



VIRTUAL VITICULTURE

ACADEMY

Vine Pruning & Training to Promote Vineyard Longevity

Fritz Westover | Viticulturist
Virtual Viticulture Academy



Vine Pruning & Training to Promote Vineyard Longevity



PennState



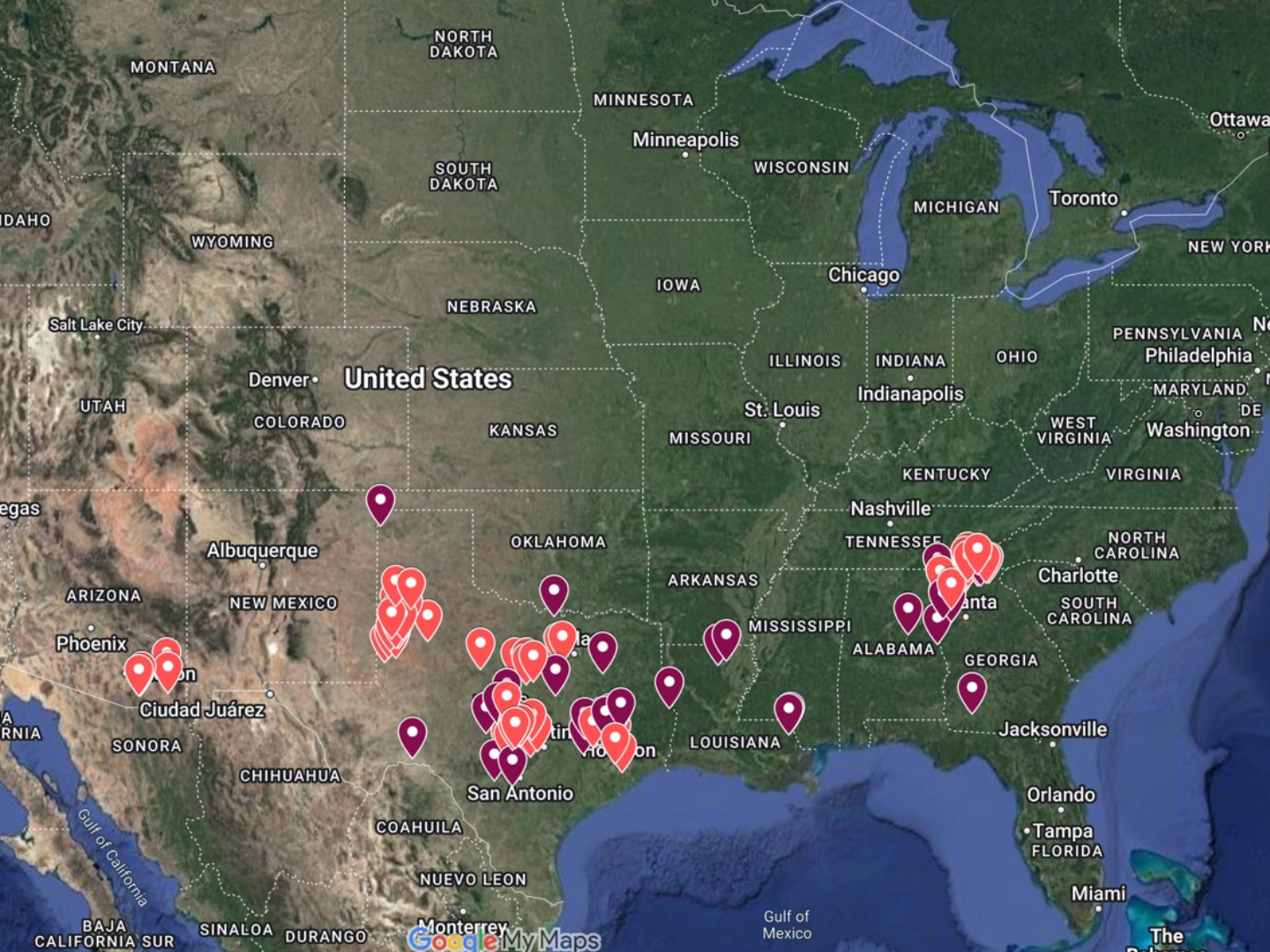
TEXAS A&M
UNIVERSITY.



VINEYARD TEAM
Promoting Sustainable Winegrowing



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United States

NORTH DAKOTA

MONTANA

MINNESOTA

SOUTH DAKOTA

Minneapolis

WISCONSIN

MICHIGAN

Toronto

NEW YORK

WYOMING

NEBRASKA

IOWA

Chicago

ILLINOIS

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PENNSYLVANIA

Philadelphia

Salt Lake City

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MARYLAND

Washington

WEST VIRGINIA

VIRGINIA

regas

Albuquerque

OKLAHOMA

Nashville

TENNESSEE

NORTH CAROLINA

Charlotte

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The Bahamas



Factors Influencing Vineyard Longevity

- Vineyard establishment protocols (soil, water, nutrition)
- Environmental conditions (drought, heat, cold)
- Management (water, nutrition, training, pruning)
- Water (quality, availability, timing)
- Diseases (GTD)
- Vine balance (crop load x season)





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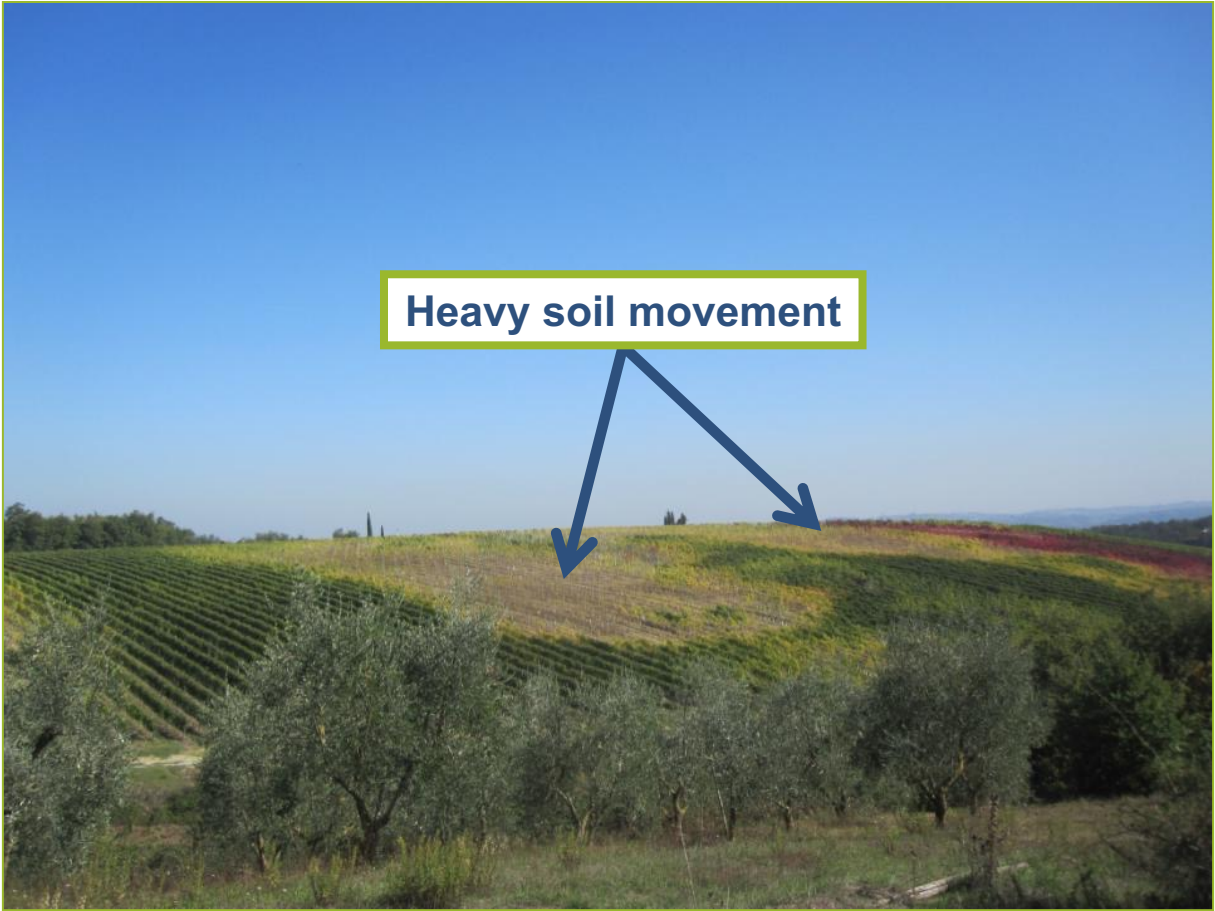


**Vineyard
longevity
starts before
you plant**



Vine Pruning & Training to Promote Vineyard Longevity

Heavy soil movement



Young Vines Should NOT Struggle...



No Wimpy Wood!



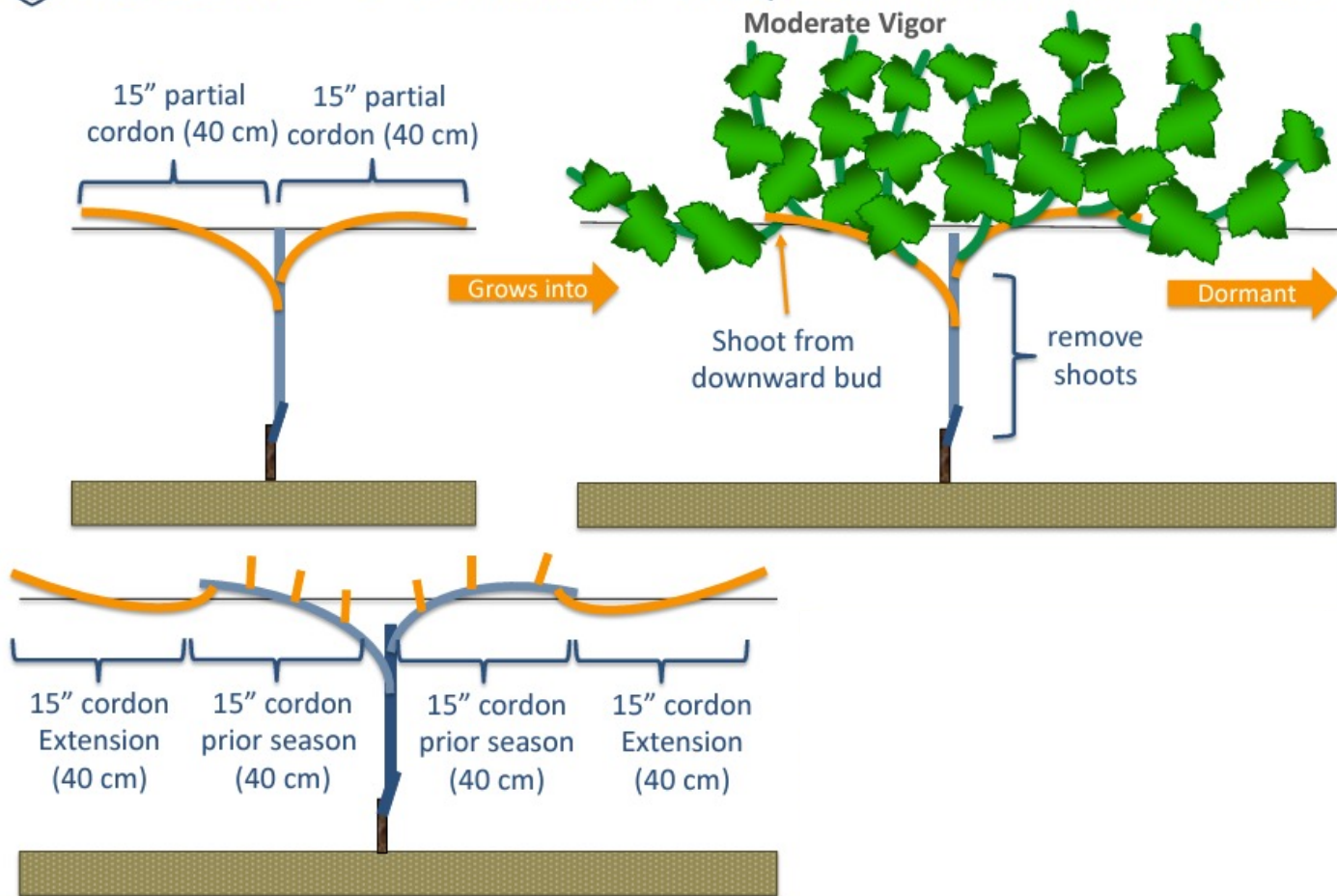
Out of Balance





Scenarios from a Trunk and Partial Cordons

3rd or 4th Year Growth – Develop Cordons from Trunks and Partial Cordons



'Killer Cuts'



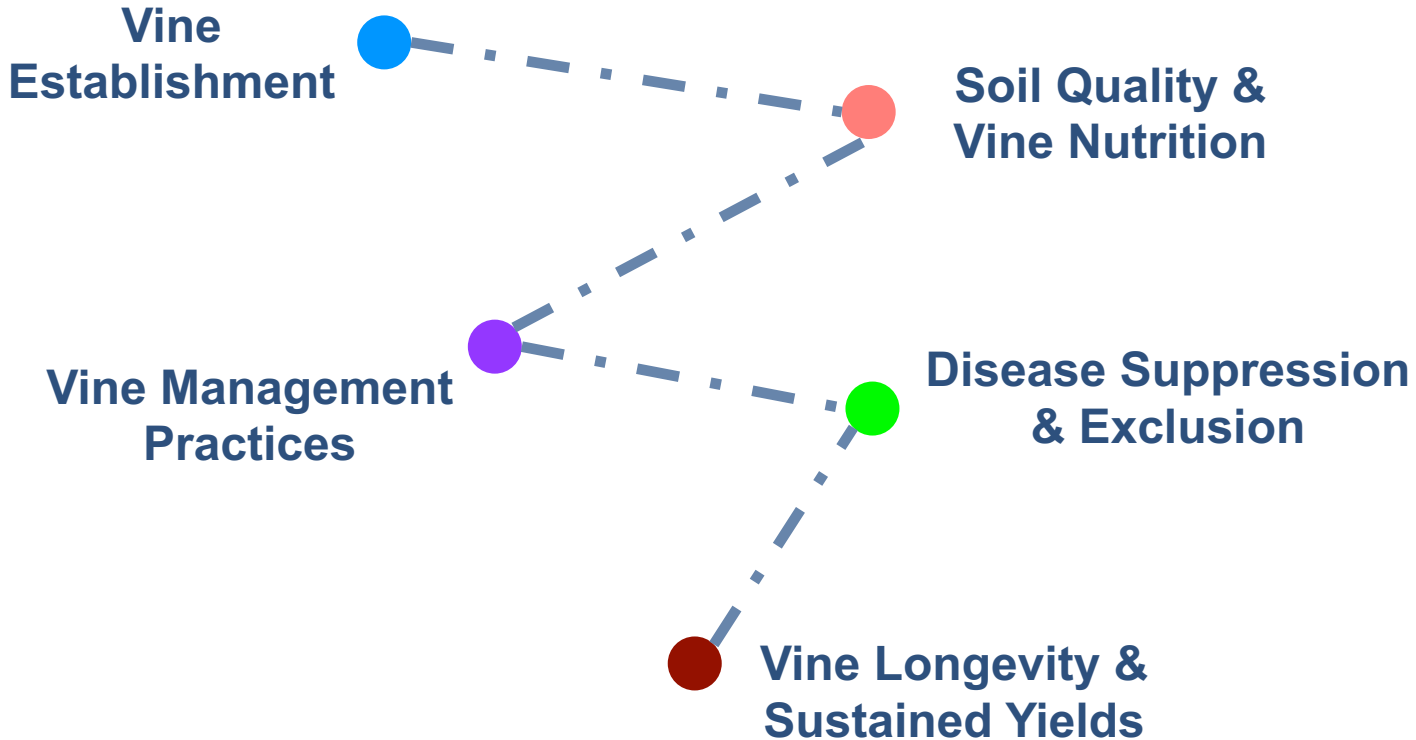
GTDs





Vine Pruning & Training to Promote Vineyard Longevity

Pathway to Longevity





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Young Vine Training:

A “Closed System” Approach



Vine Pruning & Training to Promote Vineyard Longevity

Remove Shoots = Reduce Dormant Pruning Wounds



Dormant first year
vine



Thin to one strong
shoot (or 2)



Prune back to two buds in winter
(one bud if less than pencil size wood)





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Young Vine Training & Pruning Wounds

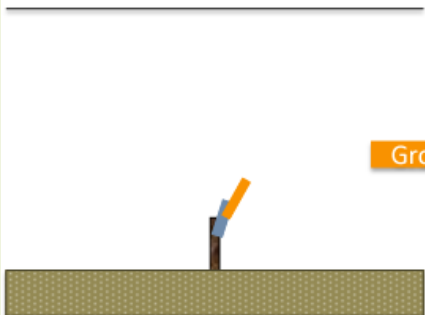




Trunk Development

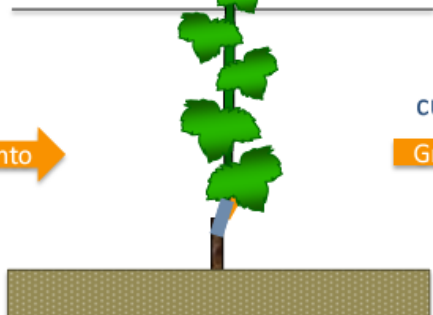
2nd Year Growth – Single Shoot to Single Trunk
Low to Moderate Vigor

Fruiting wire



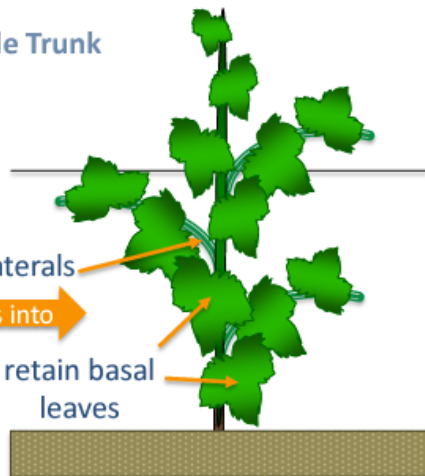
Dormant vine

Grows into

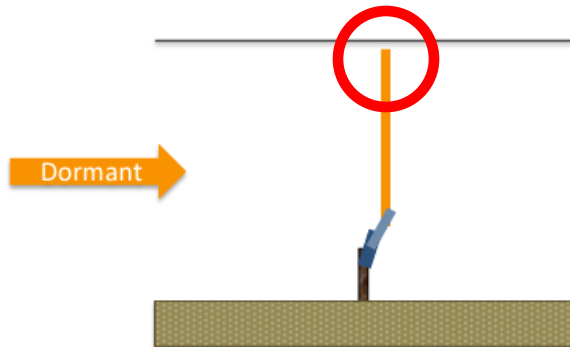


Thin to 1 strong shoot

Grows into



Cut out lateral shoots &
retain basal leaves on the
main shoot



Retain a trunk – cut so the top bud is below the
fruiting wire (Cut back to 2 buds if $3/8^{\text{th}}$ inch
[9-10 mm] thick wood)



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Bio-Tam[®] 2.0 1019.45

SePRO Ag

FOR ORGANIC PRODUCTION

For protection of crops from attack by certain fungal diseases (e.g., *Ascochyta* spp., *Fusicladium* spp., *Phytophthora* spp., *Pythium* spp., *Phoma* spp., *Rhizoctonia* spp., *Sclerotinia* spp., *Sclerotium rolfsii*, *Thielaviopsis basicola*, and *Verticillium* spp.)

Active Ingredients:
Trichothema sparsium (CC 512)¹ 2.0%
Trichothema parvum (CC 582)² 2.0%
Other Ingredients 96.0%
Total 100.0%

¹Contains a maximum of 0.1% active ingredient (a.i.) and 0.1% inert ingredients (i.i.).
²Contains a maximum of 0.1% active ingredient (a.i.) and 0.1% inert ingredients (i.i.).

**Keep Out of Reach of Children
CAUTION / PERCAUCION**

Refer to inside of label booklet for additional precautionary information and Direction for Use.

Notice: Read the entire label before using.
Use only according to label directions.



SePRO Ag, Inc. 1019.45 (10/22)
1019.45 (10/22) (10/22)
1019.45 (10/22)

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
Caution: Harmful if absorbed through skin or swallowed. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Avoid and wear appropriate clothing before using. Avoid contact with animals.

FIRST AID
If on skin or clothing:
- Take off contaminated clothing.
- Wash skin immediately with plenty of water for 15 - 20 minutes.
- Get medical attention or doctor for all other cases.

If swallowed:
- Get medical attention or doctor immediately for treatment advice.
- Show label to your doctor or take to a hospital.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything to an unconscious person.

NOTICE NUMBER
Have the product container or label with you when calling a poison control center or doctor or going to a hospital. Do not use this product or other pesticides if you are under the age of 18 or pregnant. For more information on pesticide safety, call the Pesticide Information Center at 1-800-851-9993.
EPA Reg. No. 1019.45 (10/22)
1019.45 (10/22) (10/22)
1019.45 (10/22)

Net weight: 5 pounds (Non-refillable)





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Vine Pruning & Training to Promote Vineyard Longevity

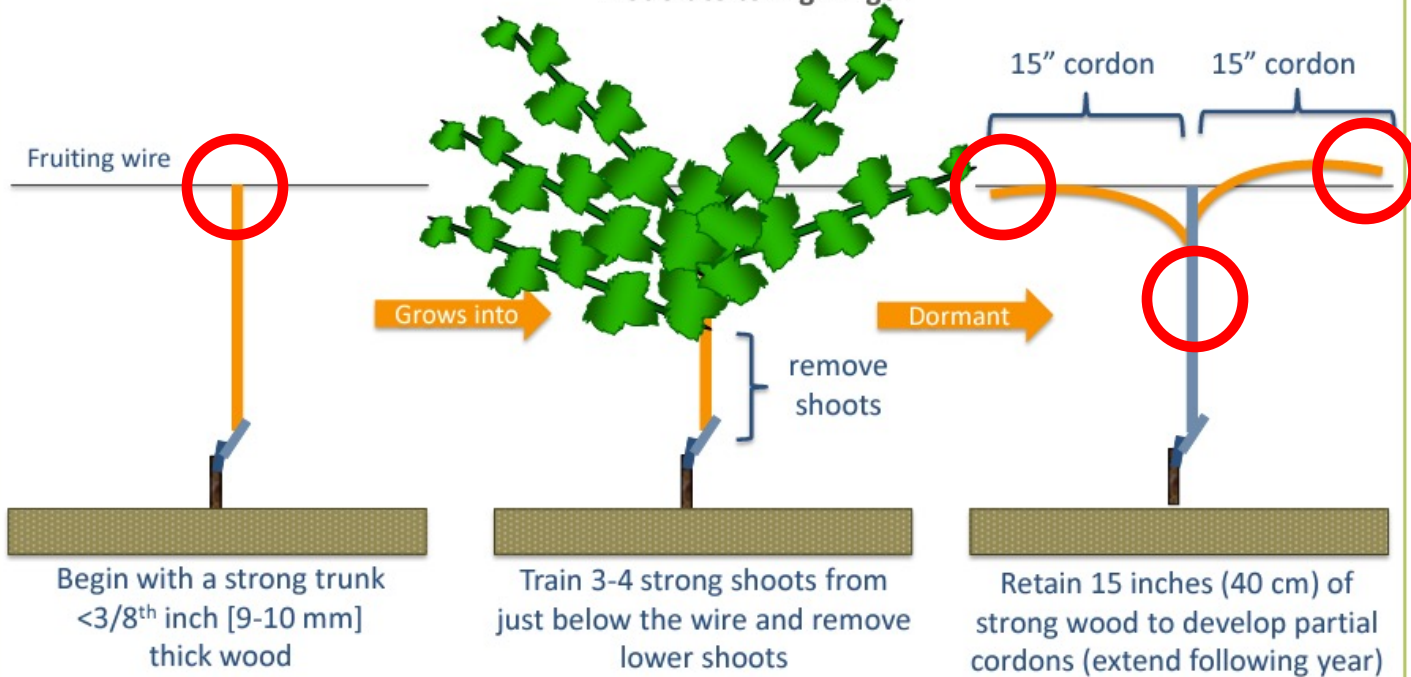




Cordon Development

3rd Year Growth – Single Shoot to Single Trunk

Moderate to High Vigor





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Canes longer than 15" can cause gaps





15"

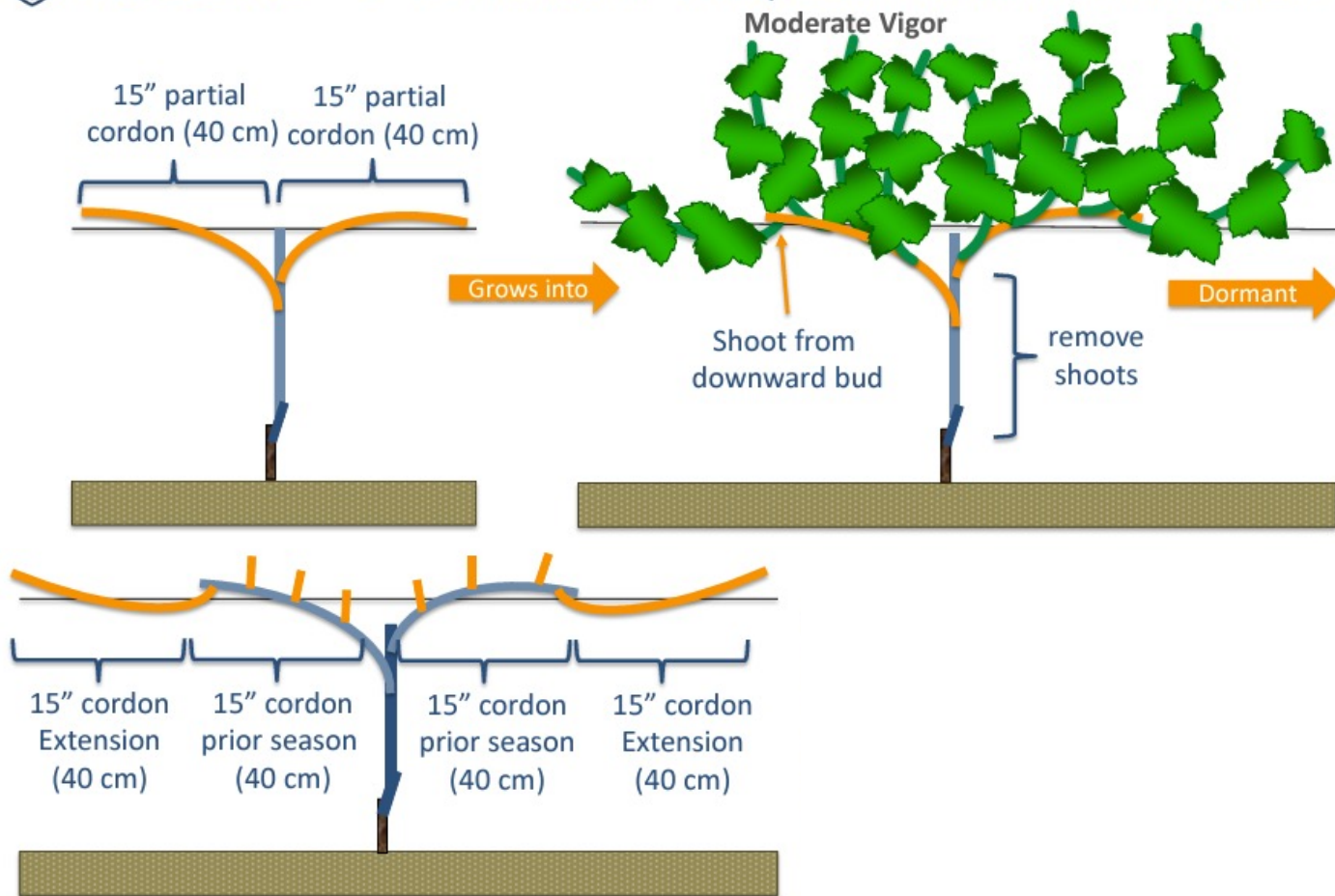
3/8"

CU
DEM



Scenarios from a Trunk and Partial Cordons

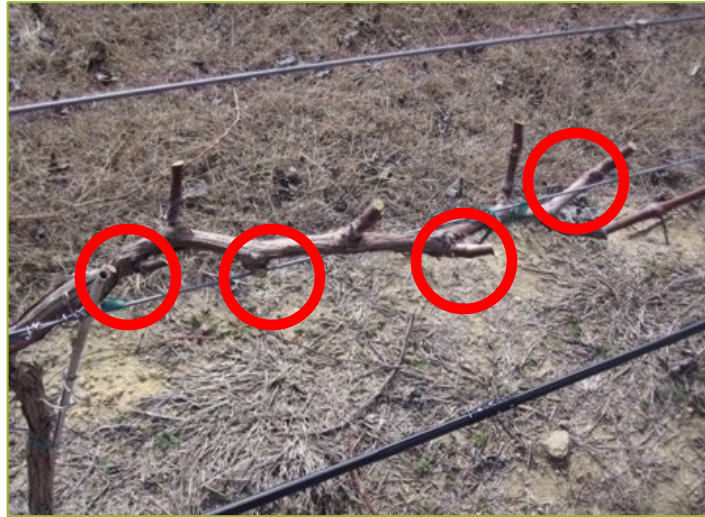
3rd or 4th Year Growth – Develop Cordons from Trunks and Partial Cordons





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Spur spacing & pruning wounds







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 Shoot thinning newly developed cordons to create well-spaced spur positions
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Pruning Rules!

Pruning Established Vines for Longevity



Factors Influencing Vineyard Longevity

- Bad cuts or “Killer Cuts”
- How vines heal (CODIT)
- Reduce large pruning wounds & diseases
- Preventing “killer cuts” vs. protecting cuts
- Good cuts + strategic wound treatments
- Best management practices (fix bad habits)





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GTD & Vine Decline



Is it the disease or the pruning?

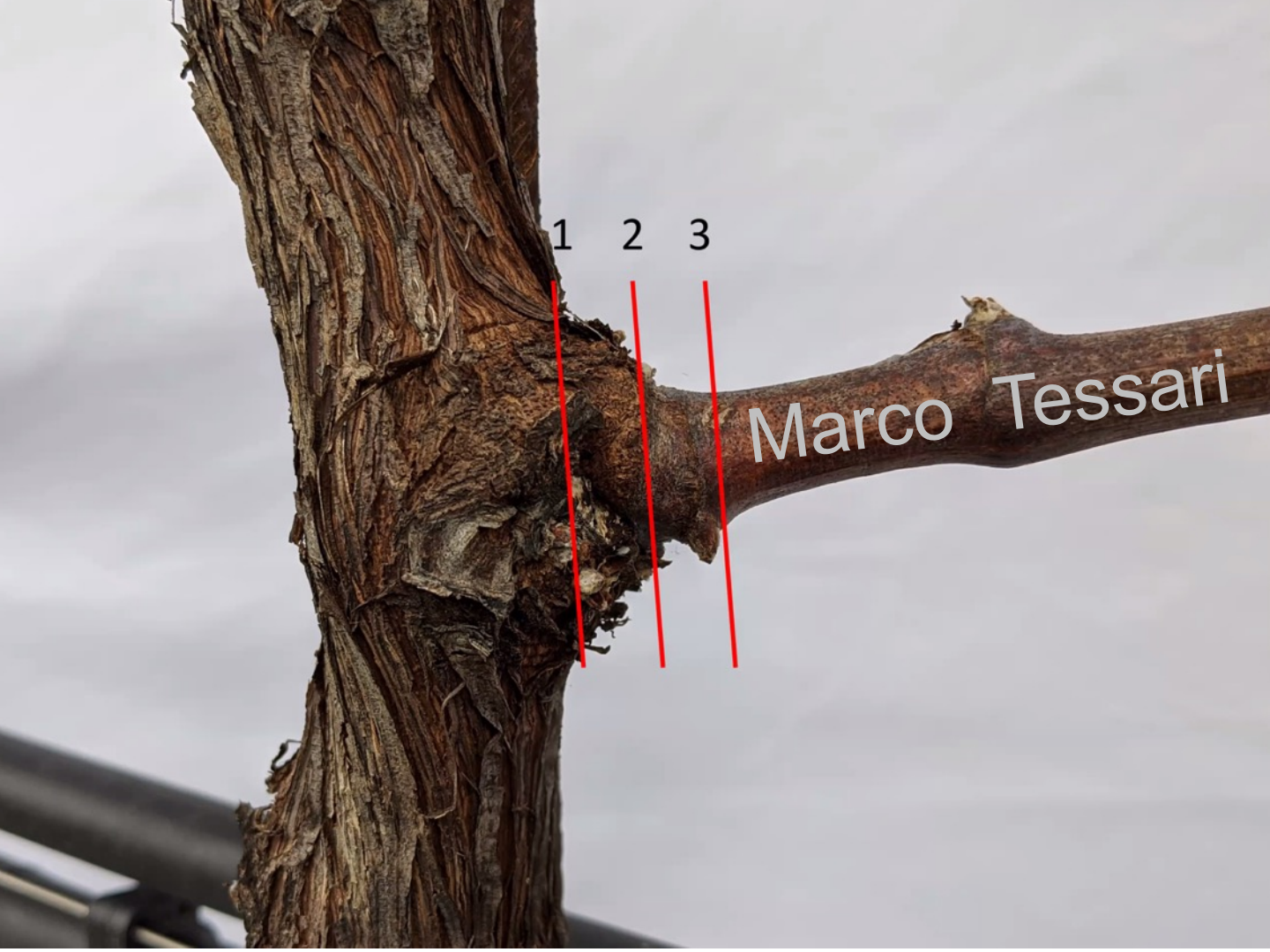




Global Vineyard Perspective







1 2 3

Marco Tessari



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Botryosphaeria dieback



Eutypa dieback



Phomopsis dieback



Esca

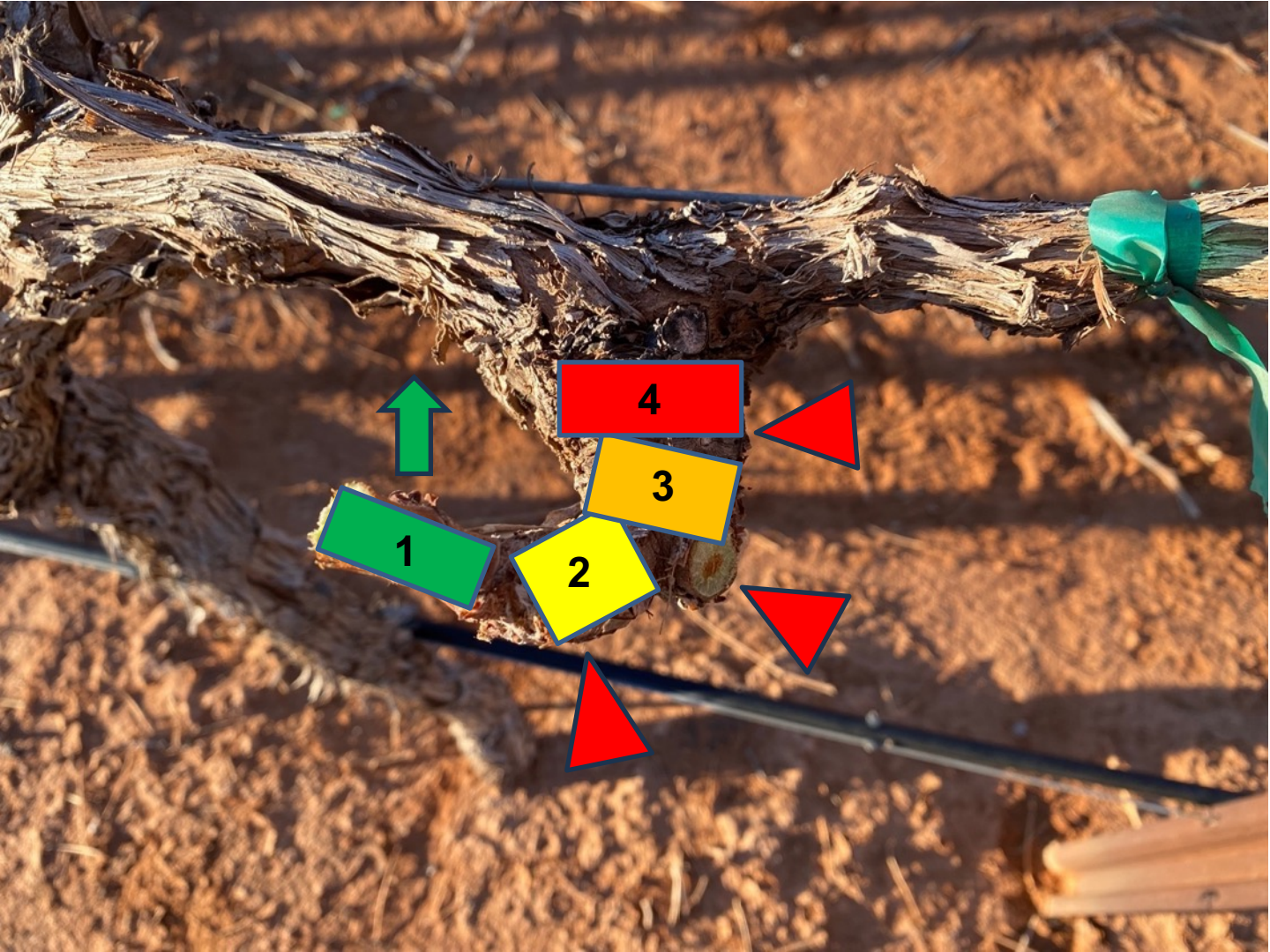






'Spur Sandwich'













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Avoid cuts like this!





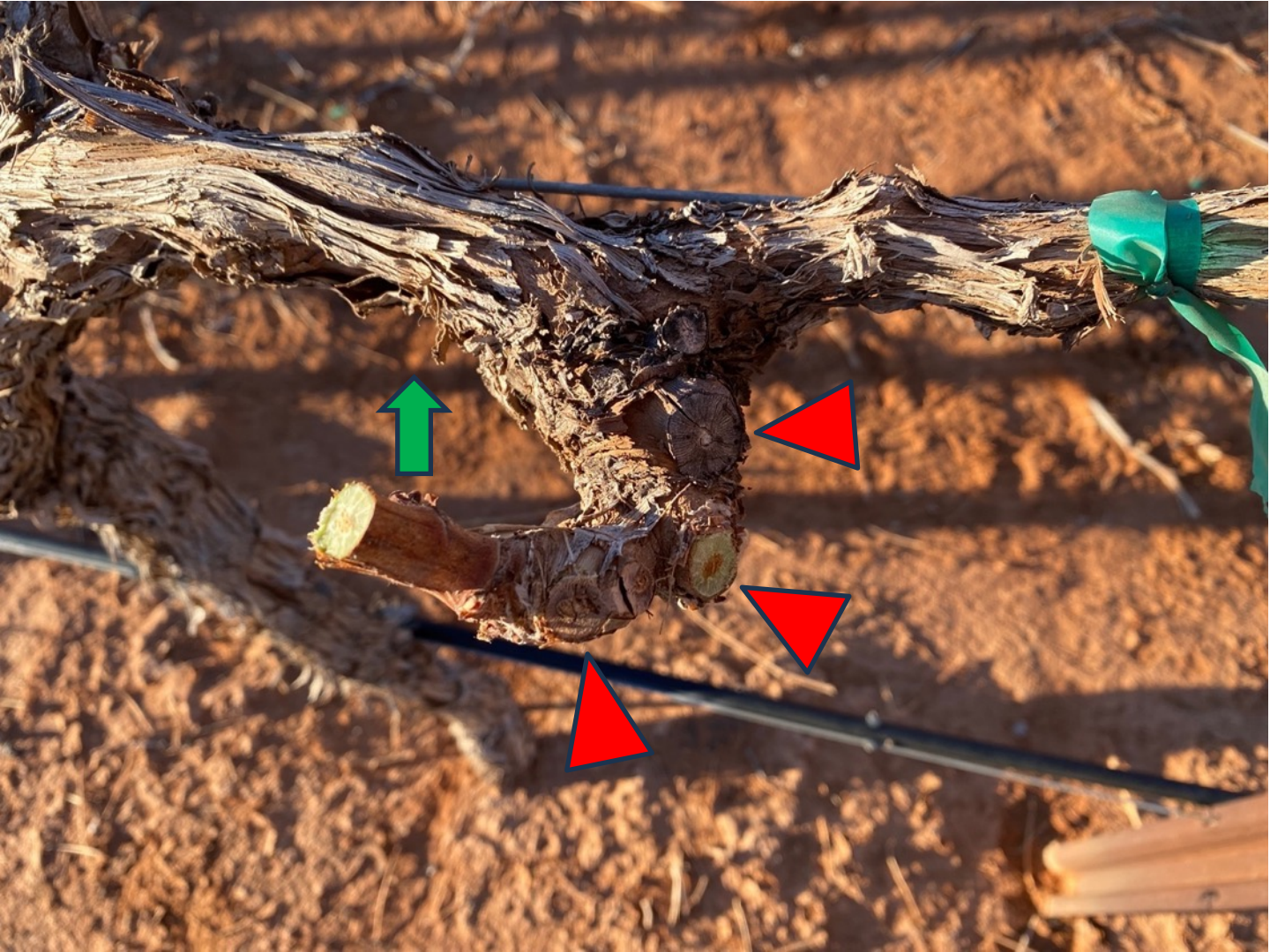
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Vine Pruning & Training to Promote Vineyard Longevity





'Spur Creep'





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Every vineyard needs “some” shoot thinning





Shoot thinning

- Role in “closed system” vine training
- Adds labor - then reduces hand pruning labor
- Reduces the number of dormant pruning wounds
- Removes basal buds compared to dormant pruning (less sucker shoots)





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Double or Twin Shoots



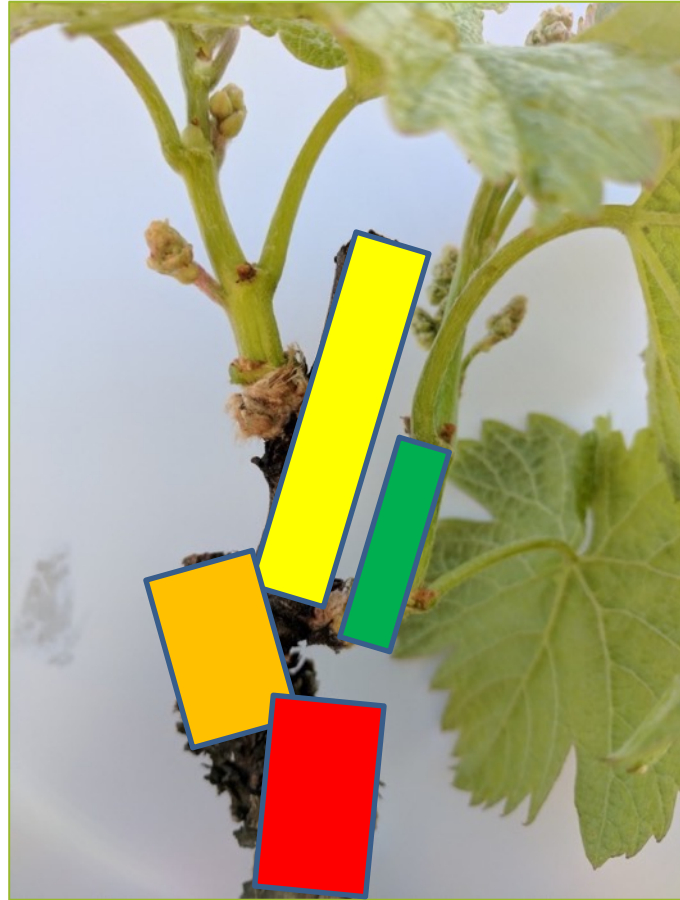


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The Consequences of Late Thinning





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Let your pruning be your guide!



Costly Vine Renewal











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Where do we go from here?

- Worker training
- Vine dissection & education
- Stop the “Killer Cuts” (electric pruners)
- Rethink the spur creep dilemma
- Maximize live wood



These techniques are covered in the videos.



Watch How-To Videos

Pruning

Search Grower Guides



Assess, Purchase, and Plan: Are You Doing These ...

Video Course

Webinar

Free Content



Converting Unilateral Cordons to Bilateral Cordons

Video

Free Content



Cutting Small Wood Back to a Strong Trunk

Video

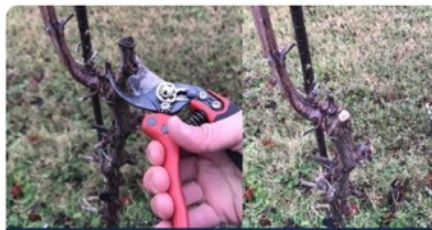
Free Content



Effectively Managing Sheep in Vineyards

Video Course

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Preventing Grapevine Trunk Disease

How-To-Guide

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Pruning Shear Sharpening

Video

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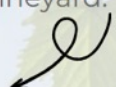
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