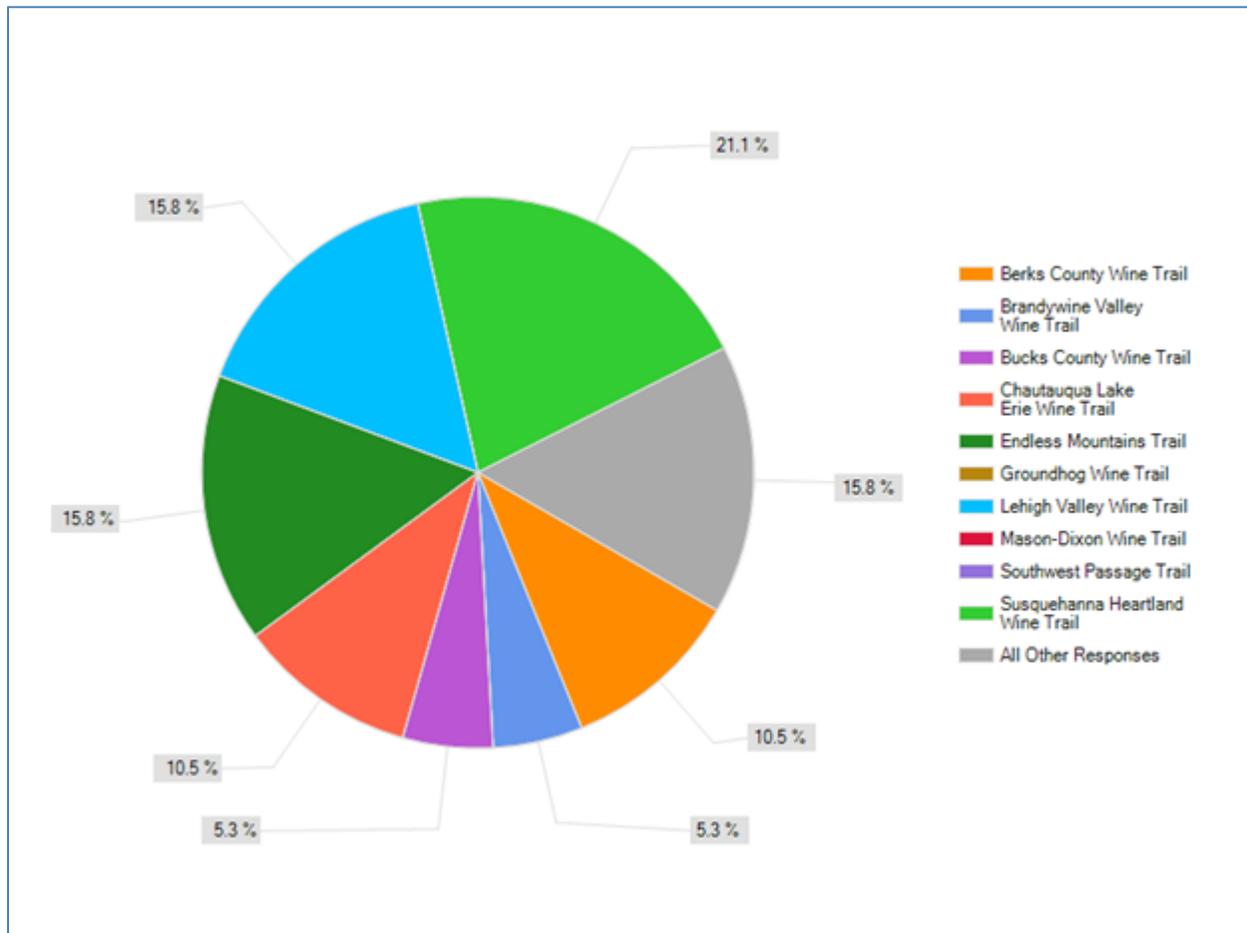


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Industry Needs Assessment – Demographic of Participants

As part of my initiative to get a quick snap shot of the Pennsylvania wine industry needs, an assessment survey was made public on July 1, 2011. This survey remained open and active through July 27, 2011. Of the 150 licensed wineries in the state of Pennsylvania, there was approximately a 21% participation rate. Of those wineries that participated, the majority (21.1%) were from the Susquehanna Heartland Wine Trail. The Groundhog Wine Trail, Mason-Dixon Wine Trail, and Southwest Passage Wine Trail were not represented in this survey. Therefore, their individual and regional needs could not be assessed at this time.

Figure 1: Percentage of Pennsylvania Wine Trail 2011 Pennsylvania Wine Industry Needs Assessment Survey

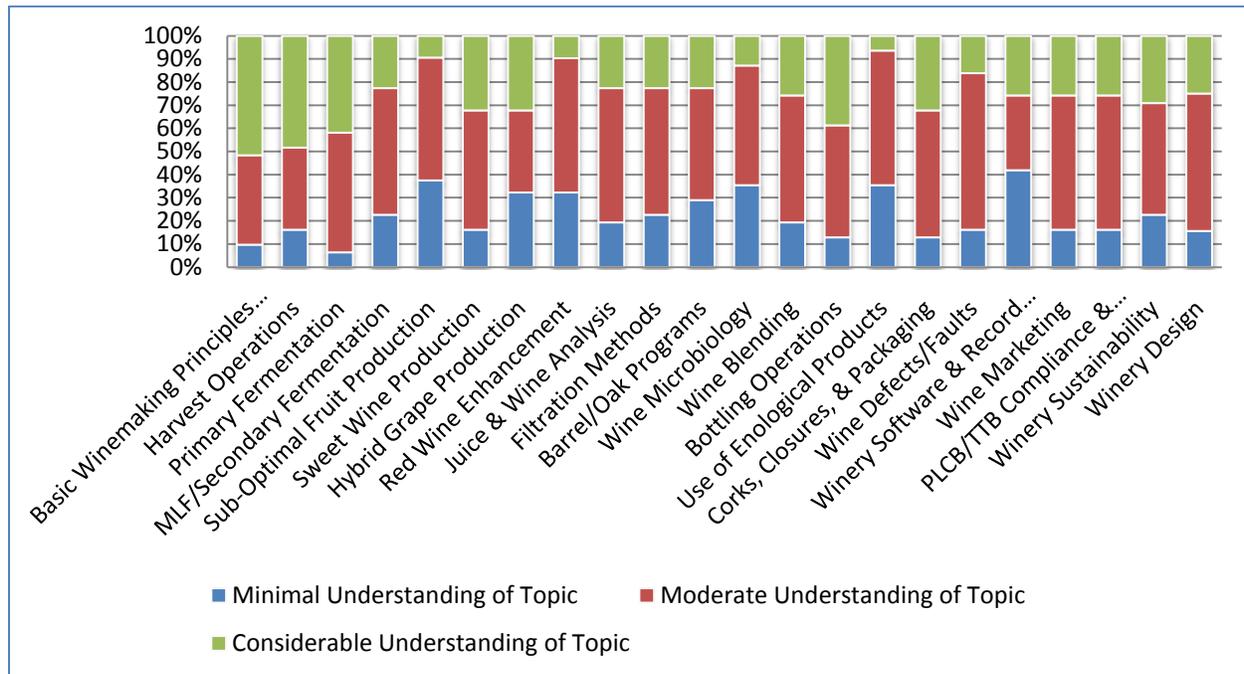


Enology Topics of Interest and Problematic Enology Topics

The primary purpose of this survey was to get a good, solid feeling on what enology-based topics were of current need to the Pennsylvania Wine Industry. Twenty-two (22) topics were proposed. The following chart shows the level of knowledge or confidence participants currently felt towards each topic.

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Figure 2: Percentage Level of Understanding for 22 Enology-Based Topics



From this chart, I found that the topics that do not demand a lot of time (meaning that most people feel they have a strong grasp on the topic) include Basic Winemaking Principles and Practices, and Harvest Operations. All other topic areas were found to exist at a “moderate understanding” level except for Hybrid Grape Production (which was evenly split across the 3 knowledge levels) and Winery Software and Record Keeping (which most people felt they had “minimal understanding”).

Of these 22 topics, most had some interest as topics for future educational events or workshops. Those that had a high demand for a workshop included:

- MLF/Secondary Fermentation (81%)
- Red Wine Enhancement (77%)
- Wine Microbiology (87%)
- Use of Enological Products (e.g. tannins, polysaccharides, etc.) (74%)
- Wine Defects/Faults (87%).

Although most participants did not feel like they had a good grasp on Winery Software and Record Keeping, there was not a strong interest level in having a seminar on this topic. However, this topic can be supplemented through additional delivery mechanisms.

Nine additional topic areas were included as problematic areas in winemaking. These topic areas were pre-determined by a small collaborative industry-based group, and were included at the end of the survey to avoid bias towards the participating individuals. These topic areas included:

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- Acid Reduction in Red Wines
- Identifying Wine Defects and Faults
- Prevent and Control of Wine Defects
- Understanding Analytical Lab Procedures
- Running/Training on Analytical Lab Tests (In-house)
- Winery Sanitation
- *Brettanomyces* Control and Prevention
- Ameliorating Green Flavors in Under Ripe Fruit
- Processing Commercially Saleable Wines with Sub-Optimal Fruit

Participants were asked to rate the extent at which each of these topics was a problem for their production on a 4 point intensity scale:

- Not at all a problem
- Minimal problem
- Moderate problem
- Considerable problem

Of these 9 topics, only 5 were found to be considered to be a “moderate” to “considerable” problem. These included:

- Identifying Wine Defects/Faults
- Prevention and Control of Wine Defects
- Understanding Analytical Lab Procedures
- Running/Training on Analytical Lab Tests (In-house)
- *Brettanomyces* Control and Prevention

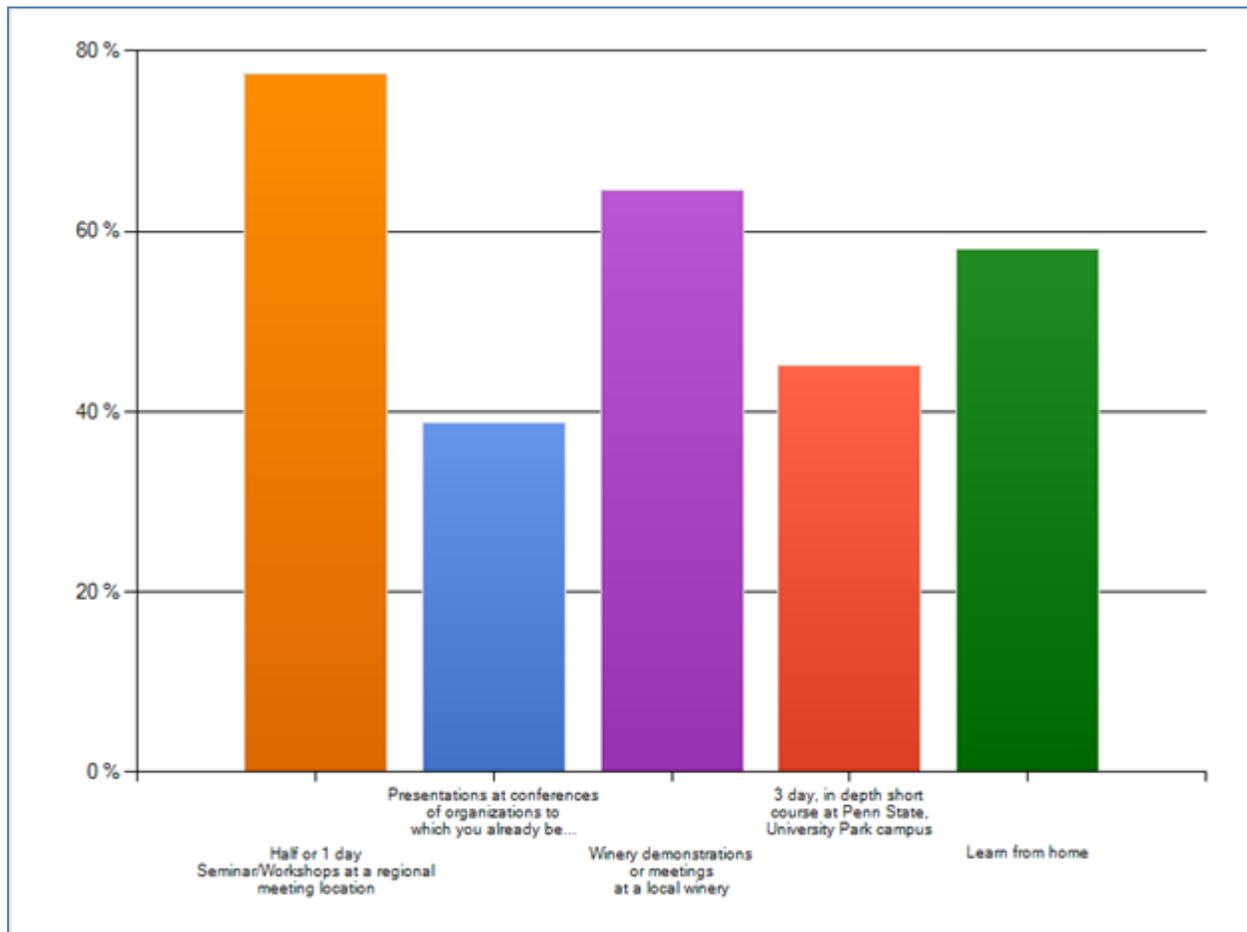
Based on these results, these 5 underlying topic areas, in addition to the 5 previously determined topics of interest (Refer to Figure 2) will probably be priority for extension workshops and education during my first year in the extension enologist position. This is not to exclude the other topic areas, as they are all important. However, they will not be of primary importance when compared to the desired or problematic enology-based topics.

Hosting Educational Events - Preferences

Participants were additionally surveyed for their preference in relation to when and where educational events and workshops are held. The following graphs illustrate this point. (All graphs axes are in percents. Percentages represent the percentages of participants that prefer that category.)

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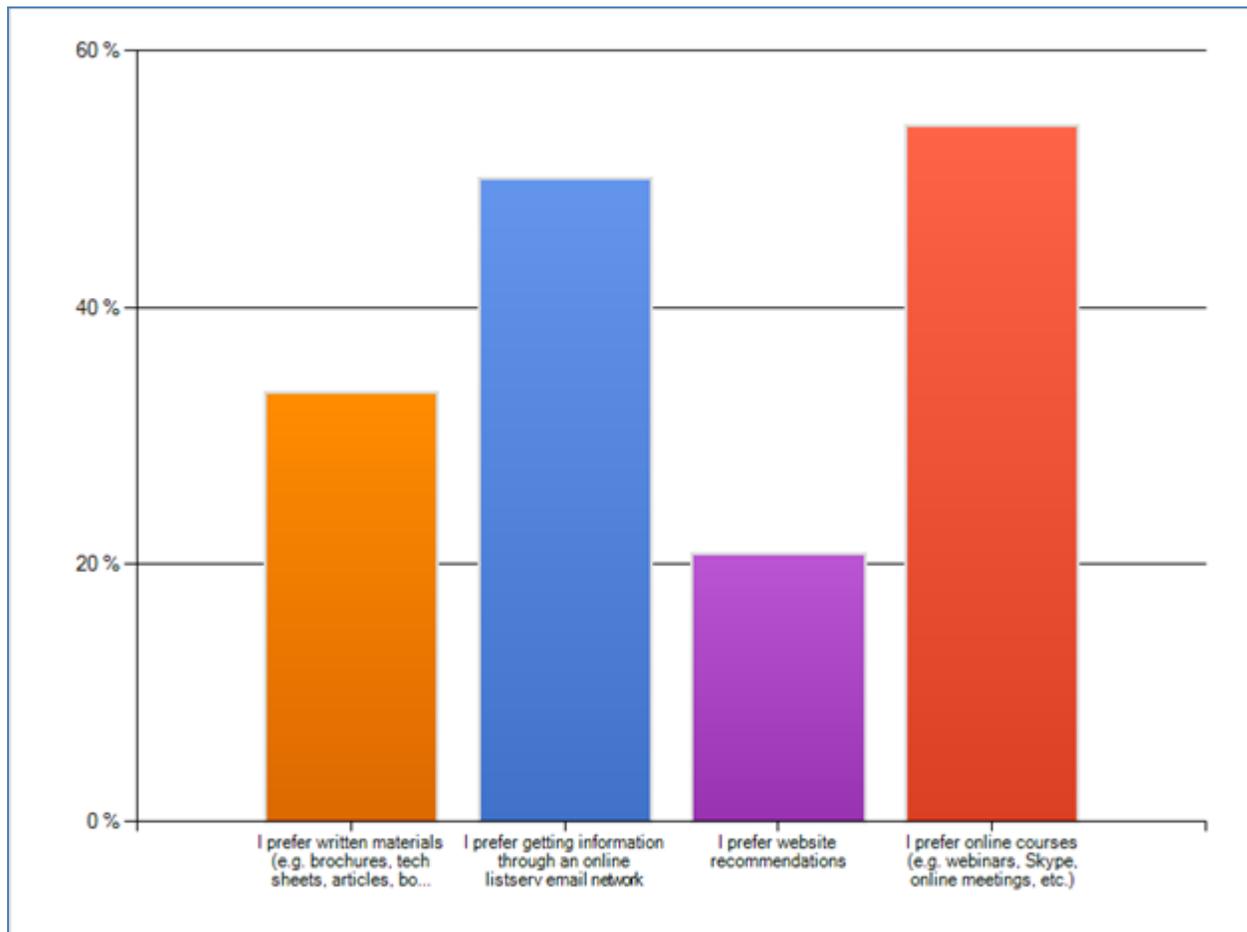
Figure 3: Preferences of Educational Events Formats



The participants preferred (~75%) to have most of my seminars and workshops as a half-day or full-day meeting, probably regionalized. Presentations at conferences were least preferred (<40%).

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Figure 4: Preferences of How to Deliver Educational Information for a Home-Based Educational Event

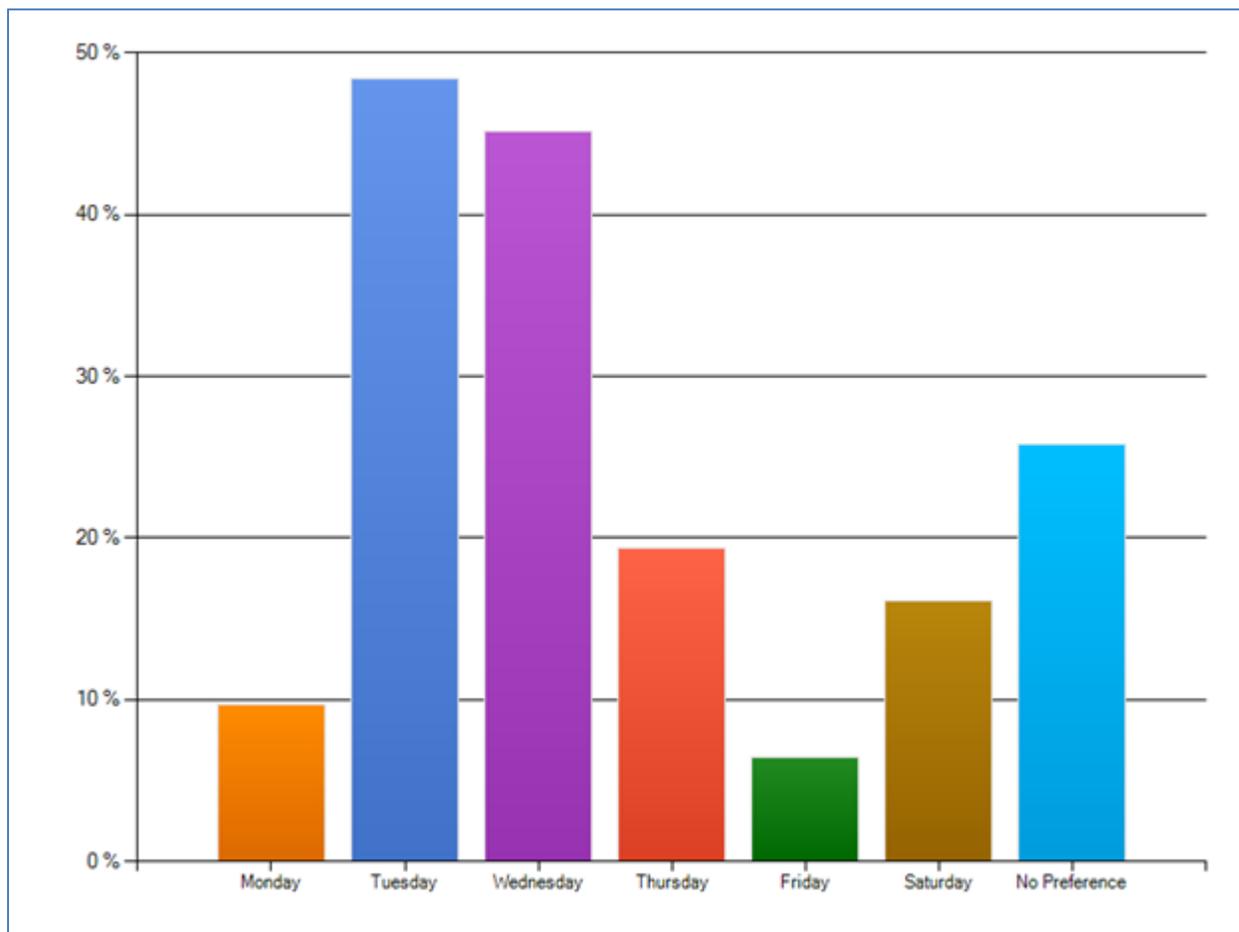


Most participants preferred (~55%) online courses (e.g. webinars, Skype talks, online meetings, etc.) as a mechanism to deliver enology material. Least preferred was receiving website recommendations (~20%). With these results, I should note that the Penn State Extension Enology website will **soon** be released to support materials and information received at workshops and seminars. The URL of this site, although currently not publicly available, will be <http://extension.psu.edu/enology>

Additionally, workshop updates, news events, quick news articles, and meeting highlights can be found at the **Penn State Extension Enology Facebook** page. This is intended to be used as a mechanism to keep the industry, university, and interested consumers up-to-date with what is happening in Pennsylvania's wine industry. Please "Like" the page, and follow me as I try to make this a useful example of how to effectively use Facebook for business purposes. (It is currently open for the "liking.")

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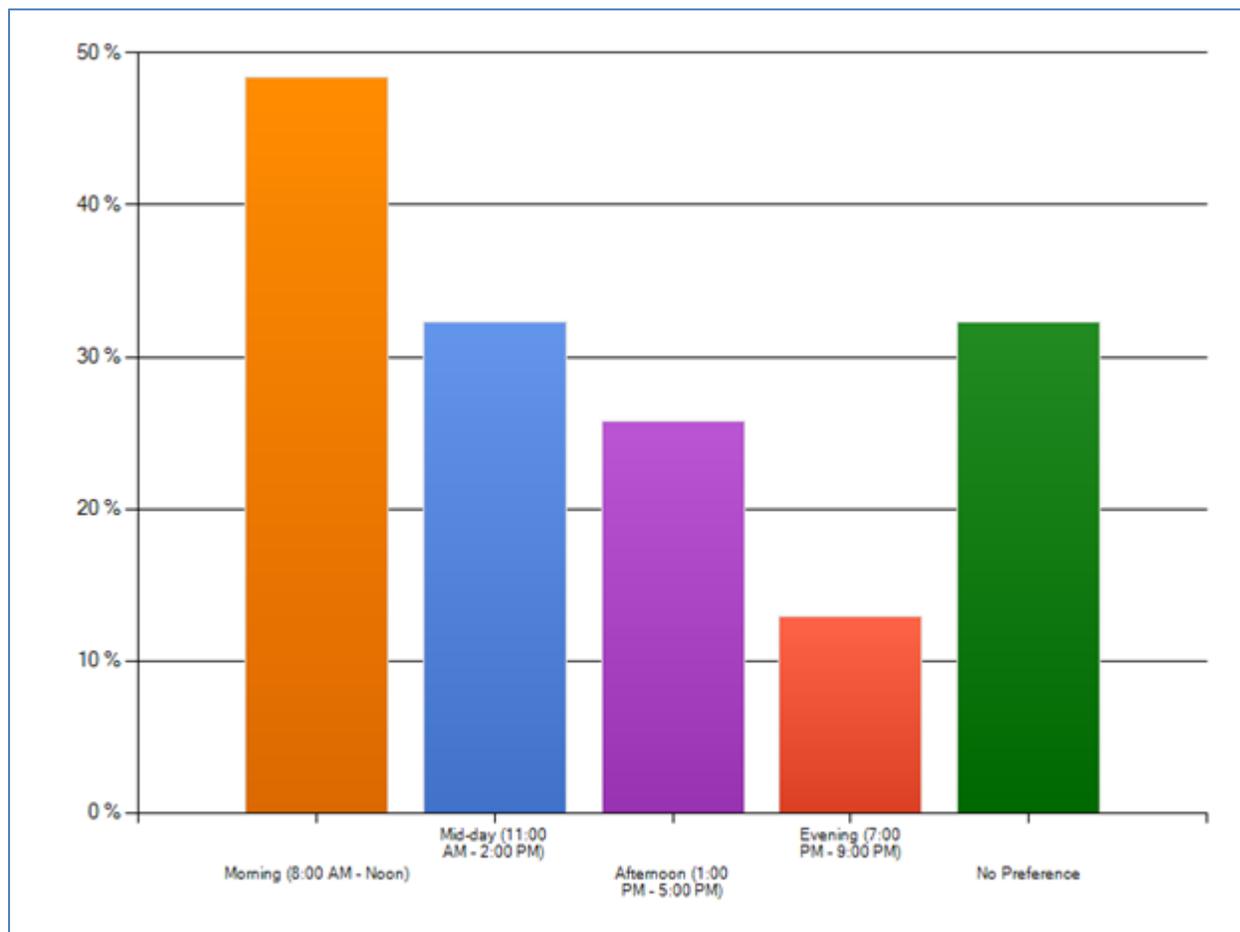
Figure 5: Preferences for the Day in Which Educational Events are Held



Participants preferred educational events on Tuesday (~48%) and Wednesday (~45%). Although a small part of the panel (~25%) had no preference to which day of the week events were hosted. The option for Saturday was open to evaluate if winery personnel would obviously prefer a weekend meeting as opposed to during the 5-day work week.

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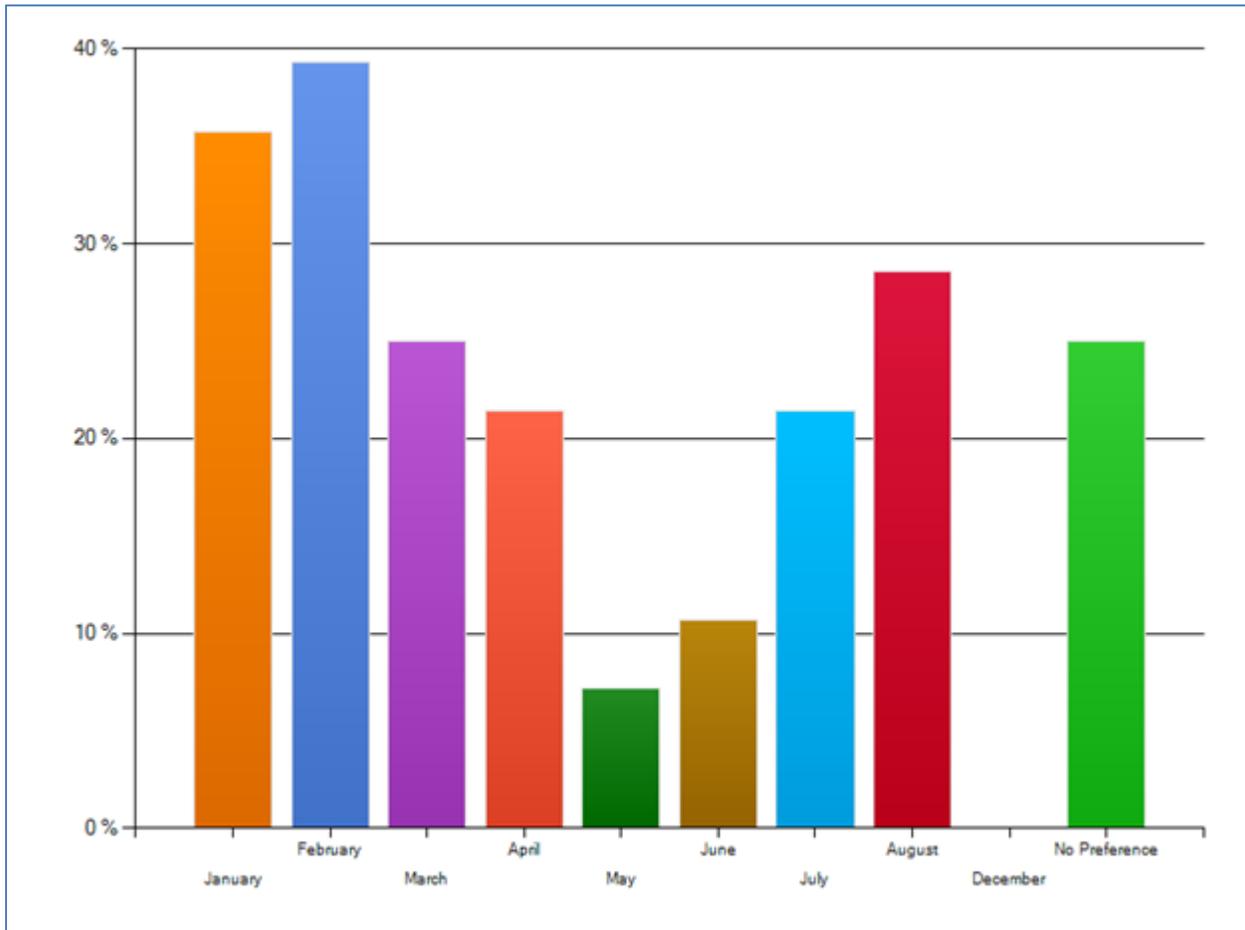
Figure 6: Preference for Educational Event Times during a Given Day



Most panelists preferred workshops in the morning, approximately 8 AM to noon (~49%). Evening hours (7 PM to 9 PM) were least preferred (~12%). This question and its subsequent results will be mostly applied to the half-day seminars or workshops.

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Figure 7: Preferences for a Month to Host 2- to 3-Day Educational Events



From Figure 7, I can see that January (35%), February (~39%), and August (~28%) would be the best months to host a longer, 2- to 3-day enology workshop. December is obviously not a good time to host events. September through November were eliminated from the survey and reserved for harvest.

Thank you to all of those participants that took the time to read through and answer the survey. I truly appreciate your time and commitment to the extension enology program. Additional comments, questions, and subject areas were included in my individual analysis. However, only quantifiable data was shown for this report.

Also, a special thanks to the PWA and Mark Chien for distributing the link the Pennsylvania Wine Industry Needs survey throughout July 2011.