



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 $100' \times 109' = 10,900$ sq.ft. ($\frac{1}{4}$ acre approximately)*
- *$12 \text{ oz. / acre} \times \frac{1}{4} = 3 \text{ oz / vineyard}$*
 - *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

