



LWC Breakfast Meeting

17 February 2009



'New' Varieties in the Region - ABC

**Paul S. Verdegaal
San Joaquin County**

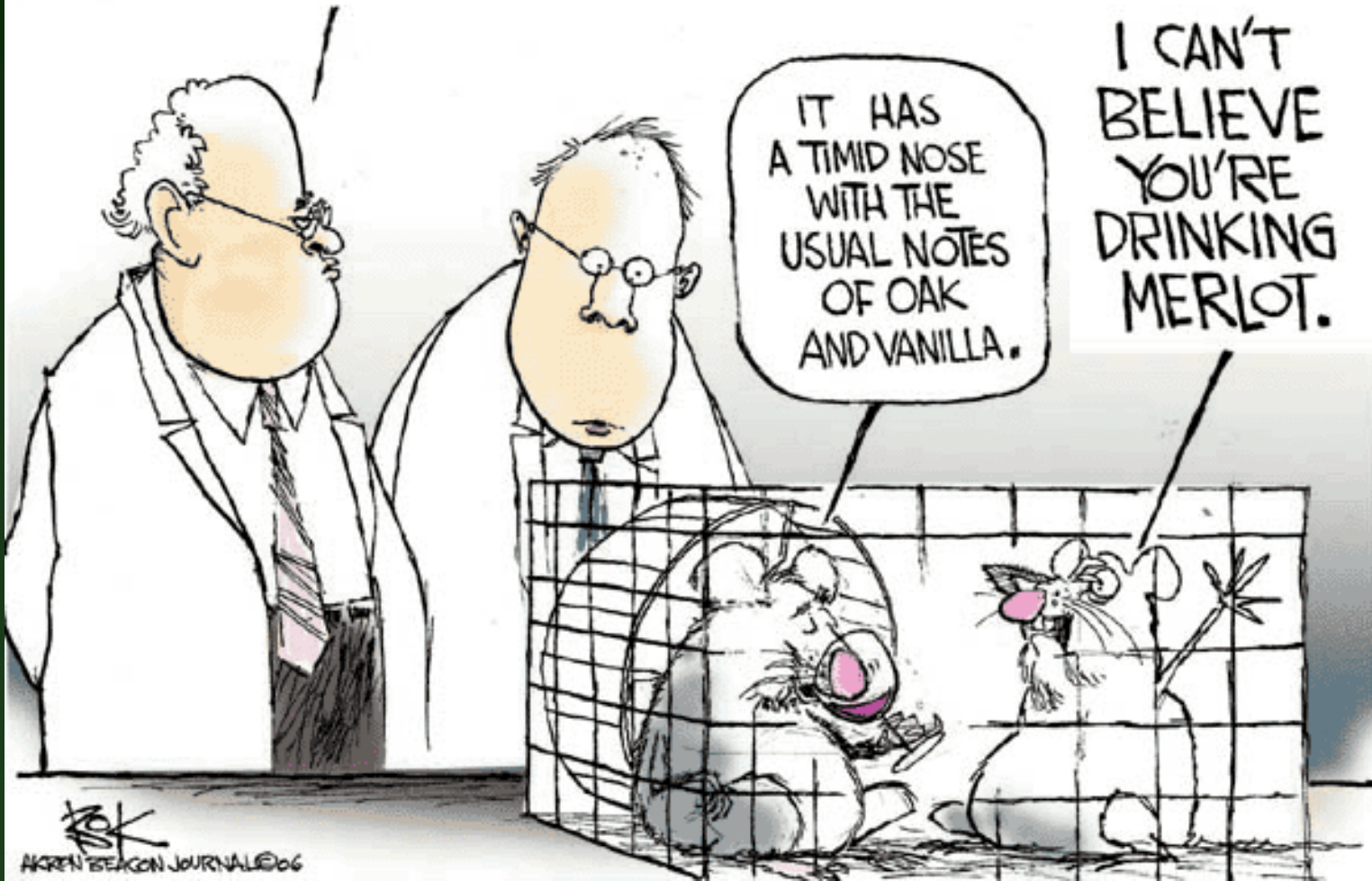
**University of California
Cooperative Extension**

The Right Variety

RED WINE MAKES THEM LIVE LONGER,
BUT THEY GET TO BE A REAL PAIN.

IT HAS
A TIMID NOSE
WITH THE
USUAL NOTES
OF OAK
AND VANILLA.

I CAN'T
BELIEVE
YOU'RE
DRINKING
MERLOT.



World Wide Selections

9,000,000 ha

14,000 varieties

Major Commercial Varieties

239

25%

20

30%

259

55%

1998

Variety Selection

- Demand and Quality
- Yield
- Soils
- Climate
- Production Goals
- Personal Commitment

Selection Factors

World

- Resistance
 - Disease
 - Pests
- Tradition
- Regulations
- Growing Conditions
 - Winter Cold
 - Water
 - Soils

California

Marketability
Quality
Yield
Resistance

First Considerations

Consumer Demand

VS

Management/Input

Quality and Marketing



Variety Acreage

2007

Chardonnay	94,282
Cabernet Sauvignon	75,662
Zinfandel	51,649
Merlot	49,781
Pinot noir	29,191
Colombard	28,649
Syrah	18,749
Sauvignon blanc	15,367
Rubired	11,109
Chenin blanc	9,598
Pinot gris	9,389

2005

Chardonnay	95,021	
Cabernet Sauvignon	76,756	
Merlot	54,288	(2,497)
Zinfandel	51,425	
Colombard	29,455	
Pinot noir	24,442	(7,816)
Syrah	18,257	(110)
Sauvignon blanc	15,462	
Rubired	11,100	
Chenin blanc	10,695	
Barbera	7,999	

The Big Six

Chardonnay

Cabernet Sauvignon

Zinfandel

Merlot

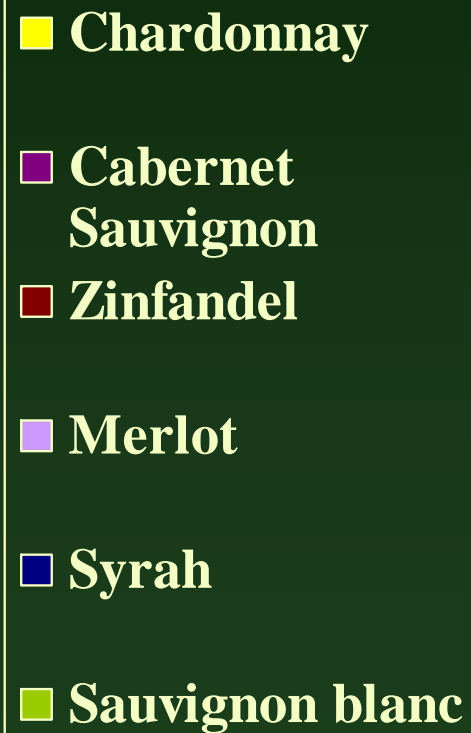
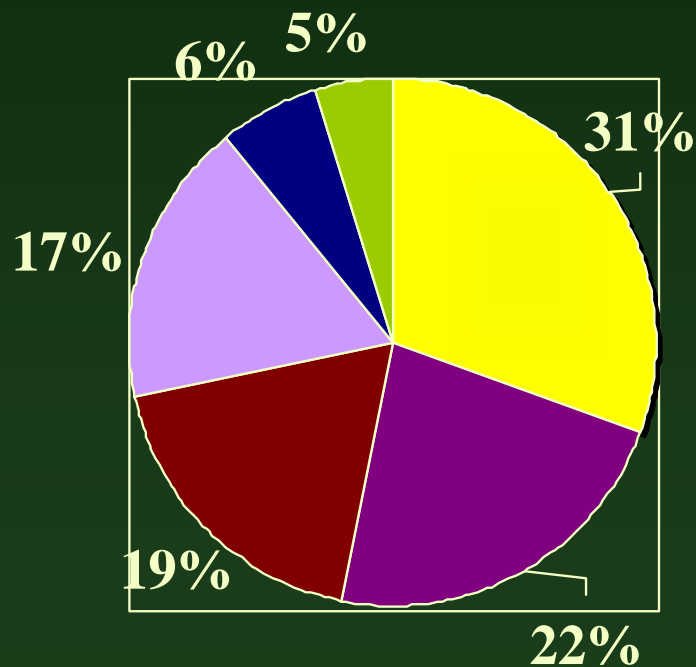
Sauvignon blanc (Pinot noir)

Syrah

The Big Six 2005

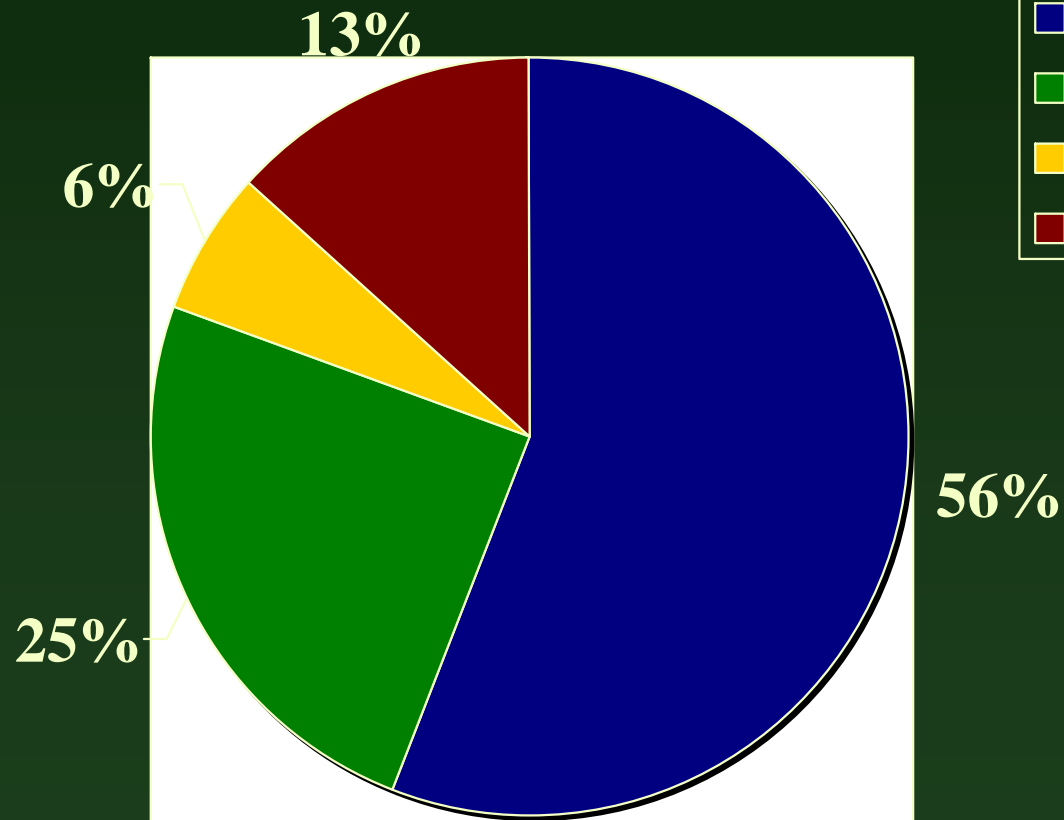
2,422,662 tons of 3,756,391 (**65%**) Wine Grapes

4,330,064 (**56%**) Total Grapes



Variety Composition of Crush

2005



- Big Six
- Next Ten
- Other
- Table

2,422,662

1,066,123

267,606

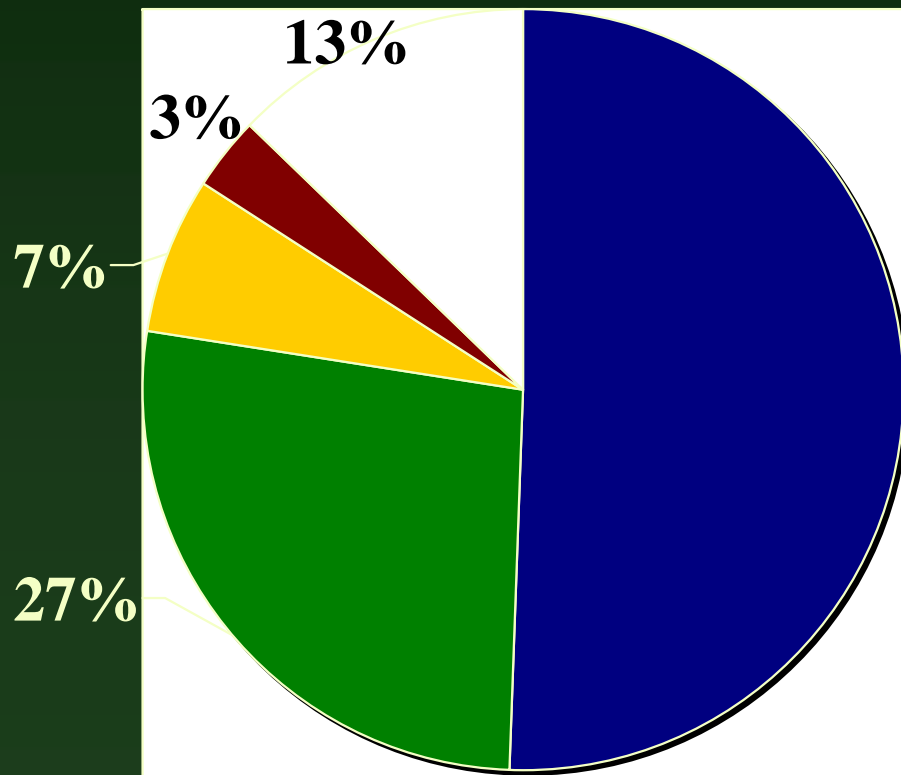
573,673

4,330,064

Total Tons

Variety Composition of Crush

2007



- Big Six
- Next Ten
- Other
- Table
- Raisin

1,953,725

1,040,581

253,198

117,099

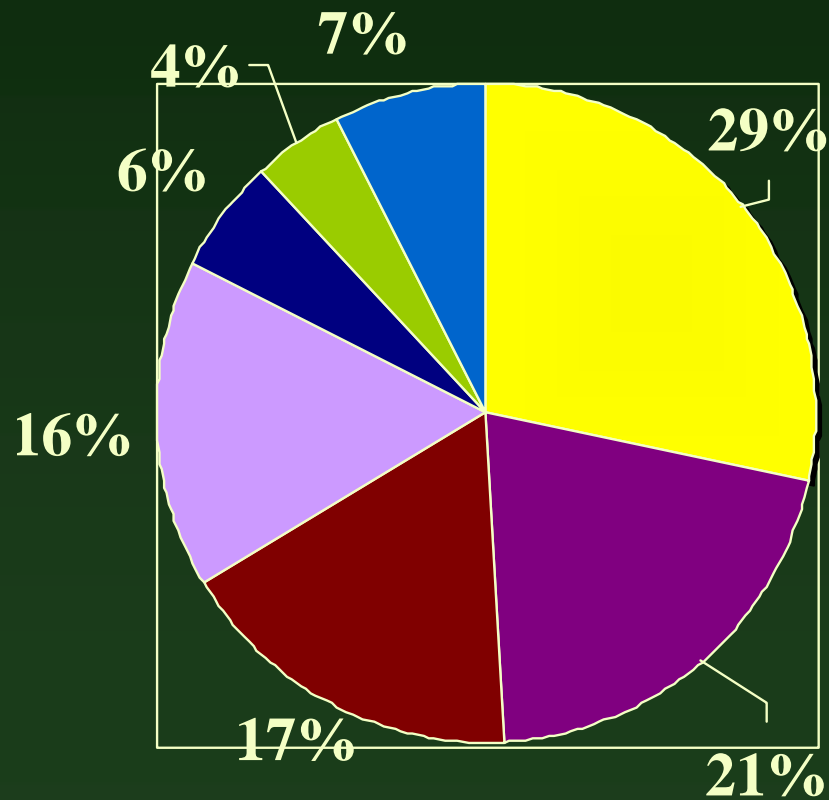
3,665,929

Total Tons

The Big Six 2008

1,953,725 tons of 3,247,504 (60%) Wine Grapes

3,665,929 (53%) Total Grapes



Varieties With 50,000 Tons Crushed in 2005

Rubired

Colombard

Pinot noir

Chenin blanc

Ruby Cabernet

Barbera

Grenache

Pinot grigio (gris)

Burger

Muscat of Alexandria

69 Red

42 White

? Other

Thompson seedless

16 Varieties of Wine Grapes

3,488,785 tons (92.9%) vs

267,606 tons of 111 Others

Newcomers in 1997

Syrah	6,987 (18, 257)	Pinot gris	890 (7,245)
Viognier	1,222 (2,217)	Symphony	538 (911)
Roussanne	166 (177)	Muscat Orange	135 (239)
Malbec	369 (1,174)	Dolcetto	98 (92)
Petit Verdot	367 (1,479)	Lambrusco	103 (103)
Sauvignon musqué	81 (165)	Tocai Friulano	124 (131)

'Newcomers' in 2007

Tempranillo	6,987 (18, 257)	Touriga	890 (7,245)
Tannat	1,222 (2,217)	Souzão	
Graciano		Tinta Barroca	38 (911)
Malbec	369 (1,174)	Trincadeira	135 (239)
Lagrein	98 (92)	Petit Verdot	367
Teroldego	(1,479)	Carmenère	103 (103)
Marzemina	81 (165)	Nero d'Avola	124 (131)
Negroamaro		Refosco	
Aleatico		Dornfelder (Complex vinifera)	
Dolcetto		Pinotage (Pinot noir x Cinsaut)	
Aglianico		Albariño	

PERSISTENCE

President Calvin Coolidge is the source of this widely quoted insight:

“Nothing in the world can take the place of persistence. Talent will not; nothing is more common than unsuccessful people with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent. The slogan "press on" has solved and always will solve the problems of the human race.”

Comeback Contenders

- Petite Sirah
- Barbera
- White Riesling
- Semillon
- Muscat blanc
- Mourvedre
- Carignane
- Grenache
- Rubired?

*I'd rather have
a bottle in front of me,
than a frontal lobotomy*



Groucho Marx

Clones

- Pinot noir (79)
- Chardonnay (60)
- Cabernet Sauvignon (36)
- Merlot (21)
- Cabernet franc (14)
- Sangiovese (19)
- Sauvignon blanc (22)
- Syrah (18+9)
- Zinfandel *



* More selections of Mission

Old Vine Zinfandel



Old Vine Tokay



2002

Primitivo 03

Vine Management

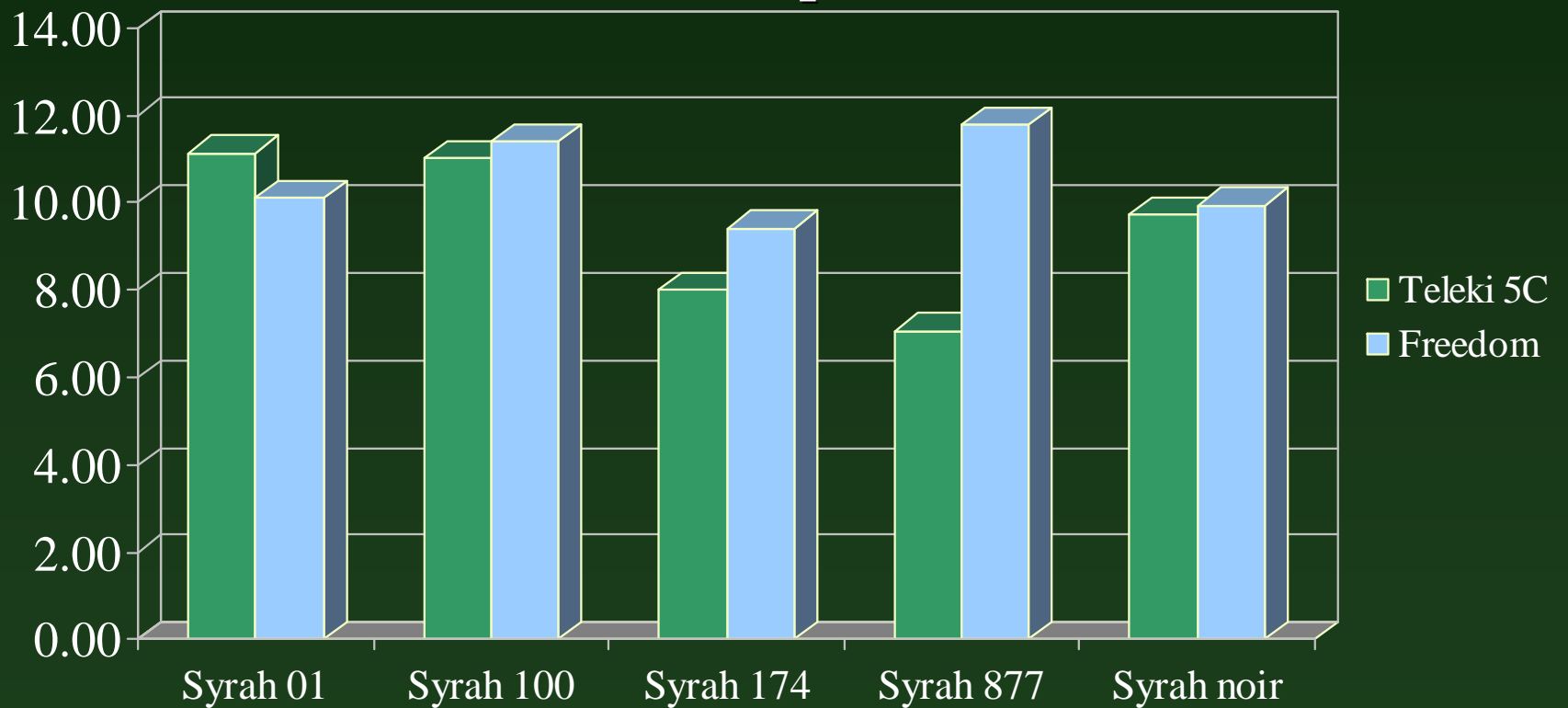
Or Continue the Search



Syrah Clones

Lodi 2002

Yield Pounds per Vine



Climate/Site Conditions

- Rainfall
- Winter Cold
- Growing Season
 - Frost
 - Heat
 - Wind
 - Hail

Symphony and Spring Rains 1998



Tendencies & Sensitivities

Petite Sirah

Zinfandel

Chenin blanc

Chardonnay

Merlot

Sauvignon blanc

Potential Problems

- Viruses
- Canker Diseases
- Foliar Pests
- General Availability

Excessive Vigor



Merlot/Freedom



**Montepulciano
2006**

Eutypa vs *Virus*



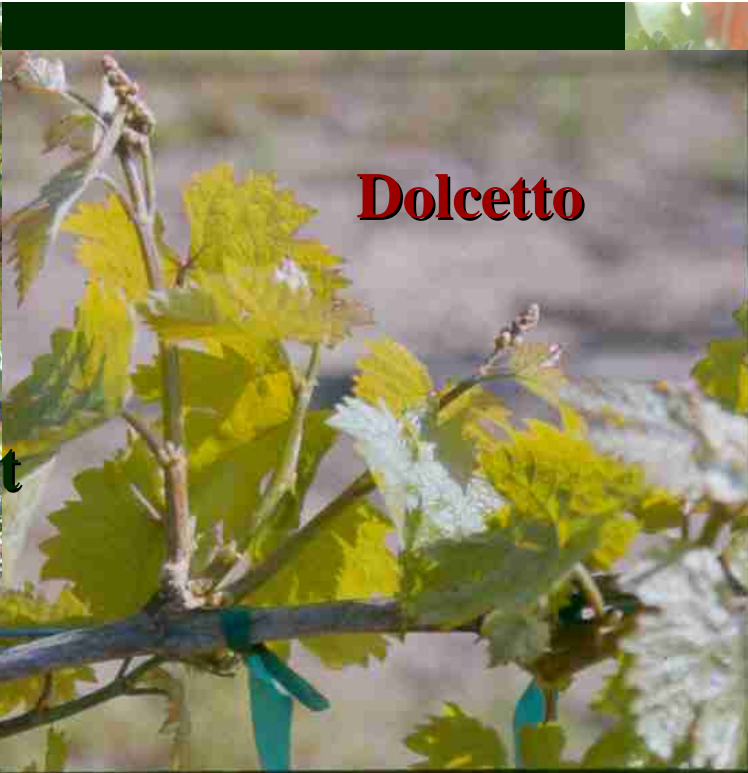
GLRaV



Eutypa dieback



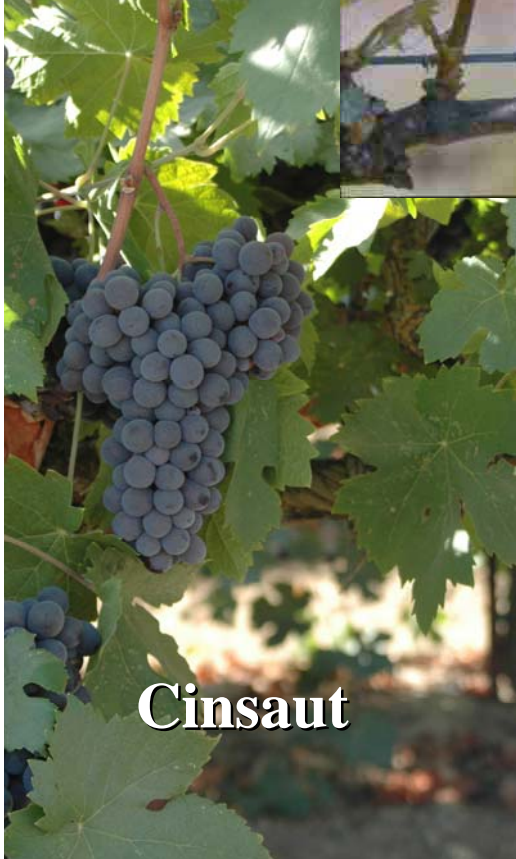
Petit Verdot



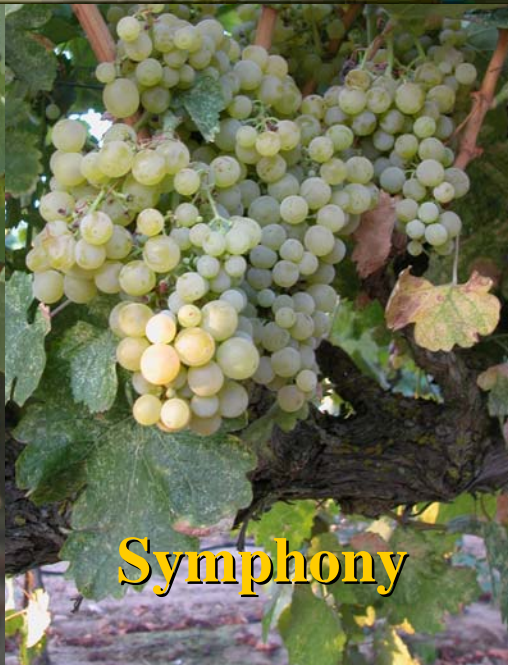
Dolcetto



Tinta Amarella



Cinsaut



Symphony



Grenache

Standards and Practices

Graciano (Morrastel)



Variety Observation Trial

- Non-Replicated
- Dynamic
- Viticulture Emphasis
- Wine Lot Opportunities

Liberty - Gallo

Soil: Tokay fine sandy loam

Rootstock: Freedom (*V. champinii* x 1613C)

Spacing: 7 x 10 feet (2.3 m x 3.1m)

Irrigation: drip 2 x 0.5 gph

Planted: 1992

Region: High III to Low IV

(Average GDD 3,464)

Vine Measurements

Growth

- Budbreak
- Bloom
- Maturity
- Pruning Weight
 - Crop:Pruning Ratio

Yield

- Weight per Vine
- Cluster Number
- Cluster Weight
- Berry Weight

Juice

- °Brix
- Titratable Acidity g/L
- pH
- Malic Acid
- Potassium
- Phenolics
 - Anthocyanins
 - Tannins

Variety Sources



Global “Warming” Considerations

- Five Warmest Seasons in Lodi during last 25 years:
1992 1997 2001 1984 2006
- Hottest July 1988
- Coolest September 2005
- Winter 2007 January with 25 days of minimum $< 30^{\circ}\text{F}$
- 2006 Hurricane Prediction of 6 to 9 Severe; actual was 3 severe, with 0 making landfall.
- Polar Ice Caps Shrinking on Mars

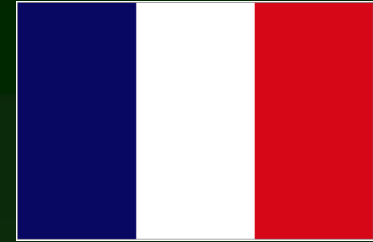
Bottom Line: Variety selection not at risk.

www.realclimate.org

www.junkscience.com

www.co2science.org

France



Bordeaux

Burgundy

Rhône

Loire

Languedoc

Rosussillon

Cahors

Alsace

Bordeaux

Cabernet Sauvignon

Cabernet franc

Merlot

Petit Verdot

Carmenère

Malbec

Sauvignon blanc

Semillon

Tannat



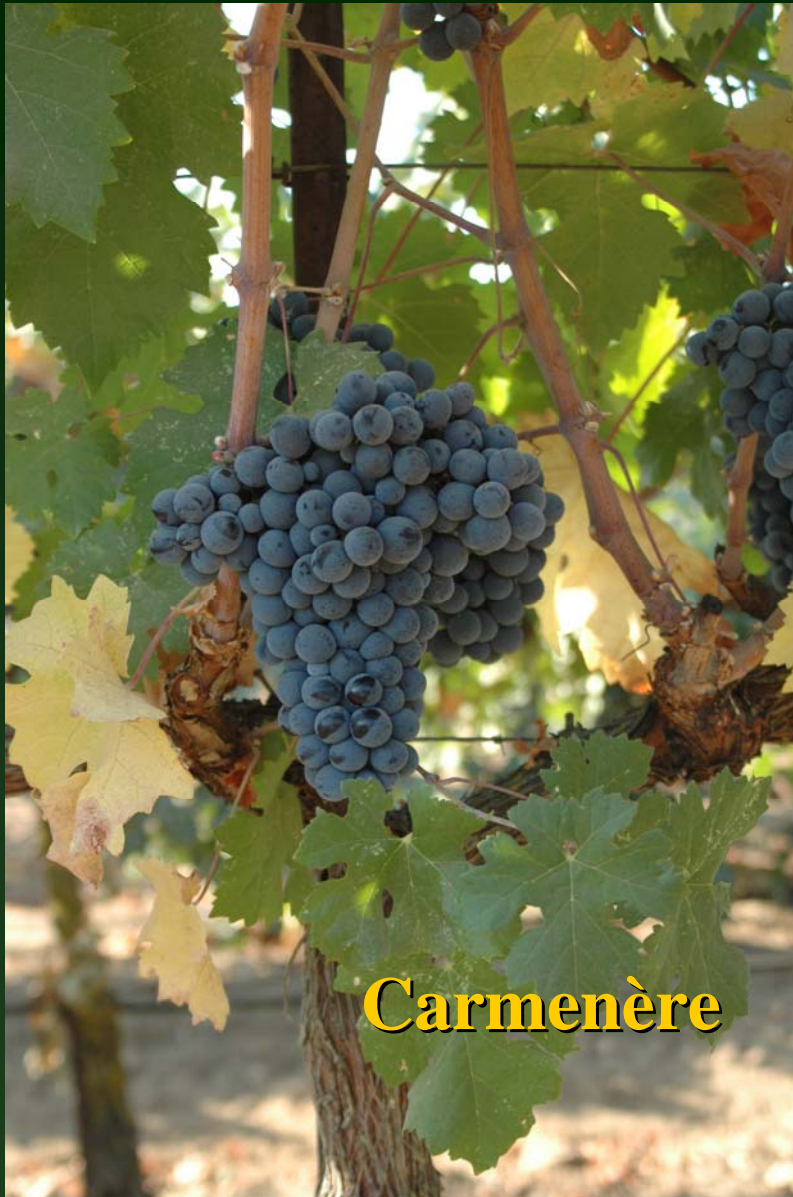


Malbec

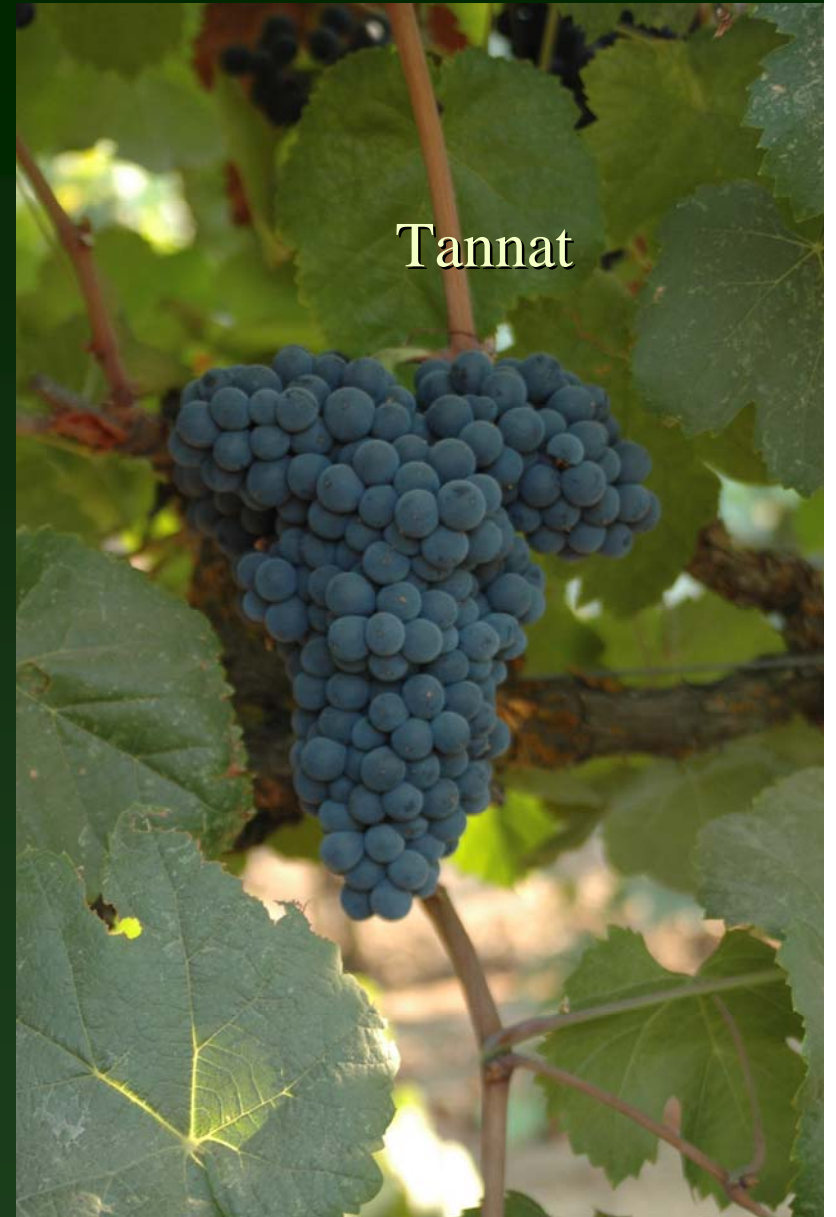
Clones FPS 04, 06, 08 vs 09

Malbec FPS 09





Carmenère



Tannat

Cabernet franc



Sauvignon blanc



Cabernet Sauvignon





Semillon



Muscat blanc

FPS 2, 3, 6, 7

Clones

146

152

FPS 01



Rhône

Grenache

Viognier

Syrah

Cinsaut

Mourvedre

Clairette blanche

Carignane



Grenache



Mourvedre

1A vs 3



Syrah



Viognier

Cinsaut





Marsanne



Clairrette blanche

Corbeau



Picpoul noir





Italy



Sangiovese 02 vs 03

Nebbiolo

Marzemino

Lagrein

Aglianico

Picpoul noir

Vernaccia

Pinot grigio 146, 152, FPS 01

Montepulciano

Pignolo

Cortese

Sagrantino (Sangiovese FPS 22)

Schioppetino

Dolcetto

Teroldego

Freisa

Aleatico

Arneis

Picolit

Refosco

Corvina (veronese)

Raboso Piave

Canaiolo nero



Barbera

Clones: Marshall = 1= 6, 2, 3 to 8



Sangiovese 02



Sangiovese 03



2006

Vintage

Sangiovese 02

Sangiovese 03





Teroldego



Marzemino



Lagrein

Freisa



Dolcetto



Aleatico





Corvina Veronese



Aglianico



Schioppetino



Mondeuse



Arneis



Arneis



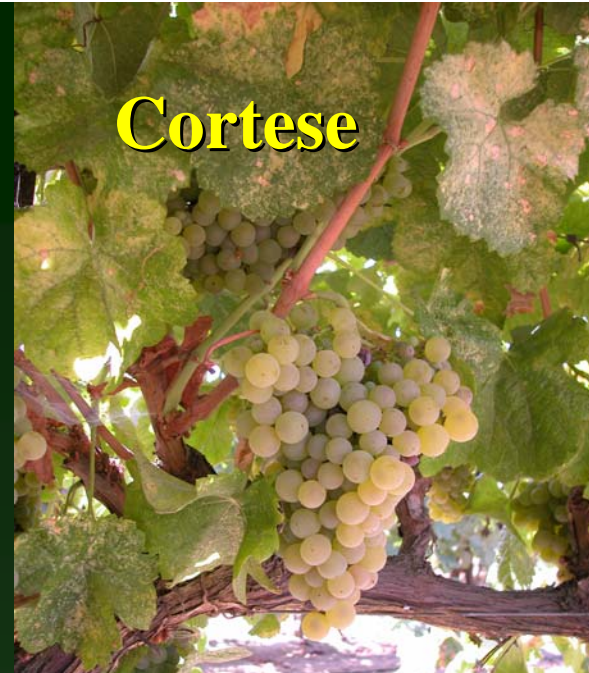
Picolit



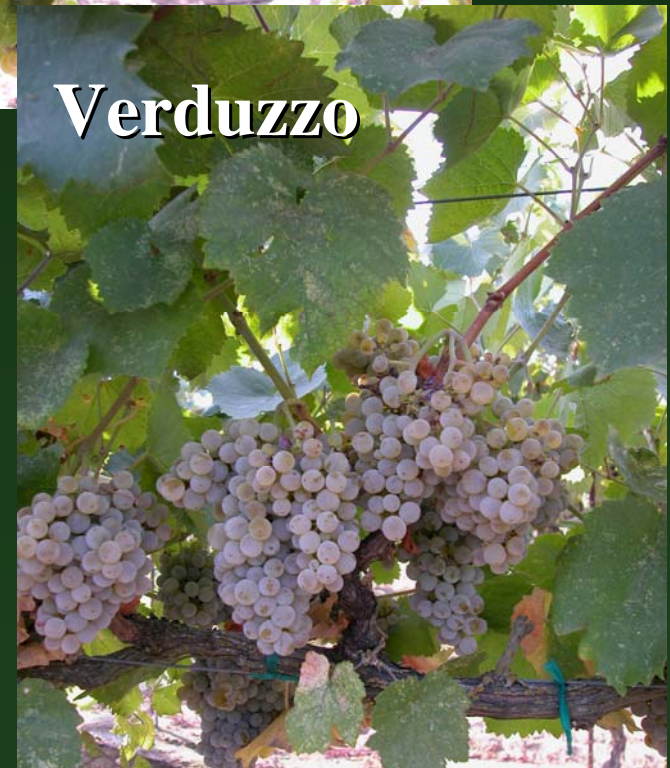
2003



Pignolo

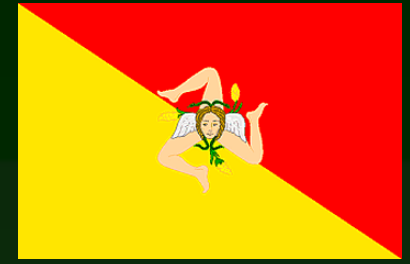


Cortese



Verduzzo





Southern Italy/Sicily

Nero d'Avola

Negroamaro

Fiano

Aleatico

Primitivo

Piedirosso

Aglianico

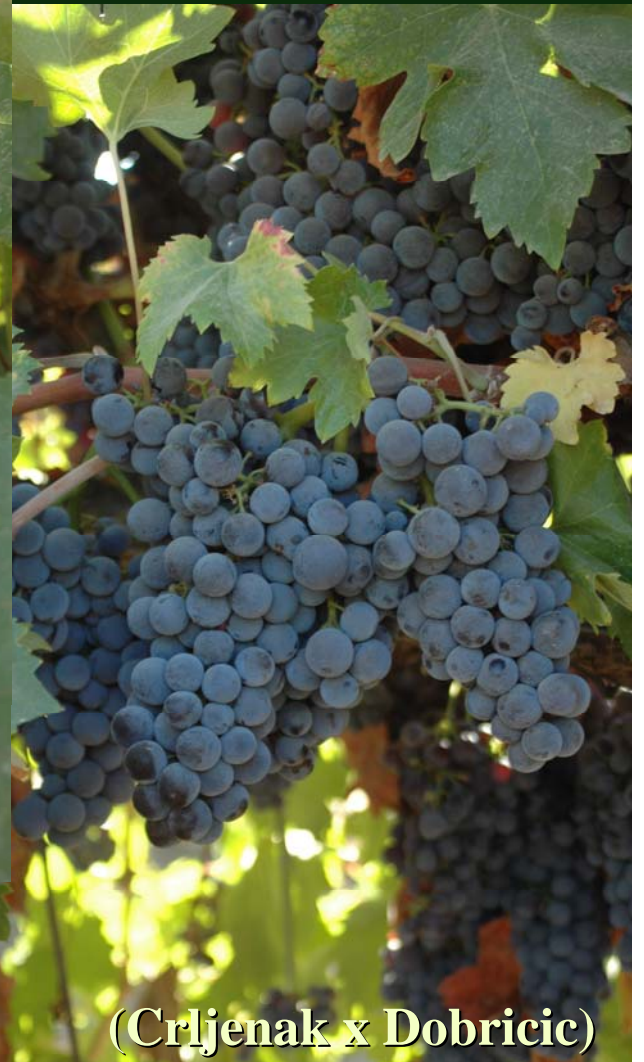
Others (21)



Zinfandel



Primitivo
(Crljenak)



Plavina (Plavac mali)

(Crljenak x Dobricic)



Aleatico



Aglianico

Spain



Tempranillo

Graciano

Garnacha

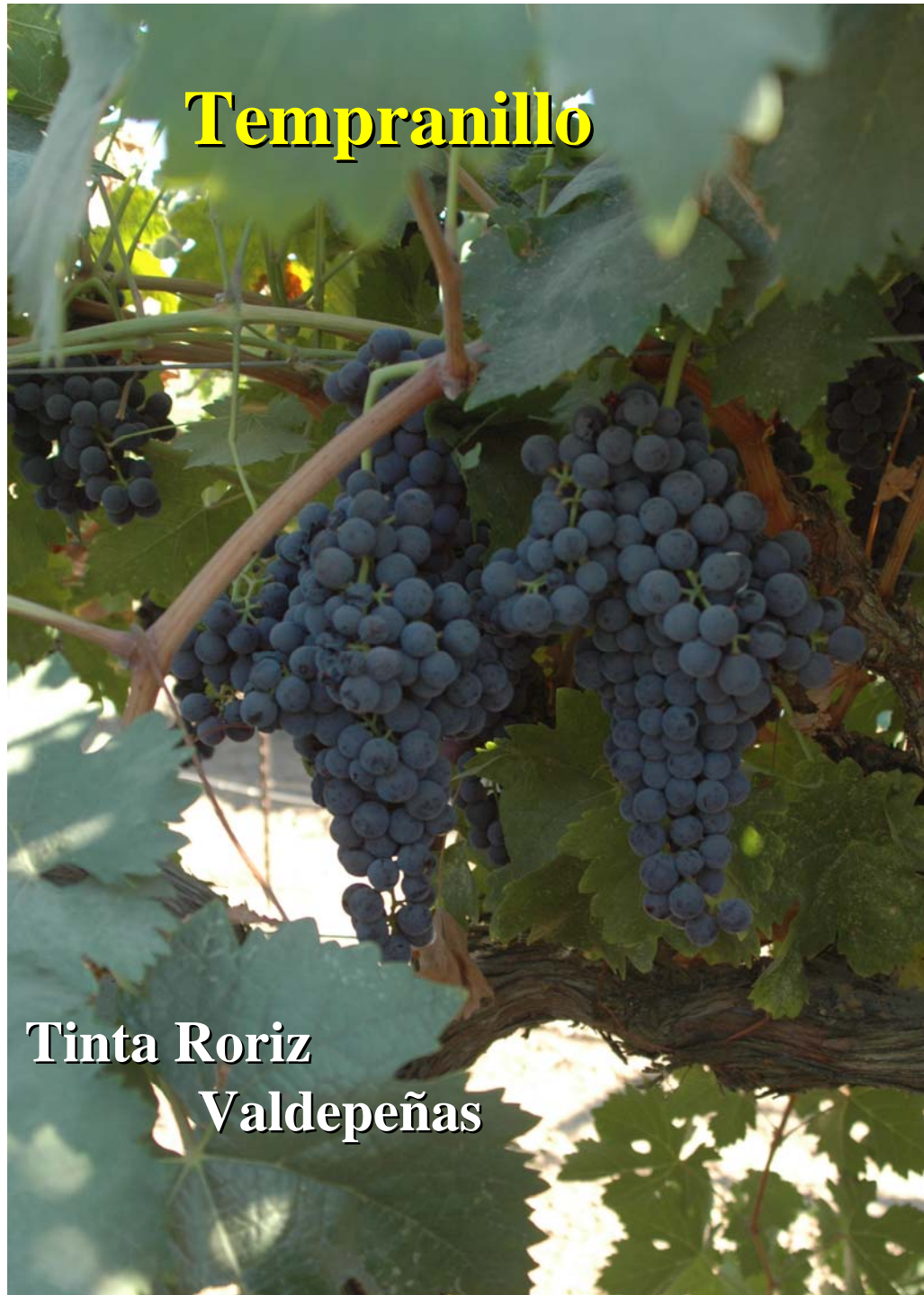
Palomino

Albariño

Xarello

Torrontes

Tempranillo



Tinta Roriz
Valdepeñas



Graciano

Morrastel

Portugal



Alvarelhão

Bastardo (Trousseau)

Souzão

Tinta Amarella

Tinta Barroca

Tinta Cão

Tinta Roriz (Tempranillo)

Touriga Nacional

Periquita (Trincadeira)

Verdelho



Alvarelhão



Touriga



Tinta Cão



Souzão



Periquita
(Trincadeira)



Bastardo



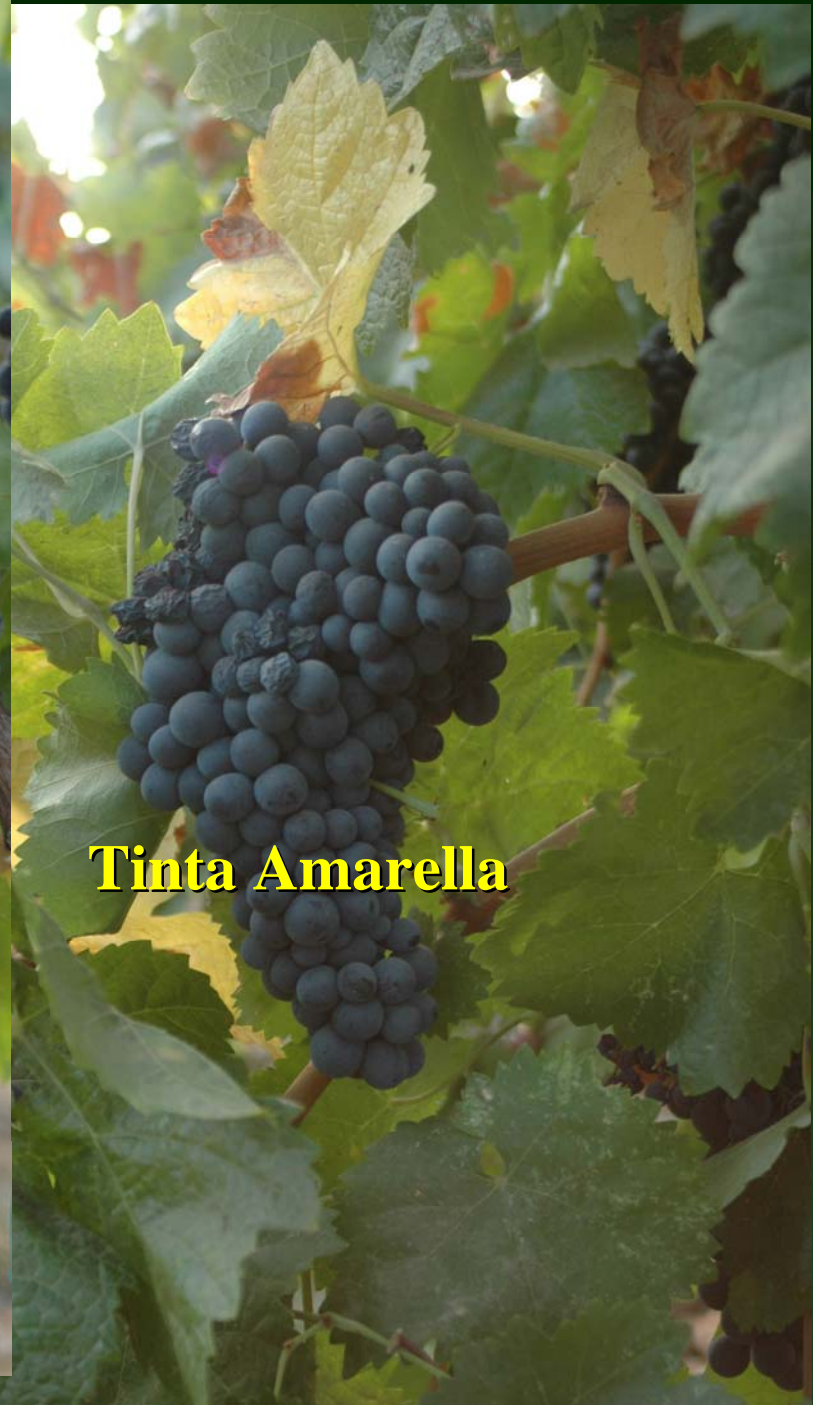
Verdelho



Trincadeira



Tinta Cão



Tinta Amarella

Germany



White Riesling

Gewürztraminer

Müller-Thurgau

Kerner

Sylvaner

Schereube

Dornfelder

Limberger

South Africa



Pinotage

(Pinot noir x Cinsaut)

Other Regions



Assyrtiko

Agiorghitiko

Xinomavro



Plavina



Furmint

Kékfrankos

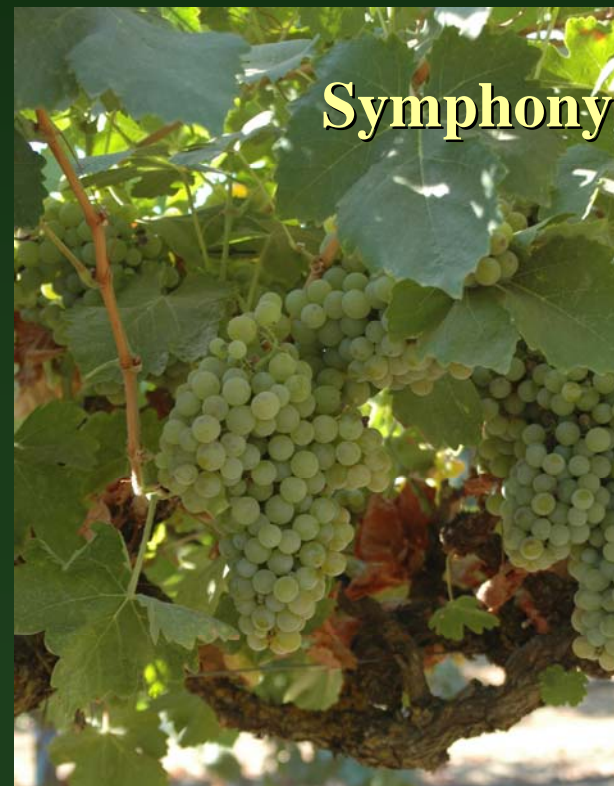
Kékoportó

Kadarka

Hybrids

- Rubired (Alicante Ganzin x Tinta Cão)
- Ruby Cabernet (Carignane x Cabernet Sauvignon)
- Symphony (Grenache gris x Muscat of Alexandria)
- Triplett blanc (Colombard x Vernaccia)
- Arinarnoa (Merlot x Petit Verdot)

- Chardonel
- Traminette
- Noiret
- Corot noir
- Valvin Muscat



Information

- fps.ucdavis.edu
- ngr.ucdavis.edu
- iv.ucdavis.edu
- nass.usda.gov/ca



Summary

- Demand
- Goals
- Variety, Trellis System, Both
- Management vs System
 - Vine Balance
- Cash Flow vs Long Term Marketing
- Quality vs Yield
 - Quality finds and keeps a home

Sustainability





Propagation of Grapevines



Selection and Handling of Propagation Material

Methods and Strategies

“ There are three kinds of men. The ones that learn by reading. The few who learn by observation. The rest of them have to pee on the electric fence for themselves.”

Will Rogers

Maintain Varieties and Market Demands



Vegetative Propagation

- Maintain True to Type Varieties
- Use Resistant Rootstock
- Crop Quality Management

Consideration of Method

- Cost
- Convenience
- Tradition
- Location
- Climate
- Available Skilled Labor





Scion wood collection

Use virus tested material OR

Know history of mother vines

Use same scion/rootstock combination



State of California
Department of Food and Agriculture
Nursery Stock Certification Program

Certified

Nursery Stock

Notice: Disclaimer of Warranties and Nonliability
The California Department of Food and Agriculture Disclaims All Express or Implied Warranties, Including Without Limitation, Implied Warranties of Merchantability and Fitness for a Particular Purpose, Regarding all Plants, Plant Parts and Plant Materials Under the Program. (Continued on Reverse of This Tag.)

No. A 000308

Variety **VOID**
Quantity **VOID** Date **VOID**
Grower and Certification Block Number

A. A. Ripken Grape Nursery, Inc.
14300 North DeVries Road
Lodi, California 95240

SEE REVERSE SIDE





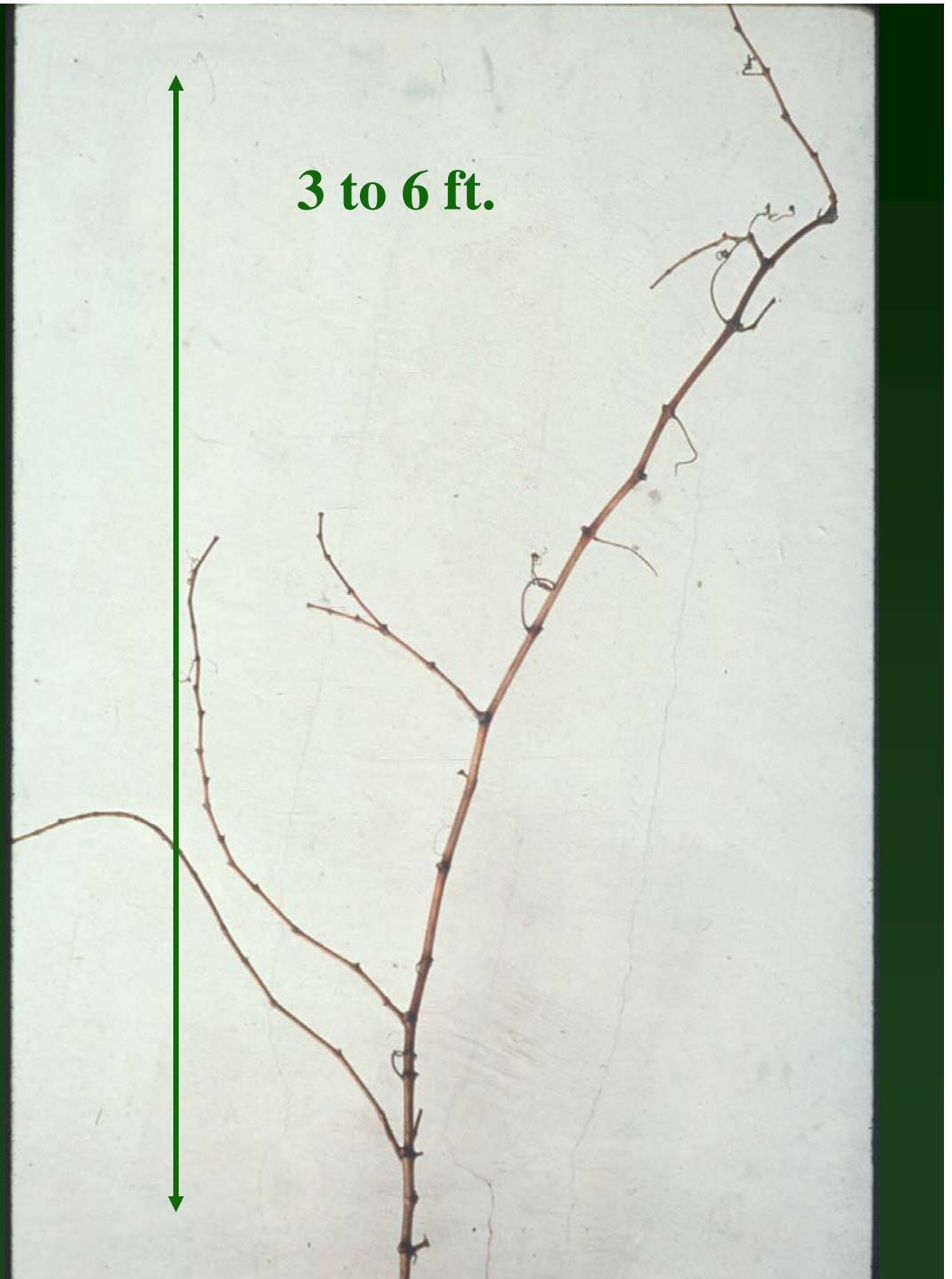
Appropriately Selected Scion Wood

Moderate Internodes

Moderate Diameter

Well Lignified

Good Internal Structure



3 to 6 ft.

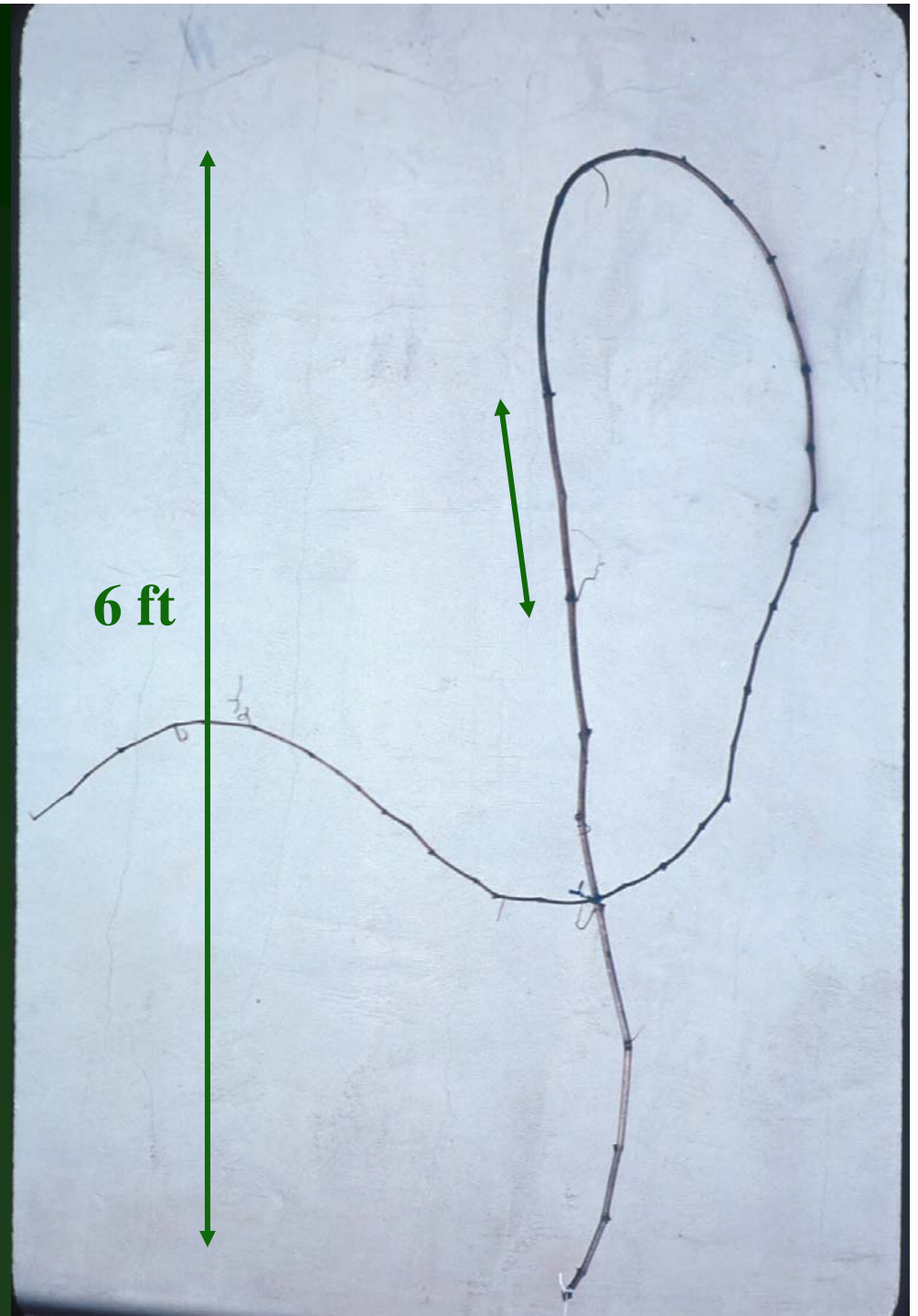
Poor Selection Wood

Excessive Internode Spacing

Large to Small Diameter

Poorly Matured

Pithy or Spongy Structure



Excessive Vigor and Shade



Grafting

Mature vines are “top worked” by inserting scion wood (short 2-bud section of dormant cane from desired variety) on a fully established vine.

Types of Grafting

- **Cleft**
- **Whip**
- **Bark**
- **Saw Kerf**
- **Side**

Cleft Grafting











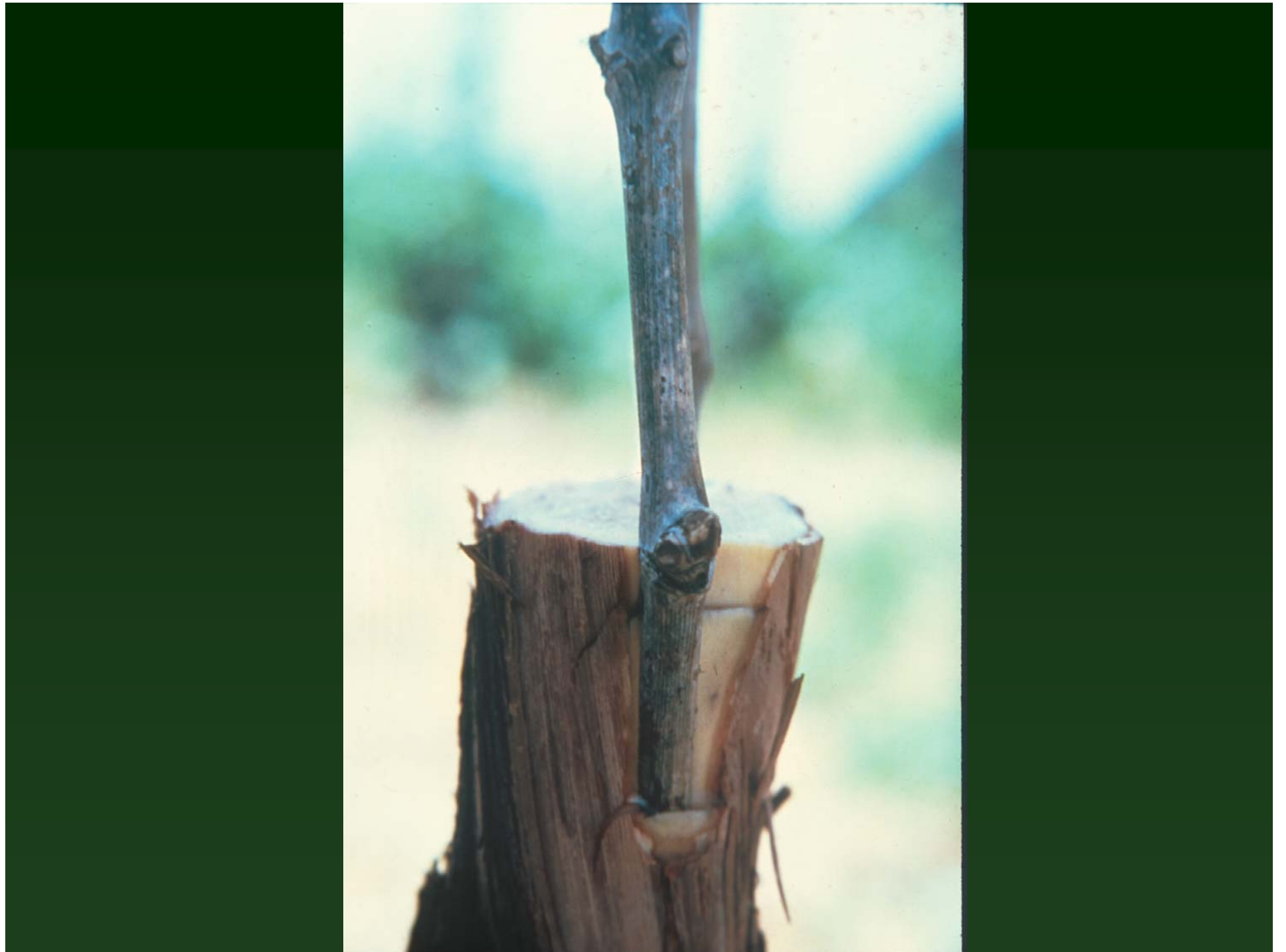
Side Whip Graft

Modified Whip Graft















Budding

A small section of bark with one bud from a desired variety is inserted on a rootstock.

“T” budding Backup

May to June



1 ¼ to 1 ½ inches

(3 to 4 cm)



“T” budding shields

Late Spring budding

Backup for grafting misses





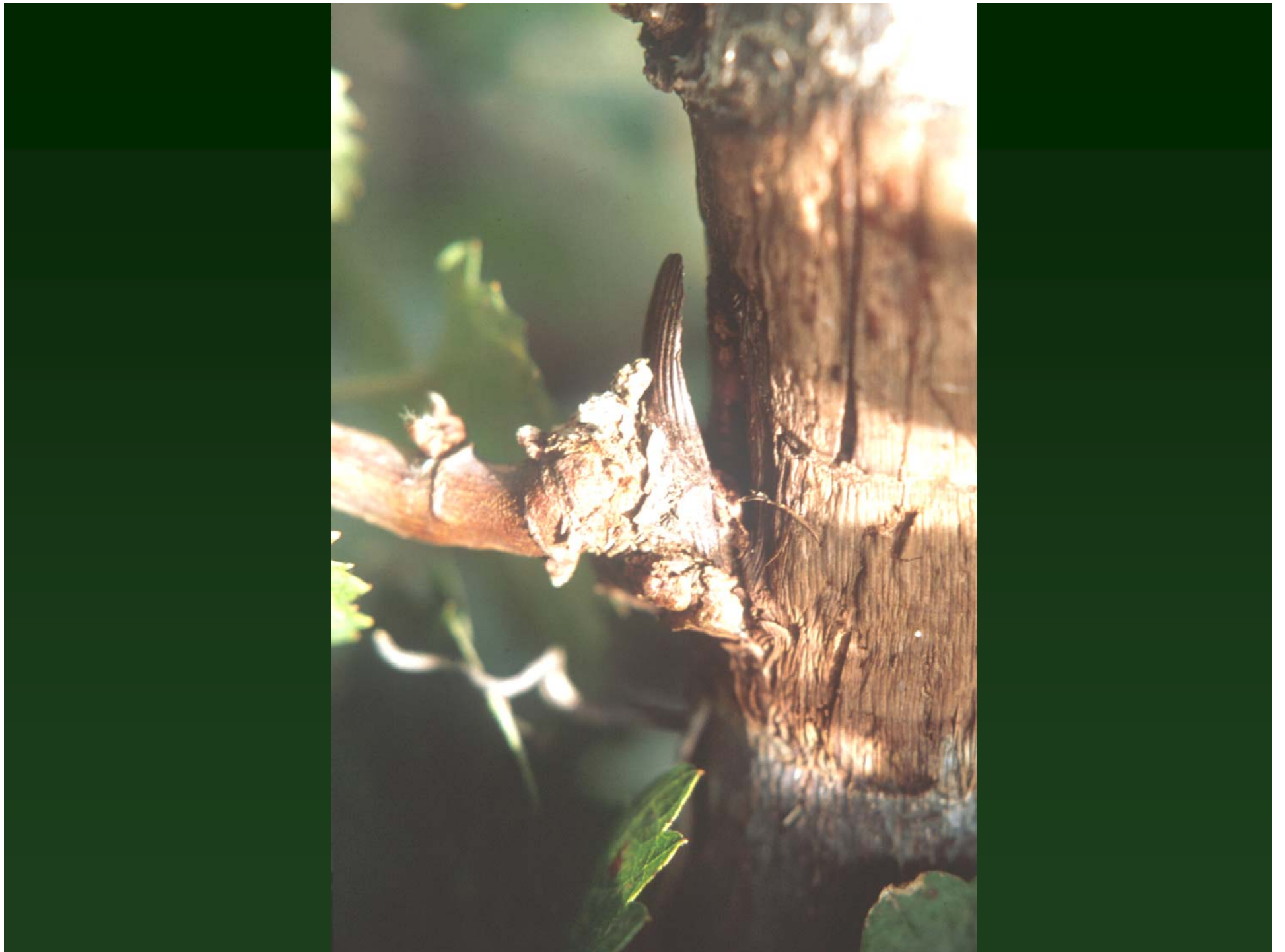




Propagation

Problems







Fieldbudded Zinfandel/Freedom

Virus Infected

Healthy





Young Vine Decline (Esca)





Wind Breakage

Sucker Growth

Drying Out



Summary Considerations

- Use Certified Wood
 - Or Use Same Scion/Rootstock Combination
- Know History of Source
- Observe the Field of Source Wood
- Obtain the Wood Yourself
- Confirm Budder's Track Record
- Provide Post Propagation Care
- Don't Assume What You Don't Know

“The cultivation of the earth is the most important labor of man. Unstable is the future of the country which has lost its taste for agriculture. If there is one lesson of history that is unmistakable, it is that national strength lies very near the soil.”

Daniel Webster





Land of the Free, Home of the Brave

