Colorado Wine on the Cusp

Trends, Future Directions, and Avoiding Catastrophe

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Definitions

- **Cusp**

  - **Etymology:** *L., cuspus* → point
  
  - **Meaning,** Random House Dictionary (1 of 6 meanings)
    
    - *Geom.* A point where two branches of a curve meet, end, and are tangent
Definitions

- Colorado wine currently has several sets of trends that are approaching cusp transitions
  - Supply/demand for Colorado grapes
  - Quality for new wineries and owner changes
  - Colorado branding and supply/demand
Colorado Wine Industry Sustainability & Viability

- S.W.O.T. Analysis
  - essential for planning industry growth rate
    - decline, maintenance, slow growth, rapid growth
  - need to account for both sustainability and viability
  - Need to account for both near-term and long-term trends
Colorado Wine Industry Strengths

Grape Growing

- some areas have average climate suitable for *Vitis vinifera*
- dry climate w/irrigation → less disease and can control vigor
- pioneer experience has decades of accumulation to quality basis
- many vineyards part of diversified production
- Can grow wide variety of grapes in diverse sites
Colorado Wine Industry
Weaknesses

- **Grape Growing**
  - suitable *vinifera* acreage small: competes w/tree fruit & houses
  - average climate non-existent: fluctuating cold events limit suitability for *Vitis vinifera* and even for more cold-tolerant grapes
  - mismatch of cold site w/intolerant variety, via *vinifera* bias, yields high horticultural and economic damage
  - inappropriate new investment and unplanned generational transfer wastes resources
Colorado Wine Industry

Strengths

- Winemaking and Marketing
  - growth potential in urban market with small Colorado presence
  - pioneer experience has accumulated increased quality
  - *vinifera* varietals have appealed to buyer demographics
  - Colorado branding has substantial presence
  - tourism a strong economic driver
Colorado Wine Industry
Weaknesses

- **Winemaking and Marketing**
  - variable grape supply/demand
    - cold events
    - swings in amount and timing of varieties planted
    - insufficient coordination among vineyards and wineries
  - wineries have common *vinifera* varietal wines in similar styles
    - compete with lower price similar wines in urban markets
    - saturate local rural and tourist style niches
  - Colorado brand unable to supply larger urban market volume
  - inappropriate new investment and unplanned generational transfer wastes resources
Colorado Wine Industry Opportunities/Cures

- **Grape Growing**
  - Plant varieties with cold tolerance matched to site
    - Grand Valley and better slopes of West Elks
      - sort sites for *vinifera* or cold hardy → more total acreage & yields
    - Cold hardy in colder sites: western slope, 4-corners, plains
  - Plant varieties that give price and yield economics
    - Cold hardy/*vinifera* mix allows more total acreage/yield
  - Coordinate with winery inventory and sales trends
Colorado Wine Industry Opportunities/Cures

- **Winemaking and Marketing**
  - Make wines that increase market niche variations
    - Different blends and acid/sweet styles
    - *Vinifera*/cold hardy blends and cold hardy blends and cold hardy varietals
  - Increase market base
    - Market medium price wines in amounts to supply restaurants
      - something different, high-quality, and consistent
    - Train younger demographic to unique Colorado wine niches
      - Novel presentation, flavor, or packaging
      - Colorado branded *vinifera*, cold hardy, and blends
      - Dry, sparkling, rosé/“white” reds, off-dry, fruit, fortified
Colorado Wine Industry Threats

- **Grape Growing**
  - Pioneer fatigue and loss of knowledge and capacity during generational transfer
  - Lack of or misallocation of new investments
    - continued efforts to grow *vinifera* in cold sites
    - planting without marketing plan to wineries
      - wrong varietals for winery demand
      - cold hardy cultivars without marketing plan
Colorado Wine Industry Threats

- Winemaking and Marketing
  - Inability to maintain price
    - degradation of Colorado brand status
    - loss of wine quality
  - Inability to grow market capacity
    - loss of older wine-savvy demographic
    - inability to recruit younger and/or urban demographic
- Less winery investment capital
  - Lack of investment to increase winery capacity
  - Loss of winery economics during generational transfer
Colorado Wine Industry
Supply/Demand Dynamics

- Causes of supply fluctuations
  - Cold events in vineyards cause vintage and variety shortages
    - Exacerbated by mismatch of sites and varieties
  - Vineyards giving up on plantings
    - Site/variety mismatch or non-viable economics
  - Timing and/or composition of new plantings do not match winery demand
Colorado Wine Industry
Supply/Demand Dynamics

- Causes of demand fluctuations
  - Swings in adjustments to inventory stock/sales ratio, even though Colorado sales show steady year-to-year rate of increase
  - Individual wineries show much greater fluctuations
Definitions

- **Catastrophe Theory**
  - In mathematics, catastrophe theory is a branch of bifurcation theory in the study of dynamical systems.
Catastrophe

- **Etymology:** Gk. Katastrophe → overturning
- A sudden, violent disturbance
  - Sudden is measured on various time scales
  - Violence is measured on various intensity levels

Cusp Catastrophe

- For a cusp catastrophe, two possible solutions (stable curves) in a dynamic system reach a stress point (indefinite state, where curves are cusped) where only one unpredictable definite solution then occurs.
Avoidance of Cusp Catastrophe

- Two-pronged
  - Relief of conflict dynamics before cusp is reached
  - Institute new dynamics into system that turn conflict into harmony
Examples of Cusp Catastrophe

- Response behavior of a stressed dog as stress levels gradually rise
  - trend toward increasingly cowed
  - trend toward increasingly angry
Examples of Cusp Catastrophe

- At extreme stress, (trend unpredictable), resulting in
  - dog may instantaneously become cowed
  - dog may instantaneously become angry
  - Cowed or angry state can persist, even without more stress
Examples of Cusp Catastrophe

- Response behavior of a real estate market
  - Trend toward price rise as demand rise
  - Trend toward buyer exit as price rise
- Normally, demand/price conflict gradually reaches stable and mildly fluctuating state
Examples of Cusp Catastrophe

- At extreme demand stress (unqualified easy credit for buyers), unpredictability occurs, resulting in
  - prices do not stem trend toward unqualified buyer demand
  - unqualified buyers cannot sustain payments and selling trend catapults toward foreclosures
Examples of Cusp Catastrophe

- Photosynthesis evolves in bacteria and oxygen is released
  - Oxygen is poisonous to anaerobic bacteria and they are harmed
  - Oxygen is absorbed and stored in air and water, allowing anaerobic conditions to be maintained
Examples of Cusp Catastrophe

- Extreme stress occurs when system cannot sequester oxygen
- Virtuous cycle occurs → runaway oxygen production to new system equilibrium point and most anaerobic forms become site specific
- Anaerobic forms evolve way to kill off aerobic forms and maintain system
Can Colorado Wine Industry Suffer Cusp Catastrophes?

- Several fundamental trends are currently under stress in the Colorado industry.
- We need to examine trends to try and predict possible scenarios for cusp catastrophes.
Fundamental Trends in Colorado Wine Industry

- More wineries opening and wine production and sales increasing constantly
- Vineyard acres cannot meet demand for grapes of Colorado origin and supply is also inconsistent
- Excess demand filled by non-Colorado grapes
Fundamental Trends in Colorado Wine Industry

- Lack of planning for generational change and for newcomers in new wineries results in inconsistencies in wine quality.
- Previous building of wine quality associated with Colorado wine is expected by consumers.
- Using new cold-hardy cultivars → steep learning curve in growing and winemaking.
Fundamental Trends in Colorado Wine Industry

- Colorado origin brand demands higher price among customers for each wine style or type, but margin is limited: consumer has many price choices for similar wines.
- Wine of Colorado origin is continually smaller share of inventory produced.
Trends May Lead to Demand Cusp Catastrophe

- Increasing demand for Colorado originated grapes and wine, but price margin not flexible
- Limited ability to produce Colorado originated grapes and wines
- Demand Cusp Catastrophe may manifest as quick consumer behavior change → either devaluation of Colorado brand or shrinkage to survival of only small premium Colorado wineries
Possible Solutions to Demand Cusp Catastrophe

- Audience Input?
Trends May Lead to Quality Cusp Catastrophe

- Lack of planning for generational change and for newcomers in new wineries results in inconsistencies in wine quality
- Previous building of wine quality associated with Colorado wine is expected by consumers
- Quality Cusp Catastrophe may result in quick consumer behavior change to devaluation of Colorado brand or shrinkage to survival of only reputation wineries
Possible Solutions to Quality Cusp Catastrophe

- Audience Input?
Avoiding Cusp Catastrophes in Colorado Wine Industry

- Possible solutions to industry stress factors
  - Have a comprehensive industry plan and implement it
    - CWIDB, with input and guidance of stakeholders, researches and creates a comprehensive and detailed, long range, research and marketing plan
      - Create a task force to research causes, effects, and come up with a plan and recommendations
      - Establish metrics for plan and review as needed
  - Continue as is and let industry survive as best it can
  - Encourage sizable outside investment in targeted industry infrastructure and marketing
Avoiding Cusp Catastrophes in Colorado Wine Industry

- Possible Elements of Comprehensive Plan
  - Grow more Colorado grapes
    - Increase will come in cold hardy cultivars
  - Incentivize profitable vineyard and winery enterprises
    - Tax credits according to initial qualifications and job creation
Avoiding Cusp Catastrophes in Colorado Wine Industry

- Possible Elements of Comprehensive Plan
  - Incentivize quality and reputation of CO wines
  - Create metrics to reward increases in market share and/or value of reputation in marketplace
Possible Elements of Comprehensive Plan

- Learn to make quality wines and blends from cold hardy cultivars
  - Comprehensive education, inter-winery cooperation, applied research, and consultant efforts can shorten learning curve
- Incentivize education in winemaking and marketing, especially for new wineries
Implementation of Comprehensive Plan Elements

- **MARKETING**
  - CWIDB undertook review of previous marketing efforts and decided on more comprehensive efforts, now being implemented with a multi-year and unified plan.
Implementation of Comprehensive Plan Elements

- **RESEARCH**
  - CWIDB and CSU are reviewing previous research efforts
  - Reviews are not yet comprehensive and analyzed
  - Need more industry and expert input
  - No comprehensive long-range plan yet devised
Implementation of Comprehensive Plan Elements

- **EDUCATION**
  - CSU and CWIDB need comprehensive review of past education and outreach efforts to address knowledge gaps and devise long range plan
  - Reviews are not yet comprehensive and analyzed
  - Need more CAVE and general industry and expert input
  - No comprehensive long range plan yet devised
Where Do We Go?

- Take problems and opportunities seriously and work on them NOW
- Devise long range comprehensive plan, and then define short, medium, and long range aims and goals
- Document everything and keep institutional memory alive and use to inform current deliberations
  - CWIDB and industry history presently being researched and report will document trends