A tool for agricultural planning
where can I plant my crop?

Taking into account
- Biophysical and socio-economic factors
- Crop Requirements

Feasibility assessment
How can I improve the current situation?
Where are the limitations?

Considering increasing environmental challenges
Where are alternative regions to grow the desired crop?

CONSUS can be applied to a variety of crops, contexts and scales
Suitability Analysis for crops in specific locations

- Which crop is most ideal for my field?
- When is it best to plant?

Taking into account:
- Biophysical and socio-economic factors
- Crop Requirements

Considering increasing environmental challenges:
- Crop diversification
- What are alternative crops?

CONSUS can be applied to a variety of crops, contexts and scales

«Situation 2»
Output: Suitability Map of analysed location – relating to the respective crop

Additional features:
- Climate Scenarios
- Crop Cycler

How can we use (publicly available) data to improve production systems?
Underlying Model

Databases / underlying data

Matching

Crop Suitability
- Climatic Suitability
- Soil Suitability
- Landscape Suitability
- Infrastructural Suitability
- Agr.-System Suitability
- Business Suitability

Crop Requirements

Matching

Crop Mapper

Suitability-Spider

Site Assessment

Feasibility Study

Intermediate, categorised suitabilities

Outputs

Summary of Results
Main hazelnut production area (worldwide): **Turkey**
- Aiming for diversification of production sites
- Increase stability of hazelnut supply

**Results:** validation of current growing areas
Identification of new area: **Croatia**

**Kroatien**
Osijek-Baranja / Vukovar-Srijem (10): 159'815 ha
Feasibility and location analysis

- Evaluation of potential to introduce the «Hass» avocado to the Sololá region
- Basic biophysical requirements
- Considering the socio-economic criteria of local farmers
- Key criteria: land ownership, irrigation opportunities and motivation
• Currently in Beta-Version
• «Teaser» to get farmers, processors and other stakeholders interested
• First simple database with few crops:

  - Cocoa
  - Coffee
  - Mango
  - Avocado
  - Cashew
  - Persimone
  - Papaya
  - Grapes
  - Vanilla
  - Goji-Berry
  - Almonds
  - Quinoa
  - Amaranth
  - Cassava
  - Sweet Potato
Next Steps

• Identification of additional data sources
• Validation of current results with on-ground activities
• Identification of future collaborations
Thank you for your attention!

Any Questions?

https://www.syngentafoundation.org
Conclusions

• Functions as a decision-support system for rural development and agribusinesses
• Flexible tool for any desired crop
• Scale can be local, regional or global
• Analysis of overall potential considering improvement measures (e.g. by fertiliser application)
• Identification of new production sites
• Identification of suitable crops on a given location
• Modelling climatic scenarios in addition
• Assessing overall feasibility and added value of agricultural plans