

INNOVATING YOUR CROPS USING PLANT TISSUE CULTURE



Global forum
for innovations
in agriculture

Introduction



1. What is plant tissue culture?
2. Why is it so important?
3. Plant tissue culture versus seeds
4. What happens in a plant tissue culture laboratory?
5. Innovations
6. Q&A

Plant tissue culture

Long used methodology

What is plant tissue culture?

- Plant clones
- Rapid production
- High quality
- High value added plants

How does plant tissue culture work?

- Tissue selection
- Virus free plantlets
- Culture media
- Controlled environment
- Protocols and techniques
- Low contamination rates (< 1%)
- Nursery + vertical farm / greenhouse



Why is it so important?

Heat extremes threaten crop yields

Europe's Blistering Heatwave Is Ruining This Year's Harvest

Arabica coffee growers brace for poor harvest

Significance of medicinal plants in human life

Coffee prices expected to rise as a result of poor harvests and growing demand

Italy Is About to Run Out of Olive Oil – and Climate Change May Be to Blame

Worldwide Importance of Medicinal Plants: Current and Historical Perspectives

Chocolate is on track to go extinct in 40 years

Prolonged hot, dry conditions affect European crop prices

Climate affect on crops worse than thought



[Soybean farmer says climate change is to blame for bad harvest](#)

CBS News - 26 nov. 2018

Why is it so important?

Climate changes

Food security

- Increased population
- Quality

Medicinal

Germination

What is the interest for Abu Dhabi?

- Sustainability
- High quality plants
- High value added plants

But also ...

- Conservation of rare and endangered plant species



PLANT TISSUE CULTURE

versus

SEEDS

More predictable

Faster

Higher costs

Higher yield

- Unpredictable?

- Growth?

- Costs?

- Yield?

Less predictable

Slower

Lower costs

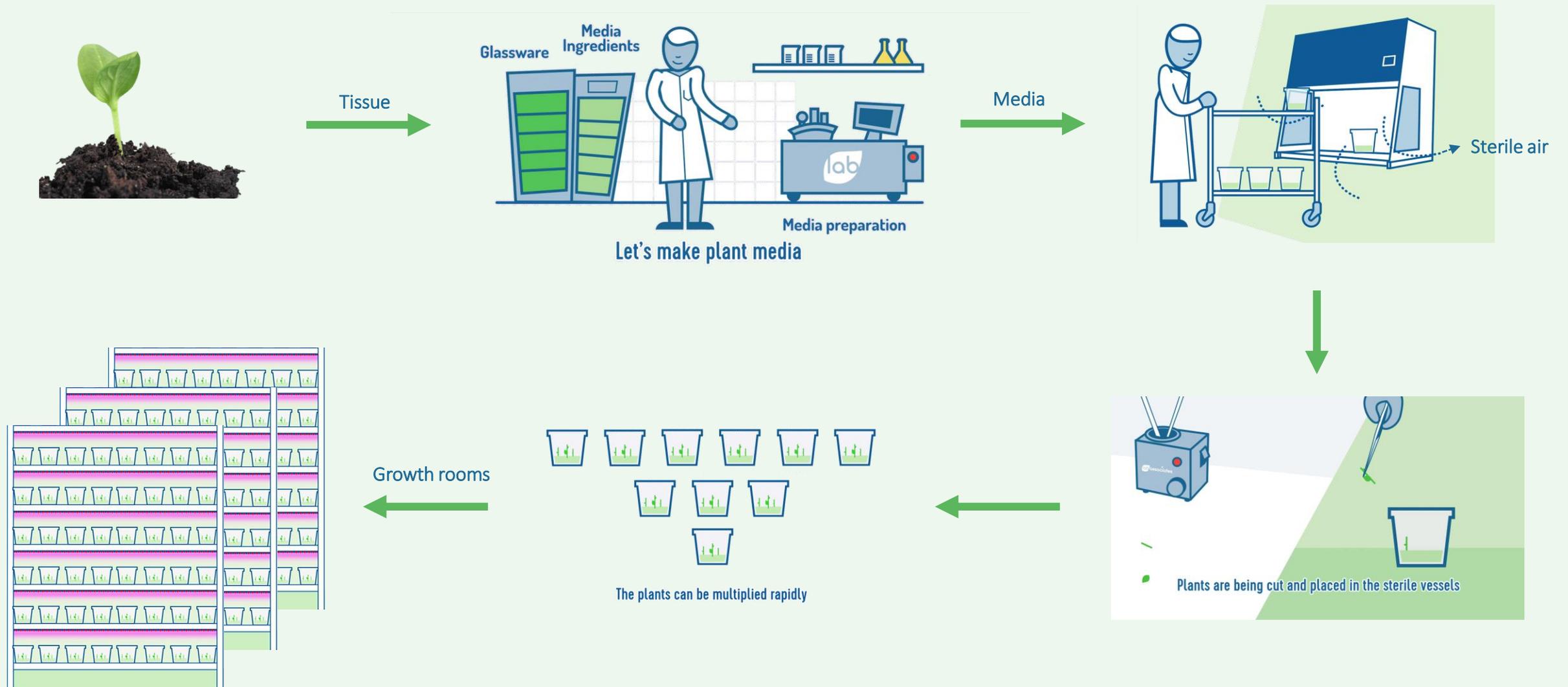
Lower yield



A walk through a plant tissue culture lab



What happens in a plant tissue culture laboratory?

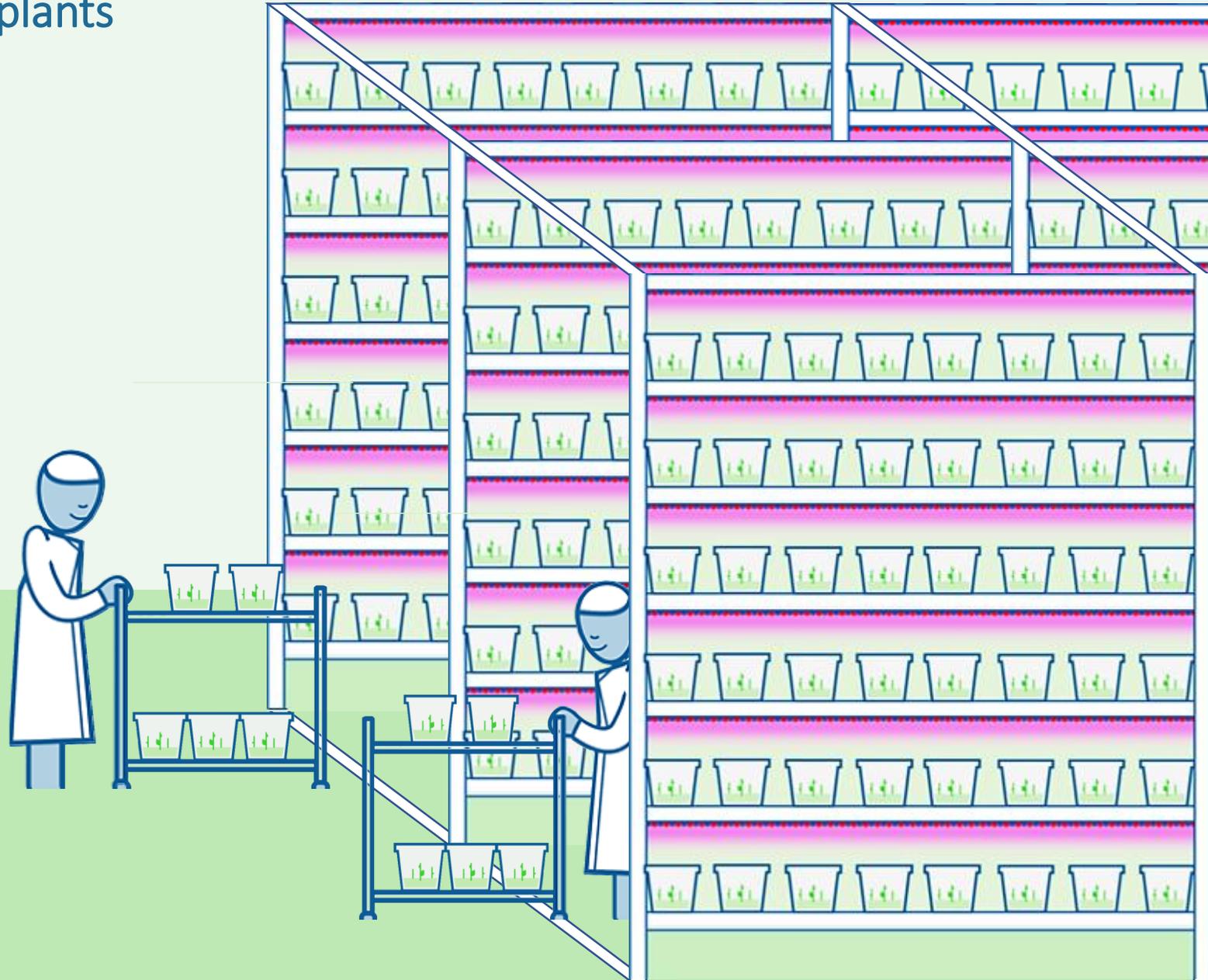


The perfect conditions for your plants

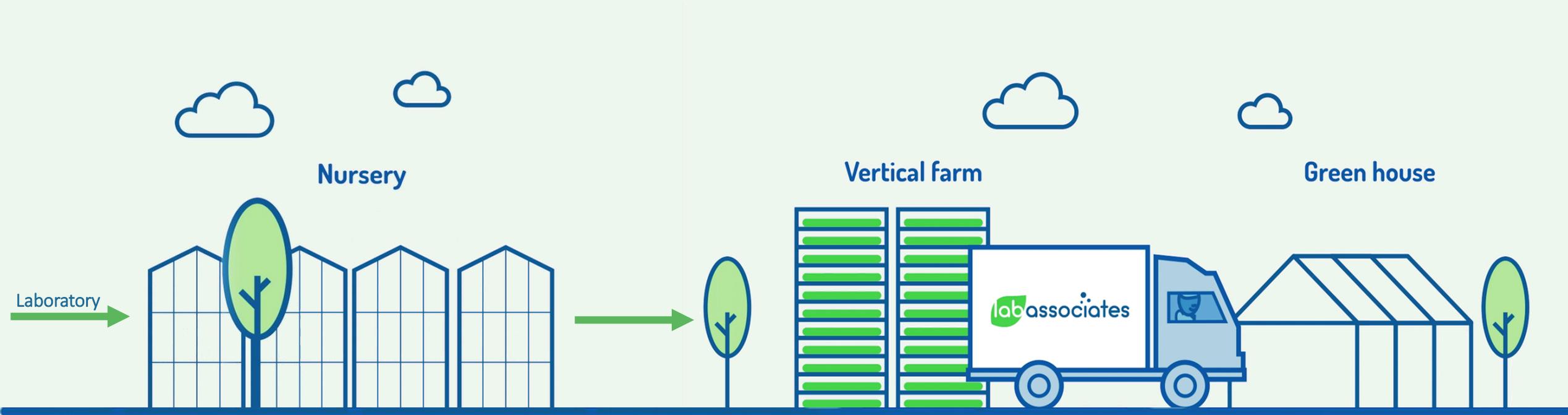
Controlled environment

- Sterile conditions
- Protocols
- Humidity
- Lighting
- Air flow
- Temperature

Different needs



What happens after a plant tissue culture laboratory?



INNOVATION: The benefits of using a media preparator



Shortest sterilization cycle time on the market

- High quality medium
- Increased plant health and quality
- Lower your production costs

Semi- or fully automatic dispensing system

- Sterile
- Non-sterile

PLC controlled

- Historical data

Other equipment



Media dispensing



Microplate washers



Leaf juice press



Sterilizers for utensils

Cultivation consumables, instruments & tools



LA-Round 'Wavin'



LA-Rectangular



Glass tubes



LA-Conical 'De Wit' tubes



Forceps, scalpel, etc.

What can we do for you? EVERYTHING!



Design of entire tissue culture lab

Protocols, media recipes, contamination issues, ...

Customized products

Product- and technical innovations

AND MORE!





Additional information?

Visit our website www.labassociates.com

Contact us on info@labassociates.com

OR

Visit our stand (D24) for a chat!

