Towards a salt-tolerant potato

Guus Heselmans – manager R&D C. Meijer BV
Company

Activity
Potato breeding and marketing seedpotatoes for: Table, French Fry and Crisp segment.

Mission
The delivery of goods and services to customers in order to optimize their potato business by ensuring availability of specific varieties and technical, logistical and administrative support.
Company

Offices

Rilland (Head office)
Breeding, Sales, Purchase, Logistics, Administration

Emmeloord, Netherlands
Purchase

Doullens, France
Purchase, Logistics

Larcay, France
Sales
Company

Subsidiaries

- Meijer Iberica
- Meijer Seed Potato Ltd
- Agriana
- INAN Meijer
- Meijer North America
Varieties
Use what you produce

**Fresh**
- Accord
- Cupido
- Jazzy
- Lady Christl
- Melody
- Musica
- Orchestra
- Soprano
- Rock

**Crisp**
- Lady Claire
- Lady Jo
- Lady Rosetta
- Lady Britta
- Lady Amarilla

**French Fry**
- Lady Anna
- Lady Olympia
- Lady Amarilla
- Lady Sara
Developments:

- Increasing world population
- Decrease of suitable land
- Constant threat by diseases
- Water availability becomes limiting
- Water quality becomes limiting
- Pressure on environment
- Homogenity and efficiency
- guaranteed food safe
Variety

= value for market 
+ reliability cultivation
Mother x Father

+++++++ +++++++

Offspring

++++++ ++++++

++++++ ++++

Etc...

Selection

+++++++
# Breeding

## Added Value

## Crossing Program

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<th>INNOVATOR</th>
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Maak kruising Prioriteit 1

Maak kruising Prioriteit 2

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**LADYANNA**

**INNOVATOR**

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**BREEDING**

**INNOVATOR**
Pre-Breeding: Improve genepool

- Fast
- Reliable
- Combine genes
Developments:

- Increasing world population
- Decrease of suitable land
- Constant threat by diseases
- **Water availability becomes limiting**
- **Water quality becomes limiting**
- Pressure on environment
- Homogenity and efficiency
- guaranteed food safe
Breeding
Added value

2008–2010

Trial field on brakkish field – saline groundwater

- Provincie Zeeland
- ZLTO
- C. Meijer BV
- AGROWA
- DELTARES
Breeding
Added value

2011–2014

Trial field at salt farm – supplied salt
• C. Meijer BV
• Van Wesemael
Breeding
Added value

2013–2014

STOP – desert trial with saline regime

- Partners voor Water
- Alterra/WUR
- C. Meijer BV
- DACOM
- Domiatec
Breeding
Added value

2015-2016
Zouttolerante aardappel binnen
Regionaal bod Proeftuin Zoet Water

- C. Meijer BV
- Deltares
- Provincie Zeeland
- Deltafonds
- Van Wesemael
Breeding
Added value

Relative yield control versus saline regime

- **ZC**
- **ZZ**

Variety

Relative yield (100=yield control)
Genetic study: weak x weak
Genetic study:
strong x strong
Genetic study: strong x weak
Breeding
Added value
To conclude

State of the art

• Expertise for proper trials
• First indication on varietal difference

Plans 2016 onwards

• New trials on different salinity levels
• Genetic studies
Obrigado pela vossa atenção!