

# Breeding for disease resistance at CIV

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International Strawberry Congress  
Hoogstraten 02/09/2010



# WHO WE ARE

MAZZONI  
GROUP

SALVI  
GROUP



**R & D**



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## CIV location



- Climatic condition
- Horticultural conditions

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## CIV ACTIVITIES

- **Certification**
- **Variety Innovation**
  - Varieties from abroad
    - INN
    - Breeders
  - Participation to programs
    - East Malling (UK)
    - PICO (Canada)
    - Univ. Bologna
    - ...
  - In House Breeding
- **I.P. management**



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# CIV STRAWBERRY BREEDING PROGRAM

## High Chilling

- Clery
- Antea
- Galiaciv
- Arosa
- ....
- **DELY**
- **JOLY**

## Low Chilling

- Kamila
- Siba
- Naiad®civ135
- Tethis
- ....
- **RANIA**
- **NABILA**

## Day neutrals

- Elsinore®civri30
- **CAPRI**

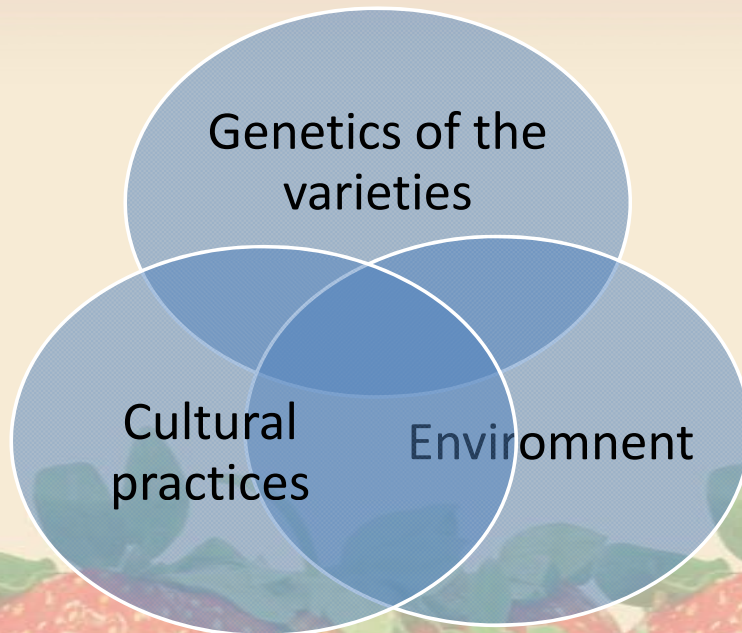
## Processing

- 5 advanced selections



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# SUSTAINABLE SAFETY OF THE CROP



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# SUSTAINABLE SAFETY OF THE CROP

## Genetics of the variety

- Adaptability to the environment
- Growth efficiency
  - Plant /root volume, leaf area, light interception,
- Productivity
- Tolerance to abiotic stresses
- Tolerance/resistances to pest and diseases of the plants and of the fruits.



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# THE APPROACH OF CIV

## SELECTION THROUGH NATURAL CHALLENGE

Focus on resistance throughout all the steps

Germplasm

Seedling selection

Further screening steps

Extended testing



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## THE APPROACH OF CIV

### Germplasm

All susceptible genotypes discarded since 15 years

Collection of resistant parents

Cooperation in research on “resistance”

Evaluation of character transmission



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# THE APPROACH OF CIV

## Seedlings selection

Grown on low chemical input

Only healthy individuals are selected

Elimination of individuals with troubles during the season

Enhanced environmental pressure



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## THE APPROACH OF CIV

### Screening steps

No fumigation, replanting

Enhanced environmental pressure

Low pesticide applications

Discarding all the “susceptible” individuals



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## THE APPROACH OF CIV

Extended testing before release

Testing in different conditions

Testing with experiment stations

Testing with growers

Consumer tests



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# NURSERY PROPAGATION

Importance of the plant quality

Right plant type

Healthy plants from the nursery

Strong plants from the nursery



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## RESULTS

Varieties with wide adaptability and tolerance to stresses and disease

Clery

Rania, Nabila

Dely, Joly

Capri



# Thank you for the attention

For more information

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