



# *Weather forecasts for the agrofood market*

*Antonio Volta*

*Agro-Meteo-Climate  
to agrofood market*

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# What's *AgroMet* ?

*AgroMet* is a team composed by five young researchers which got SPINNER 2013 grant funded by the Emilia-Romagna region to high innovation and technology enterprises.

*AgroMet* provides expert advices and tools to assess how much climate influences the agrofood companies business.

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# Critical factors on agrofood market

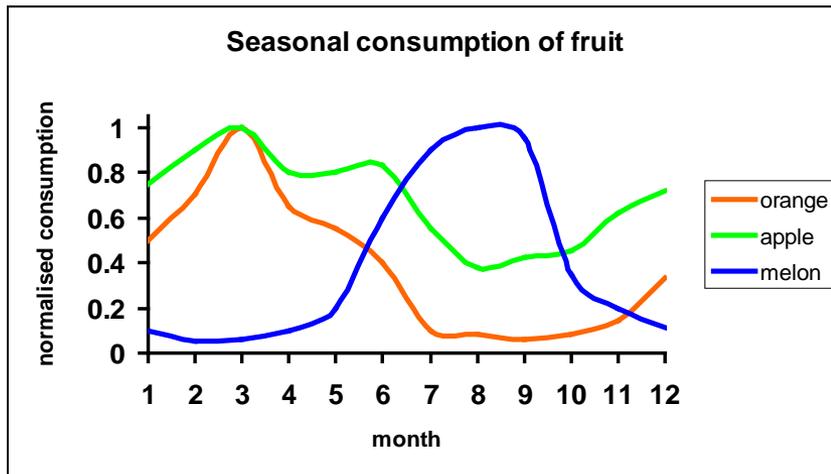
Marketing of horticultural crops is complex especially because of:

- perishability;
- seasonality;
- bulkiness.

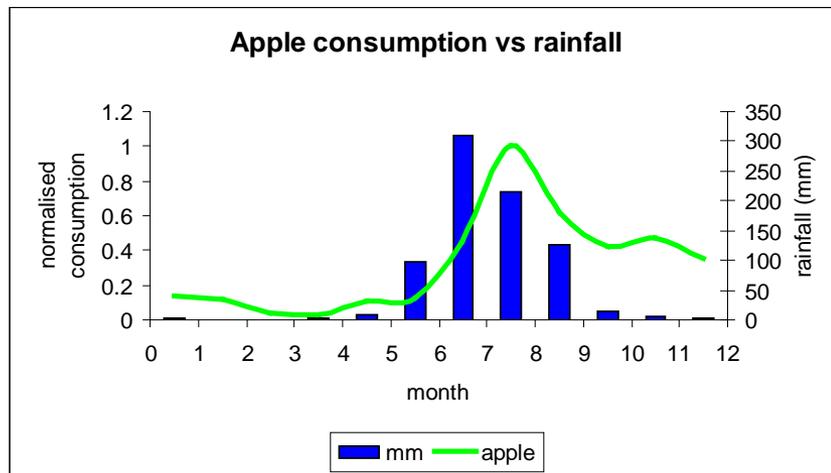
# Perishability

- Highly perishable fruits and vegetables: apricots, peaches, berries, ... . It is compulsory to sell them after few days they are picked;
- Lowly perishable fruits and vegetables: bananas, apples, orange, potatoes ... . They maintain their organoleptic properties along weeks or month if well stored;
- Cereals: long time storage.

# Seasonality



Italian trend of fruit consumption



Ahmedabad Naroda Fruit Market (India)

V. Gandhi and N.V. Namboodiri, 2006.  
*Fruit and Vegetable Marketing in India.*

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# Bulkiness

- Apple: around 10 billions kg (EU 27)
- Potato: around 50 billions kg (EU 27)
- Orange: around 8 billions kg (EU 27)
- Other fruits: around 100 billions kg (EU 27)

Yearly European production (from Eurostat)

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# Weather on the agro-food chain:

## ■ Producers:

- Weather plays a key role to establish the crop yields.
- Through weather forecast and crop modeling one can assess in advance yield and quality of the final product.

## ■ Sellers:

- Fruit demand strongly depends on weather conditions.
- Through weather forecast we can improve the efficiency of wares management and avoid the massive wastage and deterioration in quality.

# Weather forecast for agrofood

- **Seasonal weather forecasts :**

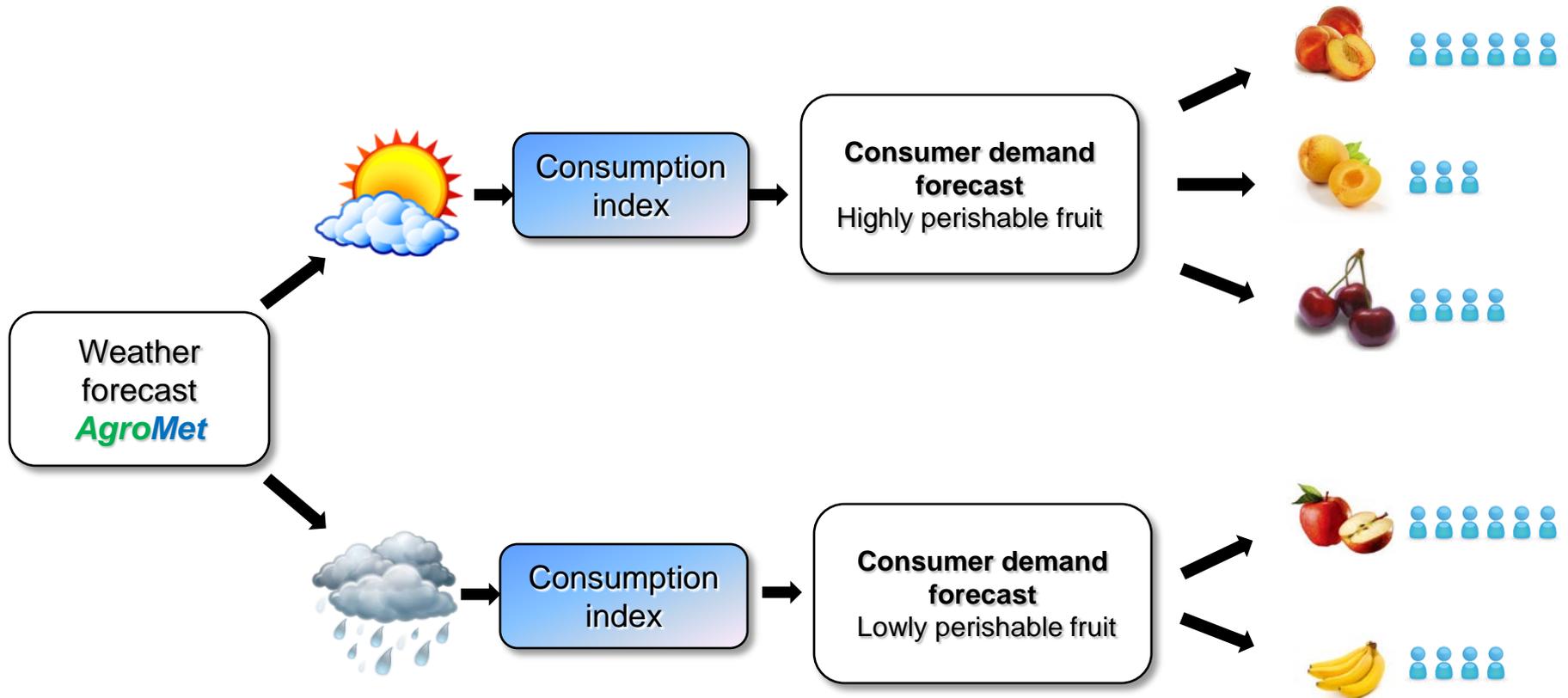
- For department stores to establish a market strategy for the next season for lowly and highly perishable fruits.

- **Weekly weather forecasts:**

- To help producers in crop management, to forecast crop yield and day of harvest;
- To assess the market trend of highly perishable fruits (stone fruits, fresh berries, ...) and vegetables. Their price varies once per week.

# Our idea

Consumer demand forecast for highly perishable fruit-based on weather conditions



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# The *AgroMet* team

- **Giulia Villani:** PhD in Agronomy. Post-doc at ARPA-ER since 2008.
- **Antonio Volta:** PhD in Physics. Post-doc at ARPA-ER since 2010.
- **Cesare Govoni:** graduated in Agronomy. Coworker of ARPA-ER since 2006.
- **Federico Carboni:** bachelor student in atmosphere physics, Coworker of ARPA-ER since beginning of 2013.
- **Michela Giusti:** graduated in Physics, M. Sc. student in atmosphere physics and meteorology.



***THANKS!***