Phenological data of sweet cherries and climatic conditions in the Region of Murcia, Spain.

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IMIDA’s R&D Sweet cherry Research Activities

SWEET CHERRY: AN ALTERNATIVE IN THE REGION OF MURCIA

OBJECTIVES:

• **Rootstocks**
  - Introduction of new rootstocks
  - Sweet cherry rootstocks for particular soils of Murcia

• **Varieties**
  - Introduction and evaluation of cultivars
  - Adaptation to warm climate.
    - Low or Null production of double fruit
      - (Main objective in many important warm areas)
      - (Due to the effect of high temperatures on flower differentiation)
    - Low chilling requirement
    - Early harvest
Location and climatology

South-east

Semiarid Mediterranean climate

Soft winter with temperatures around 11 ºC

Hot summers with maximum temperatures around 40 ºC

300 to 400 mm/year

Cultivated lands with 100 to 1500 hours below 7 ºC
Productions areas vs. chilling hours

- AgroClimatic information service
- Experimental stations
- Dense net of experimental orchards
AgroClimatic Information Service

- More than 25 parameters. (daily vs. hourly)
  - $T_a$ Max, Min, Med, Abs,
  - HR, Max, ..., DEWPT
  - Radiation, Eto
  - Wind speed, direction
  - Agro-climatic maps

http://siam.imida.es
Experimental stations  (Sweet cherry collections)

- Evaluation of more than 80 varieties
  (Phenological and Pomological Ch.)
  - Flowering Period (Baggiolini, 1952)
  - Harvest date and production
  - Tree habits
  - Fruit quality (Size, Weight, °Brix, Acidity, pH, Firmness, Colour,...)

- Incorporation more varieties
  (20 cultivars more)

- Testing a progeny in different locations
  (Regina x Lapins)

Results in: www.imida.es
Evaluation (Sweet cherry collections)

- Beginning
- Full blooming
- End of flowering
- Harvest date
- Abnormally flowers
- Double Fruits
- Productivity
Experimental orchards

- Less precision in data collection
- Study a small number of cultivars for determining their adaptation to our different production areas.
- Dense net of orchards that we can confirm the results obtained in ours experimental stations.
- Differences in the management of the orchards.
  - (covers, pruning, rootstocks,....)

Transfer of results
Dynamic model

Fishman et al. (1987)


- Lapins → 35 CP
- Rainier → 45 CP
- Burlat → 53 CP
- Sam → 70 CP

Cv. Lapins_Murcia_25/04/2014
Cv. Rita_Murcia_25/04/2014
Cv. Crystal Champaing_25/04/2014

Early      Late
Thanks for your attention!