

KENTUCKY VINEYARD NEWSLETTER

August 15 2007

Editor: S. Kaan Kurtural PhD Viticulturist

Contents:

- 1. Growing degree day accumulation in the state**
- 2. Crop development**
- 3. Grape exchange/marketplace**
- 4. Kentucky weather and climate summary**
- 5. Measuring titratable acidity in the must**
- 6. Upcoming meetings/events**

1. Growing degree day accumulation in the state

Here is the situation so far at various reporting stations across the state in our commercial growing regions.

<u>Station</u>	<u>GDD (50F base)</u>
Lexington	2452
Owensboro	2860
Louisville	2589
Quicksand	2452
Mayfield	2860
Covington	2452

You can also get growing degree day accumulation reports at the following URL:

http://www.wagwx.ca.uky.edu/cgi-bin/generic_dd_www.pl for more locations throughout the state.

These data are courtesy of the Agriculture Weather Center at the University of Kentucky, College of Agriculture.

2. Crop development by Patsy Wilson

Crop development is progressing as expected in this year despite the Easter freeze. Below you will find the table reporting basic fruit chemistry of grape cultivars in central Kentucky.

<u>Cultivar</u>	<u>Date sampled</u>	<u>TSS (%)¹</u>	<u>Juice pH</u>	<u>TA (g/L)²</u>
Vidal Blanc	August 3 2007	11.5	2.8	19.0
Traminette	August 3 2007	12.7	3.1	19.3
Syrah	August 10 2007	14.6	3.2	9.5
Cabernet	August 10 2007			
Sauvignon		17.0	3.2	9.8
Mourvedre	August 10 2007	11.4	3.1	8.9
St. Vincent	August 10 2007	13.5	3.0	14
Vidal blanc	August 10 2007	15.2	3.1	10.2

As you can see, we have quite a while before harvest if you will refer to the previous issue of Dr. Kurtural's newsletter. Grape berries will not start accumulating majority of volatiles and phenolics (flavor compounds) 120 days after flowering. It is critical for growers to keep accurate records of bud break, and flowering and measure basic fruit chemistry to ensure that a commercially and horticulturally ripe crop is delivered to the wineries.

¹ TSS: Total soluble solids measured as °Brix in juice.

² TA: Titratable acidity measured as grams of tartaric acid per L of juice.

3. Grape exchange/Marketplace by Stacia Alford

STACIA ALFORD CONTACT INFO: 100 Fair Oaks Lane, 5th Floor, Frankfort, KY 40601

Phone: (502) 564-4983

Fax: (502) 564-0303

Cell: (502) 382-8779

In an effort to promote the grape and wine industry in the Commonwealth, the Kentucky Department of Agriculture, under the auspices of the Kentucky Grape and Wine Council has instituted a grape market place. The aim of the program is to match grape growers to wineries in the state that are looking to purchase fruit. More information about the program can be found at the following URL: <http://www.kyagr.com/marketing/plantmktg/grape.htm>

Producers with grapes for sale should contact Stacia Alford at (502) 564-4983 to be placed on the "Grapes For Sale" list. This list will connect buyers and sellers to meet the needs of our growing wine industry. Stacia will post the lists on this page as producers and buyers call with their information. Wineries looking for grapes to purchase should also call Stacia Alford to be placed on the "Looking to Buy" list. The Kentucky Department of Agriculture makes no claims to the quality, price, or availability of the grapes listed on this page. They only serve as link to bring buyers and sellers together.

4. Kentucky Weather and Climate Summary by Dr. Tom Priddy

For the Period August 6 to August 12, 2007

Much Above Normal Temperatures and Below Normal Rainfall:

Hazy, hot and humid with record and near-record temperatures gripped the Commonwealth during the work week which joined a long string of weeks with dry conditions this growing season. Temperatures in the upper 90s and low 100s were the rule during the work week which were the warmest temperatures since August 2005. Rainfall was limited to the northeast sections of the state. Slightly less humid conditions with temperatures in the low 90s occurred during the weekend.

Temperatures for the 7 day period averaged 84 degrees across the state which was 9 degrees above normal and 4 degrees warmer than the previous. High temperatures averaged from 94 in the West to 94 in the East. Departure from normal high temperatures ranged from 5 degrees above normal in the West to 9 degrees above normal in the East. Low temperatures averaged from 72 degrees in the West to 72 degrees in the East. Departure from normal low temperature ranged from 6 degrees above normal in the West to 8 degrees above normal in the East. Princeton reported the extreme high temperature of 104 and Lexington's Spindletop Research Farm reported the extreme low temperature of 62 degrees in Kentucky

Rainfall for the period totaled 0.08 inches statewide which was 0.76 inches below normal. Rainfall totals by climate division, West 0.00 inches, Central 0.01 inches, Bluegrass 0.21 inches and East 0.11 inches, which was 0.79, 0.84, 0.65 and 0.76 inches respectively below normal. By station, rainfall totals ranged from a low of 0.00 inches at Bowling Green to a high of 0.80 inches at Berea.

5. Measuring titratable acidity in the must

This basic chemistry variable is usually skipped by our growers and winemakers in the field. However, it is very important that this variable is measured weekly, post-veraison and reported to the wineries. Titratable acidity is very easy to measure with the following steps using minimal equipment

Equipment:

1. pH meter (sensitive to 0.01)
2. 500 mL beakers, 100 mL graduated cylinder, 5 mL pipette and tips
3. Burette, stand, and clamp
4. 0.1 N NaOH (can be made from 1 N NaOH). NaOH is sodium hydroxide
5. Phenolphthalein Indicator .1%
6. Deionized water
7. Kimwipes
8. Recommended: hot plate/magnetic stirrer and small stir rods (you can also mix sample during titrations by hand swirling).

Steps in measuring titratable acidity in the must:

1. Make sure NaOH has been standardized.
2. Place 100 mL deionized H₂O in 500 mL beaker.
3. Add 3-5 drops phenolphthalein indicator.
4. Place the pH meter electrode in the beaker.
5. Use NaOH to raise pH to 8.2, which turns the solution a very pale pink. This is the reference color.
6. Record Volume₀ (on burette).
7. Add 5 mL of sample juice and begin titrating with NaOH to pH=8.2 using the pH meter.
8. Record Volume₁.
9. **Calculate TA:**

$$\begin{aligned}
 \text{TA} &= (V_1 - V_0)(\text{Normality of NaOH})(.75)(1000)/\text{mL juice sample} \\
 &= \frac{(\text{mL NaOH})(\text{N NaOH})(75)}{(5)}
 \end{aligned}$$

6. Upcoming meetings/events

30 August 2007 at 6:00pm NEW GROWER ORIENTATION/WORKSHOP

Madison County Cooperative Extension Office

This meeting is aimed to introduce New Growers to grape growing in the Commonwealth. Topics that are going to be covered are:

- Site Selection
- Net Cost and Return Estimates for Vineyards
- Matching economically important cultivars to sites

For registration information and directions to the workshop please contact:

Brandon Sears
Madison County
Extension Agent for Agriculture and Natural Resources
230 Duncannon Lane
Richmond, KY 40475
Office: (859) 623-4072
Fax: (859) 624-9510
brandon.sears@uky.edu

Next issue of this newsletter is going to be released around 1 August 2007.

To receive a free electronic copy of this newsletter you must be on the KY-Grape-Alert List Serve List. To be added to the List Serve distribution, please send an e-mail to: k.kurtural@uky.edu with the subject line reading: KY-Grape-Alert.