



# Thoughtful use of water by recirculation in open air: a pot-in- pot growing system

*Ilse Delcour*

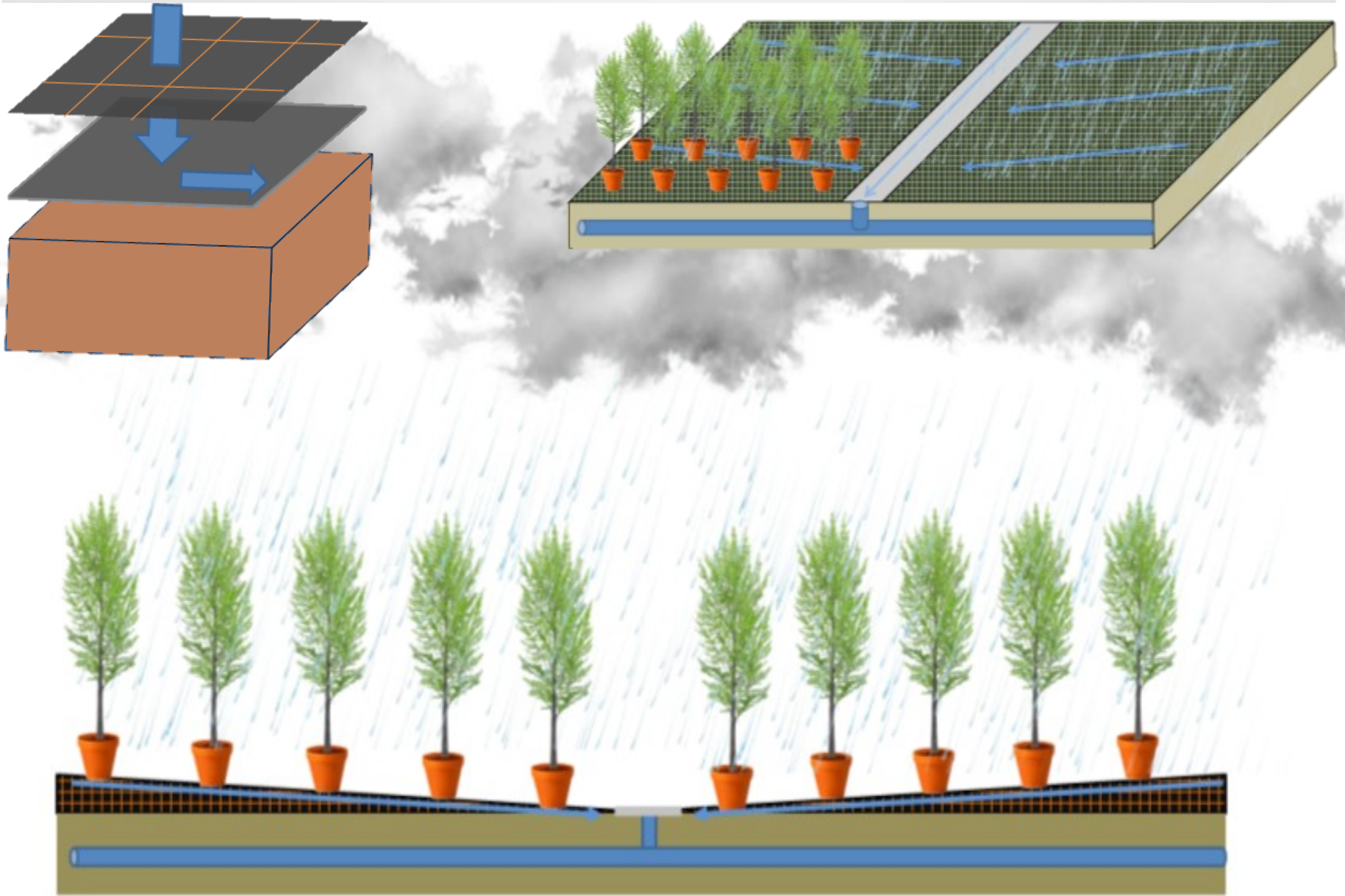
# A standard “container field” for trees in Flanders



Growing plants in containers  
Container field with anti-root cover  
Supporting system



All water can contain nutrients and has to be collected





# The idea came from the US: pot-in-pot ...



Woodburn nursery and Azalea

# ... and was adapted to an outdoor growing system with drain water recirculation



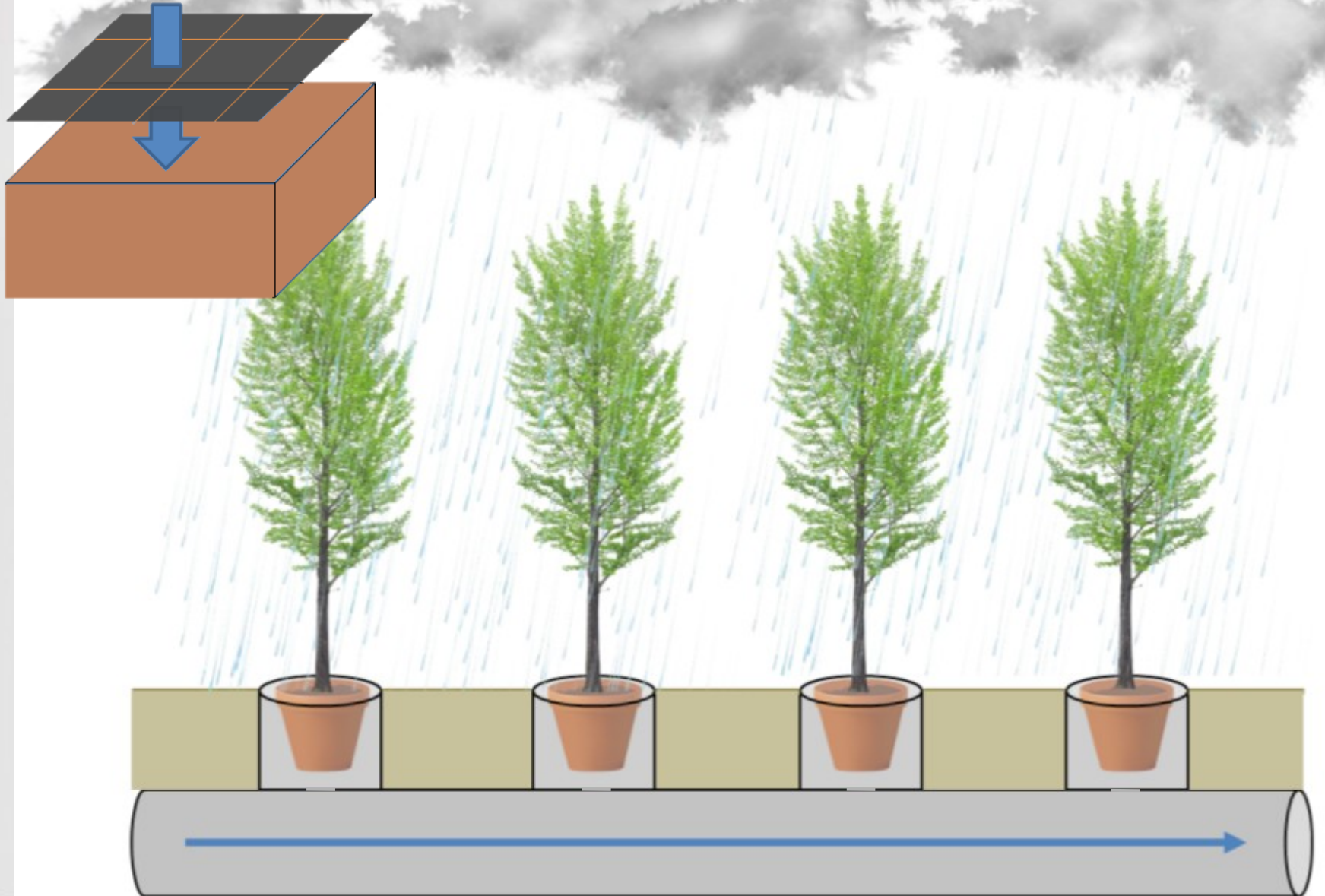
Cultivation in containers

No plastic foil underneath the anti-root cover


Less support needed to secure high plants



# Now only water draining through the containers has to be collected



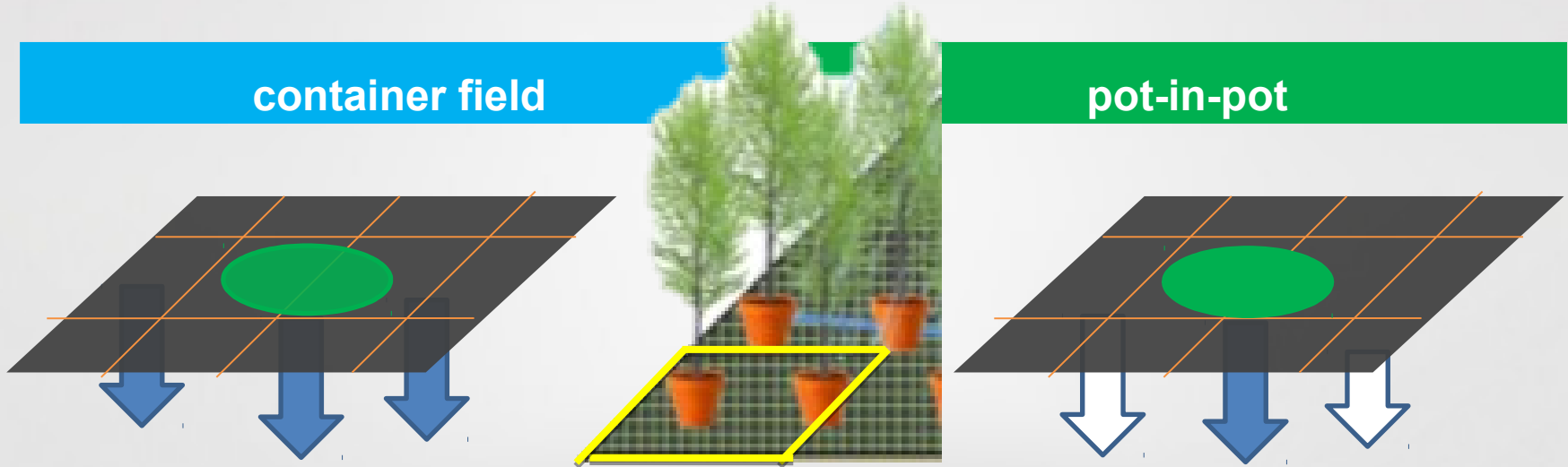
*Klik op het pictogram als u een afbeelding wil toevoegen.*



**WHY WOULD WE  
DO THAT?**



# 15x smaller volume of drain water has to be collected and treated



To collect:

drain water (rain + irrigation) +  
**runoff** =

96% of precipitation



To collect:

drain water (rain + irrigation) =

6% of precipitation





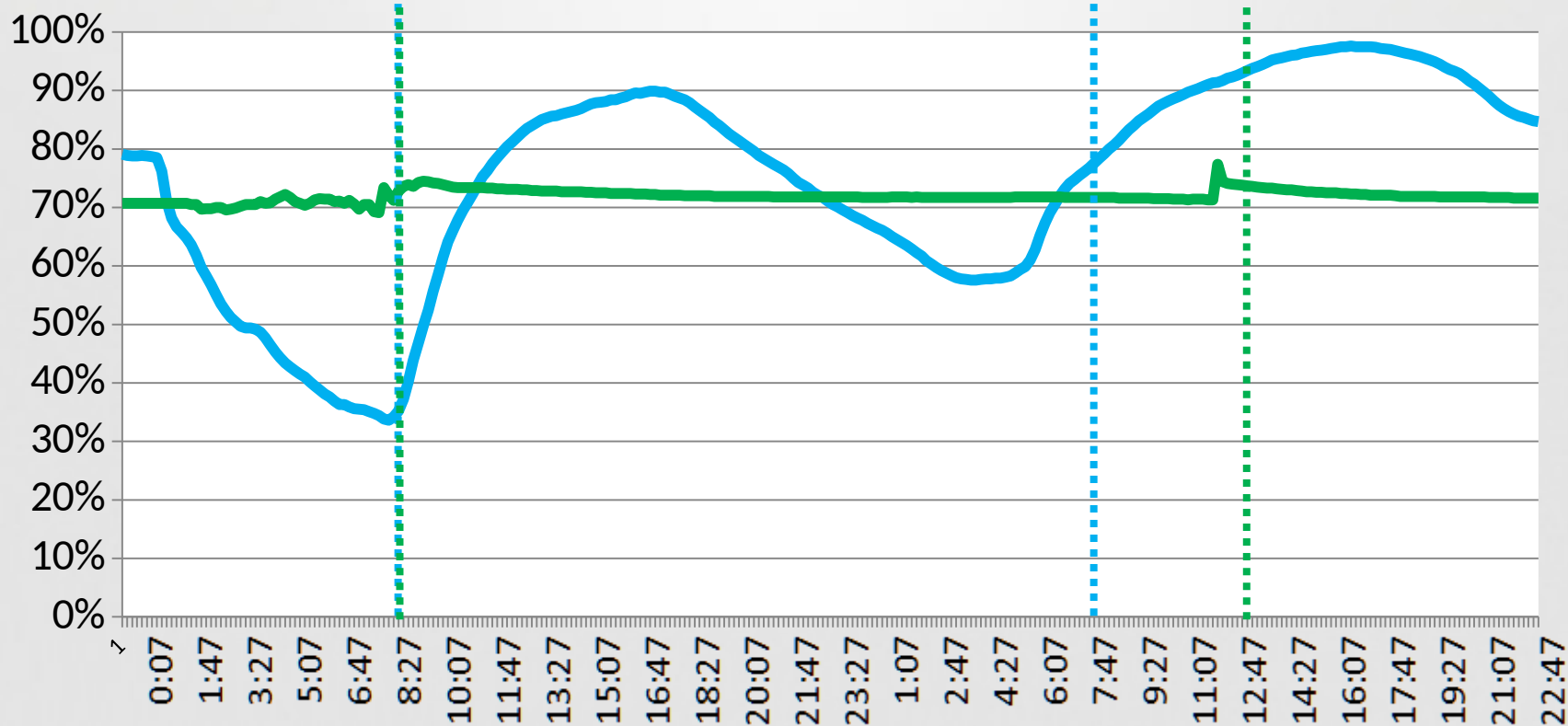
# less fluctuations in moisture content and temperature favour root development

container field

pot-in-pot

Precipitation: 14L

10/06 dry + Irr.



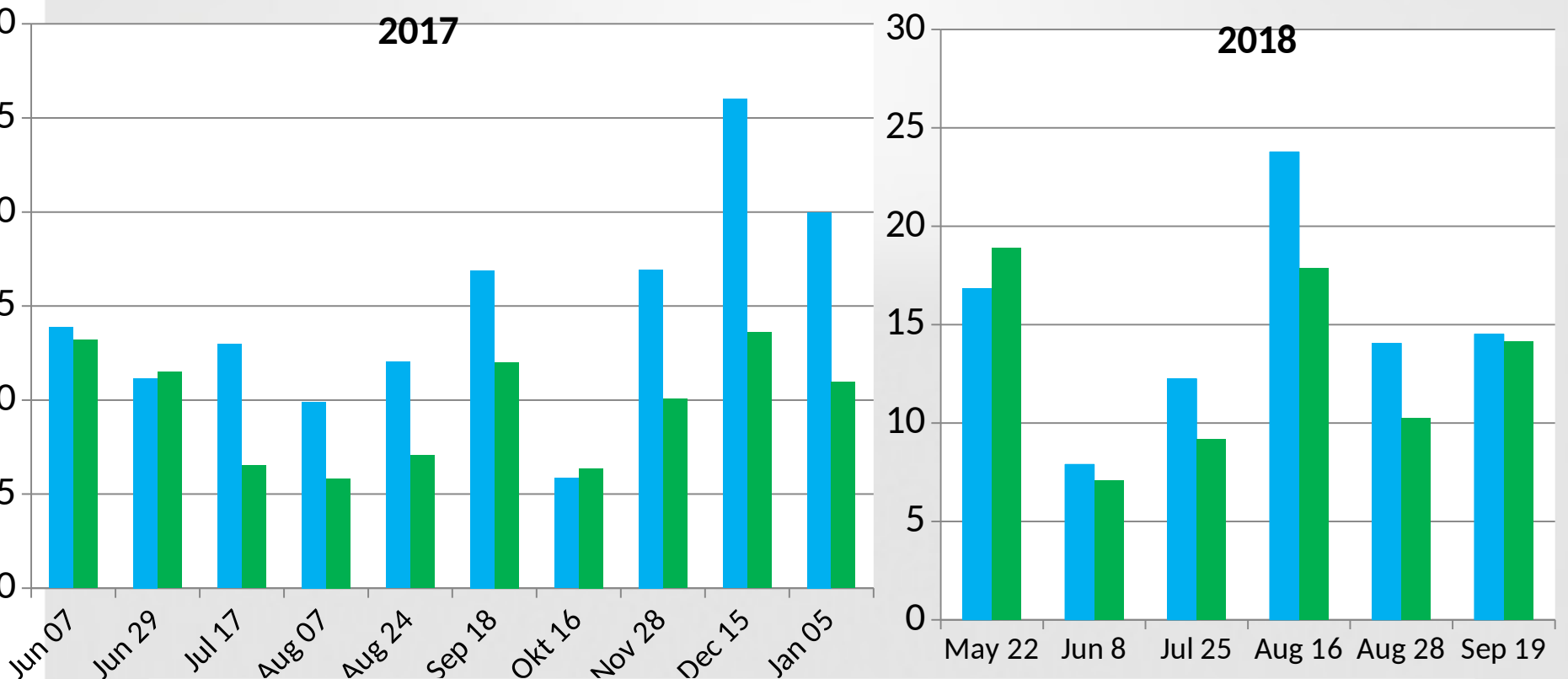
9/06/2017

10/06/2017

PCS

## container field

## pot-in-pot



2017: Drain volume PIP was 37% lower when irrigation was 36% higher

2018: Drain volume PIP was 12% lower with same irrigation volume

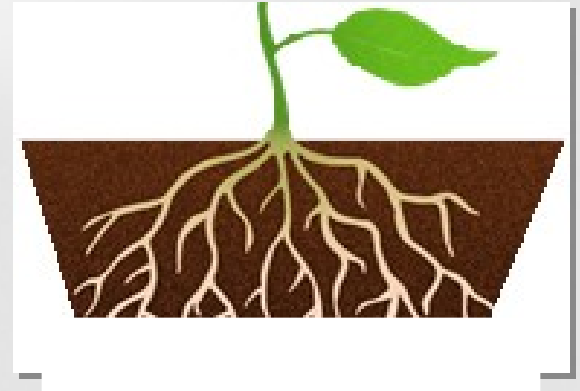




↓ water storage capacity needed

Economical

Efficient



Ecological



↓ nutrients disposed in surface water







Any questions?

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