



**Timely Viticulture**

- Dormant
- Pre-Bloom
- Bloom
- Post Bloom
- **Mid Season**
- Pre-Harvest
- Harvest
- Post Harvest
- Dormant

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"Timely Vit" is designed to give those in the Maryland grape industry a timely reminder on procedures or topics they should be considering in the vineyard.

## Hail Damage

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We experience many climatic vagaries in the Mid Atlantic. Hail damage may be the most devastating as it can quickly obliterate a season of meticulous management in the vineyard. Depending on the timing and intensity of the event, as well as canopy density and exposure, damage can range from random tears in leaf blades to defoliation, extensive shoot damage, and crop loss.

### Hail during early stages of development (pre-veraison)

- Shoots and petioles may be damaged and leaf blades are shredded or torn from the vine.
- Severe defoliation from hail during early to mid-season will typically stimulate a new canopy to develop from lateral shoots, with minimal long-term effect on fruit quality. Fruit maturity, however, will be greatly retarded after severe defoliation.
- Berries damaged by light to moderate hail early in development will be scarred but will typically "heal" or die but WITHOUT onset of fruit rot.

### Hail during late stages of development (post-veraison)

- Shoot, petiole, and leaf damage will depend on the direction and intensity of the hail, as well as the density of the canopy.
- Medium to severe defoliation from hail after veraison may stimulate some new canopy development from lateral shoots. Fruit maturity will be greatly retarded, however, and fruit quality is likely to be adversely affected.
  - Eliminate or thin crop to a level appropriate for the each vine, considering both proper (potential) ripening of the fruit, as well as proper hardening of the vine for adequate winter survival.
- Hail during or after veraison WILL promote fruit rot. Severely damaged berries may drop immediately but some may hang on.
  - Intensify fruit disease management to combat the increased risk of Botrytis and summer bunch rots such as ripe rot, bitter rot, and Macrophoma rot.
    - \* Botryticides (Vanguard/Scala, Elevate, Rovral, Pristine/Endura) and captan will help to protect sound berries from rot infections but cannot prevent the development of rots in damaged berries.

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- The onset of rot will promote the attack of insects that can further damage berries and clusters and encourage sour rot. Stinging insects may create hazards for the vineyard worker, especially during harvest.

\* Scout for insects. Identify those that are actually damaging fruit and treat if appropriate. This will be the same insect complex that we deal with during harvest, especially secondary scavengers. As always do not apply an insecticide unless the insects are causing economic damage.

- For late-season hailstorms, assess the damage and determine whether the sound fruit will be able to ripen to a level of quality that will justify additional pest management applications.

Thanks to Dr. Anne Demarsay for her contribution to this Timely Viticulture.

- \* Maryland growers may refer to Extension Fact Sheet 848, Guidelines for Developing an Effective Fungicide Spray Program for Wine Grapes in Maryland for specific management recommendations. <http://www.extension.umd.edu/sites/default/files/docs/programs/viticulture/FS-848FungicideSprayGuidelines2012-2.pdf> and 2013 Supplement: <http://www.extension.umd.edu/sites/default/files/docs/programs/viticulture/FungicideSpraySupplementGuidlines2013.pdf>
- \* For more detailed information please see info in “Managing Summer Bunch Rots on Wine Grapes” from Dr. Anne DeMarsay at: [www.extension.umd.edu/sites/default/files/docs/programs/viticulture/ManagingSummerBunchRots.pdf](http://www.extension.umd.edu/sites/default/files/docs/programs/viticulture/ManagingSummerBunchRots.pdf)



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