



TOWARDS RESILIENT STRAWBERRY CULTIVATION: PRACTICAL INSIGHTS FROM THE FIELD

DCM Headquarters

De Ceuster Meststoffen N.V.

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Belgium

www.dcm-info.com



Core Numbers



+225

Employees



+€90_{mio}

Turnover 2023



+45

Years of experience
in professional
high-quality
products



6

DCM branches in Belgium, the
Netherlands, France,
Germany, Austria and the
USA

Various partnerships with
distributors

DCM Headquarters & Production Facilities, since 1976



2001

MINIGRAN®
Innovation



2009-2011

1st and 2nd high-rise building
Capacity:
25.868 pallets



2013

2nd MINIGRAN® tower



2019

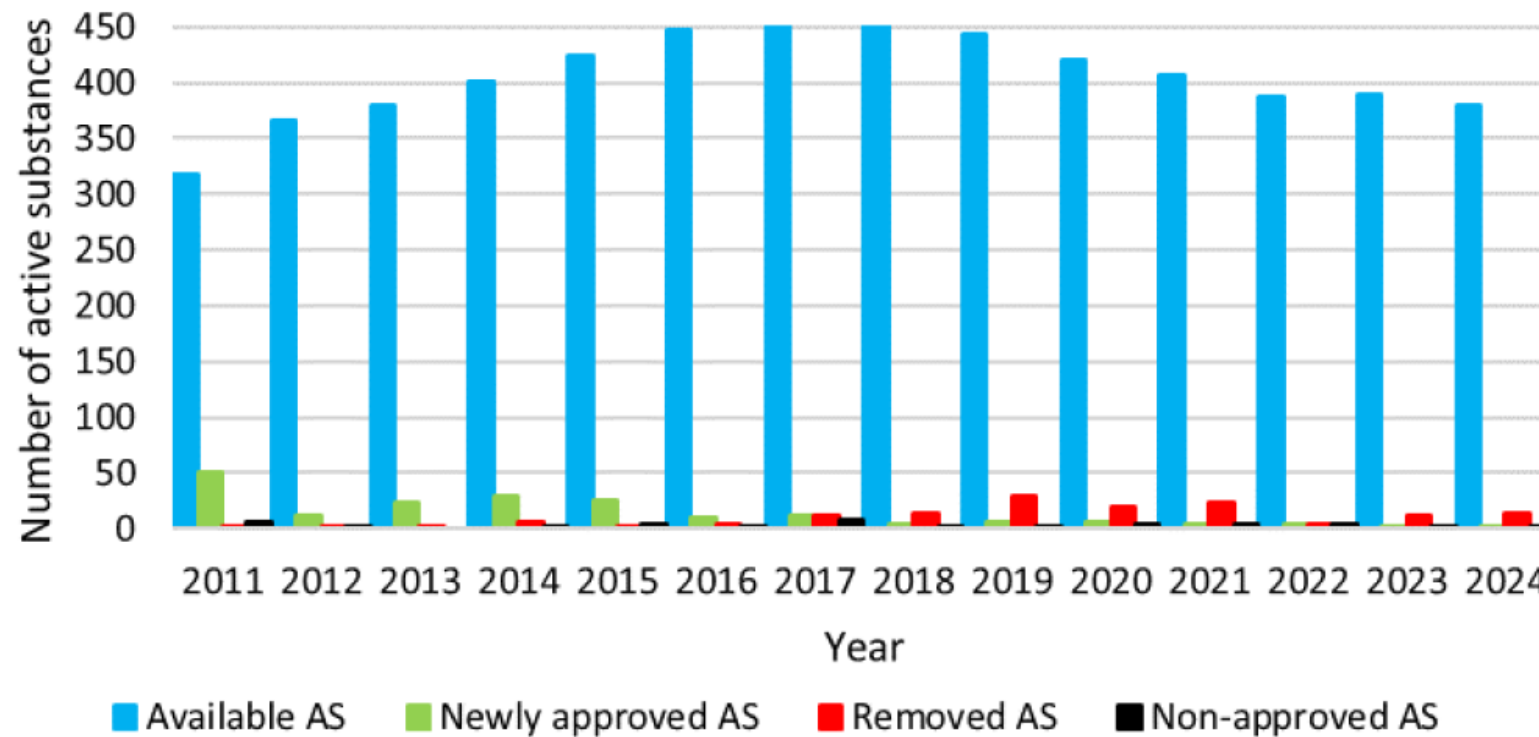
GroupDC NZE building
New production hall
liquid fertilisers



IMPORTANT CHALLENGE IN STRAWBERRY: LESS PESTICIDES



Availability of active substances



RESILIENT GROWING AS A PART OF THE SOLUTION



An undefined definition:

“Resilient growing is a methodology which is aimed at creating optimal conditions for a healthy plant. Providing the plant with a surplus of energy to give it the means to protect itself from external factors. By making a plant more resilient from within, it is better protected by abiotic and biotic stressors”

Free interpretation of this definition:

To invest in a healthy basis for a stronger and fitter crop

RESILIENT GROWING



Microbiology and fertilization: stability in an ecosystem

Biodiversity



Stability



Resilience



1



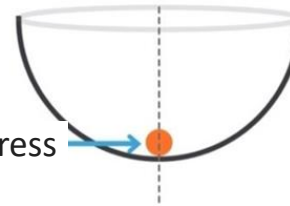
High biodiversity in woods

2



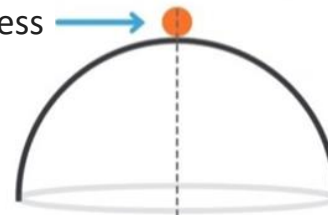
Low biodiversity in monoculture

Stable system

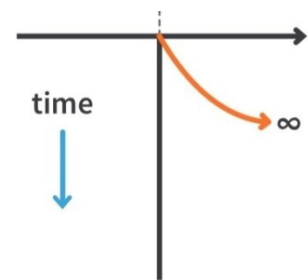
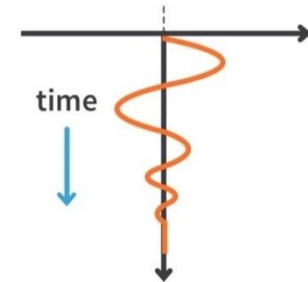


External stress

Instable system



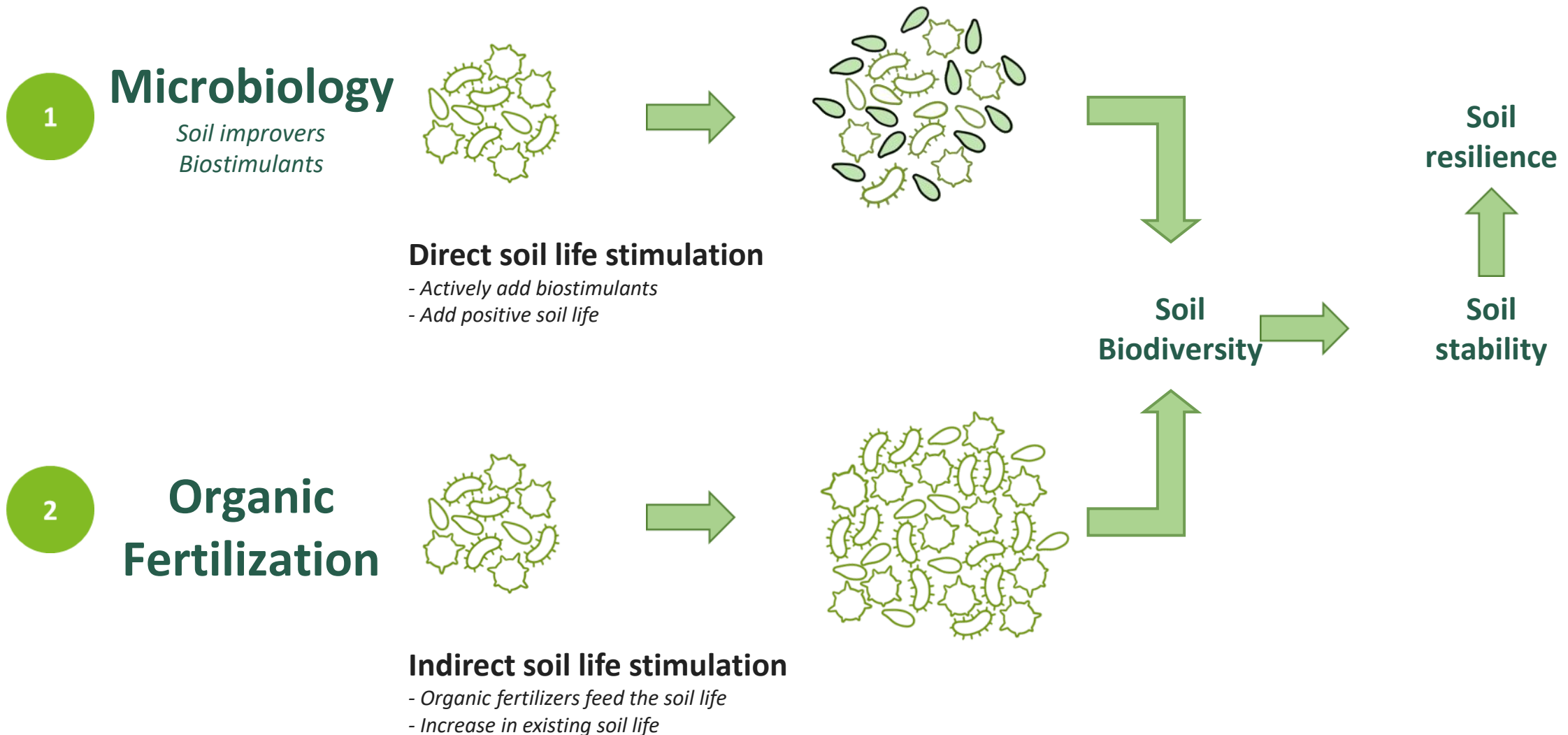
External stress



SOIL RESILIENCE



Microbiology and fertilization: stability of a soil ecosystem

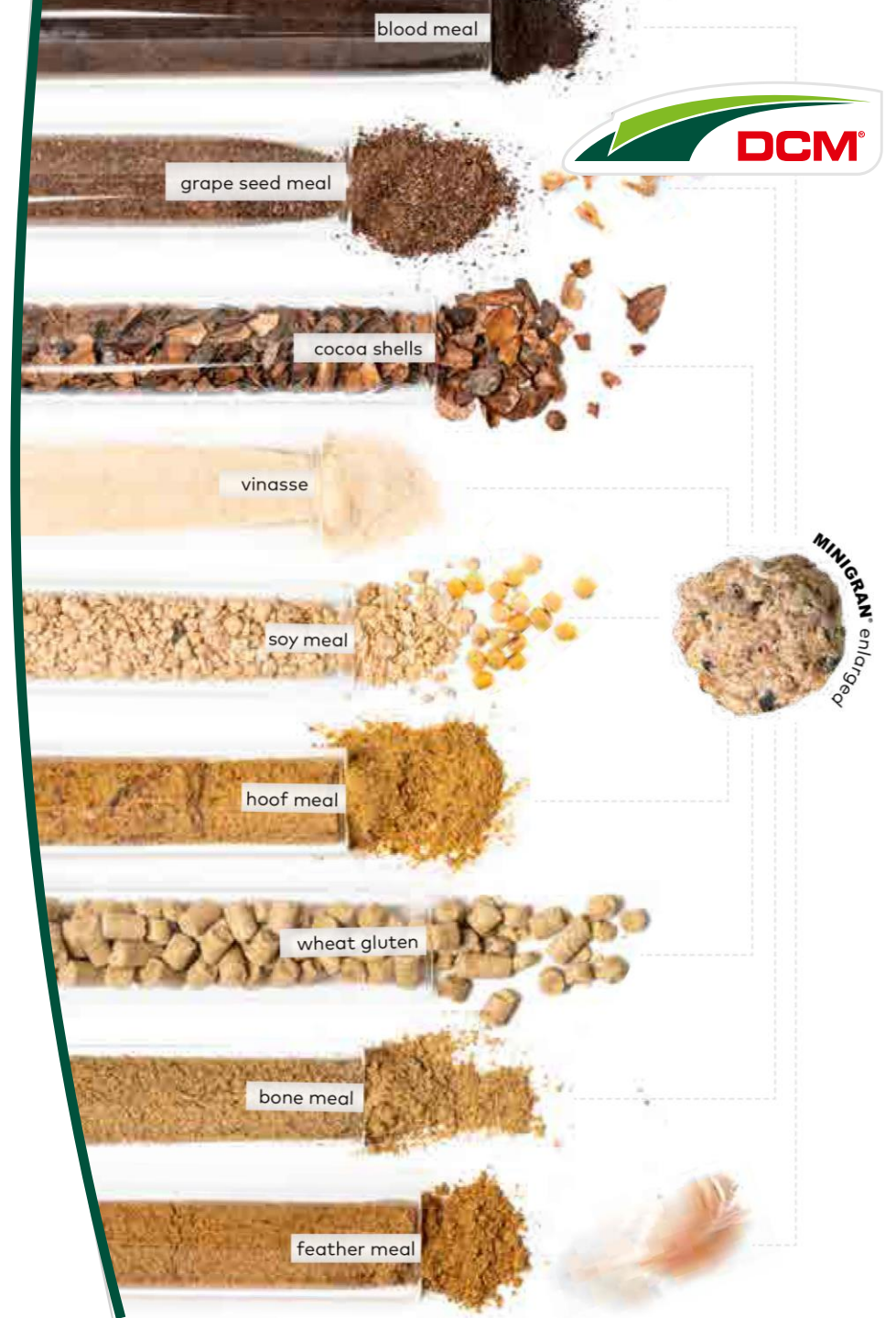


MINIGRAN TECHNOLOGY

+30 **MINIGRAN®** technology for our fertilisers: up to **30 different** natural ingredients in one single granule

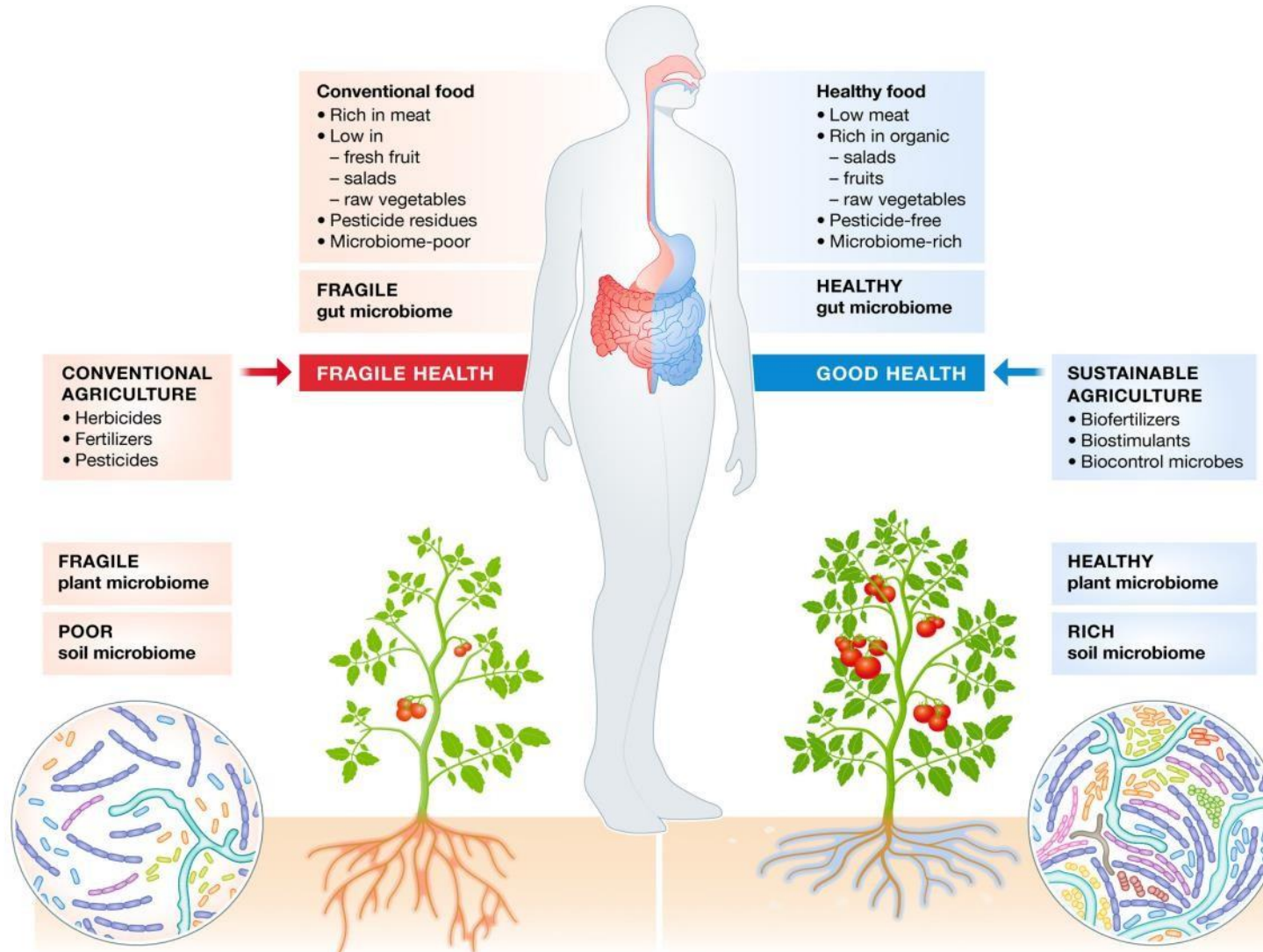


Each granule contains **exactly the same amount of nutrients** for a homogeneous result



RESILIENT GROWING

A PARALLEL WITH THE HUMAN IMMUNE SYSTEM

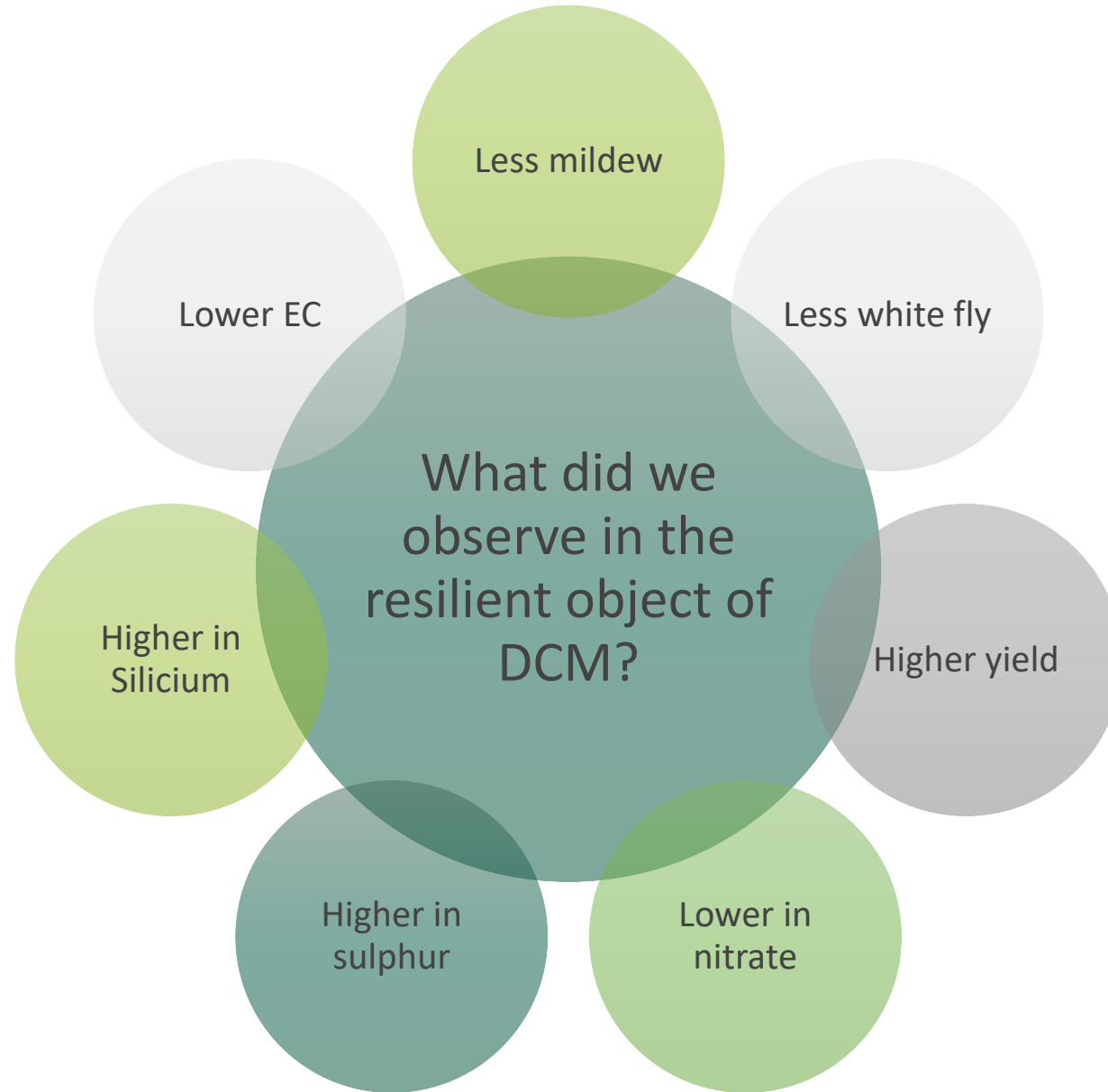




LAST 3 YEARS:
A LOT OF STRAWBERRY
TRIALS



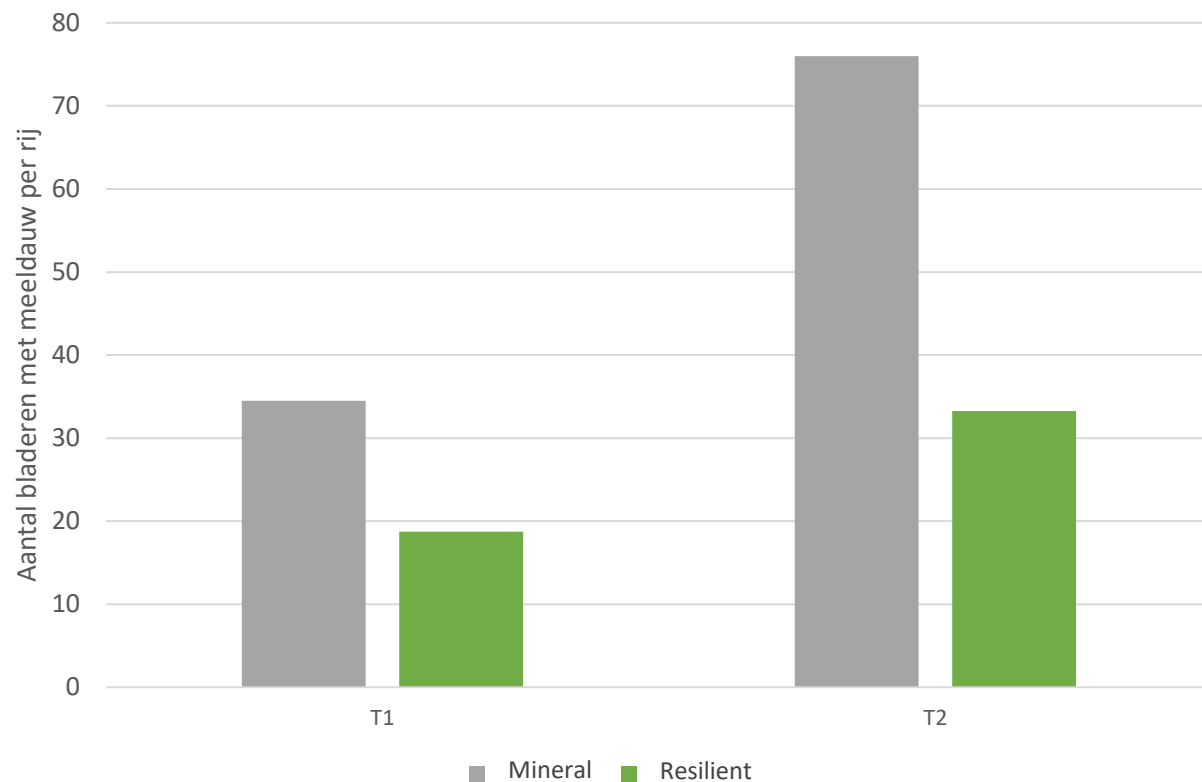
WHAT WAS ACHIEVED WITH THESE TRIALS?



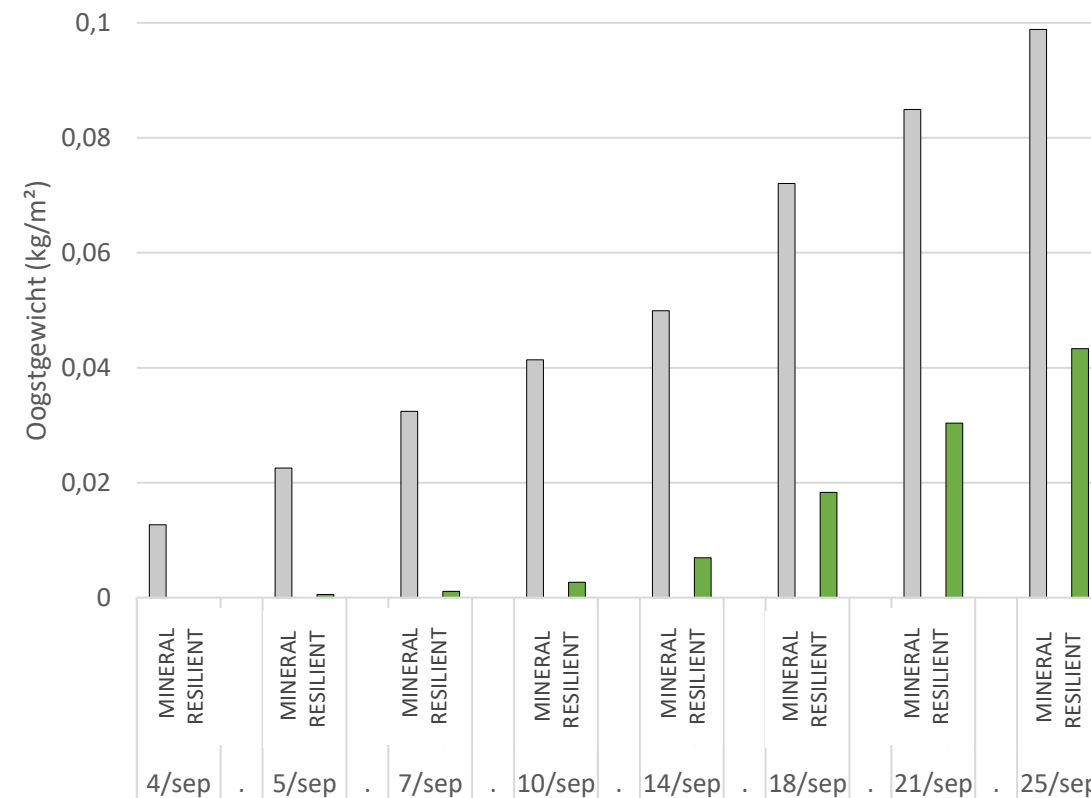
MILDEW

Less
mildew

MILDEW IN LEAVES



MILDEW IN FRUIT

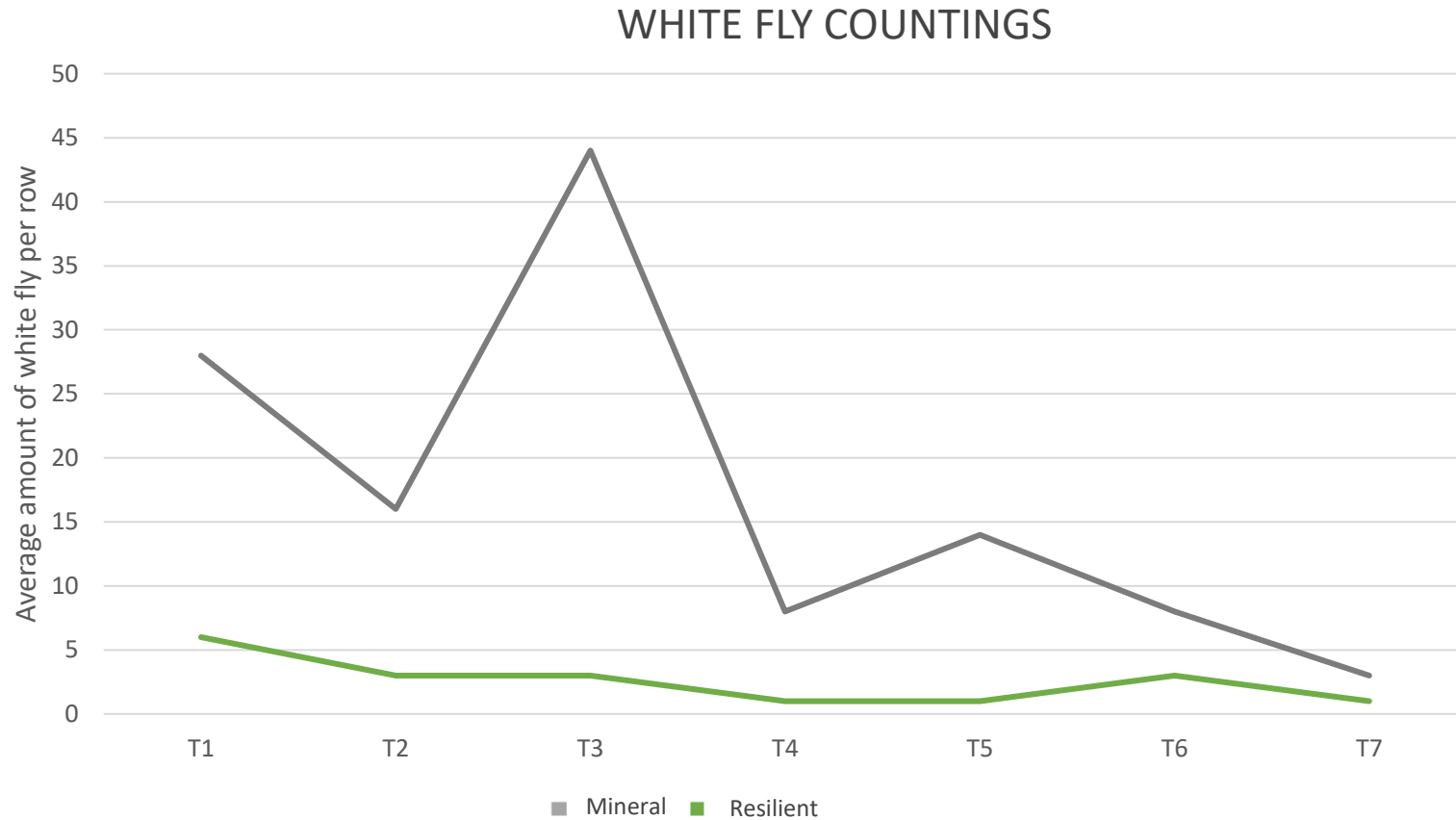


- Conclusion:** On average **2x less** mildew on the leaves and **4x less** mildew on the fruits with resilient DCM object compared to standard mineral



WHITE FLY

Less white
fly

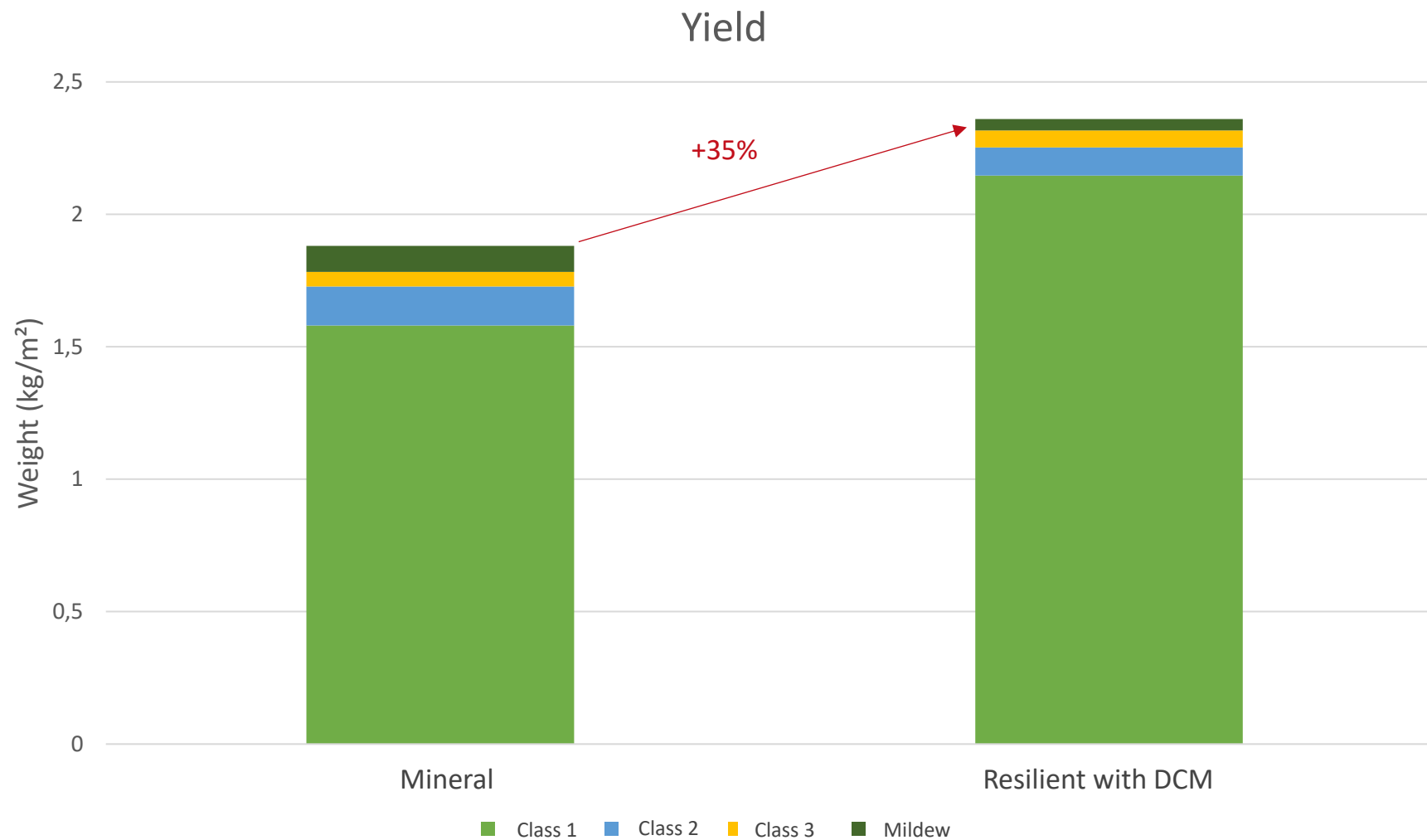


- **Conclusion:** On average 4x less white fly in resilient DCM object compared to standard mineral



CUMULATIVE YIELD

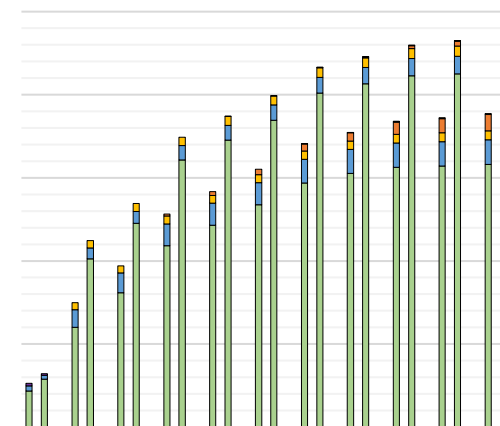
Higher yield



Yield class 1+2:
(23 aug – 25 sept)

+35% Mineral: 1,7 kg/m²
Resilient with DCM: 2,3 kg/m²

Trend visible from the start

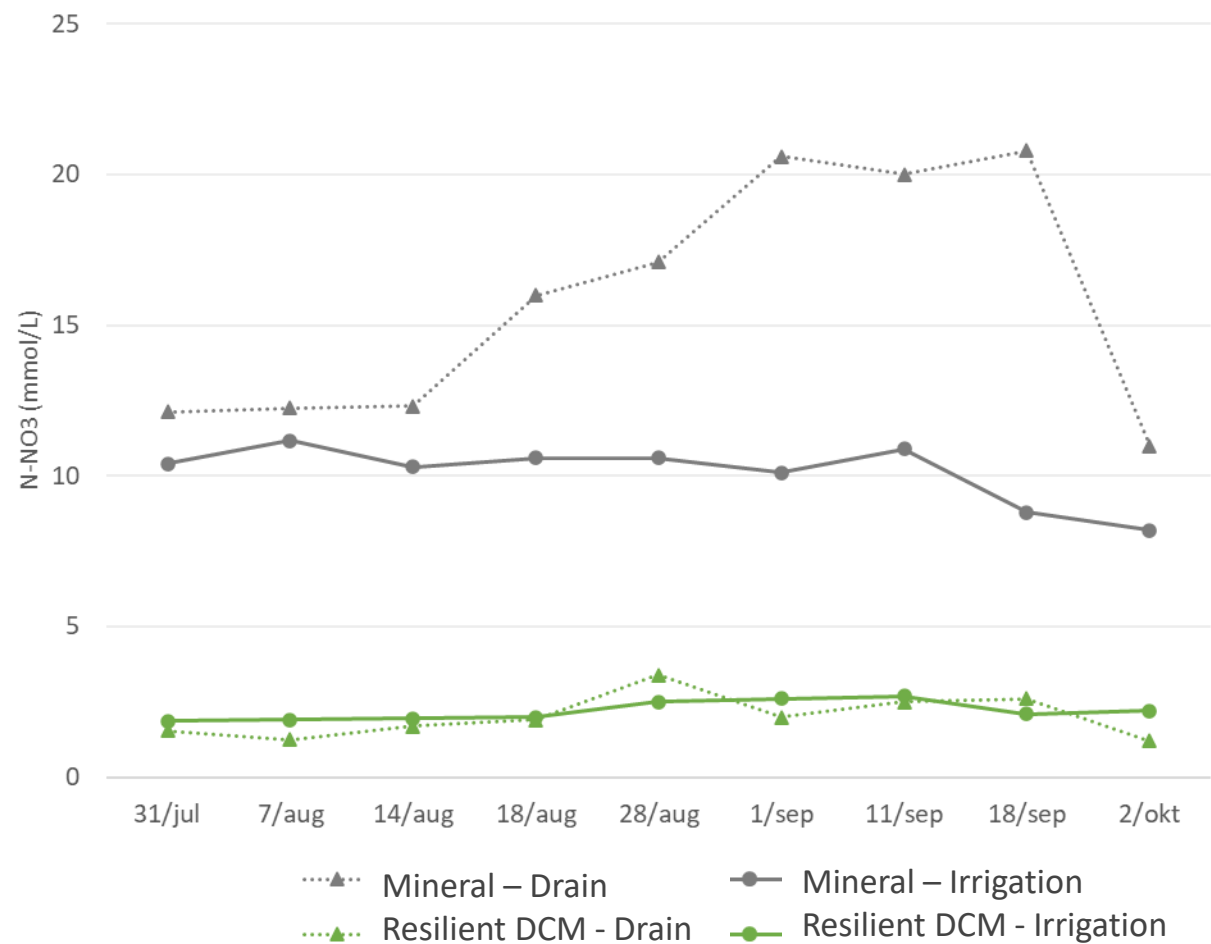


NITRATE PROGRESSION

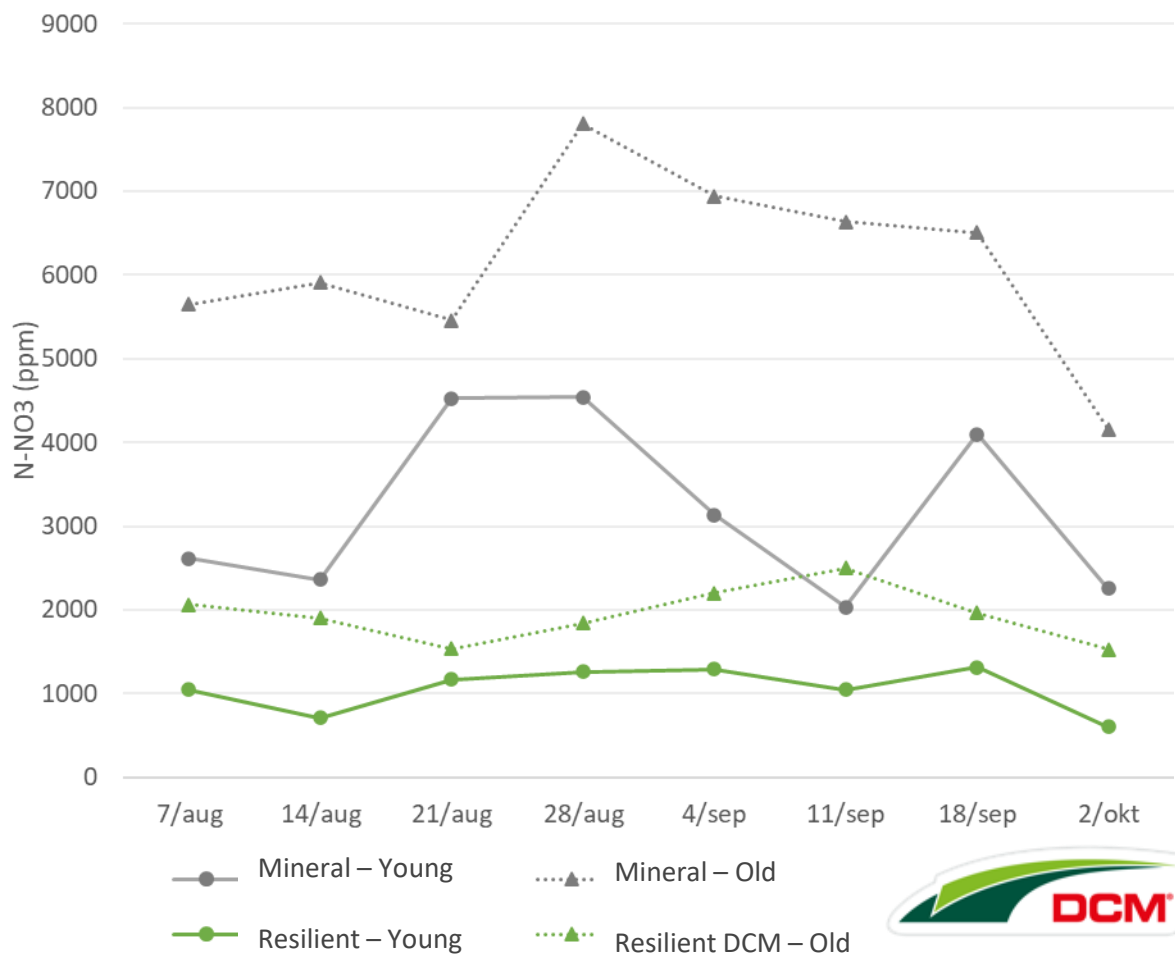
Lower in nitrate

NITRATE	Irrigation mmol/L	Drain mmol/L	Young leaf ppm	Old leaf ppm
Mineral	10,1	15,8	2942	6133
Resilient DCM	2,2	2,0	1029	1828

ANALYSIS OF IRRIGATION AND DRAIN WATER



LEAF SAP ANALYSIS



ALSO ON COMMERCIAL SCALE GROWERS WORK MORE
AND MORE RESILIENT!



TAKE-HOME MESSAGE

- Less pesticides is a challenge for the strawberry grower
- Resilient growing is a way to face these challenges
- Biodiversity below and above ground/substrate plays a crucial role in this resilience
- Commercial growers are shifting towards a more resilient strawberry crop





THANK YOU FOR YOUR ATTENTION!

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