

## GRAPE GROWING

1. Objective and choices
  - a. Maximize profit or nonprofit objective
  - b. Quantity of grapes
  - c. Quality of grapes
  - d. Price of grapes
  - e. Quantity-quality tradeoff
    - i. Cluster pruning
    - ii. Richard Smart's argument
2. Vine planting
  - a. Vine type
  - b. Vine location
  - c. Vine density
3. Vine tending
  - a. Irrigation
  - b. Pruning
  - c. Protection
    - i. Conventional farming
    - ii. Sustainable farming
    - iii. Organic farming
    - iv. Biodynamic farming
4. Vine harvesting
  - a. When to pick grapes
  - b. How to pick grapes

## GRAPE MARKETS AND SUPPLY CYCLES

1. Two questions
  - a. How do growers sell their grapes?
  - b. How can the choice of grape-bearing acreage produce a grape supply cycle?
2. How do growers sell their grapes
  - a. Spot market
  - b. Long-term contract market
3. Spot market
  - a. Immediate delivery
  - b. Organization
  - c. Price and quantity determination
    - i. Weather
    - ii. Uncertainty
4. Long-term contract market
  - a. Advantages
  - b. Quantity
    - i. Tons of grapes
    - ii. Acres harvested
  - c. Quality
    - i. Maximum yield provision
    - ii. Bonus
    - iii. Farming provisions
  - d. Price
    - i. Price per ton
    - ii. Price per acre
    - iii. Fixed price
    - iv. Variable price
  - e. Market clearing mechanism
5. How can the choice of grape-bearing acreage produce a grape supply cycle
  - a. Grape supply cycle
    - i. overproduction, low price, below normal profits
    - ii. under production, high price, above normal profits
  - b. Cobweb theory
    - i. Assumptions
      - a. Growers make acreage decision based on price this year
      - b. Wine producers make buying decision based on price this year
    - ii. Implications
  - c. Factors affecting grape supply cycle
  - d. Length of grape supply cycle