

# Club van 100: the Business Club of the Unit Greenhouse Horticulture of Wageningen University and Research.

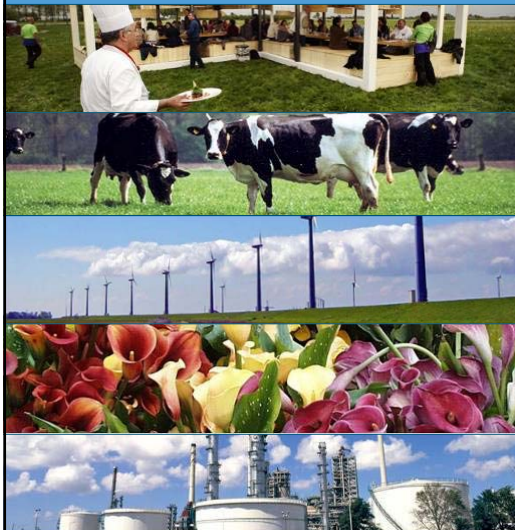
November 2016

Sjaak Bakker and Jan Willem de Vries, WUR Greenhouse Horticulture



WAGENINGEN **UR**  
For quality of life

## Wageningen University and Research



Social Sciences Group

Animal Sciences Group

Environmental Sciences Group

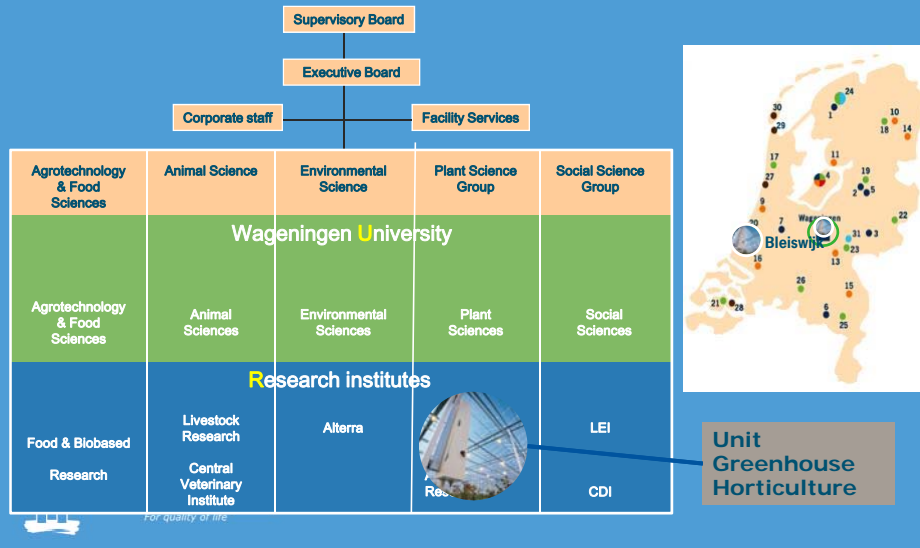
Plant Sciences Group

Agrotechnology and Food Sciences Group

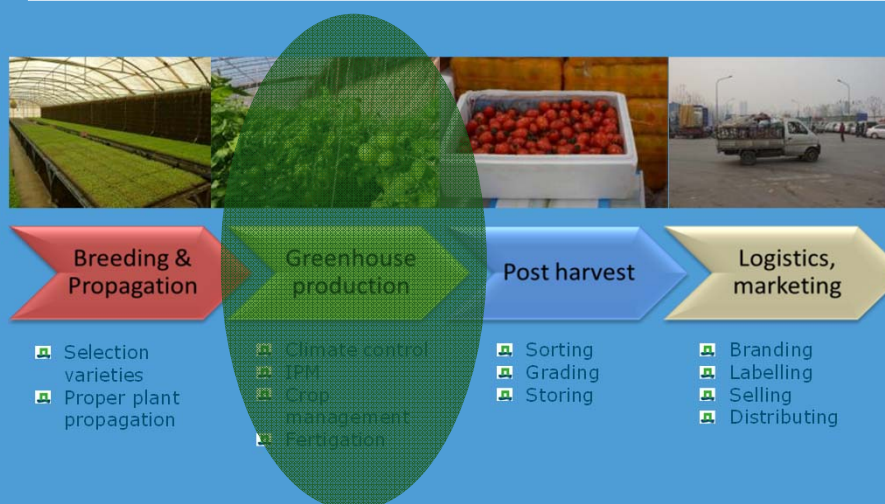


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## Organisational structure Wageningen University and Research



## Applied research: production systems for protected horticulture



## Innovations Greenhouse Horticulture last 50 years (primary production)

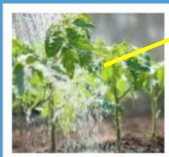
### Independence of...

- Environmental conditions (greenhouses, climate control)
- Soil (substrates)
- Water saving (hydroponics)
- (Fossil) energy (energy saving, sustainable sources)
- Chemicals (IPM, biological control)
- Labour (Logistics and robotics)

Innovation: the key for (international) success



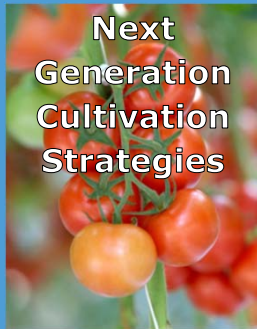
## Fields of expertise



- Climate and energy
- Water and emission
- Advanced cropping systems
- Sustainable crop protection
- Quality of crop and product
- Added value crops



## “Het Nieuwe Telen” integrated approach of energy saving crop production



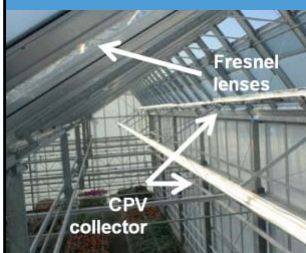
- Test integrated approach in research
- Monitor at growers
- Result: 10-30% energy saving



Already 146 ha  
commercial greenhouses  
with HNT



## Daylight greenhouse: upscaling to practice



- Greenhouse with integrated lenses and heat/ solar collector
- Applied at Ter Laak orchids





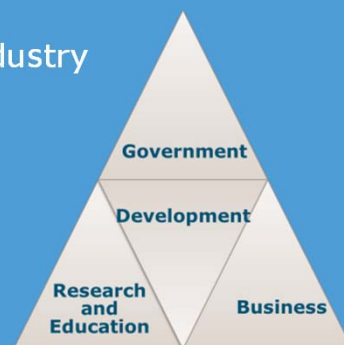
## Hyperspectral imaging – disease detection Top Crop Viewer

Polder et al. 2015



## Dutch governmental policy on funding (public – private partnership)

- Cooperation
- Agreed thematic approach (industry and government)
- Governmental support
- Golden triangle:
  - Knowledge
  - Government
  - Private companies



## WUR Greenhouse Horticulture new market approach

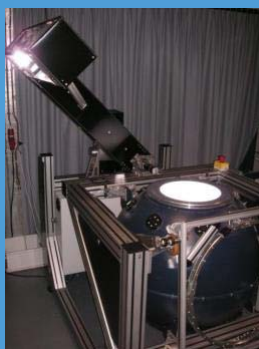


From 100% fixed  
governmental funding  
(1970)

To a business unit with  
various funding sources



## Examples of B2B projects: material development



- **What:** quantify and improve light properties of screen and cover materials
- **Who:** national and international glass, coating and screen producers



## Examples of B2B projects: taste research

- **What:** quantify and improve taste of fresh products
- **Who:** Wageningen UR, international breeding companies, consumers



## Business Club: a benefit for all



## 100% private Business Club

- Idea: low level access to all expertise and facilities Wageningen University and Research Greenhouse Horticulture
- Package deal membership: B2B and Coöperative
- 50% Business to Business (confidential) fixed price
- 50% Coöperative (pre competitive)
- Only for National companies
- Yearly fee (15.000)



## Business Club: First members (25) at kick off November 2014





# 100% private Business Club

- Matching coöperative part with Governmental funding (multiply on investments)
- Results cooperative projects remain confidential until project ends
- Short term (B2B) ánd mid term research
- Based on personal relationships
- Current: 65 members (1000K)



## Current members 1:(65)



## Current members 2: (65)



## Motivation of members

Wilke Goeman van de Beekenkamp Groep:

**"Liever samen sterk dan steeds zelf het wiel uitvinden."**



Bert Jan Nolden van Hoogendoorn:

**"Als we nu stoppen met dit soort onderzoeksinstituten, dan zijn we verkeerd bezig"**



Mark van der Knaap van Anthura:

**"Wij beseffen dat als je niks geeft, er ook niks terug komt. We willen tenslotte samen verder komen."**



Peter Maes van Koppert Biological Systems:

**"Het past in ons DNA. De Club van 100 kijkt naar de middellange en lange termijn en niet naar het nu."**



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## 100% private Business Club

- Added value for Dutch supply industry:
  - Easy access/ short response time
  - Expertise and facilities of Wageningen University and Research Greenhouse Horticulture
  - Total WUR organisation as “Back-office”
  - Network of top level companies
  - Publicity in facilities in Bleiswijk (>4000 visitors/ year)
  - Interview session Bloemenkrant



## Publicity: in facilities



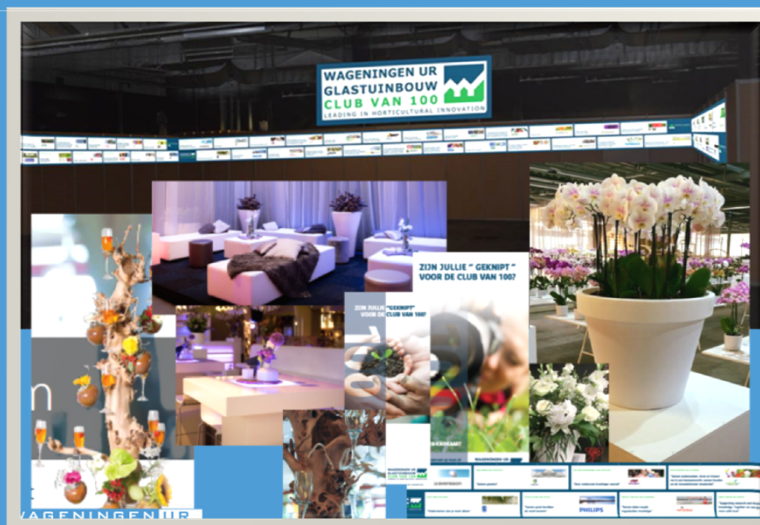
## Publicity: trade press



- Interviews “Bloemenkrant”



## Publicity: events (eg. “Tuinbouw Relatie Dagen”)





## Publicity: Web site Wageningen UR



## Current cooperative projects

- Use of light to control crop development: blue light study.
- Radiationloss: App
- The resilient plant
- Nutriënts monitoring and control
- Automatic detection
- Added value crops (new crops/ business models)



## Business Club: organization

- 65 members
- Advisory board (7 members, chairman: Mr. T. Elzenga)
- Account management (3 research team leaders)
- Decision procedures
- Member groups to guide each cooperative project
- Information members: portal with restricted access members only



## Businessclub: why, who, what

### "HET VERSCHIL TUSSEN KENNISACHTERSTAND EN KENNISVOORSPRONG"

**CLUB VAN 100**

De Club van 100 is een vereniging van bedrijven in de glastuinbouw. Het is een netwerk van toppers die zich sterk maken voor het behoud van de internationale concurrentiepositie. De leden werken samen in pre-conceptfase projecten en dragen hiermee medeverantwoordelijkheid voor het innovatieve gedrag en de continuïteit van de sector.

**WAGENINGEN UR GLASTUINBOUW CLUB VAN 100**  
LEADING IN HORTICULTURAL INNOVATION

### ZIJN JULIE " GEKNIPT " VOOR DE CLUB VAN 100?

**DE B2B-KNIPTKAART**

Voor onderzoek op maat, de B2B-knijptkaart Wageningen UR Glastuinbouw voor al uw kennisvragen.

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### PROJECTEN CLUB VAN 100

**MESTSTOFFEN**  
Het gebruik van meststoffen in een verduurzame glastuinbouw. Hoe kan de meststofgebruik efficiënter worden? Welke rol speelt de meststof in de groei van de plant?

**BLAUW LICHT**  
Kunnen we met blauw licht de productie van groenten verbeteren? Hoe kan het worden toegepast?

**WEERBARE PLANT**  
De weerbare plant die beter bestand is tegen ziekten en plagen. Hoe kan de weerbaarheid van de plant worden verbeterd?

**UITSTRALINGS-MONITOR**  
De plantengroei wordt gevolgd door het gebruik van een uitstralingsmonitor. Hoe kan de uitstralingsmonitor worden gebruikt?

**WAGENINGEN UR GLASTUINBOUW CLUB VAN 100**  
LEADING IN HORTICULTURAL INNOVATION

## Business Club: successful cooperation



### Wageningen University and Research Unit greenhouse Horticulture

More info on the Club  
of 100:

See web site,  
brochure or contact  
Sjaak Bakker or Jan  
Willem de Vries

