Musings of a Grape Breeder, by Dr. Cliff Ambers

Part I: Why Do It?

Let me introduce myself. I am Clifford P. Ambers, owner/operator of Chateau Z Vineyard in Amherst County, Virginia, one of the smallest wineries in this state and possibly the country. I hold a Ph.D. in geology from Indiana University, and I now occupy myself growing two acres of vines and making wine from them for sale. I sell only at the Lynchburg Community Market on Saturdays and a few, select festivals. I was accosted by Jenni McCloud back in 2004 when my wife and I published an article about the origin of the Norton grape in the American Wine Society Journal which Ms. McCloud was VERY interested in for reasons you are fully aware of. What links me to the Norton grape is grape breeding, and this links me to a community of activity very few wine drinkers are aware exists.

I was thinking about grape breeding as an agricultural community as I toured a senior class of plant physiology students from Sweet Briar College though my vines the other day. I was explaining to them how what I do is motivated by what Michael Pollan discusses in his "Botany of Desire." The grapes entice me to do what I do for their benefit. It is a symbiosis. In doing their bidding, I seek out grape materials that I suspect may help me achieve even more delicious and useful grapes (and wine) thereby involving any Homo Sapiens I think may help in an extended symbiotic network that not only benefits my vines' promotion of their kind, but reciprocally benefits the vines of the other breeders who are nodes in the human network through which I am exchanging Vitis materials. It is fascinatingly like ants or termites moving fungus around or squirrels burying nuts. It reminds me that I am only a player in the continuing dance of life on Earth, life in this thin biofilm on a blue, water-covered ball of rock orbiting an unremarkable star many light years away from any possible sentient neighbors. My network with other breeders helps me stay connected with it all and protects me from loneliness. The other members, regardless of their color or creed or motivations have become my friends. It is a fully functioning, although mostly virtual, agricultural community. It provides support, connections, and resources where modern viticulture has almost completely failed (clearly excepting the USDA government germplasm collections in Davis, CA, and Geneva, NY, which are very important nodes in the network). This is a natural, evolving system of activity that can operate outside all modern technology and that produces remarkable results for very little money. It is what giant seed and chemical corporations would like to kill but cannot, because it is organically and spontaneously generated. Kill it here and it pops up there, like Whack-a-Mole or weeds in your garden! It is life at its finest. It is very similar to what happened in the making of the 'Norton' variety.

Dr. Daniel Norborne Norton was no stranger to forming networks of communication, even in his day of slow, horse-carried post and word-of-mouth. We know from letters written in the "American Farmer," Norton's own letters, and letters reprinted in various catalogs, that Dr. Norton was in contact with the biggest nurseries of his day and fellow grape enthusiasts. He exchanged vine materials with the Prince Nursery of New York, Kenrick Nursery in Massachusetts, and probably John Adlum near Philadelphia. Somehow, very early, he obtained a very interesting vine named for Colonel Theodorick Bland who lived at the confluence of the James and Appomattox Rivers (modern day Hopewell, VA) and who served somewhat infamously in the Revolutionary War. At some time in the late 18th or earliest 19th centuries, Col. Bland found a grape on the Virginia Eastern Shore that was to become, through Dr. Norton's activities, the mother of 'Norton's Virginia Seedling' now shortened to 'Norton'. We now call the seed parent of 'Norton' the 'Red Bland'. The name has nothing to do with the qualities of the grape, only Col. Bland. Dr. Norton worked closely with other Virginians on grape growing and grew a seedling of the 'Red Bland' called 'Cunningham's Prince Edward' found in Prince Edward County very near Hampden-Sydney College and grown by the son of one of that college's first graduates of the same name, Samuel Woodson Venable. The 'Cunningham', as it became known, was reported to make wine as fine as 'Norton', but like its mother, both are likely lost to history. Dr. Norton collected a large number of cultivars from various sources including French vinifera his half-brother sent him during his "coming of age" tour of Europe. Dr. Norton lost his father early, and so he struggled much of his life to live up to the elite Richmond standards in which his step-father and half-siblings were fully immersed. He seems to have found some social favor through his vines and the wines he made from them, and he tirelessly promoted
his namesake grape in an attempt to promote American viticulture, also probably to enhance his social standing since making America independent of imported European wine would have been a major patriotic accomplishment in that day.

The point in all this history is that Dr. Norton was a part of a network of grape enthusiasts that supported him (psychologically), provided resources, and connected him to his world. He participated in life through an ancient symbiosis with the vine, as I and thousands of others do today. In doing so, we see the artificiality and ephemerality of human systems and technology. We sense our place IN the environment instead of viewing it as we would a coral reef display at an aquarium, diorama in a museum, or animals in a zoo or on film. We are part of our respective environments. It is because of this sense that I have returned to our Virginia forests to seek out wild vines that I can bring home and make hybrid seed on. From Dr. Norton's grape, I seek to learn the secret of its resilience to pests and disease, yet its ability to be transformed into delicious, food-worthy wine. The small experimental vineyard across the drive from the Chrysalis Vineyards tasting room is a first step in recreating the 'Norton' grape's magic. Now, five years beyond the planting of that vineyard, I believe I know the secret of what Dr. Norton did. This spring, I hope to succeed at pollinations to make seed for a whole new generation of "Norton Class" grapes. Hopefully I can entice Ms. McCloud to participate further by expanding her experimental vineyard to make some of these seedlings available to you, key consumers of our products and supporters of our dreams, for observation. And of course, she is welcome to propagate and grow and share any of them freely as she wishes, hopefully to make some new wines never tasted in the world before. These are gifts of Nature I played only a minute role in bringing forth. It would be morally bankrupt in the scheme of life on Earth to call them my own and claim ownership. That is not where life came from or wants to go. We all inherently know this even if we choose to ignore the directive for our own evolutionary "leg up."

Until next time when I will discuss the details of the experimental vineyard, I am your faithful servant of the vine, Clifford P. Ambers.

Musings of a Grape Breeder - Part II: What Norton did.

In this month's segment of my grape breeding expose', I would like to turn to what Dr. Daniel Norborne Norton did at his farm in Richmond way back in the 18-teens and then explain what we are doing at the Chrysalis Vineyards experimental vineyard. Before I get into the mechanics of Norton's experiment, however, I want to share a letter I found from D.N. Norton to William Kenrick of Boston that was probably written near the end of Norton's life. Kenrick reproduced the letter in his 1844 catalog entitled: The New American Orchardist; or, An Account of the Most Valuable Varieties of Fruit, of All Climates, Adapted to Cultivation in the United States; With Their History, Modes of Culture, Management, Uses, etc. With an Appendix, on Vegetables, Ornamental Trees, Shrubs, and Flowers, the Agricultural Resources of America, and on Silk, etc. How is that for a catalog title?! Anyway, here is what Norton had to say about his grape with an introduction by Kenrick:

NORTON'S VIRGINIA SEEDLING

This superior native grape was originated by Dr. Norton, of Magnolia, near Richmond, Va. The bunches are large, compact; berries small, black, round; good as a table grape, and excellent for wine which is of a dark violet color, or of the color of port wine, with a just proportion of astringency, and excellent flavor. The vine bears surprisingly; all which I witnessed when last at Richmond. I add the full description of Dr. Norton, in his own words.

"Vitis Nortoni, Produced by artificial impregnation from the Bland and Meunier. Foliage somewhat resembling the Bland. The shoots are of a red color, hardy, and resisting the greatest degree of cold which happens in any portion or the Union; thriving with little care, and never failing to produce abundant crops of fruit, which has not, within the last 15 years, been known to mildew or rot. Fruit
blackish, or of a dark purple; ripens in September, and will remain perfect until the hardest frosts; largest bunches 9 or 10 inches long, sometimes shouldered, and moderately compact, weighing one fourth of a pound; must rich, and of a dark reddish violet color.

"Norton's Seedling stands unrivalled as a field and garden fruit in Virginia; crops always surprisingly abundant, and yielding wines, which, with proper care, will be found inferior to none of the imported drinks from Madeira or France. I obtained this variety by artificial impregnation, after the manner of Knight. I consider it capable of doubling the amount of our exports, when it is properly attended to, throughout the Union; for there is not a single state in our associated confederacy, which will not be found propitious to its growth. Wherever the hickory and the oak are to be found, there also you may expect to rear this fruit. In whatever climate the Indian corns mature their seeds, the Norton's Seedling grape will certainly return a most astonishing yield to the cultivator. In France, if its properties were understood, it would supply the place of much of that useless trash, which just now so unprofitably clothes her fair bosom; no casualty would then cause any serious diminution in the vintage, - which circumstance alone, independent of the improvement of her vines, would be, in a national point of view, of incalculable benefit to that country."

As I mentioned in my previous installment, Norton was a huge proponent of his grape and saw great benefit to the nation and his social status in extending its culture. Probably only our present day Jenni McCloud comes close to Dr. Norton's enthusiasm for his grape! There are some errors in Norton's letter about his grape we know from the study of it for the nearly 170 years since this letter was written. We know now that it is very unlikely that Pinot Meunier was involved in its pedigree and we know that the grape will definitely not flourish everywhere that hickory, oak or corn are grown in North America. The variety is only able to ripen properly as far north as southern Illinois, across Kentucky then eastward and up the east side of the Appalachian Mountains to maybe Long Island but best only to Baltimore. Norton's very entertaining assessment of France's viticulture of the day was no doubt influenced by his nationalism and personal failure with the Old World Vitis vinifera varieties he tried in Richmond. His was the era before ANY prophylactic fungicide sprays were available to keep the vinifera alive in the eastern climate and he wrote what he observed. His variety grew well, was very healthy and vigorous, and produced enough grapes reliably for wine over 15 years. Most other grape varieties available at the time were much more hit-and-miss or simply died.

So what is in the letter to inform us about what the grape really is? Norton made a couple of very important statements about this. First he states the variety was produced from "the artificial impregnation of the Bland," and later on, "after the manner of Knight." This is key information about the Norton variety. First, it verifies that the seed came from the Red Bland I discussed in the last installment. Secondly, it tells us how Norton did his cross. Thomas Andrew Knight was a British horticulturist of Norton's day who worked in fruit improvement (http://www.hcs.ohio-state.edu/hort/history/079.html). I found a description of his method of creating new varieties by hybridization in an 1824 supplement to the Encyclopedia Britannica which is a possible place Norton could have read it. His method of "artificial impregnation" involved removing the anthers from a flower of a fruit with fine scissors followed by dusting the emasculated flowers with blooming flowers of another variety. Importantly, this method recognizes flower gender and that the flowers of many cultivated fruits are self-fertile while those of their wild counterparts are often male or female. Since Norton used Knight's method, we can be fairly sure he recognized that the Red Bland would self-pollinate itself unless scissors were used to remove the male parts from the flowers: this means Red Bland was self-fertile and that is where Norton's grape obtained the trait. We can also be sure that Norton actually did dust his emasculated Red Bland flowers with blooming clusters of Miller's Burgundy = Pinot Meunier flowers. However, if he did this immediately the Red Bland may not have been receptive to the pollen and also there is no mention in Knight's method of protecting pollinated flowers from stray pollen carried on the wind or by insects by covering the pollinated flowers with a bag. It is highly probable that Norton's emasculated Red Bland flowers became receptive to pollen a few days after he applied the Pinot Meunier and that they were pollinated with whatever was on the wind. One thing that was surely on the wind in Richmond was Vitis aestivalis pollen, since today the wild species is very common there and no doubt was then.
We almost have the recipe for breeding Norton, but we still lack detail about its seed parent. Here's where it gets interesting. In my last installment I mentioned the Red Bland grape and its seedling called the Cunningham's Prince Edward. Well, it turns out that the Cunningham made its way into history during the phylloxera crisis of Europe when it was sent there for use as a grafting stock and direct producer of yellowish white wine. Much more is on record about the Cunningham than the Red Bland, and this goes all the way back to its origin. The Cunningham was reported in separate letters to The American Farmer back in 1830's to have been found in 1812 under a solitary Red Bland vine in the garden of Jacob Cunningham of Prince Edward County, Virginia, and was "to almost a moral certainty" a seedling of the Red Bland. In all accounts it is reported to have been very similar to the Red Bland, and its gender is never mentioned, indicating self-fertility. The importance of all this is that "only" 100 years ago, Thomas Volney Munson of Texas and Ulysses P. Hedrick of New York wrote their monumental tomes about American grapes in which they describe the Cunningham as falling squarely in the "Bourquiniana" class of grapes Munson had defined. Some of these still exist and include varieties like Herbemont, Lenoir = Jacquez, Favorite and Delaware. These are now thought to be simple hybrids of wild Vitis aestivalis with either vinifera or a labruscana (labruscana = Vitis labrusca X Vitis vinifera). Delaware involved a labruscana parent, but it is easy to see the Vitis aestivalis influence on the vine. So, through Norton's half sibling Cunningham, we have a window on both it and Norton's seed parent Red Bland: Red Bland was probably a simple Vitis aestivalis X vinifera, but could have had a self-fertile labruscana pollen parent instead of pure vinifera and/or other species mixed in with the Vitis aestivalis (which is common). When Red Bland naturally self-pollinated to produce Cunningham, it produced a grape likened to the Herbemont grape in Munson's Bourquiniana group. When Dr. Norton did his experiment, he ended up growing a seedling that turned out to be very similar to wild Vitis aestivalis except that it was lower in acidity, very sweet, inky dark, and self-fertile. One only has to look to the wild Vitis aestivalis of Richmond to form a hypothesis of where the Norton grape got the genetic material for these traits. It was Vitis aestivalis pollen blowing on the wind and carried on the bugs when his emasculated Red Bland flowers became receptive to pollen.

Now we have a hypothesis to test. In 2006, when I bred the seeds growing in Jenni's experimental vineyard, my hypothesis was simpler for Red Bland's pedigree because I did not know of the Cunningham and hadn't seen fruit from many Vitis aestivalis hybrid grapes of my own breeding. At that time I wanted to test if Norton was a cross of Vitis aestivalis X labruscana. Now, five years later, I have much more information and can refine the Norton hypothesis. Note that I don't use the word "theory" here as is commonly used in the media. A theory is something like the gravitational theory or germ theory of disease that has been studied exhaustively over a long time by many people and it is the best fit to what we know about the phenomenon. Almost all of the "theories" spoken of in modern culture are poorly researched hypotheses, at best, and often times just hunches. I think we know enough about Norton's origin now to have a testable hypothesis. If it looks like the tests produce grapes much like Norton and this can be verified by many breeders and genetic analysis, we might then consider calling it the theory of the origin of the Norton grape! My current Norton hypothesis can be written as an equation:

\[
\text{Norton} = (\text{Vitis aestivalis} \times \text{Vitis vinifera or labruscana}) \times \text{Vitis aestivalis} 2
\]

This would make Norton at least 3/4 wild North American Vitis aestivalis, and 1/4 Vitis vinifera and at most 7/8 wild (3/4 aestivalis + 1/8 labrusca) and 1/8 vinifera. But hold on. Remember that mention of Vitis labrusca above and the inky dark juice of Norton? It is very possible because of the continual hybridization and back crossing that goes on in wild vines out in the woods that either or both of the Vitis aestivalis parents in Norton could have had other grape species in them. There are some vine characteristics that hint at Norton having Vitis labrusca and Vitis cinerea in its pedigree. If Red Bland were more like Delaware and had a labruscana father, then the grapes in the experimental vineyard at Chrysalis Vineyards from the 2006 seeds would be much like Red Bland. Indeed, what I see in these hybrids here at Chateau Z Vineyard very nicely fit the historic descriptions of Red Bland (see the illustration below), and they have a hint of labrusca in their vines. As for the dark juice, both Hedrick and the French insisted that Norton and the Bourquinianas had "a strain of cinerea in their pedigrees." If you look closely at the Vitis aestivalis of the Blue Ridge in comparison to the same species at Richmond and out onto the Coastal Plain and further south, it has hairy leaf veins and stems, the leaves are stiffer, and
the fruit has darker juice in the east and to the south. On the Blue Ridge, the Vitis aestivalis grows alone or occasionally with Vitis labrusca or Vitis cordifolia, whereas in Richmond and eastward the Vitis aestivalis grows alongside Vitis cinerea and muscadine grapes. Bunch grapes and muscadines don't generally interbreed because they have different chromosome numbers, but Vitis aestivalis and Vitis cinerea do. It is very likely that either the Red Bland Vitis aestivalis parent and/or the Norton pollen parent had Vitis cinerea in their pedigree. This would account for Norton's very dark juice and would have contributed markedly to its disease and pest resistance.

Well, there you have it! In my next installment I will explain what I have done with this hypothesis this year in an attempt to test it. In the meantime, consider what Jenni mentioned in the last newsletter about diverse indigenous wines in comparison to making yet another store-style vinifera wine, and couple this with Dr. Norton's observation about the "useless trash" varieties of France from his perspective of the pre-spray era. If consumers in eastern North America continue to press for purer wines in the face of food safety scares like the recent e. coli outbreak in Europe and stories of chemical contamination of foods, the industry will either throw its hat in the genetic modification camp and grow very expensive and not very numerous GMO grape varieties designed to beat bugs and diseases with minimal chemical use OR they will go the much less expensive and expert-dependent route of using high North American pedigree hybrids. Add to this ever increasing fuel costs and economic uncertainty, and it becomes entirely possible that a GMO solution would not come due to loss of research funding and vinifera grapes from the western states or overseas would not be used because the shipping would be too much. In this case, which may well come, we would have to use our indigenous hybrids to keep making wine here. The Norton grape is a key to unlocking the indigenous viticulture of Eastern North America. We were on that road until teetotalism and Prohibition ended our national wine freedom. It is high time we get back on it and prepare for whatever time brings by breeding a wide selection of Norton-like hybrids to grow in our demanding climate!

A leaf and cluster from my 06-92-2 hybrid of Vitis aestivalis X Suffolk Red. Suffolk Red is a 75% vinifera seedless table grape developed in New York. The 06-92-2 grape very closely matches the historic descriptions of the Red Bland variety, the mother of the Norton variety. If my current hypothesis for the origin of Norton works out, a pollination of a wild Vitis aestivalis female grape with this type of variety will yield Norton type seedlings.

Sincerely, Clifford P. Ambers
June 14, 2011
Musings of a Grape Breeder – Part III: What Chateau Z Vineyard is doing.

In this last segment of my grape breeding expose', I would like to highlight what I have done in the last eight years of working with Virginia's wild vines. With grapes, a picture is worth more than a thousand words since it is so difficult to describe every aspect of the vine. As such, beyond this introduction will be a guided picture story of one of my wild parents and a few of its offspring.

One thing that has changed enormously since Dr. Norton's day is communication. Even in the last ten years, communication between grape breeders working at the scale of Dr. Norton's experimentation has expanded exponentially through their use of the internet. Very important in this new era of connections is a grape breeder's email list server that was set up by Lon Rombough in Oregon about ten years ago. Now, almost daily, grape breeders across North America and beyond are discussing grape hybridization and observations in their vineyards - almost in live time. In this group of about 200 breeders is a contingent very interested in bringing new Vitis æstivalis hybrids to bear in various parts of the country. These folks include Prof. George Gale of Kansas City and his friend Jean Houle of Quebec working with the northern bicolor strain of Vitis æstivalis; Aaron and Holly Puhala of Vineyard Innovations, LLC (http://www.vineyardinnovations.com/About.html) in northeast Ohio who are working with their family to domesticate the bicolor in that area; Charles Wray of SE Minnesota working with his 'Winnebago bicolor'; Hal Love of the Cumberland Plateau in Tennessee working to build disease resistance with his local æstivalis; Ryan Daum of Wisconsin with his local bicolor; Troy Ward of NE Texas working with Munson's Vitis æstivalis var. lincecumii; and William Shoemaker of the University of Illinois St Charles Horticulture Research Center near Chicago who is working with NW Illinois bicolor. There are others, as well, and I apologize to them for not recalling their efforts off the top of my head. There is no doubt that collaboration between the breeders listed and all breeders communicating on the internet strengthens each one’s efforts. I am 99.9% certain that within five years we will have grapes very similar in disease and pest resistance to Norton available from non-institutionally supported breeders.

In my previous installment I used evidence from the historic Cunningham grape to provide a glimpse of Norton's seed parent Red Bland. From this, and what we know looking at Norton directly, I inferred that Red Bland had an æstivalis parent and self-fertile vinifera or labruscana parent and must have been self-fertile itself. Dr. Norton emasculated bland and it got another æstivalis vine’s pollen on a flower, so that when Dr. Norton grew the seed, his seedling ended up with two æstivalis parents in its pedigree. This year, I took pollen from several 'Red Bland analogs' and applied to their pollen to various wild æstivalis mother vines in my collection. The two most important mother vines from a ‘Norton recreation’ standpoint are seedlings from a cluster of grapes sent to me by Aaron Puhala of Kent, OH, from a wild æstivalis vine he found at Cape Hatteras, NC. These seedlings are of the southern æstivalis strain that were involved in Norton’s breeding. I currently have about 15 bagged clusters growing on these vines that should produce vines like Norton. With many seedlings to choose from, however, we should find some as good for wine as Norton itself but with differing flavors. We will finally begin to rebuild an indigenous viticulture for Virginia! So let's look at some things I've come up with to this point. I'll use one of my favorite wild Vitis æstivalis mother vines as a case in point. I have about 20 wild vines of this species in my vineyard that I do breeding work with. All the hybrids shown are self-fertile and ready for vineyard growing.

The Panther Falls Road Tannic Vitis æstivalis

This is a 100% Virginia wild grape from near the Blue Ridge Parkway in western Amherst County. It is special in that the fruit has a high tannin content making it especially valuable as a parent of grapes suitable for red wines with aging potential. It has good sugar content and moderate acidity for a wild selection. It makes a superb mother vine.
The leaves of *Vitis æstivalis* are large, thick, and leathery. Their key characteristic is a bluish-white, waxy underside.

Fruit on the Panther Falls Rd. Tannic is typically 4-6” long, blue, bloomy, open clustered, and sometimes with a wing - like the cluster shown below, or often simply a cylinder shape.
Panther Falls Road Tannic *Vitis æstivalis* X Delaware (06-82-1)

This is a stunning little grape that can be thought of as a labruscana analog of the Red Bland. Self-fertile and nicely productive, it makes fruit with amazingly good chemistry for wine from such a simple cross. It would make an excellent dry rose’ or dry white wine, and could also be used for a semi-dry summer sipper.
Yes, those clusters are 6” long!

Panther Falls Road Tannic *Vitis æstivalis* X Jupiter (06-86-1)

Here is a muscat hybrid with a summer grape! It just began to bear fruit in 2010, so we don’t know yet if the clusters will fill in as the vine matures, but Oh! What an aroma. I made one bottle of wine from this vine last year and I am waiting for the right time to open it.
Panther Falls Road Tannic *Vitis aestivalis* X Pocklington (06-89-1)

Pocklington was a popular white labruscana in its days of the late 19th century that grew from a seed of Concord. It is somewhat like the Diamond wine grape and has a heady grapiness like most of the old-line American hybrids based on *Vitis labrusca*. In this hybrid with the Panther Falls Rd. Tannic, its grapiness is purified into a crisp grape-nehi-like aroma with the spiciness of Norton. An intense semi-dry to semi-sweet rose’ or even red could be made from this grape.
**Panther Falls Road Tannic Vitis æstivalis X Suffolk Red (06-92-1,2)**

The #1 seedling is an incredible little grape. Producing two properly packed, 3-5” clusters per shoot, it has a pulpiness like Norton and a spicy, tropical fruity aroma that is difficult to describe. I made a bottle of wine last year from this vine, as well, and can’t wait to test it!
The clusters are all cylinders with 3/8-1/2" berries.

06-92-1’s sister seedling #2, below, is the closest grape I have to the descriptions of the Red Bland grape (mother of Norton).

By using the pollen from any of the hybrid grapes shown above on wild grapes like Aaron Puhala’s Cape Hatteras southern *Vitis aestivalis* seedlings, my other central Virginia *Vitis aestivalis* selections, or even northern *Vitis aestivalis* var. bicolors, we can recreate all kinds of wine grapes in Norton’s class. The first group of such seeds is growing now in my vineyard.
The Promise of a White Seedling from Norton

Finally, we really would like to have a wine grape with uncolored skin that has the disease and pest resistance of Norton. One way that this was done in the past was to self-pollinate Norton and about ¼ of the seedlings would come out white, meaning Norton carries a recessive gene for the white fruit trait. However, along with the white trait, it was always found the fruit was small, vines unproductive and the vines lacked the vigor of the parent. Another way to reach this goal without these problems is to cross Norton with a white grape carrying genes for disease/pest resistance, white fruit, large berries, large clusters, high sugars and low acidity which will compliment Norton’s characteristics. In 2006 I did a cross between an 1850’s labruscana grape named Lindley which is tough, makes fruit with unsurpassed flavor, but is female. I pollinated Lindley with Rayon d’Or, the grossly over-productive French hybrid parent of both Seyval Blanc and Vidal Blanc. Eleven seedlings resulted from my cross of Lindley X Rayon d’Or of which four remain. This year I applied pollen from Norton to the #8 female seedling, the first fruit of which is shown below.

This year, the 06-66-8 produced large, 6-7”, shouldered clusters of golden berries with a sweet, pineapply-tropical fruit flavor that is quite amazing. Here is one of the clusters pollinated by Norton:
Half of the seeds from these clusters I pollinated with Norton will produce white seedlings and half of those should be self-fertile. We intend to plant these at the Chrysalis experimental vineyard along with selfed-pollinated Norton seedlings to compare what comes from such crosses. Perhaps, within a decade, Jenni will have a Sarah’s Patio White made from one or more of these white grapes!

Well, that concludes my tour of the vineyard through the mind of a grape breeder. Thank you for your reading of these ramblings and continue expanding your palate for wines of all origins. The spectrum of grapes and the wines that can be made from them is infinite, and only if the consumer chooses variety will it continue to exist.

Best Regards, Clifford Ambers – Proprietor of Chateau Z Vineyard, Monroe, VA

8/15/2011