

Washington Rootstock Field Day
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Designing (Rootstock) Field Trials

Michelle M. Moyer, Ph.D.
Professor
Statewide Viticulture Extension Specialist
WSU-IAREC
Prosser, WA

wine.wsu.edu



WASHINGTON STATE UNIVERSITY
Viticulture and Enology



The Process

- Research and demonstration trial designs are multi-part, reiterative processes, where you must:
 - Identify what you actually want to learn
 - Identify how you will go about learning those things
 - Understand your resources and where those resources are limited
 - Learn how to design the best-case, and actual-case trials, and how to pivot when plans change
 - Assess how much time you have post-planting to execute information gathering and learn where to cut and still have a meaningful trial



Step 3 – What resources (including time) can you dedicate?

- What is the vineyard size?
- Can you do the things you want to do?
 - Variable irrigation
 - Variable fertilizing
 - Canopy or crop management
- Is there a point person to keep track of things once the vineyard is planted?

The IDN Trial Example

How much space is available?

Do we have to do any special management of the trial?

Who will be responsible for special management and data collection?

How long do we keep data collection up?



Step 4 – Repeat Step 3. Were you *realistic* or *optimistic*?

You never have as much time as you think you will

(Future available time magically shrinks)

The IDN Trial Example

Limited space, so limited number of rootstocks could be evaluated

People come and go; have strong documentation on what needs to happen (calendar it out!)

Sought creative ways to fund / keep us on-target (Western SARE grower / producer grant)



Step 7 – Start the planning / planting process!

- Best intentions are great. But what happens when things get real?
- It's okay to change in response to costs, availability, etc.
 - Are your questions still valid with these new constraints?
 - Should you change what data you are collecting?
 - Are there any new opportunities for information collection?

The IDN Trial Example

- 1) Couldn't get all of the rootstocks in the same year – that's okay but changed how we compared varieties
- 2) Planted late – that's okay, just had to watch watering, and changed some data collection timing
- 3) Had some short rows – so had to adjust vine layout



Once the trial is planted, then....

Data collection consistency is more practical and valuable than data collection frequency for on-farm trials

Examples:

- **Nutrition:** It's best to do tissue testing at the same phenological stage each year, but you don't have to always target prebloom and véraison
- **Viability:** Simple data like dead / alive in the spring is great
- **Winter vs. summer measurements:** When do you have more time?
 - **“Vigor” assessments:** Shoot length sounds good, but is tedious. Do pruning weights or internode lengths in the winter, when you have more time.
 - **Phenology timing:** Scout every date to indicate where plants are in development, or pick as set date, and rate stage of development?