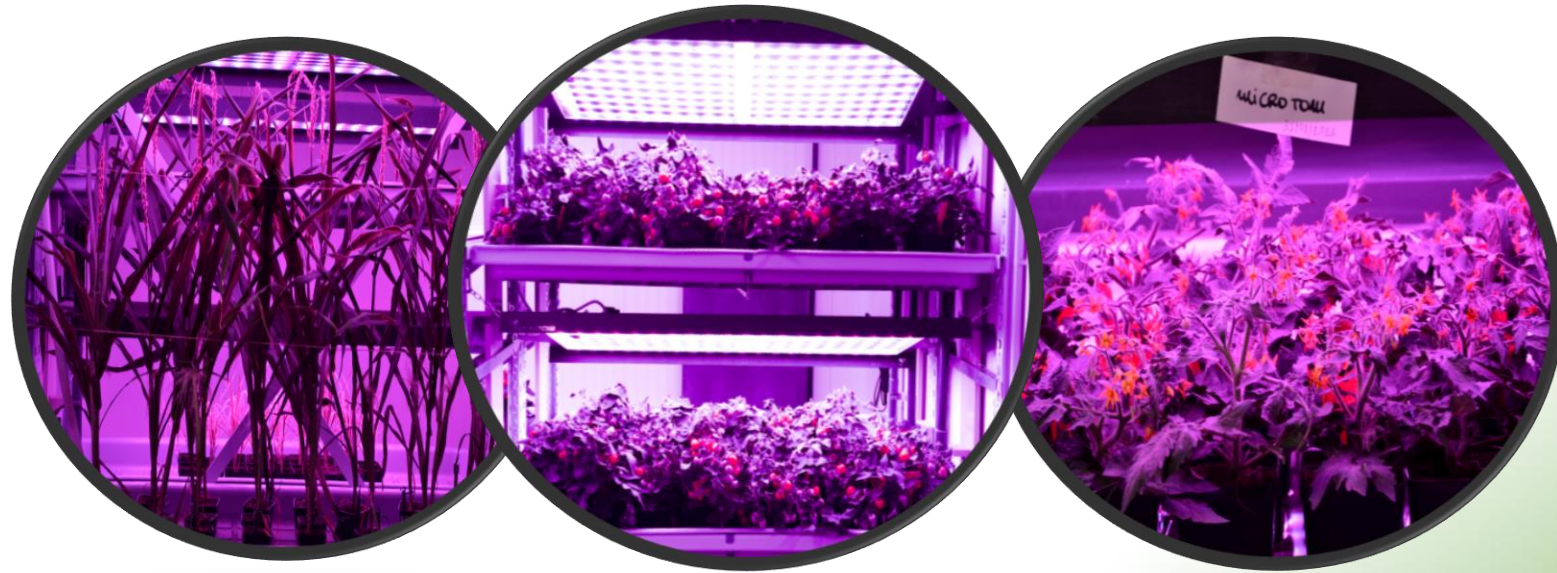
#WaterWiseEU



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DIPARTIMENTO
DI SCIENZE E TECNOLOGIE
AGRO-ALIMENTARI

Is Vertical Farm Efficient to Grow Diverse Crops Cultivation?



Vivek Jadhav

Supervisor: **Prof. Francesco Orsini**

PhD in Agricultural, Environmental, Food Science and Technology

Research topic in Agronomy, Herbaceous Crops, Flowers and Vegetables Systems, Agricultural Genetics and

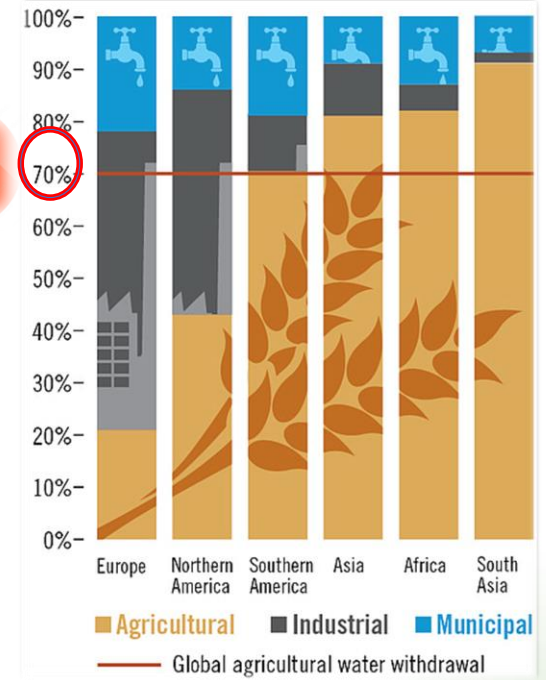
Agricultural Chemistry



PHD PROGRAMME
AGRICULTURAL, ENVIRONMENTAL AND FOOD SCIENCE AND
TECHNOLOGY



Background

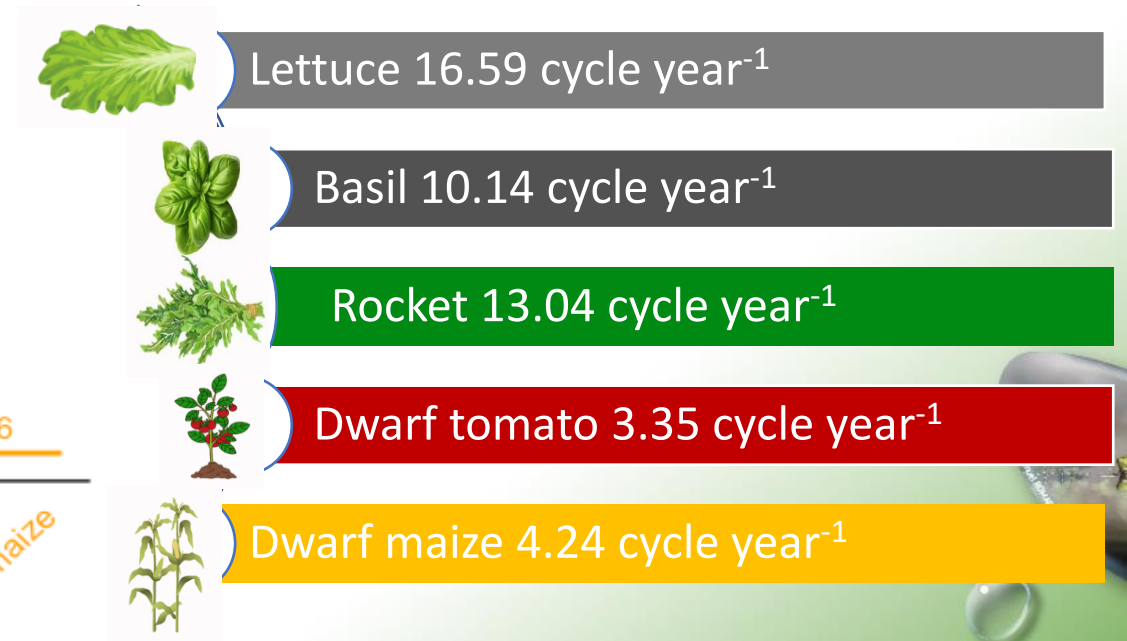
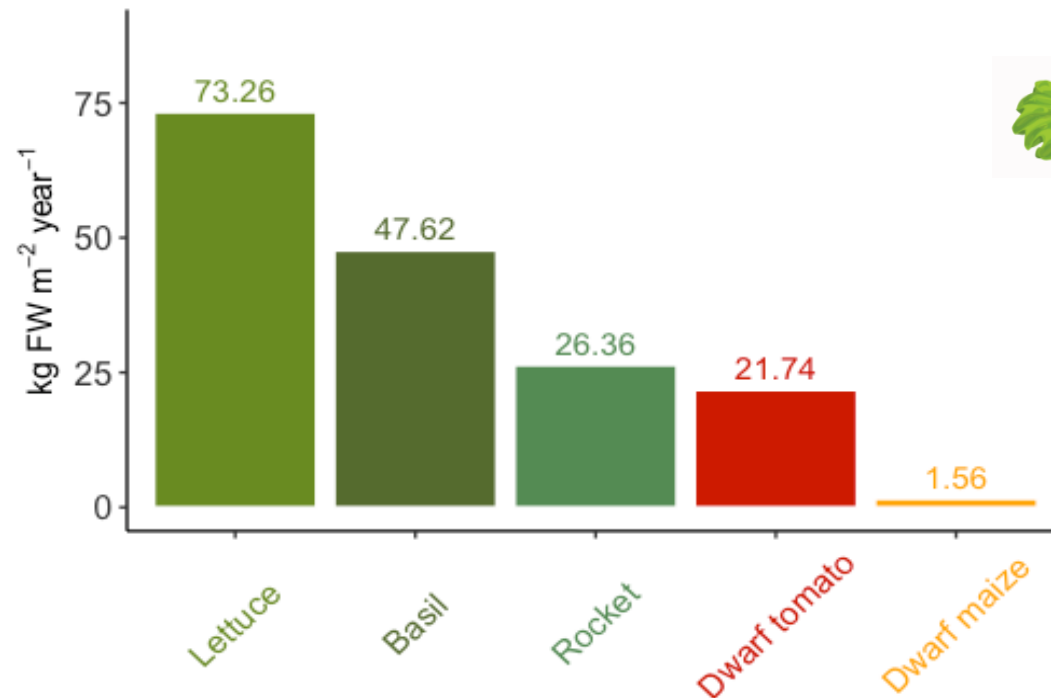
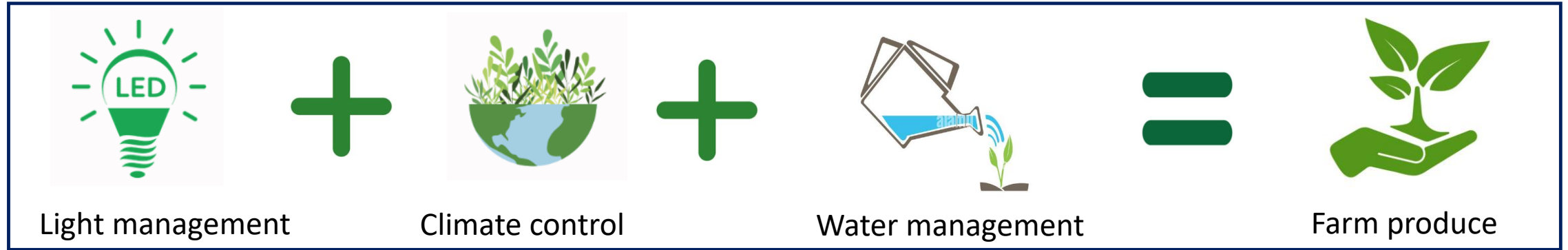


VF: Is Solution for Future Food Production?

- Independent from external climate
- Closed-loop systems, Water use is reduced up to -95%
- High quality produce, year round production
- No or very less use of pesticides
- Potential for minimal food miles



Novel Approach: Diversifying crop production in VF



Growing Forward: **Vertical Farming's Sustainable Impact....**

1. **Widely** applicable for cultivating horticultural crops and even staple crops; although energy use remains a concern
2. Almost **70% to 95%** less water than traditional farming
3. Great future in **pharmaceutical** and **nursery industries**
4. A Life Cycle Assessment (LCA) is recommended to gain insights into the **environmental performance**
5. **Dwarf genotype** breeding programme

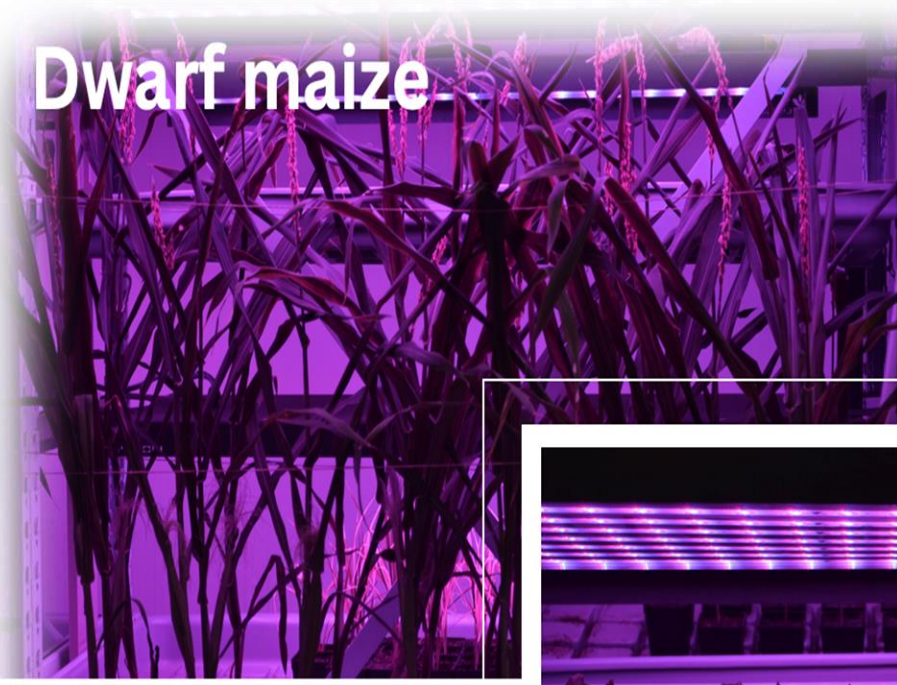




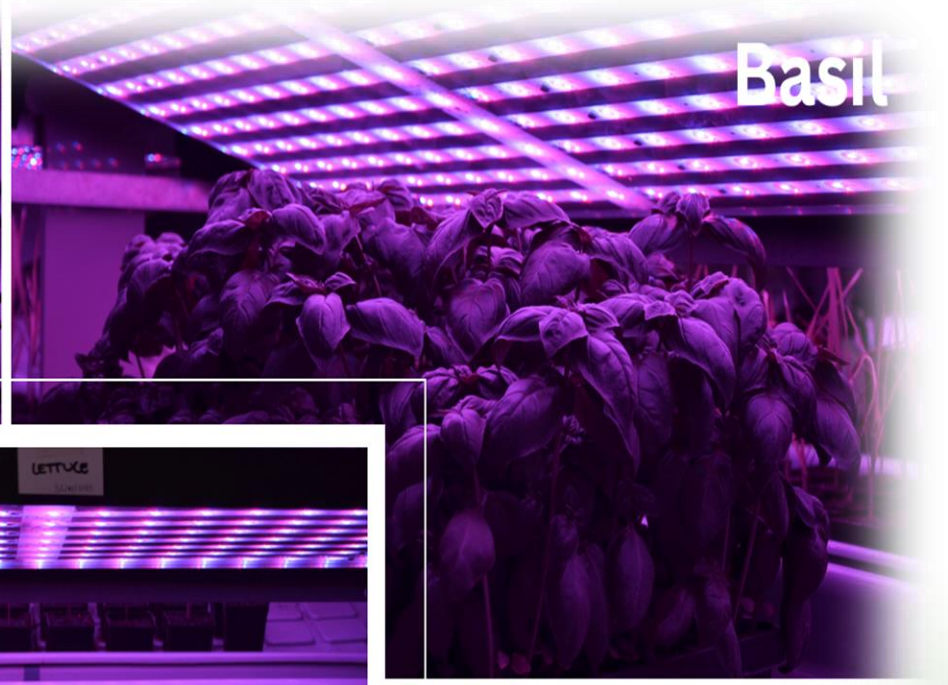
**THANK YOU
FOR YOUR
ATTENTION**

**Let Me Know if You
Have Any Questions!**
Vivek.jadhav2@unibo.it

Dwarf maize



Basil



Dwarf tomato




Lettuce

Rice



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 **AlmaVfarm, Bologna, Italy**