



AGRI-PHOTOVOLTAICS

Trends und Technologies for multi-use

13.02.2025 | MATTHIAS MEIER-GRÜLL, IBG-2 – FORSCHUNGSZENTRUM JÜLICH GMBH

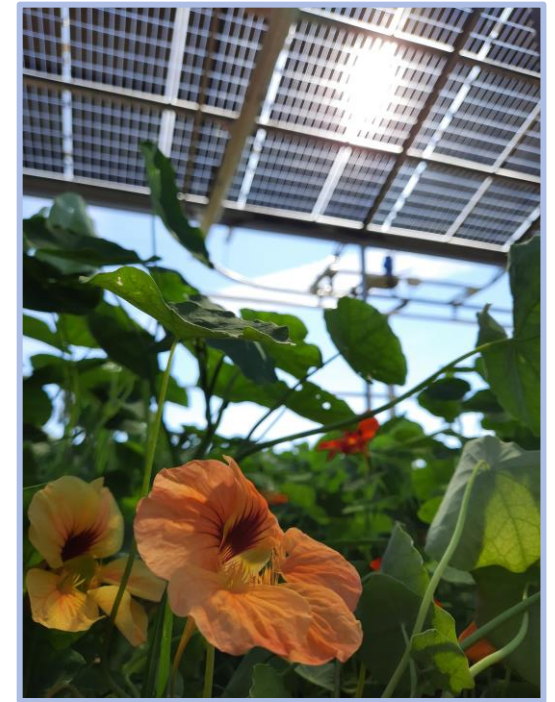






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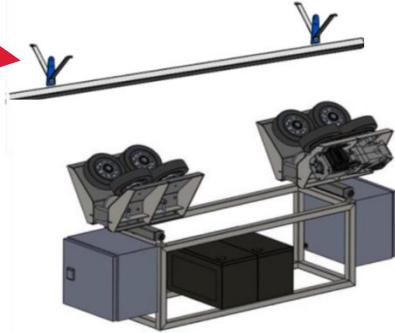


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Integrated rail system

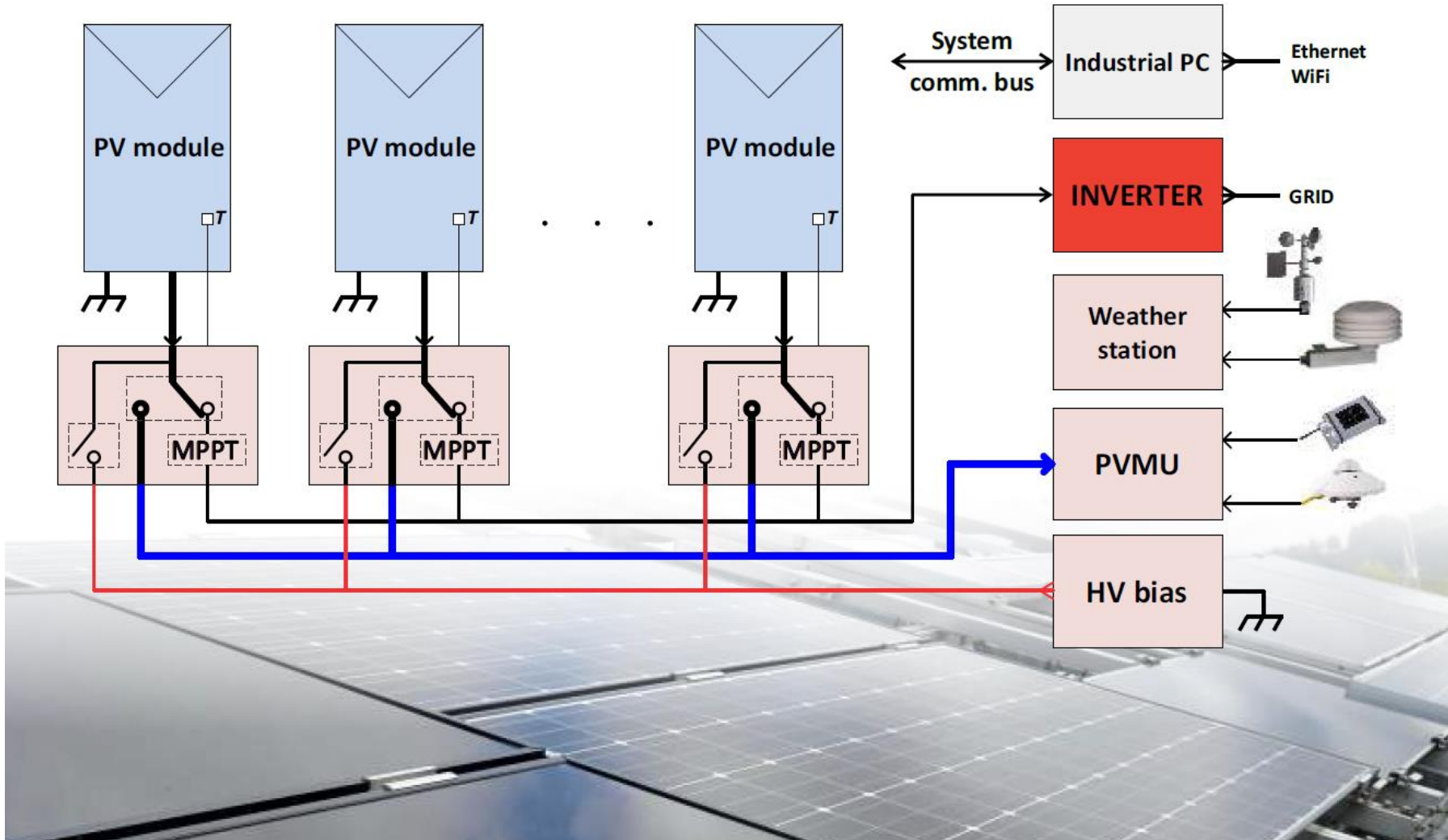


Camera Carrier



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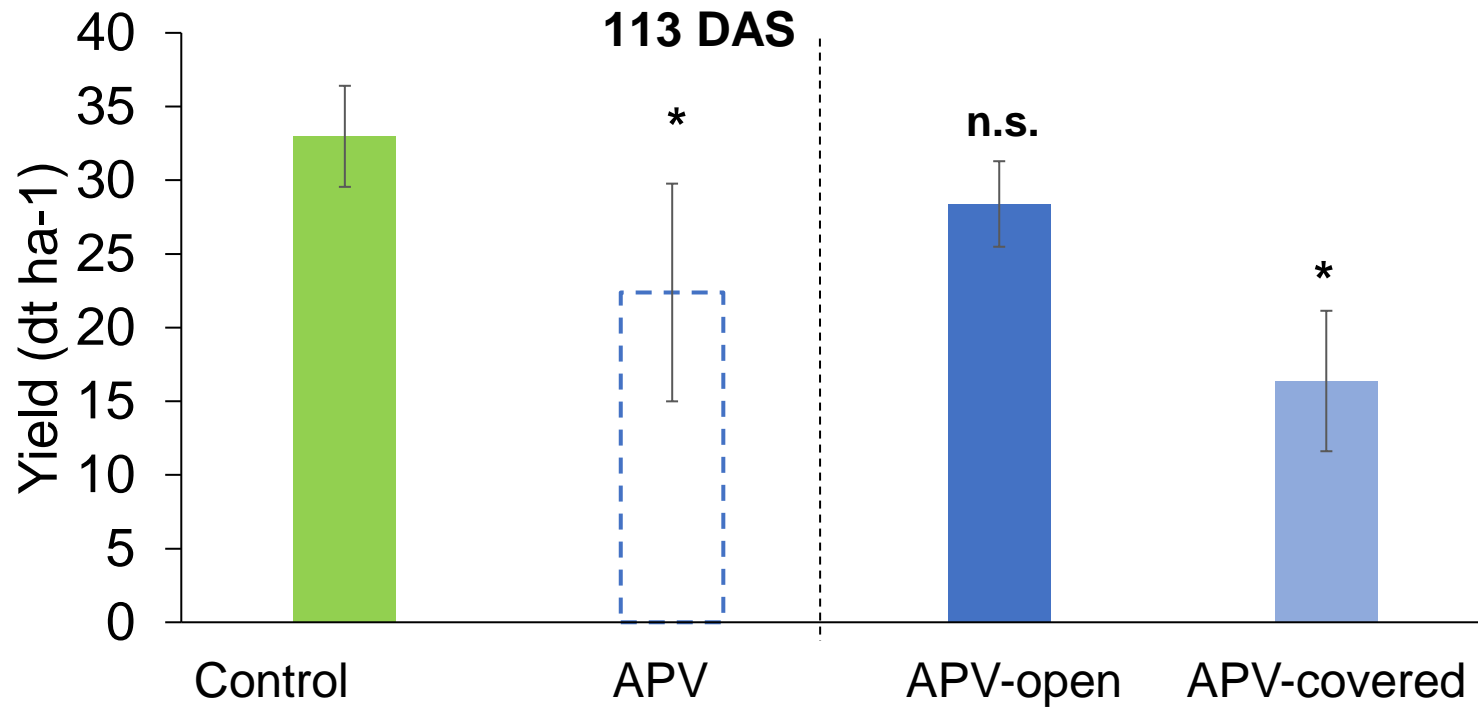
PV Yield



Results from the field

VICIA FABEA YIELD UNDER AGRI-HORTI-PV

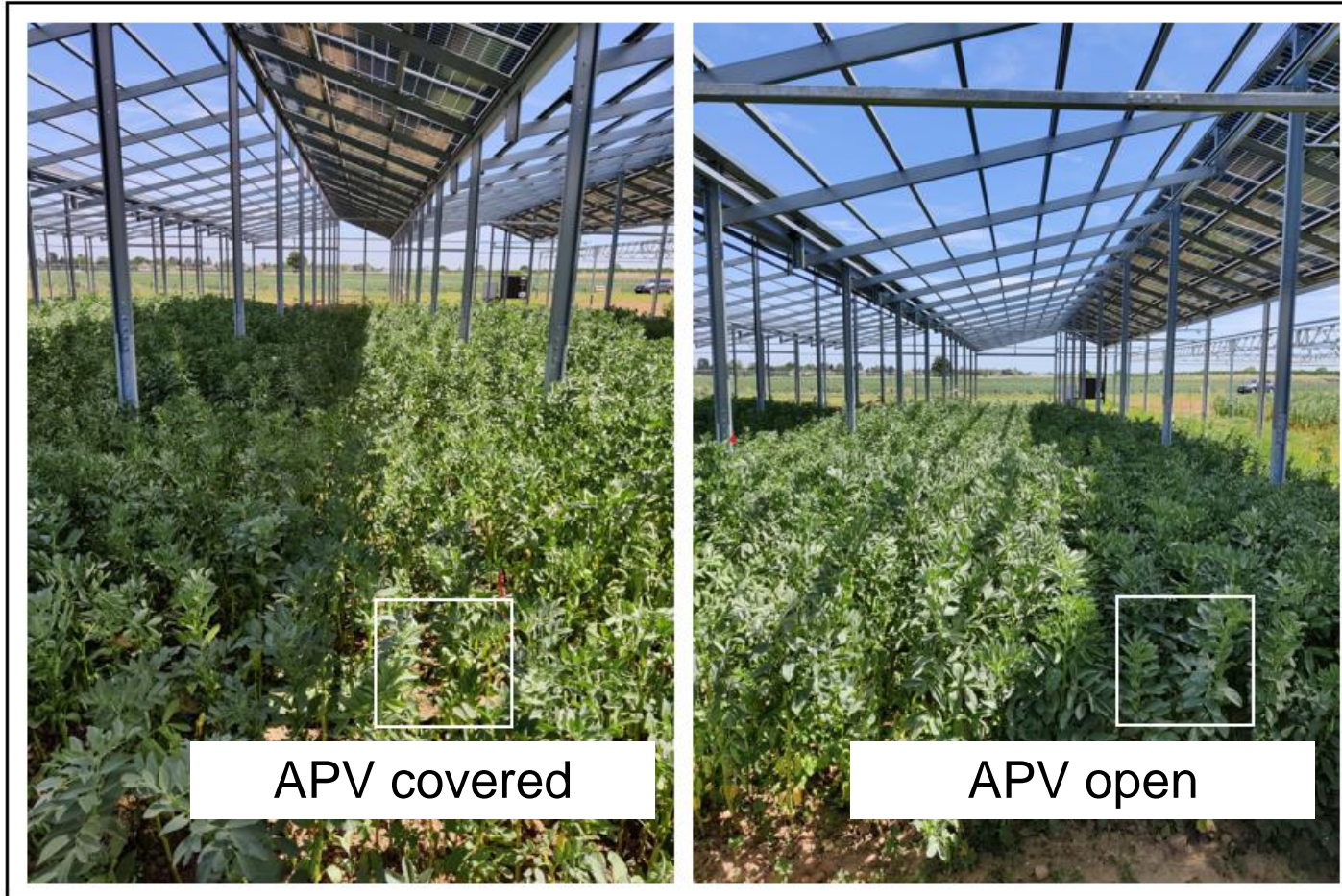
Bean yield decreased 14% under PV open area and 50% under PV covered area



Similar daily light integral (DLI) under covered and open area of the PV may point to interaction of water availability to the plant

LIGHT CONDITIONS UNDER FIXED OPEN AGRI-HORTI-PV

Vicia faba was grown in plots stretching 7 meters from south to north across open and covered area

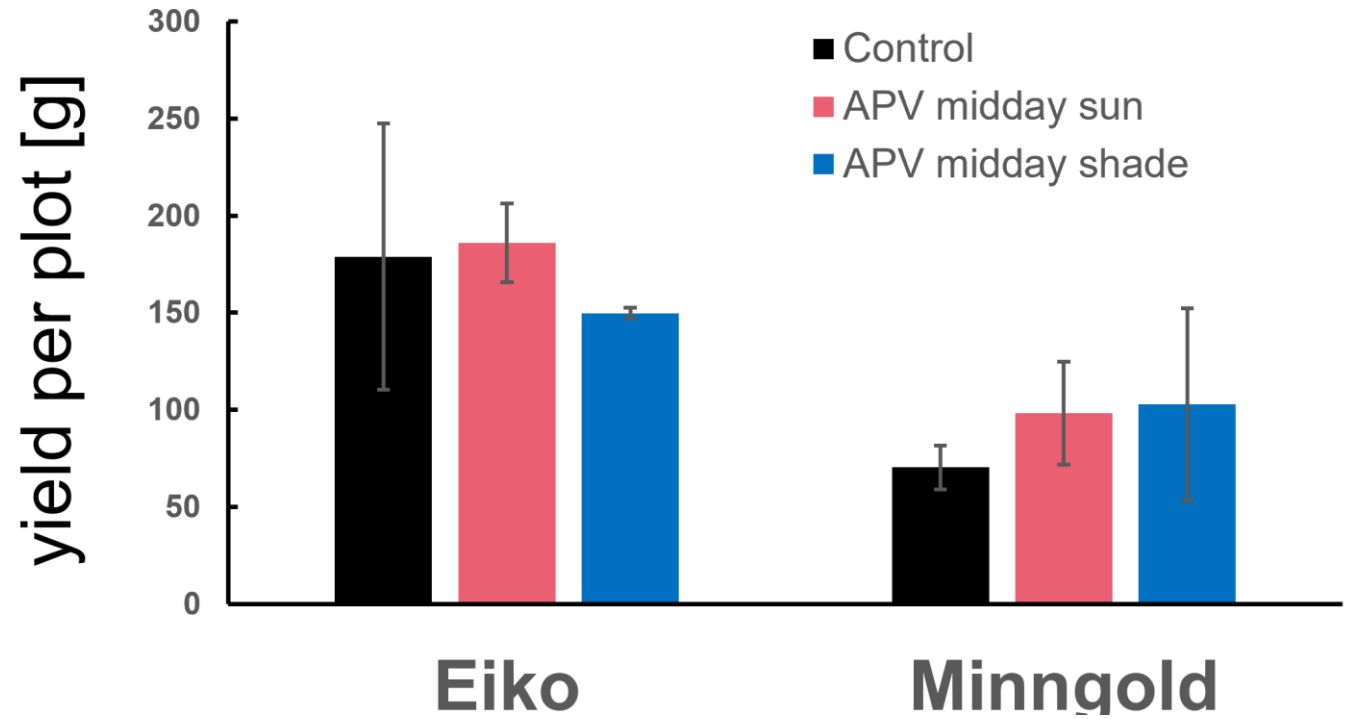


DLI (mol m ⁻² d ⁻¹)	Cloudy day 27 Jun 2022	Sunny Day 28 Jun 2022
Control	26	63
APV-area	12	32
reduction	54%	49%

Control

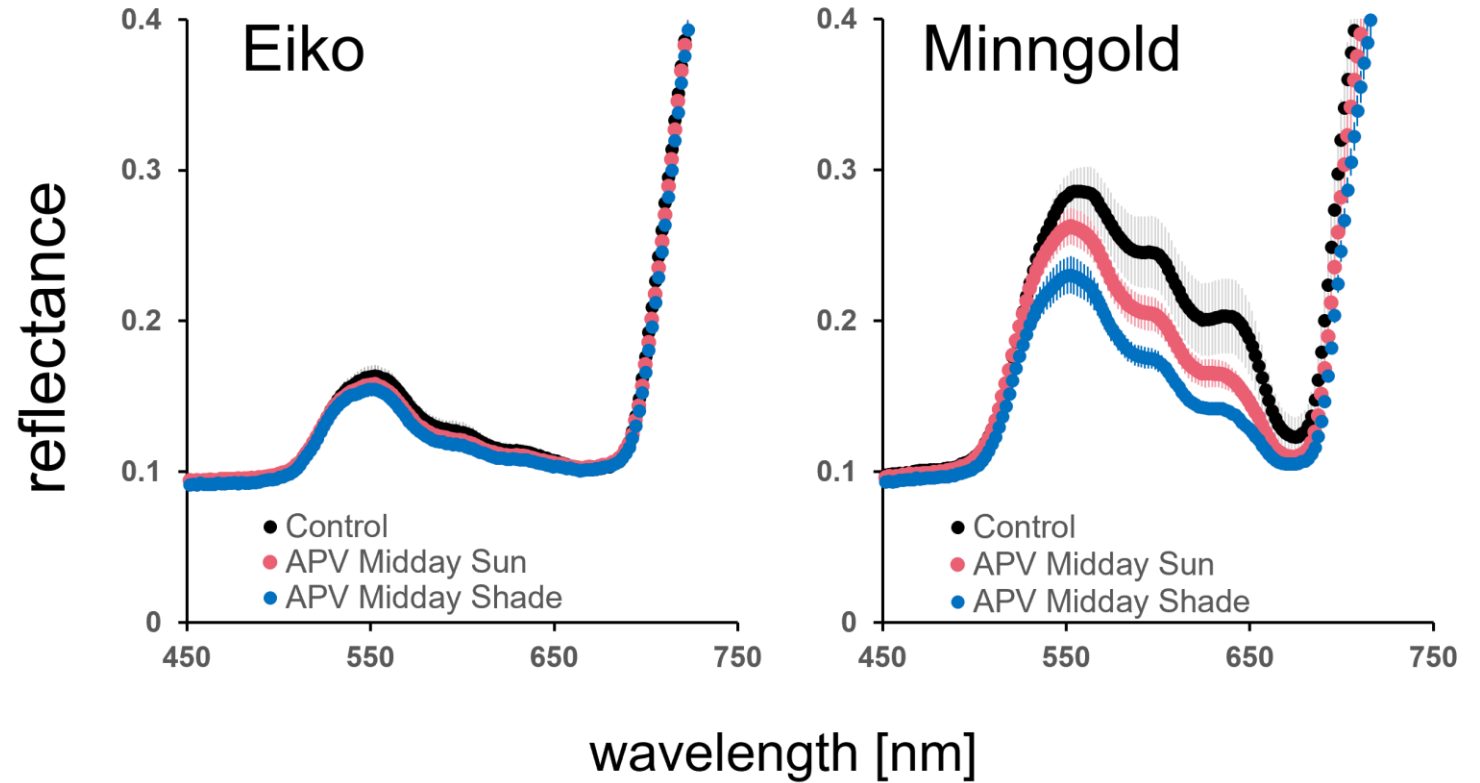
APV MORSCHENICH

Field trial with two Soybean varieties differing in chlorophyll content



APV MORSCHENICH

Field trial with two Soybean varieties differing in chlorophyll content



Other systems...

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IBG-2 Research – International cooperations



YESPV NIBEN Projekt
Nigeria



Thailand Kooperation
NSTDA & KMUTT

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Scaling Potential

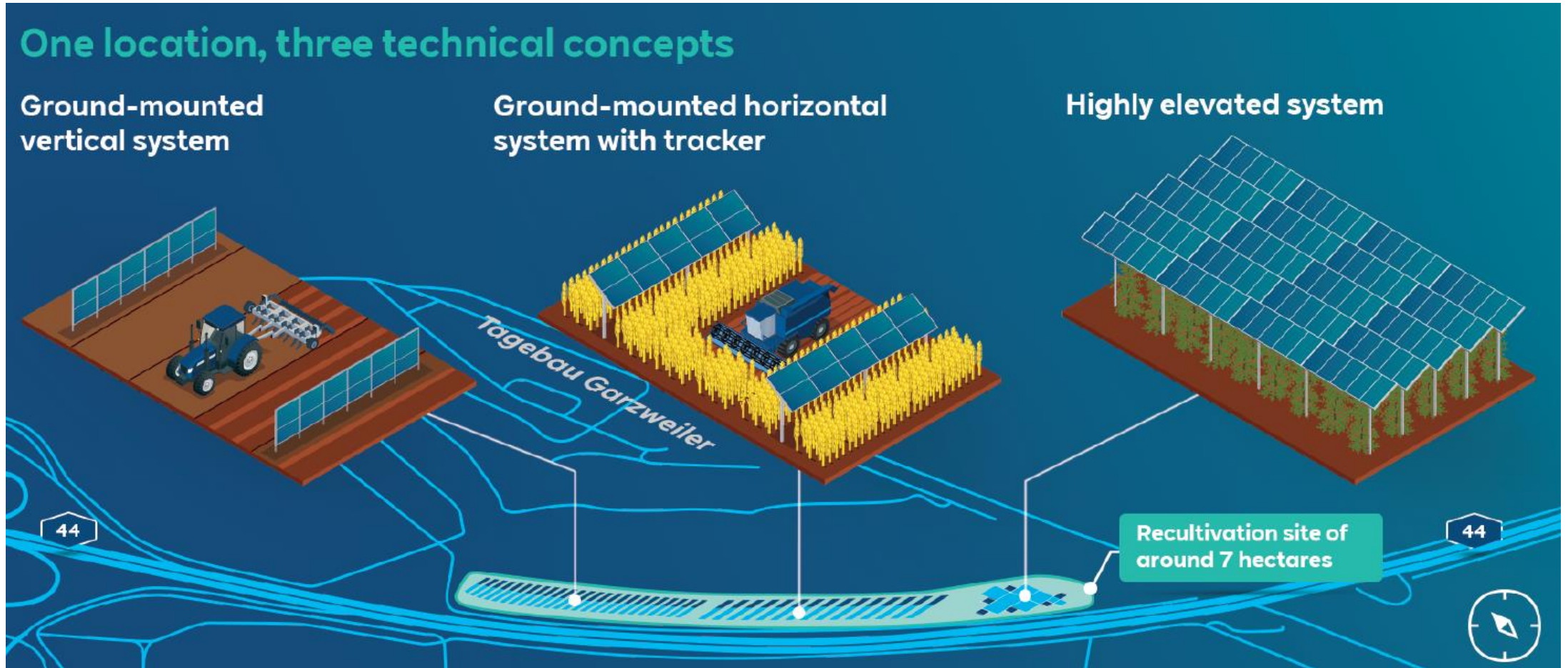


Bild-Quelle: RWE

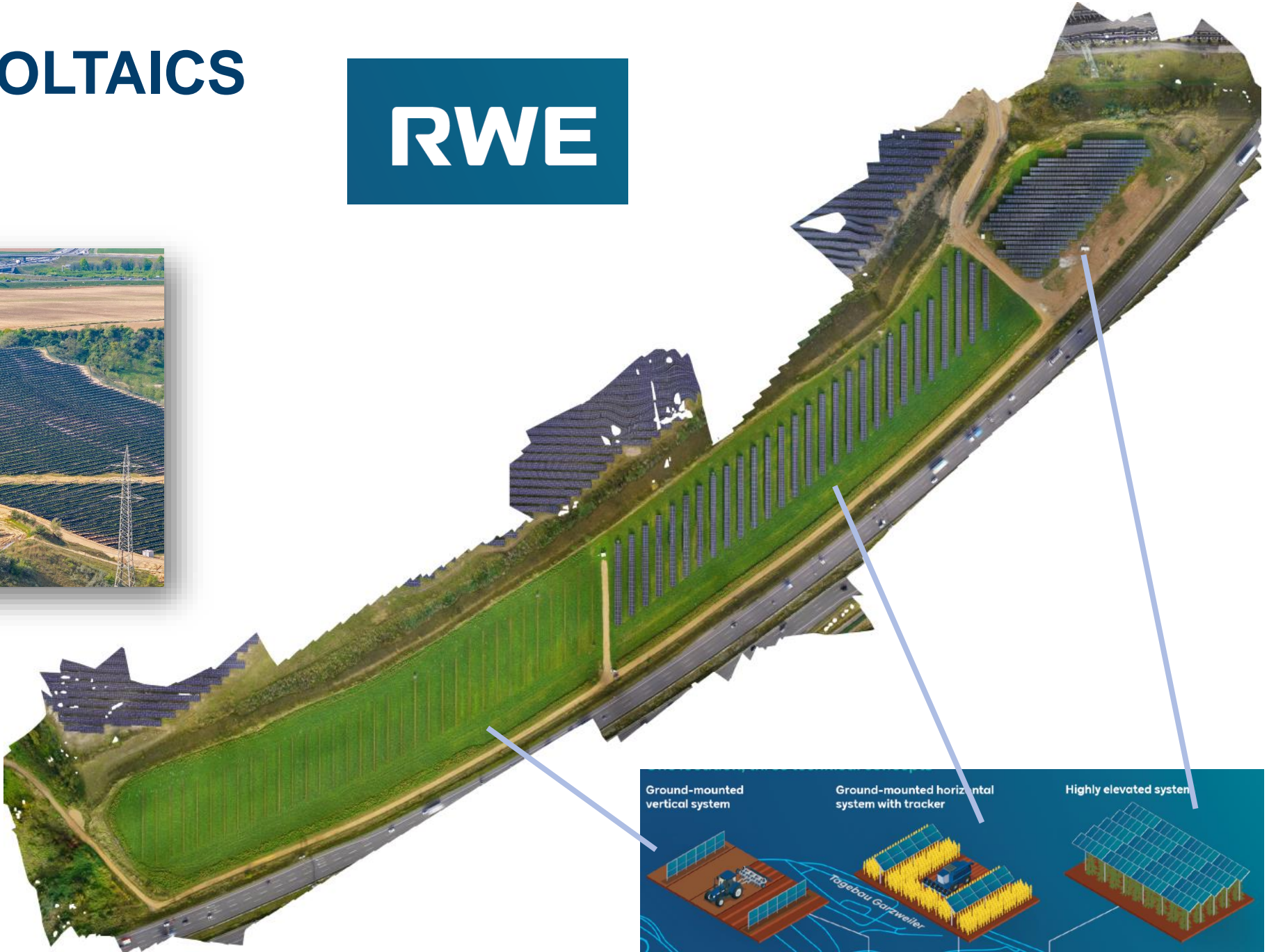
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Scaling Potential



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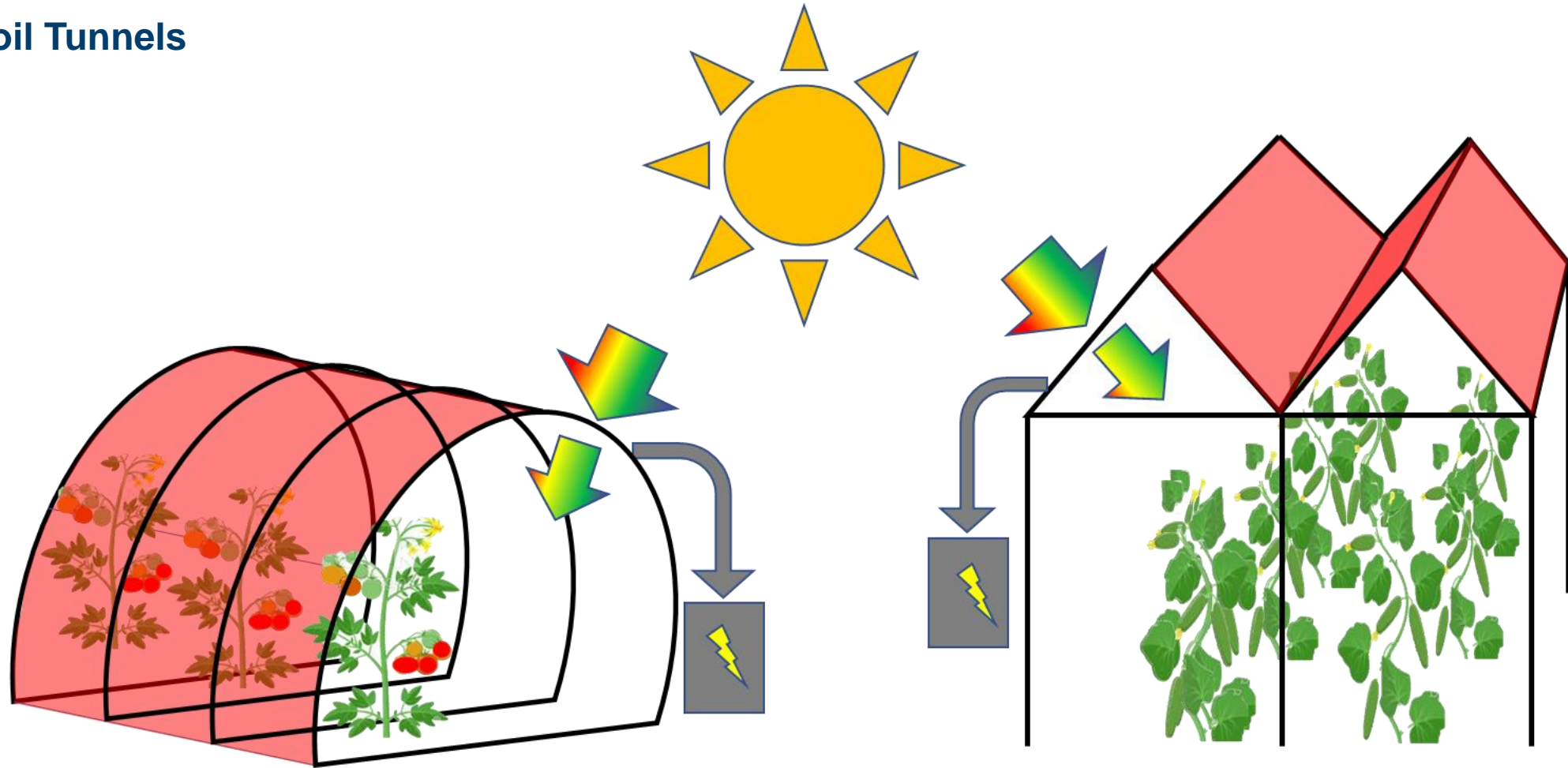
Scaling Potential



Horti-PV

HORTI-PV

On Foil Tunnels



HORTI PV

Foiltunnels in Jülich - 2024

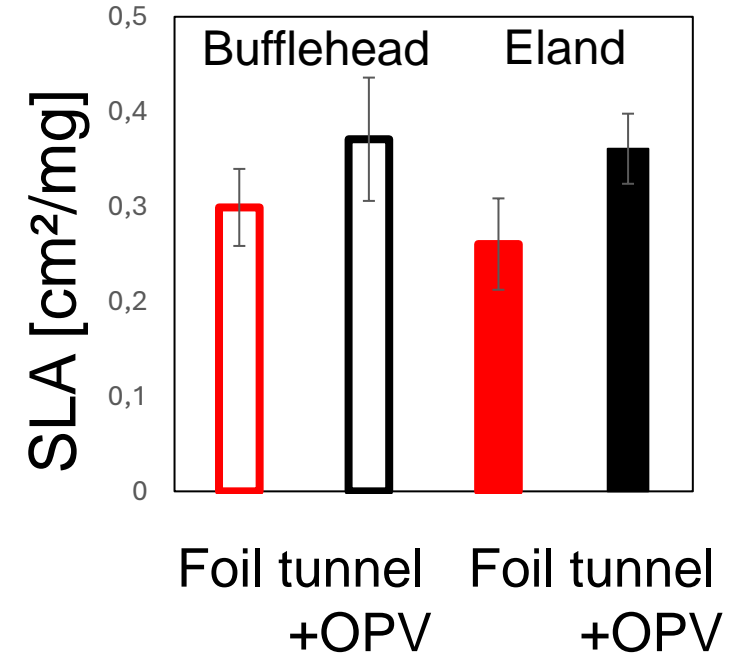
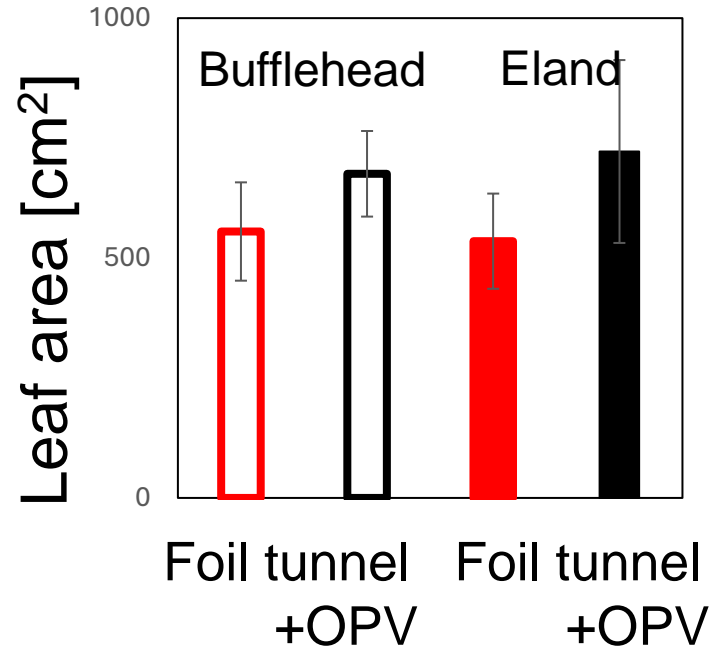
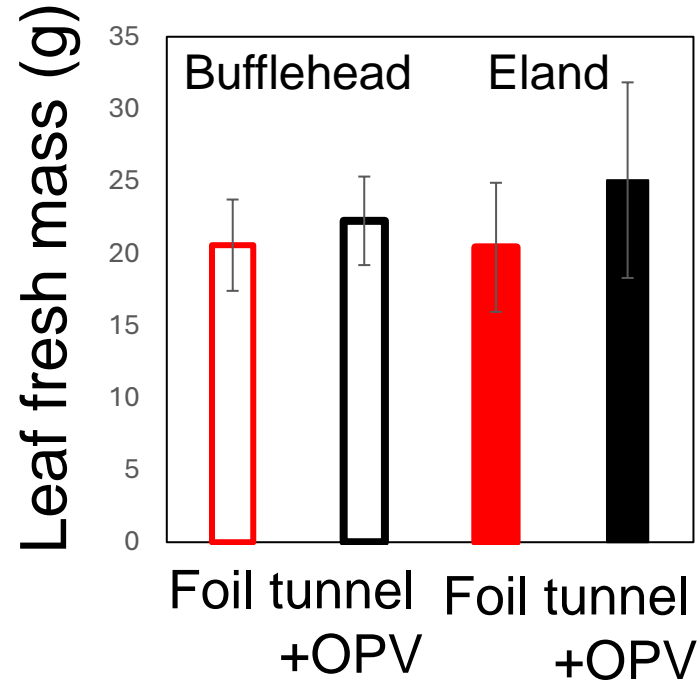


H.-J. Egelhaaf

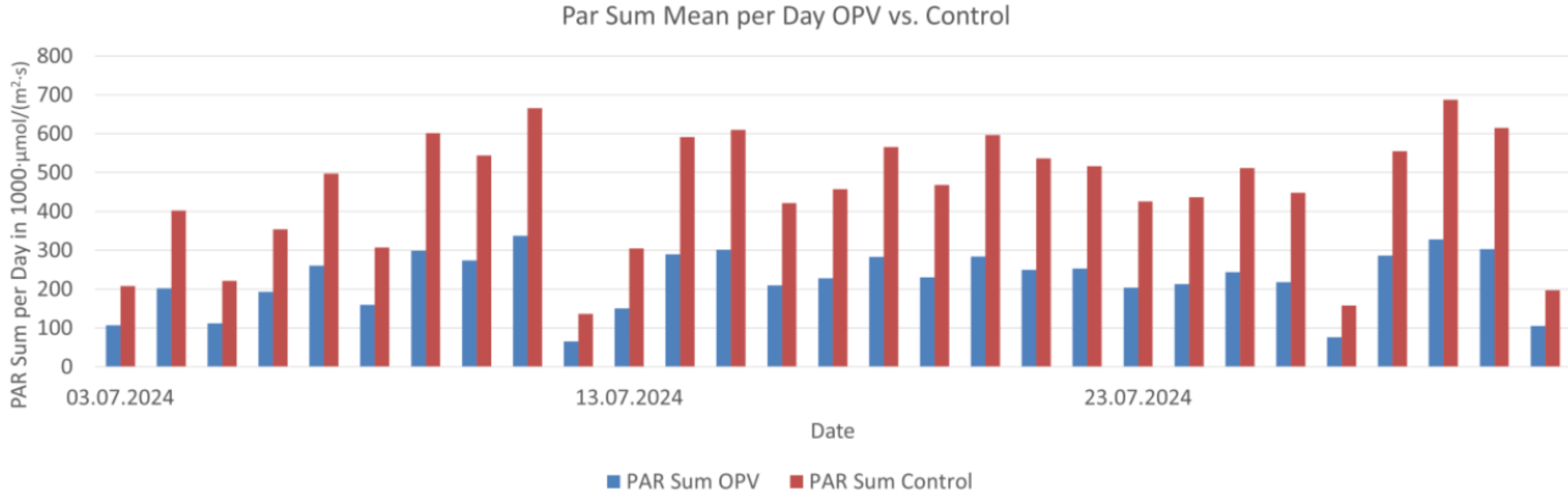




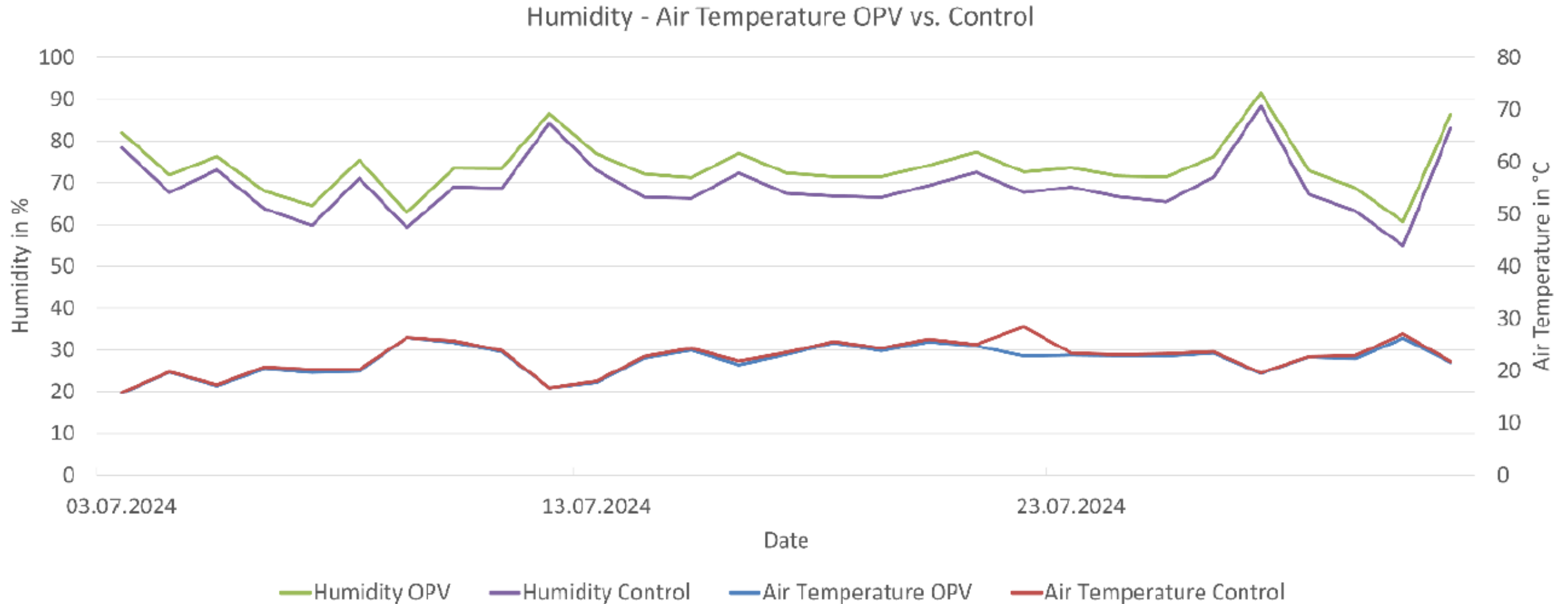
SPINACH GROWTH IN FOIL TUNNEL WITH OPV



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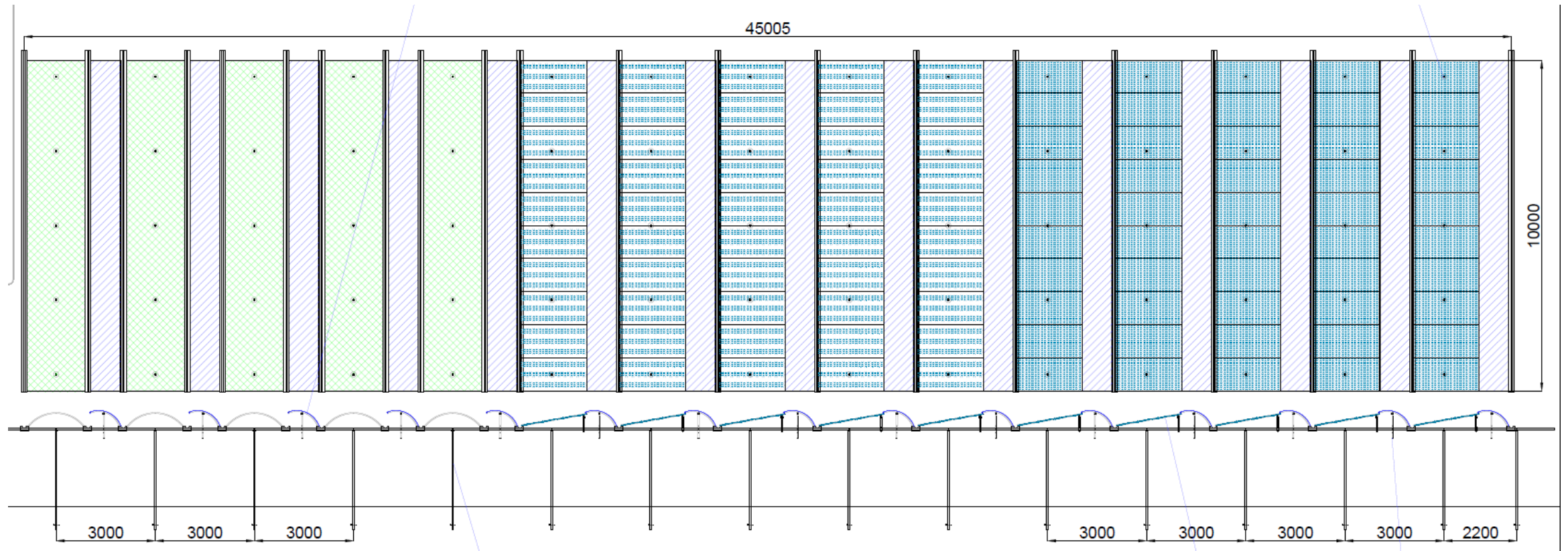
HORTI PV

Respberry in Selfkant, Heinsberg



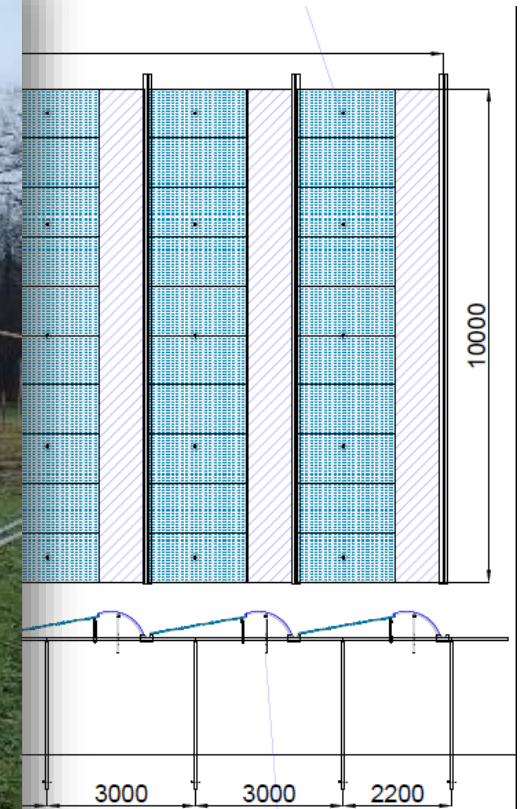
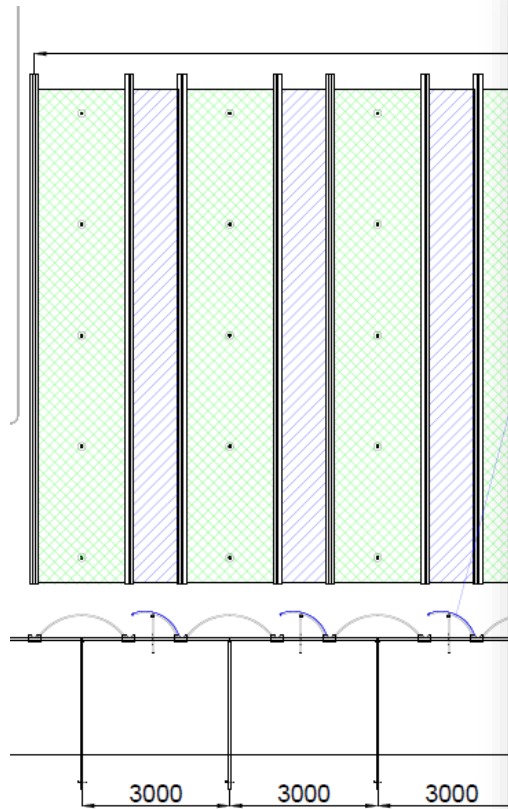
HORTI PV

Campus FZ Jülich – coming soon



HORTI PV

Campus FZ Jülich – coming soon



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