Vegetable company strategies to address the challenge of producing more food under increasingly harsh conditions and how the PBR system can help breeders to cope with such challenges.

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Astrid Schenkeveld – October 12, 2022
Contribution to food & nutrition security and climate-smart agriculture

Breeding is key to…

• increase yields in a sustainable way
• develop resistant varieties, allowing growers to use less pesticides
• find solutions to abiotic stress like heat, drought, salinity
• extend shelf life
• improve traditional varieties
Examples

- Strong focus on resistance breeding
  - Against *aphids* > less use of chemicals
  - Against *mosaic virus* > better quality/higher yield
  - Against *Leveillula taurica* > less chemicals, lower residue level
  - Against *Fusarium oxysporum f. sp. Cucumerinum* > prevents loss of plants, better yield
Examples

**Hydroponics**

- Clean and soilless, water-based growing method
- Efficient use of nutrients and water
- No or limited use of crop protection agents
- Stable and higher yield, less dependent on natural climate
Examples

**Delayed pinking of fresh cut lettuce**

*Leaf wound-induced discoloration*

- Extended shelf life
- Less waste
- Suitable for Food Service
- Stronger against cracking
- Less sensitive for leaking seals
Access to genetic variation is essential for breeding

- Own collection
- In situ material (wild relatives)
- Ex situ material (genebanks, markets)
- Competitor varieties
The role of plant breeder’s rights

- Return on investment is necessary to continue developing new varieties
- PBR is THE IP protection system: providing adequate protection, while others can continue to find solutions to today’s challenges – Open Innovation
Closing remarks

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