

KENTUCKY

WINE

TRIALS AND TRIBULATIONS OF A NEW GROWER WITH CHAMBOURCIN AND NORTON

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WHY DID I CHOOSE TO GROW GRAPES?



- Retirement hobby
- Diversify income
- Enjoyment
- A moment of temporary insanity



WHY DID I CHOOSE TO GROW CHAMBOURCIN AND NORTON?

- ◉ Suitable climate
- ◉ Hardiness
- ◉ Relative ease of growing and training
- ◉ Sustainability
- ◉ Marketability
- ◉ Level of revenue



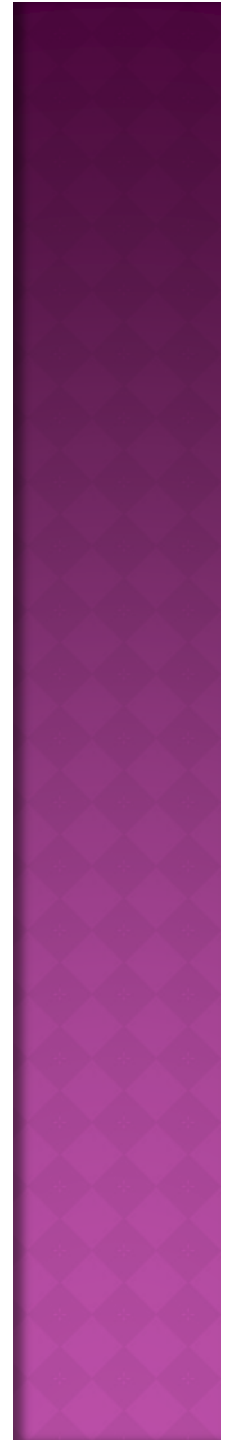
CHAMBOURCIN

- ◉ French-American hybrid
- ◉ High Yields - 6 T/A
- ◉ High quality fruit
- ◉ Strong demand from wineries
- ◉ Excellent wines



BEFORE PLANTING

- ◉ Soil analysis
- ◉ Adding amendments
 - 19 N, 19 P, 19K
(300lbs in 2007)
 - 250lbs/A lime in 2006
- ◉ Weed control
- ◉ Ordering vines -
earlier the better
- ◉ Choosing a training
system
- ◉ Ordering supplies
 - Posts, wire, bamboo

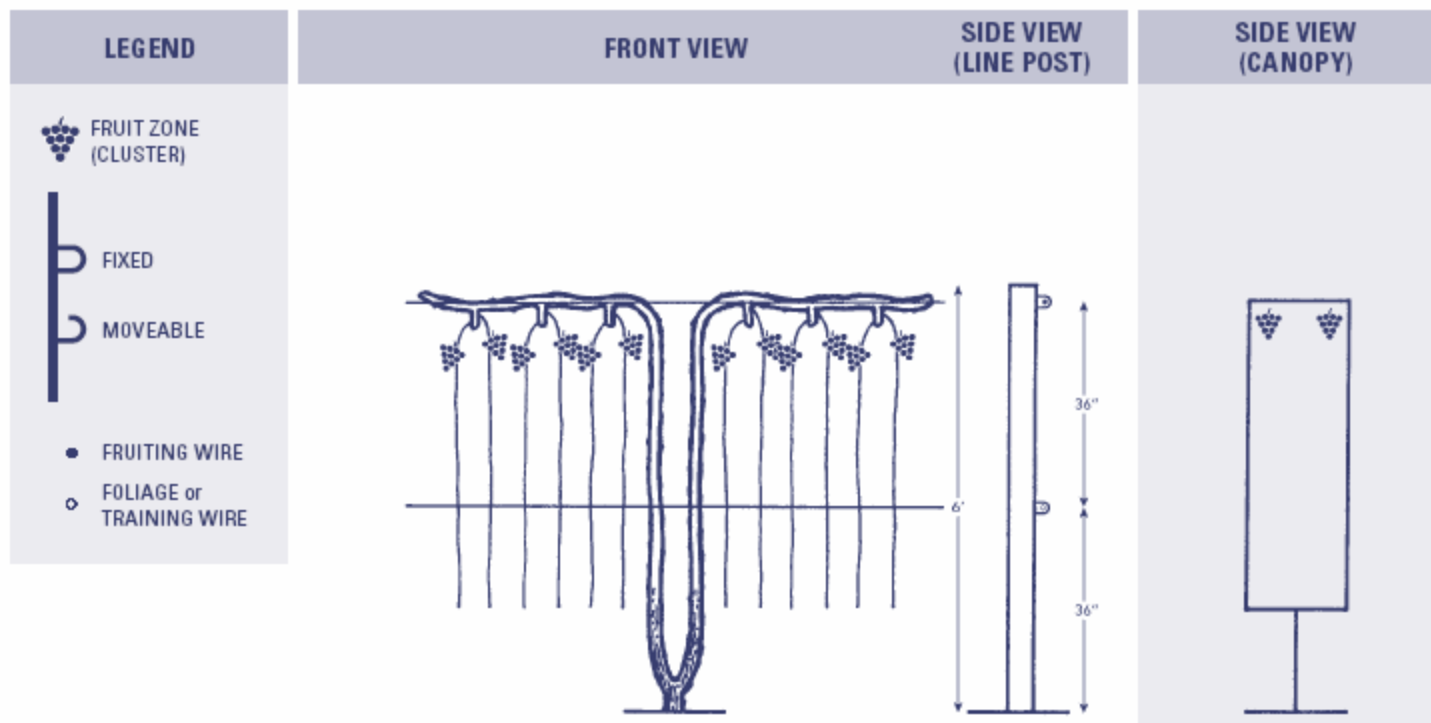


CHAMBOURCIN PLANTING

- ◉ Planted in 2001
- ◉ 5th Harvest in 2007
- ◉ 8 x 10 Spacing
- ◉ 400 Vines
- ◉ Own-rooted
- ◉ N-S orientation
- ◉ Single high-wire
- ◉ Pruned to 2-3 bud spurs



SINGLE HIGH-WIRE TRAINING SYSTEM IN CHAMBOURCIN



TRAINING SYSTEM CHOICE FOR CHAMBOURCIN

- ◉ Single high wire
- ◉ Growth habit of the vine
- ◉ Installation costs
- ◉ Higher yields
- ◉ Better quality fruit
- ◉ Less disease incidence due to exposure



STEPS TAKEN DURING THE SEASON

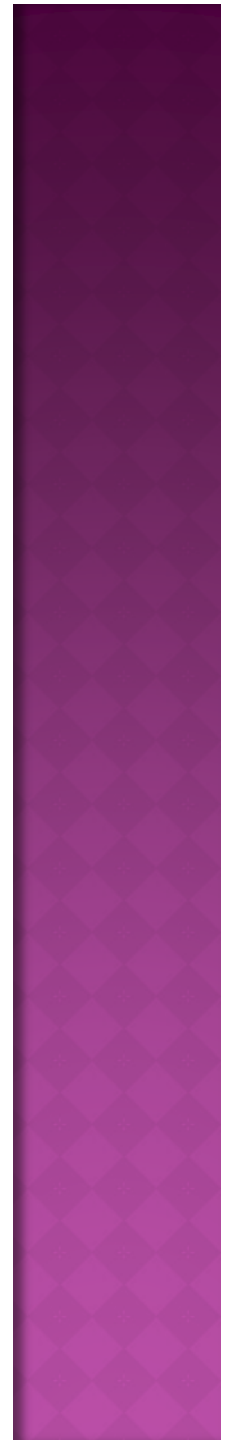
- ◉ Dormant season:
 - Rough prune: 30+10
- ◉ Dormant lime-sulfur spray - be aware of varietal sensitivity
- ◉ Pre - emergent weed control spray - Roundup and Chateau
- ◉ Final fertilizer application by mid-June
- ◉ Cluster thinned to 50 - 60 clusters per vine
- ◉ Combing vines vital to sunlight and airflow
- ◉ 10-14 day spray schedule
- ◉ Bird netting application by veraison (Aug. 1)
- ◉ Yield estimation by veraison
- ◉ Harvest coordination with the winery

PROBLEMS ENCOUNTERED WITH CHAMBOURCIN

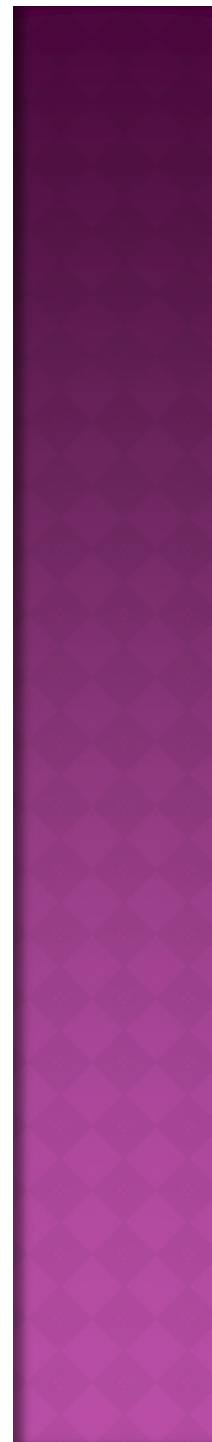
- Cannot tolerate wet soil - required tiling
- Early season disease pressure
 - Early and consistent spraying necessary
 - Consulting UK specialists/attending workshops
 - Rotating chemicals and using proper amounts
 - Calibration of sprayer
- Over cropping - reduces quality and delays ripening
 - Cluster thinning is a must
- Late season disease pressure
 - Air-blast sprayer
 - Calibration
- Birds - no problems until 2006
 - Netting vines is the only sure option

YIELD AND FRUIT QUALITY AVERAGES FOR CHAMBOURCIN

- Yield averages:
 - 8616 lb/400 vines =
 - 5.4T/A
 - 22 lb/vine
- Fruit quality averages:
 - In 2007 Brix - 21.5



AIR-BLAST SPRAYER AND BIRD NETTING



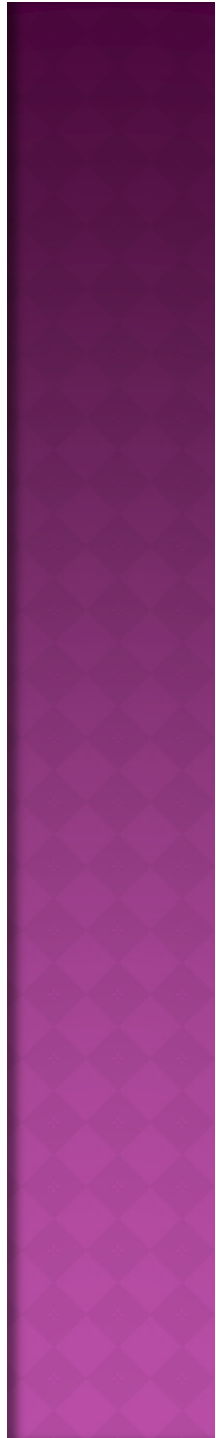
NORTON

- ◉ American cultivar
- ◉ Small clusters
- ◉ Cold hardy but requires long season
- ◉ Disease resistant
- ◉ Very high quality fruit
- ◉ Very high demand from wineries
- ◉ Signature wines



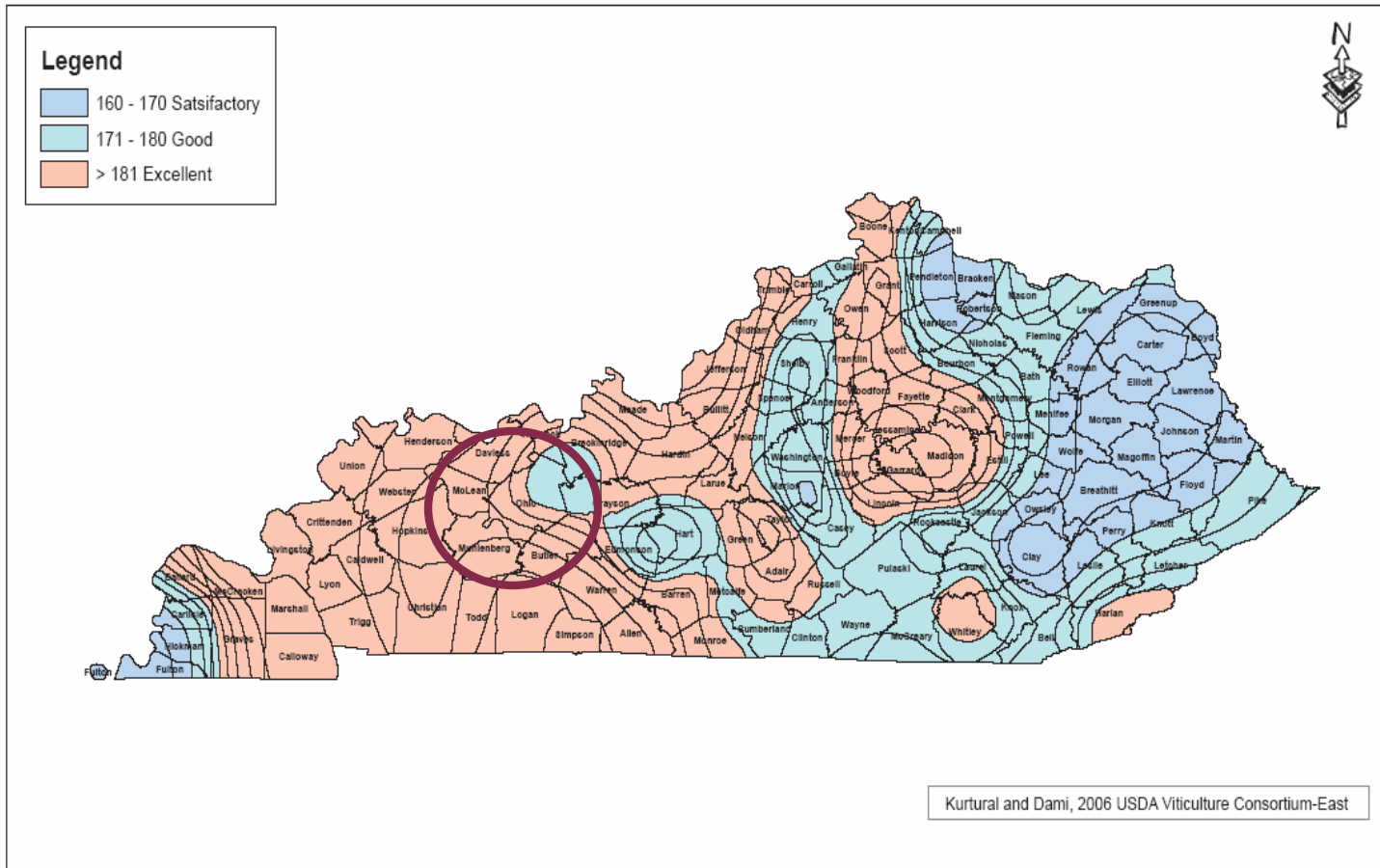
DECISION TO PLANT NORTON

- ◉ Diversify harvest resources
- ◉ Very high demand from wineries
- ◉ Adaptation to climate
- ◉ Ease of growing the cultivar
- ◉ Disease resistant and cold hardy



NORTON CLIMATE

Frost Free Days 1974 - 2005

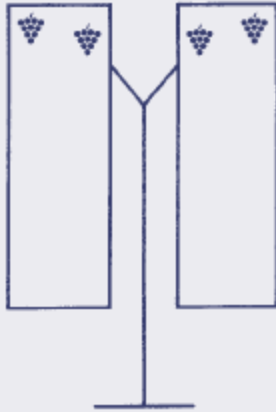
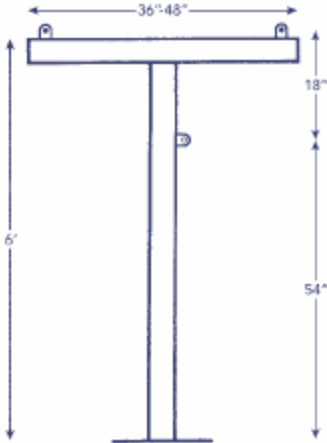
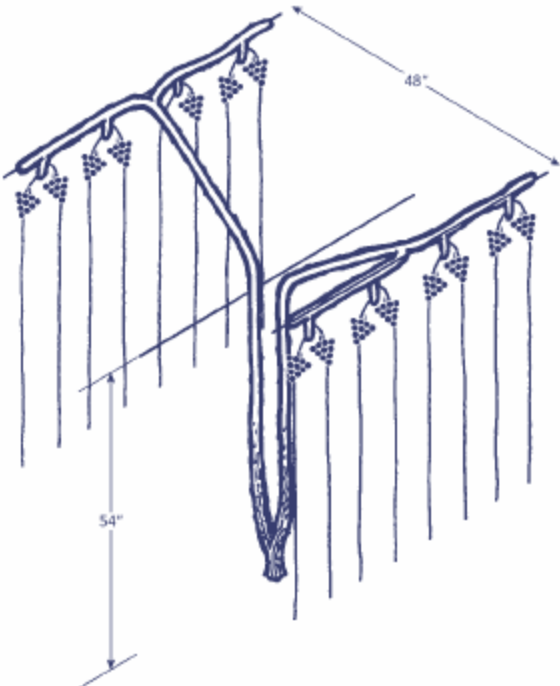


NORTON PLANTING

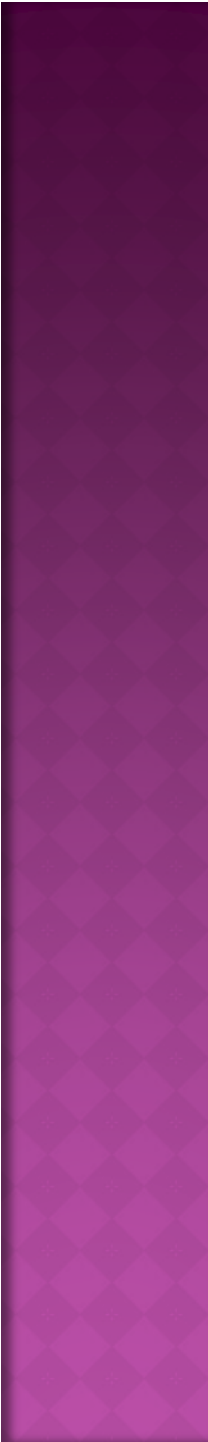
- Planted in 2005
- 8' x 14' spacing
- Own-rooted
- N-S orientation
- Geneva Double Curtain
- Long-spur pruned to 4-6 bud spurs
- 2007 1st harvest year



GENEVA DOUBLE CURTAIN

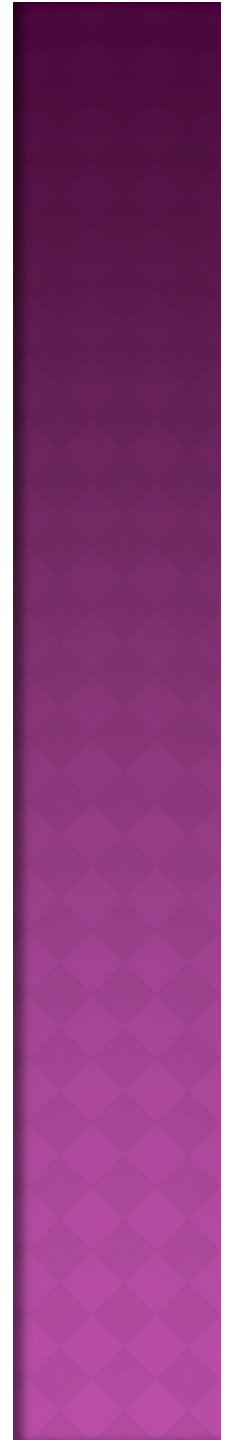


GENEVA DOUBLE CURTAIN



TRAINING SYSTEM CHOICE FOR NORTON

- ◉ Growth habit
- ◉ Vigor of the vine
- ◉ Need for sunlight exposure
- ◉ To increase yields
- ◉ To increase fruit quality at harvest
- ◉ To reduce number of sprays



ISSUES WITH THIS CULTIVAR

- ◉ Time to training wire
 - Two to three years to train to harvest
 - Training each vine is like training two vines
- ◉ Vigorous vines require Geneva Double Curtain to accommodate dense foliage and expose the shoots to sunlight and airflow
- ◉ Shy bearing cultivar (small clusters) so Geneva Double Curtain maximizes canopy area for growth of shoots and clusters
- ◉ Acidity an issue so Geneva Double curtain to expose the clusters

STEPS TAKEN DURING THE YEAR

- Dormant season
 - Rough prune: 60+10
 - Dormant lime-sulfur spray
- Pre-emergent weed control
- Final bud number adjusted by June if rough pruned
- Fertilizer application by mid-May and mid-June
- Vine combing vital for sunlight and airflow
- Spray program not as aggressive
- Yield estimation
- Harvest coordination with winery

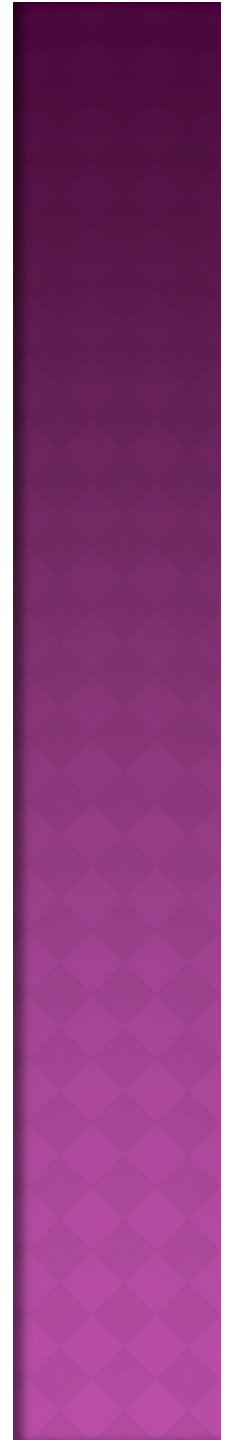
AVERAGE YIELDS AND FRUIT QUALITY

- Yield:
 - 2705 lb/98 vines
 - 28 lbs/vine
- Fruit quality
 - 21.5 Brix



H-BRACES

- Heavy canopy weight on GDC creates high - stress on wires and cross arms
- H-Braces distribute the weight of the crop
- Distributes the weight of the crop
- Will be installed this season



OTHER ISSUES

- Production costs
- Time
- Resources
- Harvest
- Record keeping
- Questions??

