

# Dealing With Hail Damage

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# Hail damage on canopy

## 2 inches hail - April 2017 – Terry County



Shoot or trunk damage  
(broken or bruised)



Leaf damage or  
defoliation



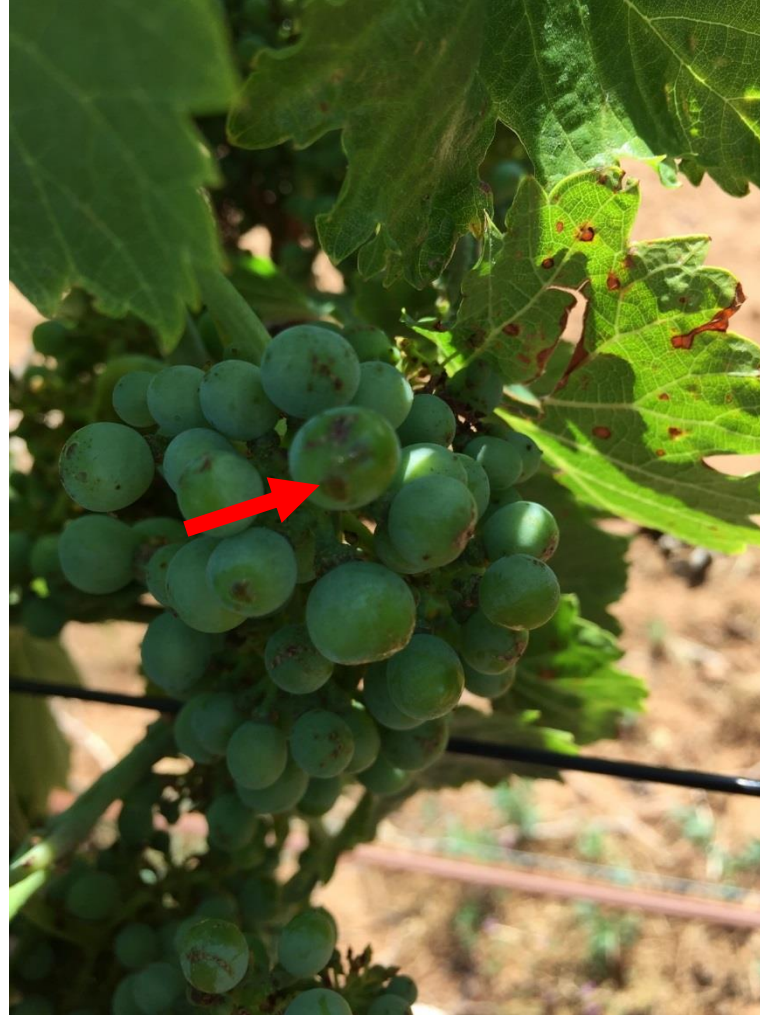
Vines completely stripped  
of leaves and fruit



## Hail damage on berries



Hail at early stages can cause scarring or berry loss



Hail after veraison leads to damage and fruit rots



When it happened?

*Budbreak - Bloom*

*Bloom - Harvest*



What is the intensity of damage?

*Light damage*

*Severe damage*

Inspection  
per bloc



# Budbreak - Bloom

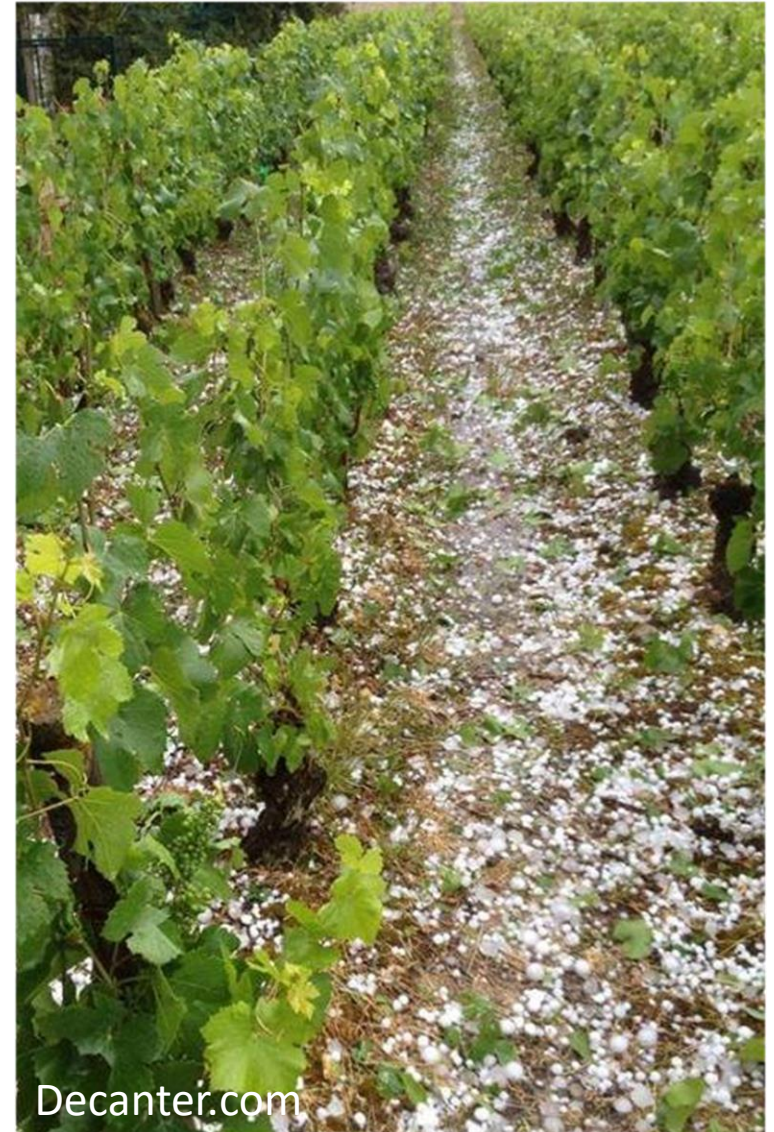
**Light damage**



**Do nothing**

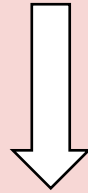
- Leave shoots and inflorescences
- Wait for canopy to grow
- Secondary growth of shoots and clusters

*Attention at harvest!*



# Budbreak - Bloom

Severe damage



Action needed

- Remove broken shoots to basal buds
- New growth from secondary and latent buds - Healthy canes for next season
- *Harvest later than usual (with fruitful secondary bud varieties)*





# Budbreak - Bloom

Severe damage

Don't keep damaged shoots!

- Growth on existing damaged shoots
- Damaged canes for next year + Few fruit

- Remove broken shoots to basal buds
- New growth from secondary and latent buds - Healthy canes for next season
- *Harvest later than usual (with fruitful secondary bud varieties)*





# Bloom - Harvest

**Enough fruits to harvest**



**Do nothing**

- Let canopy regrow (secondary growth of shoots and clusters).

*Attention at harvest!*





# Bloom - Harvest

**Severe damage**

Still early

Late in season (near harvest)

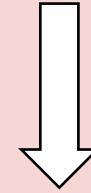


# Bloom - Harvest

**Severe damage**

Still early

Late in season (near harvest)



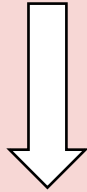
Do nothing



# Bloom - Harvest

## Severe damage

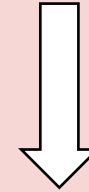
Still early



- Remove damaged shoots to basal buds
  - New growth from secondary & latent buds (healthy canes for next season).
- Remove remaining fruits

*This decision is to be taken carefully!*

Late in season (near harvest)



Do nothing

# Disease Management After Hail Damage

- Management as in normal year – Prevention sprays.
- Attention to bunch rot because of injured berries next to sound berries.
- Spray against trunk diseases.
- Open canopy.



Wounds attract pathogens and pests



# How to anticipate hail damage?



Extra buds (1 or 2) and  
no canopy management

*Attention to excessive vigor!*



Insurance



Hail netting











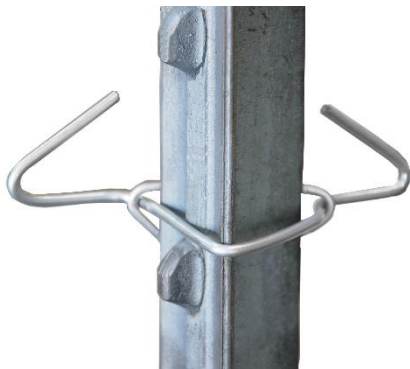
HI Tensile wire 12.5 ga



Crossarms



Hail netting clips



JR clips



Zip ties



# Netting up just after budbreak





Till after harvest





Influence of of Hail-netting on  
*Vitis vinifera* Physiology, Growth, Production and Fruit Quality:  
A Texas High Plains Perspective

Pierre Helwi, Thayne Montague, Kenneth Ruland,  
Matthias Bougreau, Kirk Williams, Edward Hellman



With nets

Without nets





Photo by Thayne Montague



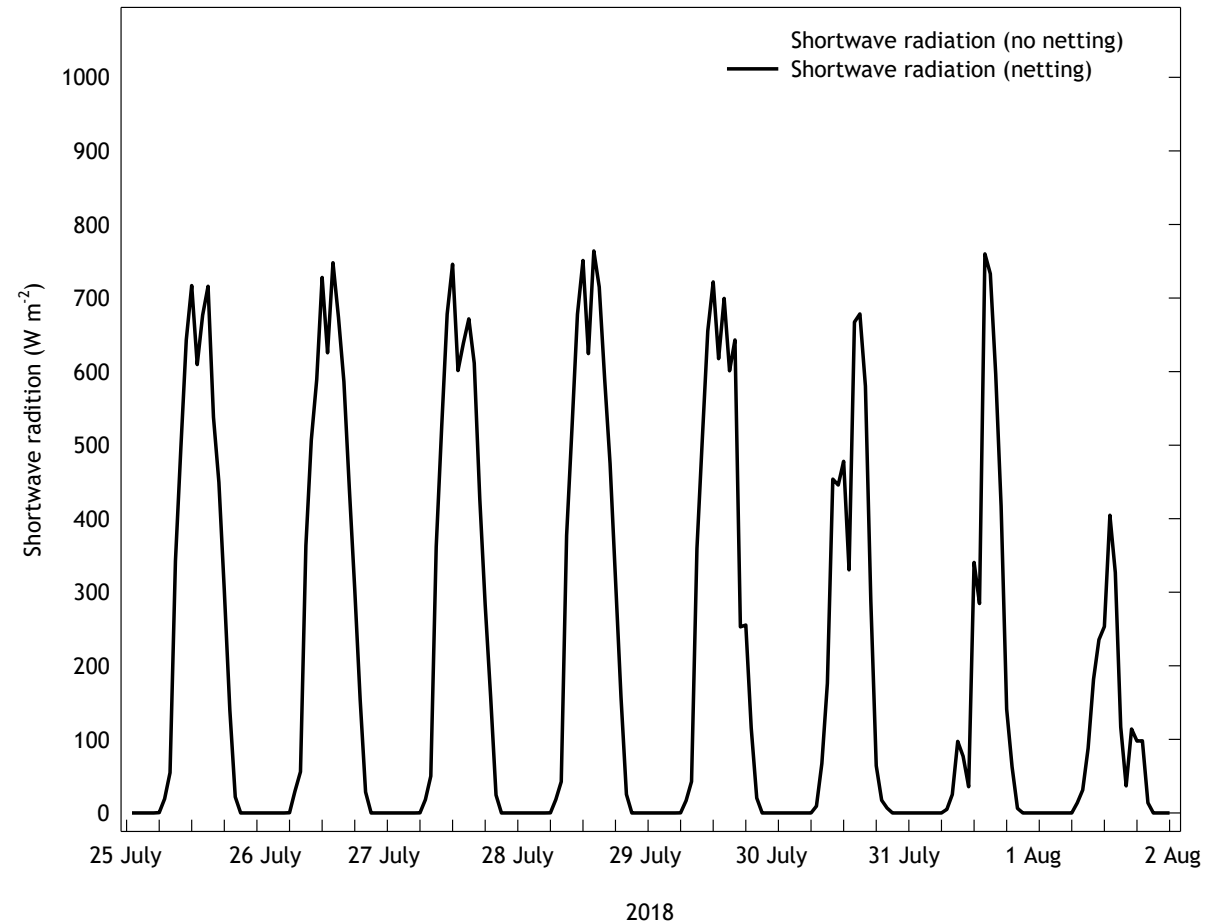


Photo by Trey Ruland



# Primary Results

- Canopy climate: netting decreased solar radiation by  $\approx 25\%$
- Berry ripening: netting had no influence





Lubbock, Texas  
May 2020



Recovery is faster when vines are healthy

Proper management through fertilization, irrigation, pest control, and crop load management.



Questions?