



# VINEYARD SPRAYING

**KELLY  
CHRISTIANSEN  
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4 CHRISTI'S VINEYARD

LLC



# INTRODUCTION

Kelly Christiansen  
4 Christi's Vineyard  
Newton, WI

Vineyard est. 2014  
Approx. 3000 vines  
Petite Pearl, La Crescent,  
Marquette, Sabrevois,  
Louise Swensen, Itasca

# PURPOSE OF DISCUSSION

Know the safety and rules about how to use chemicals to spray our vineyards in order to maintain healthy vineyards.

# DISCLAIMER:

4 Christi's Vineyard  
Wisconsin Extension  
WGGA

# WHERE INFO RESOURCES ARE AVAILABLE

Local Extension  
WGGA

# WHY DO WE SPRAY?

- To protect our investment
- To maintain a healthy vineyard

*There are organic options that may or may not work, but that is outside the scope of this discussion.*

# WHAT ARE THE DIFFERENT SPRAYS

- Pesticides
- Fungicides
- Herbicides

# WHAT DO THESE CHEMICALS ALL HAVE IN COMMON?

- They are all dangerous and can be lethal
  - Pesticides kill pests-bugs, worms, etc.
  - Fungicides kill fungus like mildew, etc.
  - Herbicides kill plants

# HOW DO WE KNOW WHAT TO USE?

- The ideal situation is to find a professional, (familiar with chemicals and your crop).
- Go to a business that handles spray chemicals, but always read the label.

# WHY SHOULD WE READ THE LABEL WHEN SOMEONE GIVES US THE PRODUCT?

- The “Label is the Law”
- As the user of the product we are ultimately responsible for the consequences of handling, and use of the product.

# CONTINUED....WHY READ LABEL

- The label also tells us how to protect ourselves, others near us, pets, and the environment around us.
  - Often times full protective gear is needed or
  - We may need to stay out of the vineyard for period of time.

# DO I NEED TO BE LICENSED TO BUY OR USE THESE CHEMICALS?

- Some products are available at the local 'big box' stores or local co-ops that need no license, but some chemicals are restricted where/when we can spray them.
- For chemicals that are regulated, we should contact our local AG office for more information.

# WHEN DO WE KNOW WHAT TO SPRAY?

- Some spraying is pre-emptive; like lime/sulfur spraying before bud break to destroy spores.
- Some spraying is action/reaction like spraying for an insect infestation of Japanese Beetles with an insecticide

# CONTINUED...WHEN DO WE KNOW WHAT TO SPRAY?

- Follow a good spray guide like the one available through WGGA, as it explains what works good for different plant growth stages.
- We also need to be diligent on looking at our vines regularly and paying attention to their health.

# WHY DON'T WE JUST SPRAY ON A REGULAR BASIS EVERY SO MANY DAYS TO MAKE SURE WE STAY AHEAD OF PROBLEMS?

- The first reason to not overspray is to prevent immunity or disease tolerance to our chemicals by whatever disease we are trying to get rid of.
- Also rotating our choice of chemical sprays helps with this problem. Note: Pre-harvest interval

# CONTINUED...WHY NOT SPRAY REGULAR BASIS

- The second reason is cost associated with the spray.
- The third reason is adding more chemicals to the environment that aren't needed.
  - Note: Some people don't have this as an option and need to spray when they can.

# DO WE MIX DIFFERENT CHEMICALS TOGETHER?

- Cautiously speaking, the answer is Yes and No.
- Not all chemicals mix together and may precipitate out...clogging sprayers etc.
- A jar test is a common test. (see following slide for jar test)

# JAR TEST

*Water and chemicals being used are mixed in a mason jar (or equivalent) at the same ratio as the spray tank will be mixed.*

- After shaking the mixture, it is allowed to sit for a period of time to see if there is a negative reaction (precipitate)*
- A jar is easier to clean than a sprayer*

# HOW MUCH CHEMICAL DO WE USE?

- First of all, we need to go back to the label of the product.
- There it will show us how much chemical is to be used per acre.
- This will be shown as oz./acre, lbs./acre or liquid oz./acre.
- It may also give us a minimum amount of water to be used for dispersal.

**THE BIG QUESTION NOW IS HOW MUCH WATER DO WE NEED TO USE TO COVER OUR AREA WITH THE AFOREMENTIONED AMOUNT OF CHEMICAL?**

- That amount of water is determined by first finding out how much water the sprayer uses to spray this particular vineyard.
- Next figure out the area (square feet) of your vineyard

Example: The product label says 12 oz. / acre  
It takes 60 gallons of water to spray your vineyard at a fixed rate with your sprayer.

- *The vineyard is 100' x 109' = 10,900 sq.ft. (1/4 acre approximately)*
- *12 oz. / acre x 1/4 = 3 oz / vineyard*
  - *Mix 3 oz. of product to 60 gallons of water*
  - *This process is known as calibration*

# DOES THE SPRAY CONSISTENCY MATTER?

- Yes, to make sure the product works as designed.
- It needs to be applied as the label states
- To apply a different rate than stated would be illegal.
- **“THE LABEL IS THE LAW”**

# DOES IT MAKE A DIFFERENCE WHAT TYPE OF SPRAYER IS USED IN THE VINEYARD?

- Consistency of a spray program and the quality of its application does play an important part in the type of equipment used.
- This also comes with a price
- Someone with 150 grape vines may think a \$20,000 + axial sprayer and tractor a bit steep given the value of the grapes produced.

# WHAT ARE SOME DIFFERENT TYPES OF SPRAYERS?

- Backpack sprayers with a pump and a wand
- Backpack sprayer with a blower
- UTV/trailer tank with a spray-bar
- UTV/trailer/tractor tank with a fan/blower
  - Consistency of volume used is much better when motion is mechanized over walking, and the quality of procedure is better when the spray is finer and blown with a fan.

# ARE THERE CONCERNS WE SHOULD HAVE WHEN WE SPRAY?

- The first concern would be our own safety!
- The next concern would be the safety of others while we are spraying and after we are done spraying (residue).
- Also we need to be aware of the over-spray, where it is going and what we can do to change the situation
- Lastly, are we inadvertently killing something we do not want to kill. (Good bugs and plants)

# WHEN EVERYTHING IS FINALLY SAID AND DONE, IS SPRAYING WORTH ALL THE TIME AND TROUBLE?

- With proper training, equipment, and spray products...our vineyards will be healthier and more productive.
- Remember: WINE is made in the VINEYARD!
  - GOOD WINE is made with GOOD/Healthy grapes!

# QUESTIONS OR COMMENTS?

- Contacts -
  - UW. Extension
  - WGGA

