Establishing a Signature Grape Variety
The Case for Traminette
• Signature variety must be adapted to entire state
  – Top 3 in acreage: Chambourcin, Chardonel, Traminette
  – Chambourcin is the top red for the south, but too cold tender and late ripening for north
  – Chardonel is a bit cold tender for the north, small vine size, Phomopsis susceptible…
  – Foch ripens too early for south, 2,4-D sensitive
  – Vignoles ripens too early for south and has major fruit rot issues some years
  – Seyval? Vidal? Noiret?
• Traminette is well adapted to the entire state
  – Vigorous, productive, cold hardy
  – Outstanding wine quality
  – Easily recognizable flavor and aroma
  – We know best management practices in vineyard and winery.
History of Traminette

- Joannes Seyve 23.416 x Gewürztraminer
- Cross made in 1965 in Illinois by Herb C. Barrett
  - USDA ARS breeder at UI-Champaign-Urbana focused on black rot resistance
  - Made many crosses for Cornell during 1960s
- Seedlings planted in Geneva, NY in 1968
- Original vine selected in 1974 (NY 65.533.13)
- Made available for limited commercial testing through NYFTA
- Released as a variety in 1996
History of Traminette in Indiana

- Planted at 3 locations in 1992 (NY 65.533.13)
  - 12 vines per location (4 reps of 3 vines)
  - First fruit observed in 1994, first wine in 1995
  - Propagated ~600 cuttings from 1995 wood
  - Plowed up ~600 plants after off-types discovered in 1996
    - Off-type plants continue to be a problem with Traminette until recently (both commercial and research plantings)
  - Recognized shading and fruit quality issues in 1997-98.
  - Planted training system trial in 1999
  - Published results of training systems study and fruit monoterpenes study in 2008
Results of our studies

• Vines are vigorous and moderately productive
  – Vine size 2-3 lb, Yield: 15-20 lb/vine (~5 T/a)
  – Fruit chemistry is excellent: 22 Brix, 3.2 pH, 6.7 g/l TA
  – Diseases: Downy mildew, Phomopsis
  – Cold hardy to (-15°F) Occasional trunk issues
• Fruit MTs are increased up to 2x by sunlight exposure
• VSP training leads to 2x more exposed fruit than HC, ½ the number of leaf layers
• VSP may lead to excessively vegetative vines and poor fruitfulness (Ravaz index below 6)
• HC or GDC training with good canopy management a viable option
Results of our studies

- Traminette and Gewürztraminer are very similar in MT constituents (17 in common)
- Traminette has nearly 2x MT content of Gewürztraminer
- *cis*-rose oxide comprised 35% of total MTs in Traminette (3x higher than Gewürztraminer)
- Traminette odor profile highly correlated with *cis*-rose oxide and other fruity, floral and spicy MTs (linalool oxide, perillyl alcohol, sabiene hydrate, hotrienol, lavandulol, camphene, 3-carene)
- Limited skin contact will increase extraction
Figure 2  Principal components analysis (PCA) components loading plot of the concentrations of monoterpenic compounds found in three wine grape cultivars based on inter-correlations. The compounds are plotted against PCA dimensions 1 and 2 which indicate the majority of the variation in the data set.

From: Skinkis, Bordelon, Wood. 2008
Traminette as Indiana’s Signature Grape?

• Well adapted to all regions
  – Cold hardy, ripens mid-season
• Vigorous and moderately productive
• Consistently good fruit chemistry and wine quality
• Not excessively susceptible to diseases, etc
  – Phomopsis must be controlled
  – Downy mildew can be an occasional problem
  – Not too sensitive to 2,4-D, dicamba