FRUITION
SCIENCES
CULTIVER LA CONNAISSANCE

Great Wines are made in the Vineyard

FRUITION SCIENCES

10 years
Of data

More than 150 customers
3 continents

1000 sites
monitored

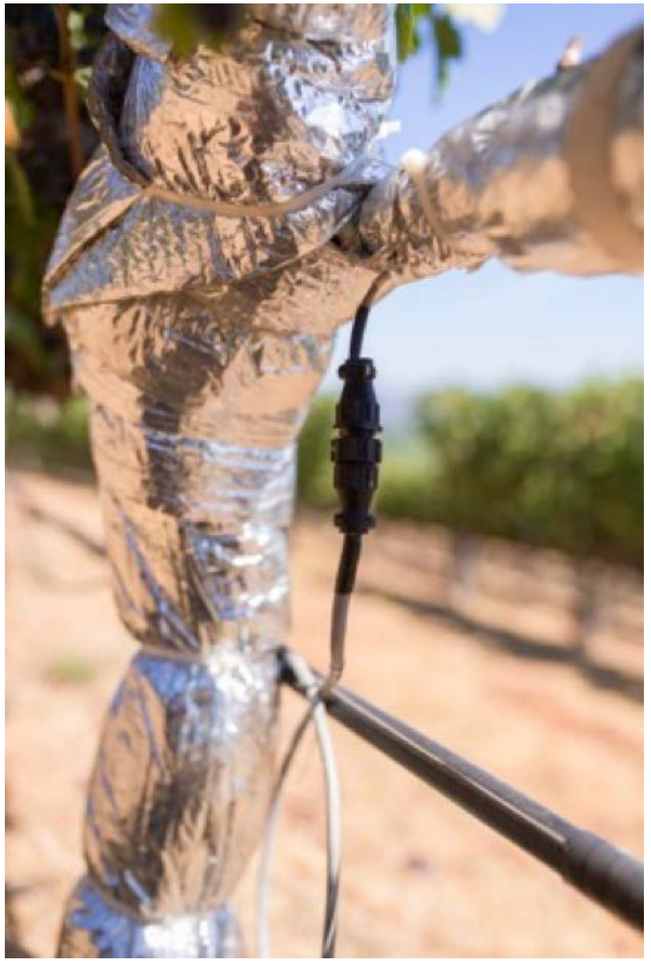
Partnership :

Suppliers of sensors, consultants, laboratories, etc..

Sap Flow Sensors

FRUITION SCIENCES
CULTIVER LA CONNAISSANCE

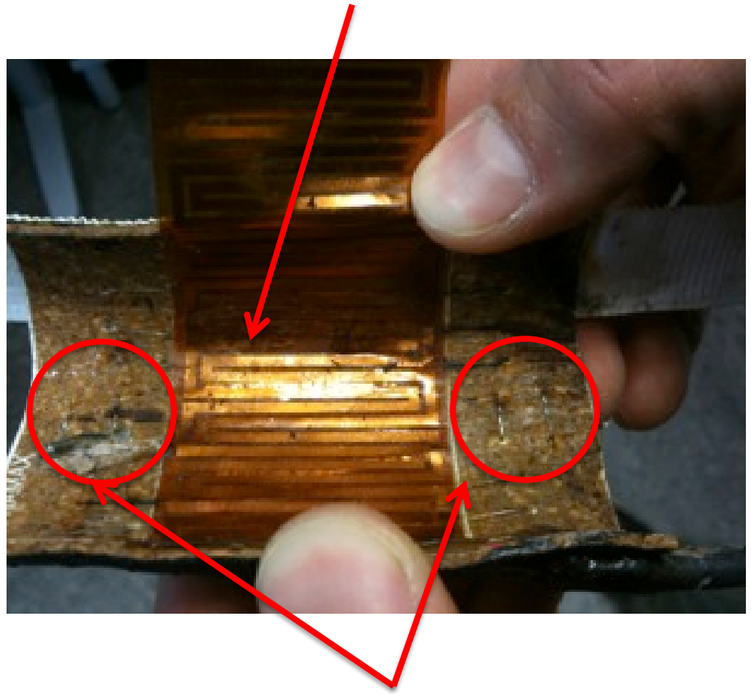
Listen to the Vine in Real Time



Listen to the Vine in Real Time

- The sensor is installed on the cordon or last year wood.
- Measurement of temperature before and after the heater allow to compute the Sap Flow

The resistance strip heats up the vine at all time

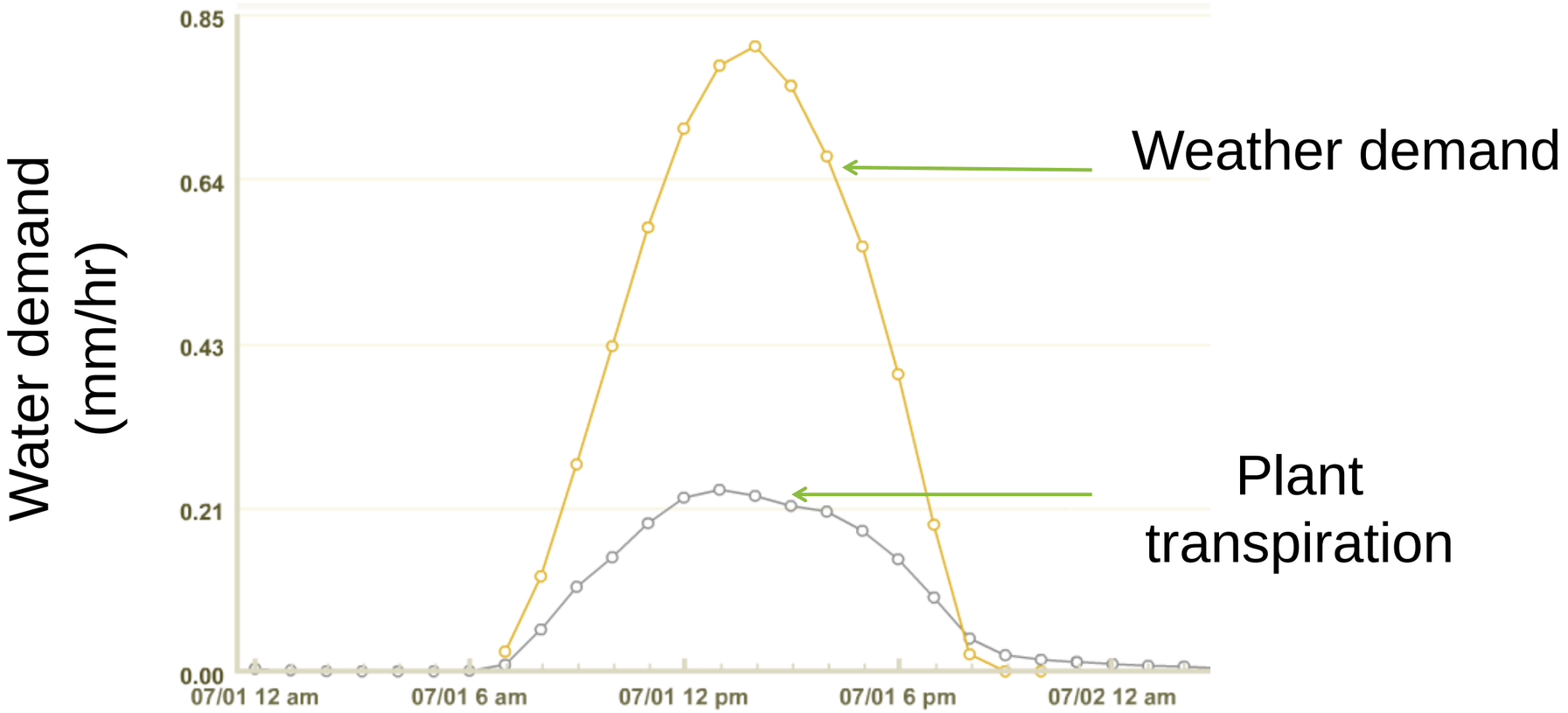


Thermocouples Measure the temperature of the vine before and after the resistance

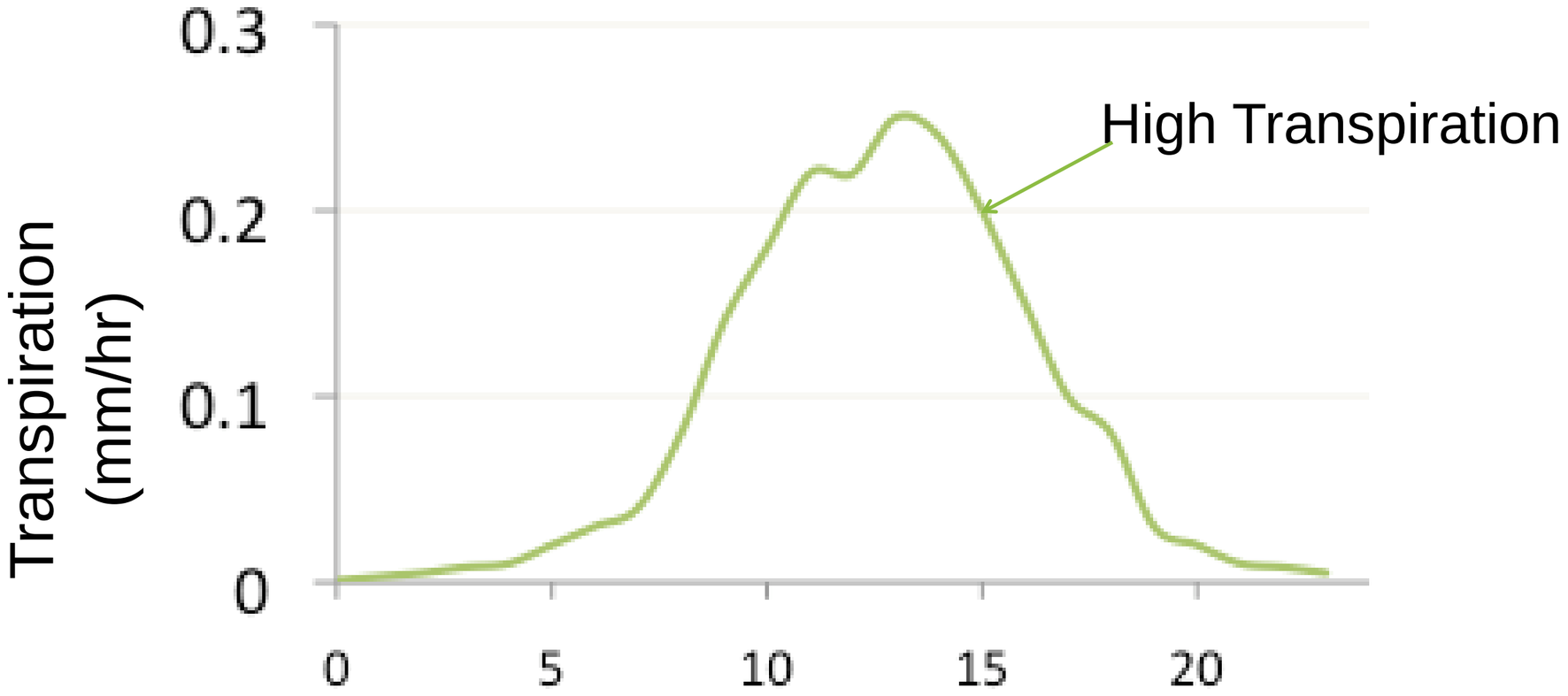
Water Status

FRUITION SCIENCES
CULTIVER LA CONNAISSANCE

Water status depends on Climate

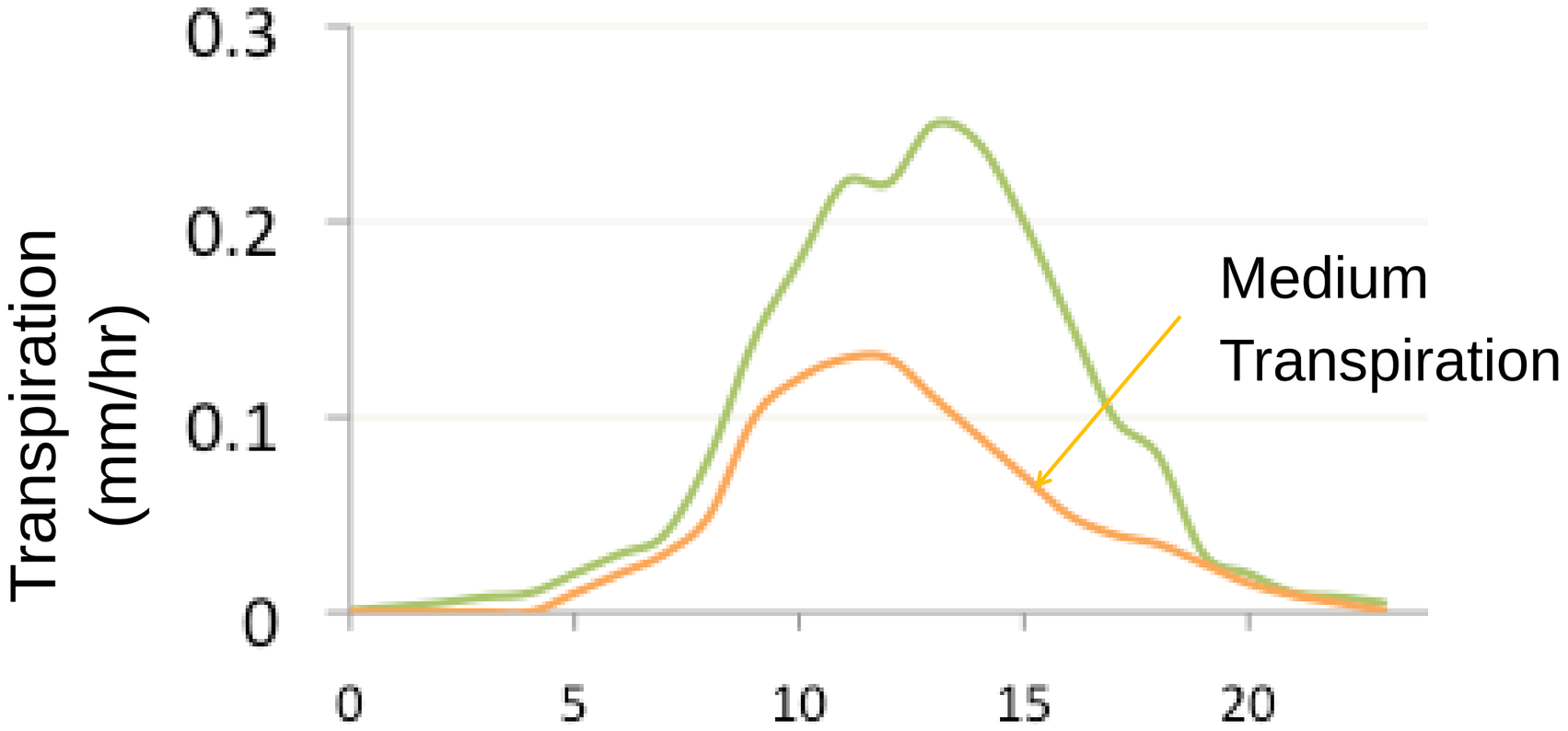


Water status depends on soil moisture



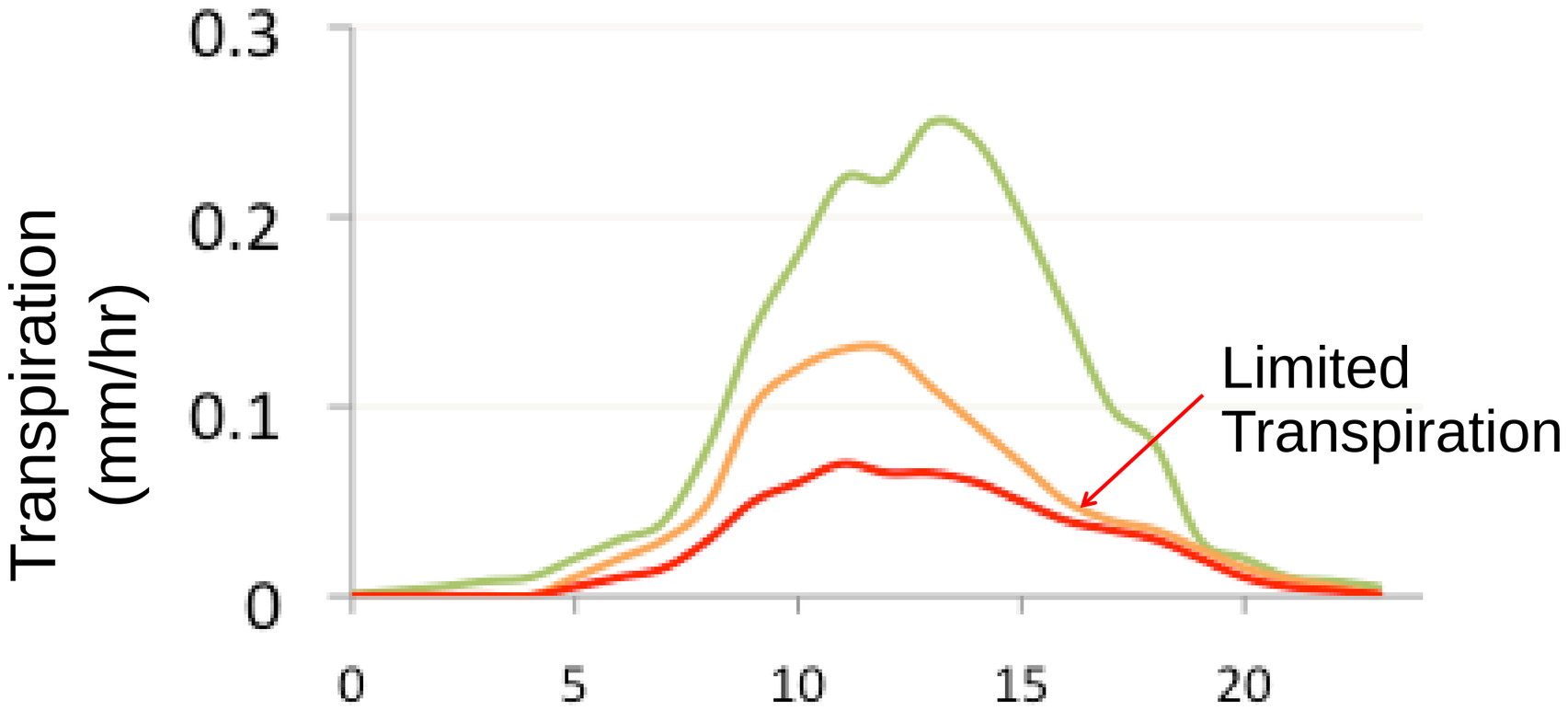
No Soil Water Deficit

Water status depends on soil moisture



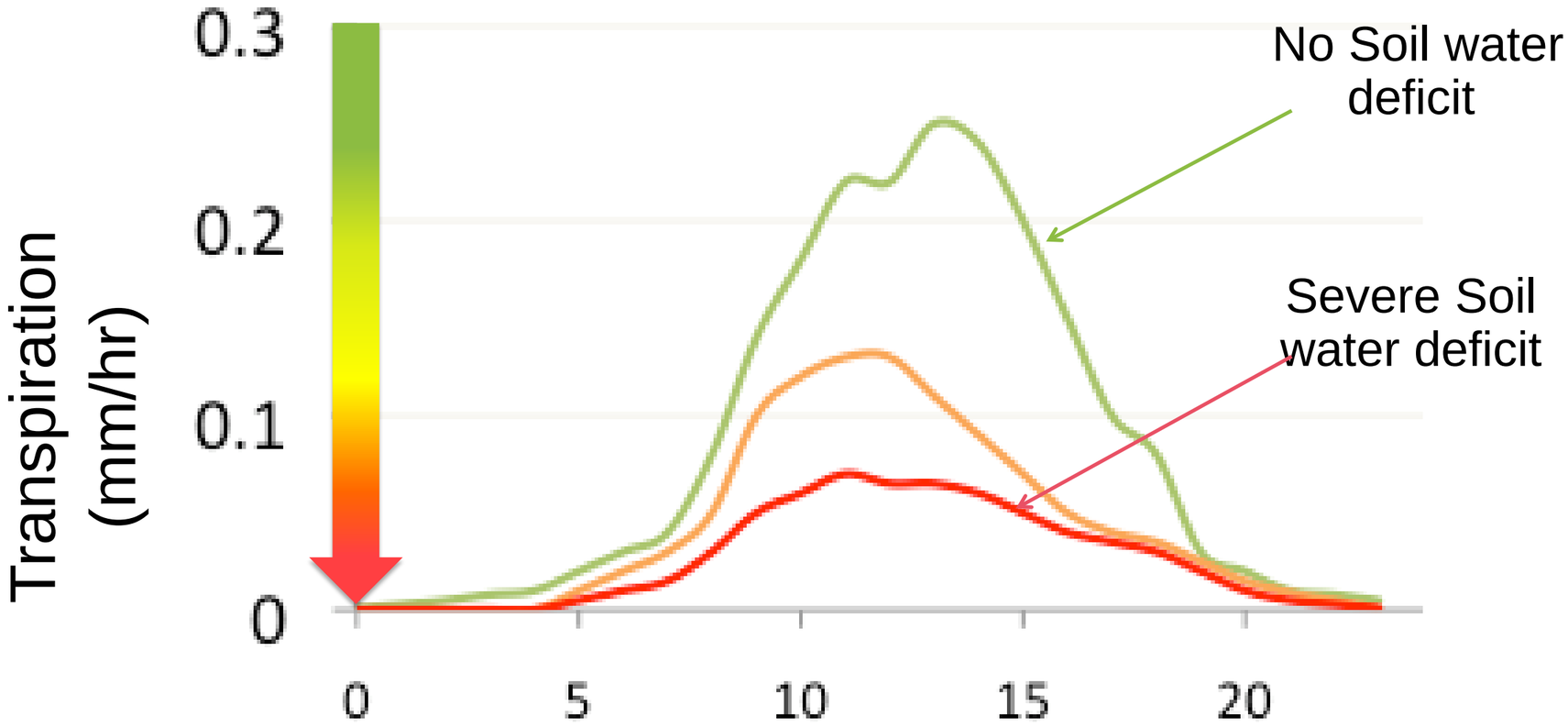
Moderate Soil Water Deficit

Water status depends on soil moisture



Severe Soil Water Deficit

Severe Soil water Deficit= Limited transpiration



Conclusion

- Water statut depends on :
  - Climate demand
  - The availability of the water in the soil
  - Variety / Rootstock
  - Leaf architecture

- The Sap Flow allows to calculte the Water deficit Index = ratio between the real transpiration and the maximal transpiration.

- The maximal transpiration depends on:
  - Evaporative demand
  - Architecture of the vines

How to irrigate according to the Water Deficit Index ?

FRUITION SCIENCES
CULTIVER LA CONNAISSANCE

Definition of thresholds

No Water Deficit > 70%

30% < Moderate Water Deficit < 70%

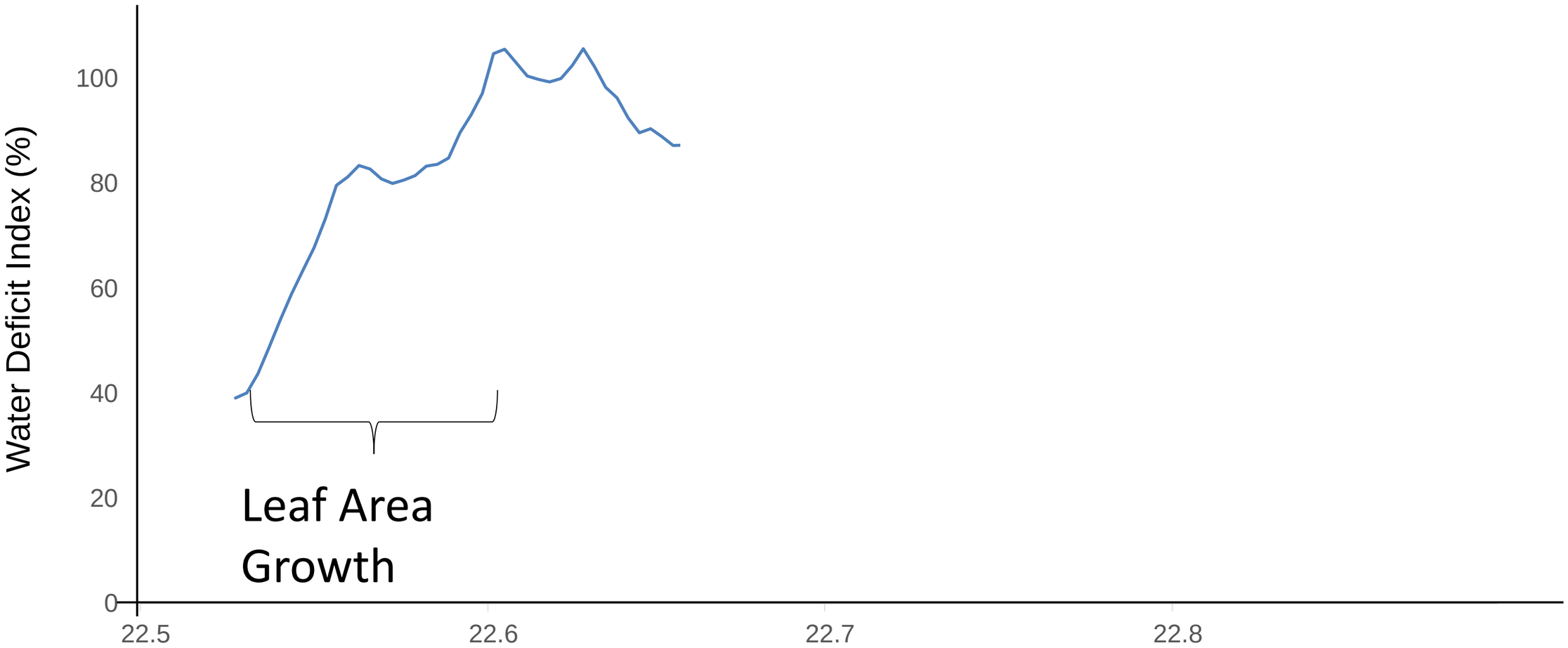
Severe Water Deficit < 30%

Thresholds depend on Production objectives (Quality et Quantity)

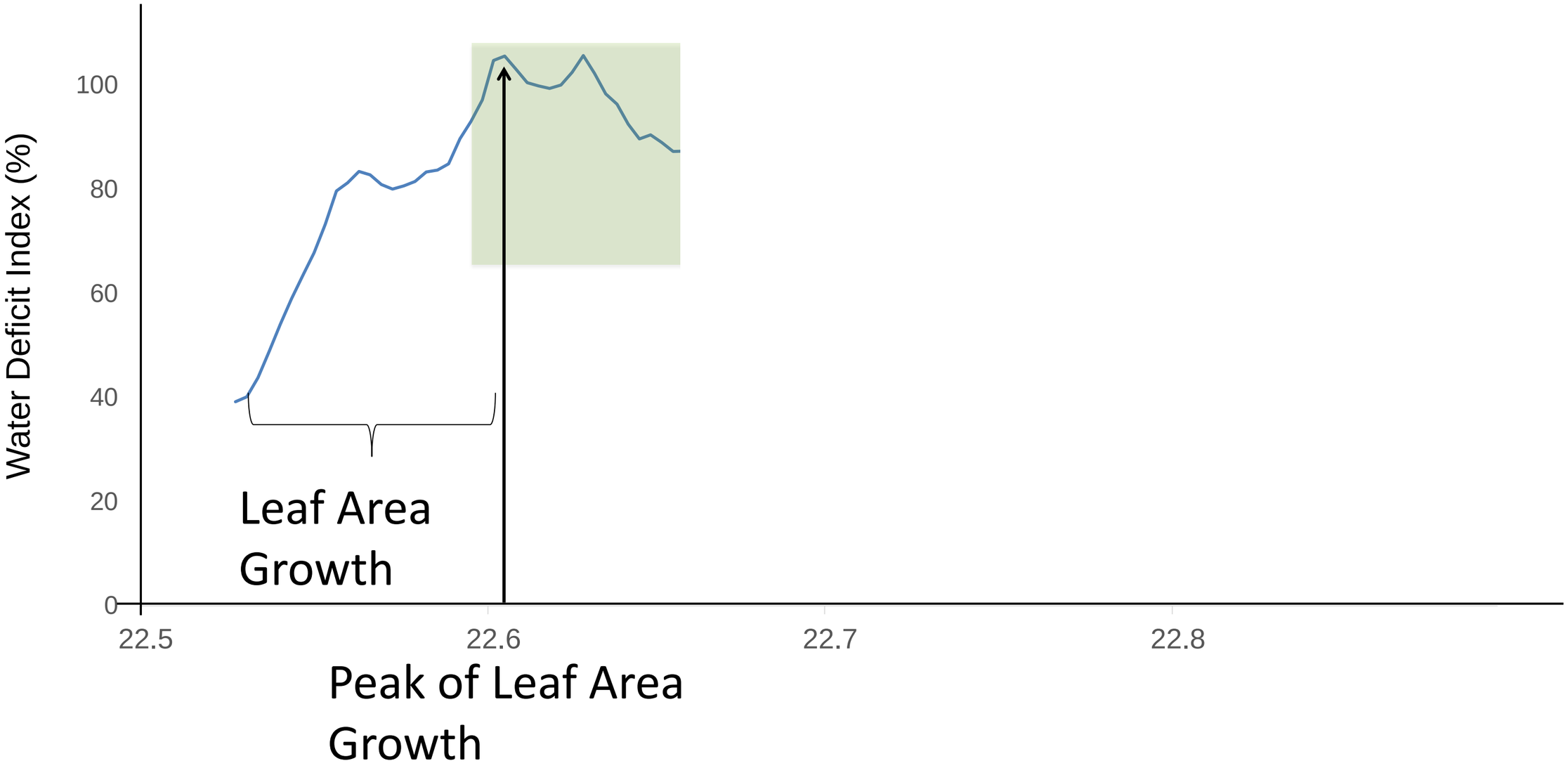
Case study :
Rosé in Provence

FRUITION SCIENCES
CULTIVER LA CONNAISSANCE

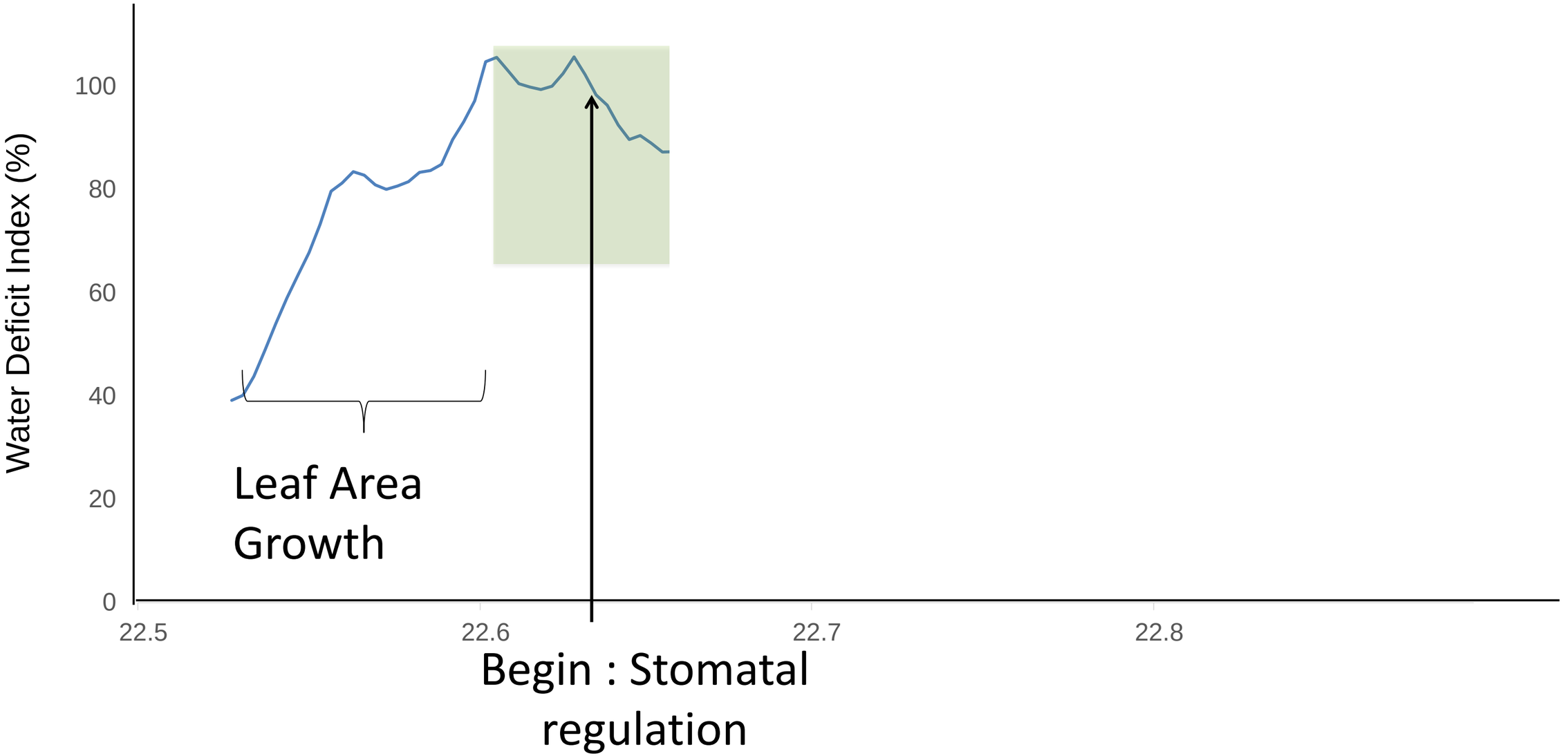
Water Deficit Index for rosé in Provence



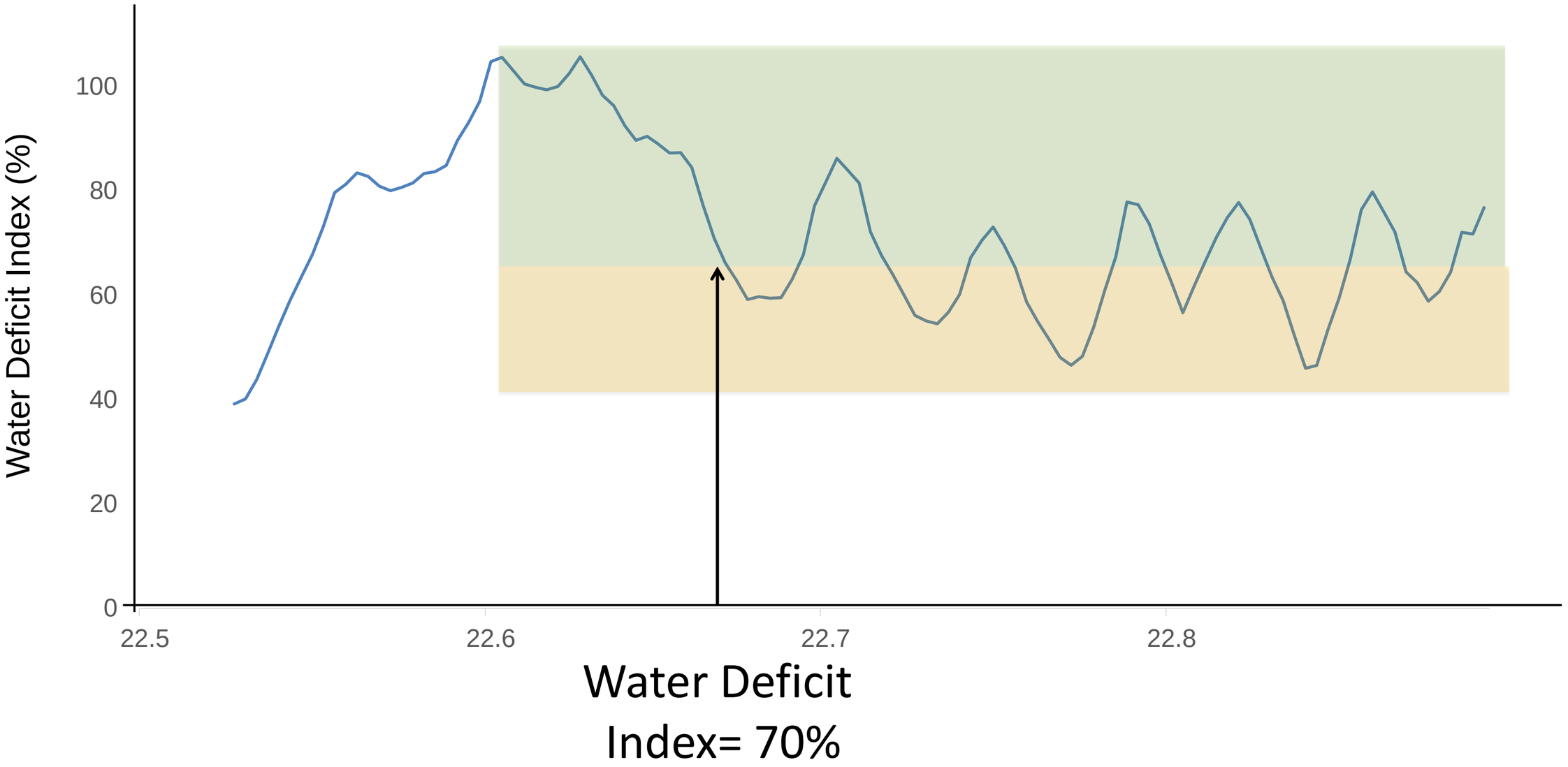
Water Deficit Index for rosé in Provence



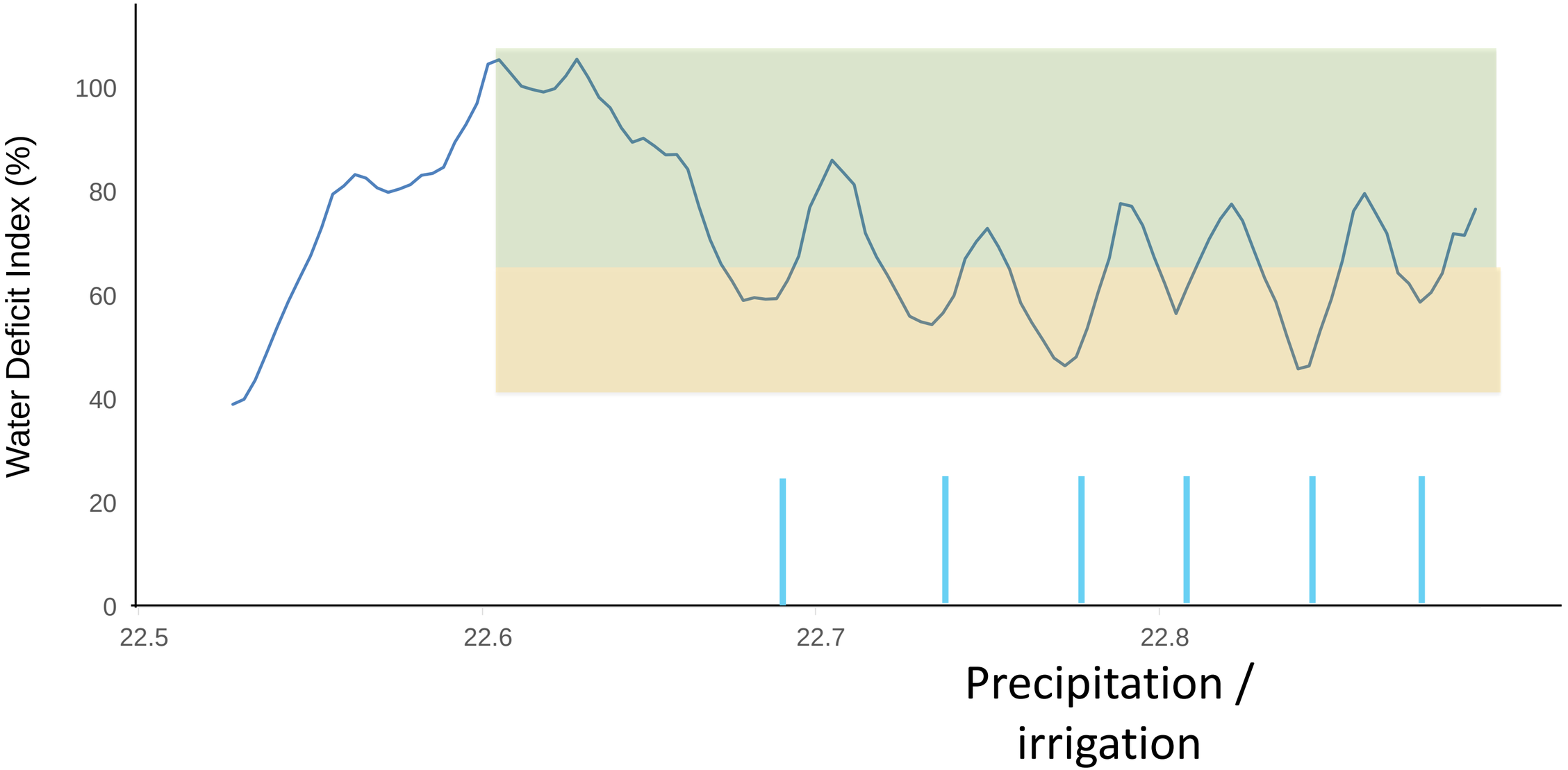
Water Deficit Index for rosé in Provence



Water Deficit Index for rosé in Provence



Water Deficit Index for rose in Provence



Benefits

FRUITION SCIENCES
CULTIVER LA CONNAISSANCE

Benefits

- Define the optimum irrigation timing using the water deficit index
- Apply the right volume of water according to the terroir and production objectives
- Save water : 40%
- Improve Yield : +15% and Wine quality

FRUITION
SCIENCES
CULTIVER LA CONNAISSANCE

FRUITION SCIENCES
672, rue du Mas de Verchant,
34000 Montpellier
Tél. : 09 53 22 13 00

www.fruitionsciences.com