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What is a Vine Training System?

The **system** or **form** in which a vine is cultivated



Training Systems Vary in:

- **Yield & quality**
- **Labor**
 - Shoot positioning, leaf pulling, pruning, etc.
- **Suitability for varieties**
 - Upright or Procumbent shoot growth
- **Suitability for climates**
 - Wet, dry, cold, hot
- **Cost of establishment**

Some Common Training Systems

Vertical Shoot Positioned VSP

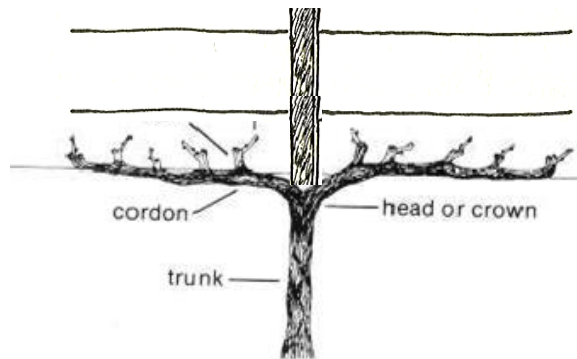


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Vertical Shoot Positioned Spur Pruned



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Bi-lateral cordon, vertical shoot positioned VSP

- An international standard
- Cordons at 38 to 42 inches above the ground
- One fruiting zone



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Some Common Training Systems

Smart-Dyson

“Ballerina”



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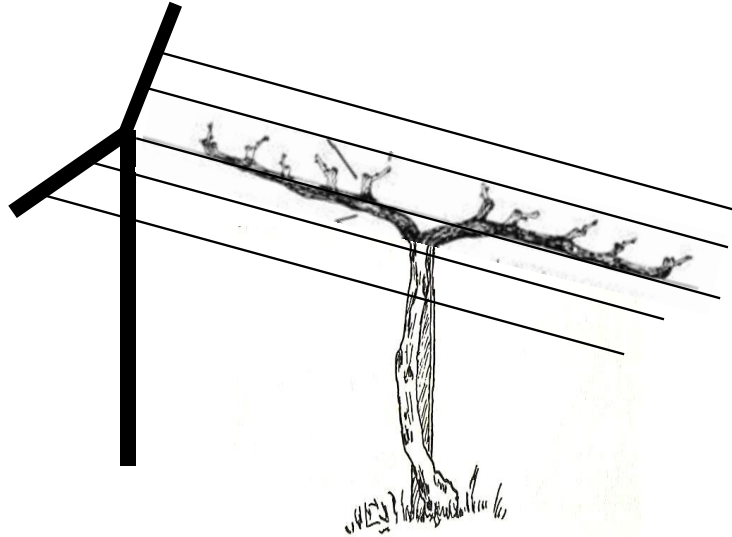


Smart Dyson Pros

- ✓ Yield increases of about 50-70% over non-divided VSP
- ✓ Suitable to most high-vigor situations
- ✓ Efficiently utilizes trellis space



Watson Training System



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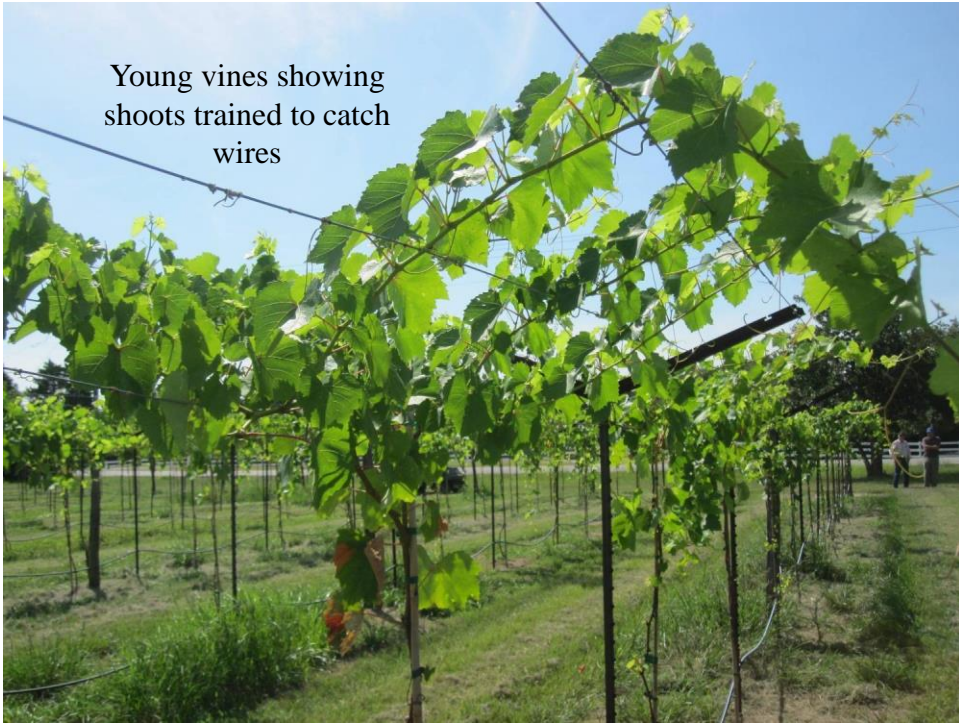
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Cordon wire at 66 inches

Young vines showing
shoots trained to catch
wires







Some Common Training Systems

Geneva Double Curtain GDC

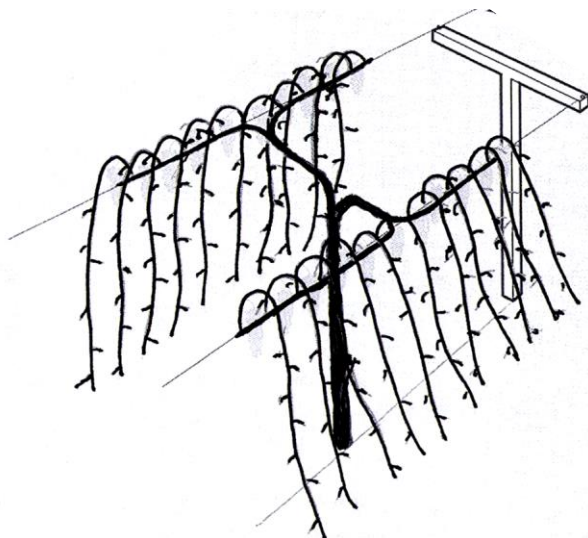


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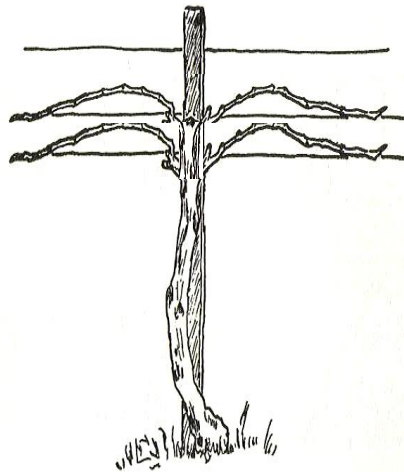
Geneva Double Curtain

Pros

- ✓ High yields; high phenols also possible
- ✓ Good fruitfulness reported
- ✓ Reduced vigor on downward growing shoots



Vertical Shoot Positioned 4 Parallel Cane Pruned



Vertical Shoot Positioned 4 Parallel Cane Pruned



Vertical Shoot Positioned 4 Parallel Cane



Vertical Shoot
Positioned 4
Parallel Cane

View from
under the
fruiting zone



New Demonstration Vineyard in South Texas

- Grapevine training system evaluation for Blanc Du Bois
- Question:
 - What training systems produce highest yield without loss of quality
 - What is yield potential for Rio Grande Valley

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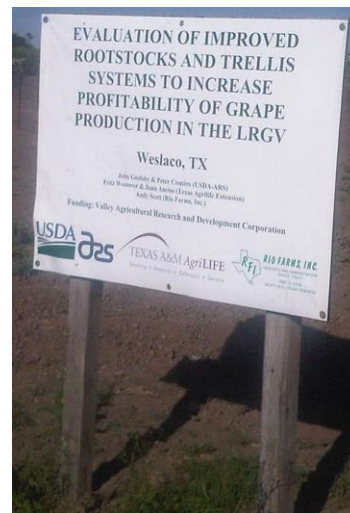
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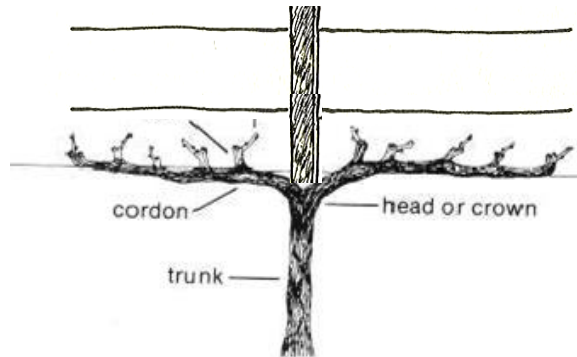
Demonstration Vineyard in South Texas

Collaborative Project

- USDA-ARS Weslaco
- Texas AgriLife Extension
 - Fritz Westover
 - Juan Anciso
- Rio Farms Inc.
 - Andy Scott



Vertical Shoot Positioned Spur Pruned

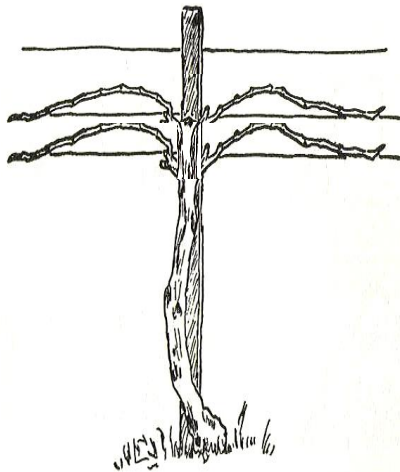


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Vertical Shoot Positioned 4 Parallel Cane Pruned

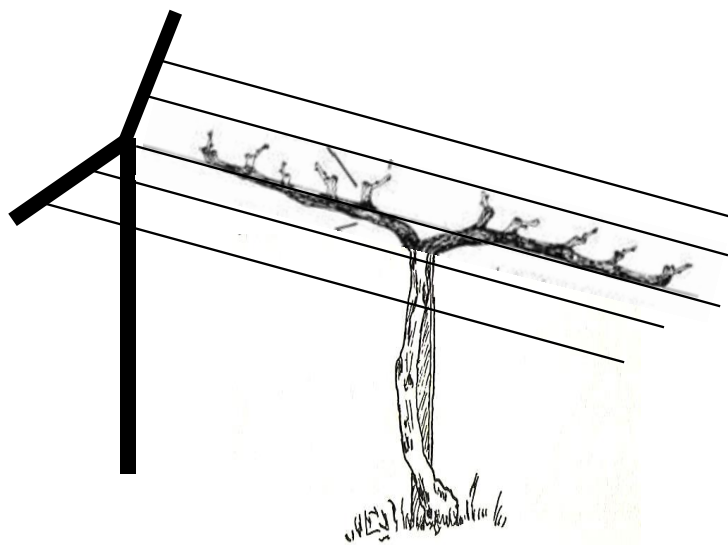


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Watson Training System

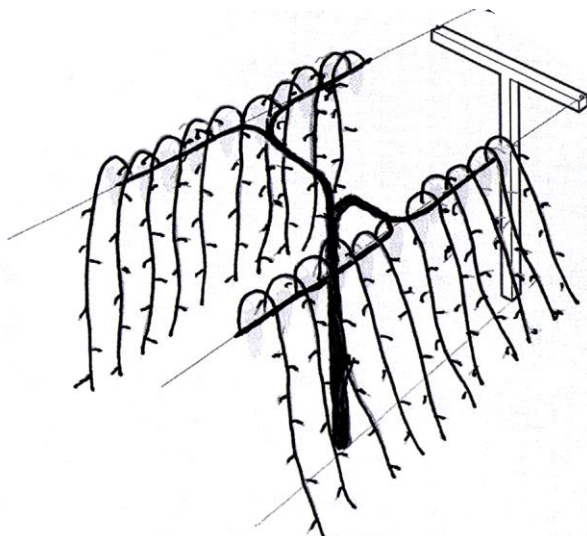


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Pruning in Rio Grande Valley – February 2011



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Advanced training in year one



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Pruning after first leaf – Feb. 2012



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Satellite Training System Demonstrations

- **Training systems demonstration in Weimar, TX**
 - Blanc Du Bois
 - VSP, cordon, spur pruned
 - VSP, 4-cane parallel
 - Western Sprawl (Smart-Dyson Ballerina on West side)

Harvest day at Weimar



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VSP



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Western Sprawl



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4-Cane Parallel



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Training System Evaluation in Georgia at Trillium Vineyards



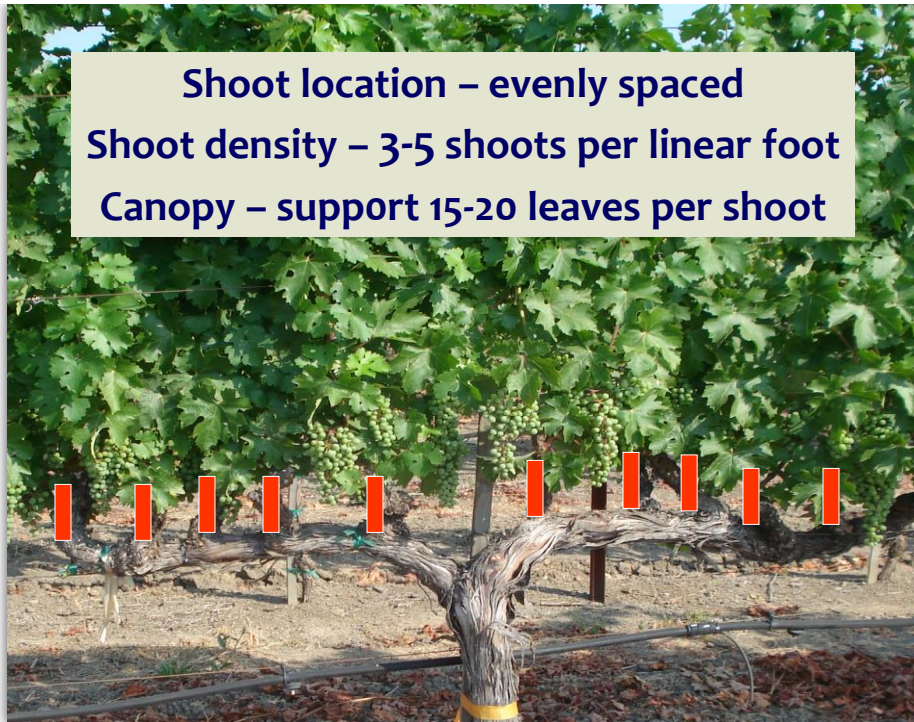
Effects of Partial Canopy Division on Yield, Pruning Weight, and Fruit Chemistry of Favorite Winegrapes



5 Year Study

- New Ulm, TX “Favorite” wine grape
- 2 treatments
 - Vertical Shoot Positioned (VSP)
 - Vertically Divided Canopy (DIV)
- 18 vine replicates (3 vine blocks)
- 10 ft. row spacing, 8 ft. vine spacing

Shoot location – evenly spaced
Shoot density – 3-5 shoots per linear foot
Canopy – support 15-20 leaves per shoot



The conversion from VSP



Mid Season Shoot Position

3rd pass



Summer – Pre-Veraison



Harvest Day



Clusters on Downward Shoots

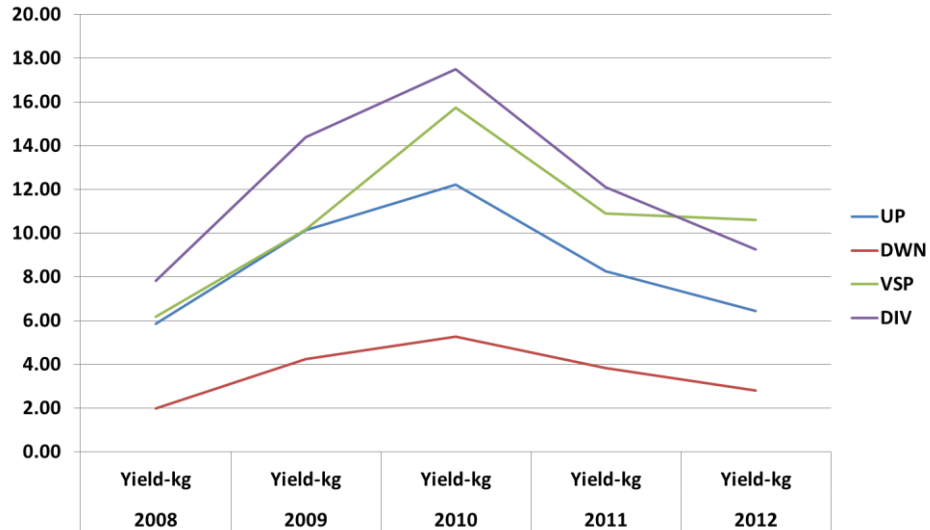
Open eastern side allows for controlled herbicide application



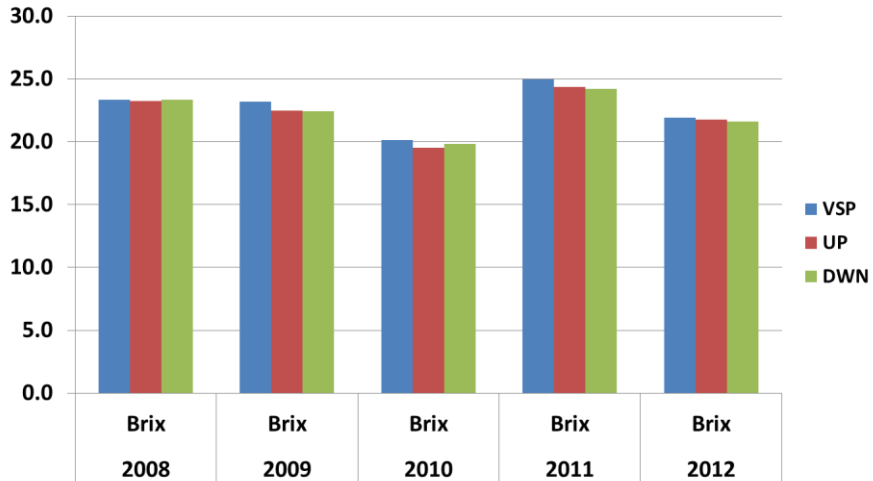
Dormant



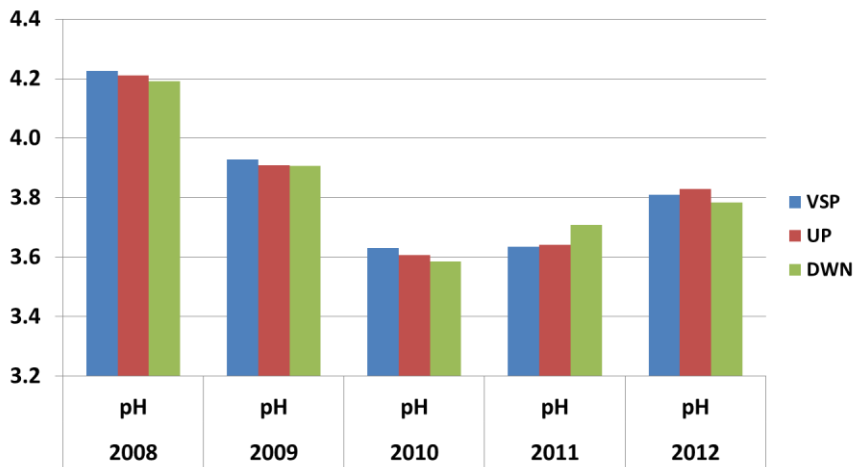
Yield (kg/vine)



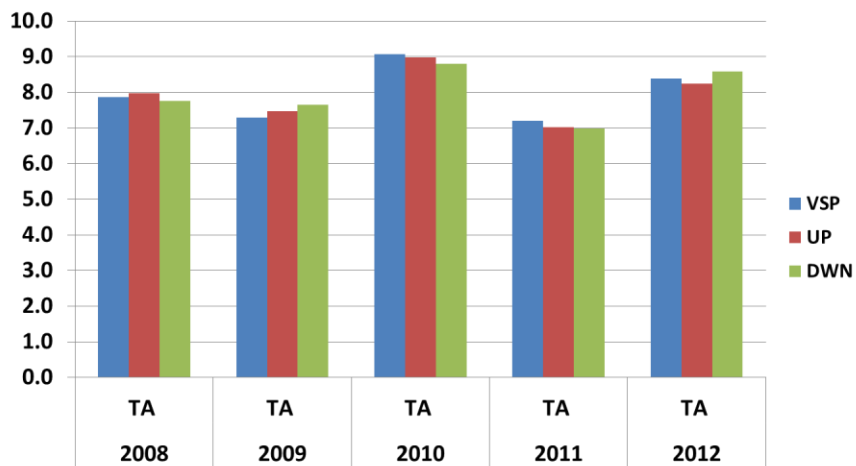
Brix



pH



TA



Summary & Conclusions



- Average yield increase over 5 years = 4.5 Tons/Acre
- Crop load and average cane weights may provide useful data for estimating yield potential in following seasons.
- Fruit thinning may be needed some years may improve crop load (ripening?) and prevent decline of vine capacity.
- Canopy division may not provide a yield benefit every season.
- Season appears to be biggest factor affecting yield.

Advice

- **Consult with a professional**
- **Visit vineyards and talk to managers**
- **Think about the long term function**
 - Mechanical harvest
 - Modifications for vigor
 - Economics
- **Make sure you understand the system!**





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