

# Oregon Wine Advisory Board Research Progress Report

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## Pinot Noir Clonal Trials: Misnamed Clones

Steve Price

### Introduction

In 1983, our research group took on the task of answering the question: What are the characteristics of available Pinot noir clones in Oregon? Our main resources in this effort were the OSU Mother Block and two cooperative clonal trials at Knudsen Erath (KE) and Five Mountain Vineyards( 5M). Information we obtained this summer on cluster morphology and leaf types indicates that, in fact, we have been trying to answer a trick question. Apparently, there are vine mixes in the OSU Mother Block and serious numbering errors in both the KE and 5M trials. The information we have released on these trials accurately describes the plant material we evaluated, but that material may have the wrong numbers attached or even be mixed clones.

If these apparent errors are real, they have serious consequences both for our research trials and for growers who have propagated vines from the OSU Mother Block, the 5M and KE trials, and the Foundation Plant Materials Service (FPMS) based on our reported results. The following article outlines evidence for this apparent mix-up. We are publishing this preliminary information because there is substantial interest in one of the clones. Propagation of this material should be stopped until the proper identity of all these clones is known.

### OSU Mother Block

In August 1989, Lucie Morton was asked to visit OSU to help with the identification of several rootstocks in the OSU Mother Block Ms. Morton has considerable experience with rootstocks and ampelography (ampelography is the study of grape variety identification). The OSU Mother Block is laid out in matched pairs, two plants of each clone. When she was looking at the Pinot noir section of the block, she noticed several pairs of vines that did not appear to be matched sets. Inspection of the clusters of these plants supported this claim. There were three clones involved: UCD 1 (E6 V1), UCD 17 (15 V5), and UCD 29 (H11 V11).

Our research at 5M and KE has shown each of these clones to have a distinct cluster type. UCD 1 has a large, loose cluster with a long rachis and long pedicels. UCD 17 has a small cluster with a small rachis with frequent poor set. UCD 29 has a large, loose cluster similar to UCD 1, but generally smaller. The large, loose cluster type of UCD 1 and UCD29 is particularly easy to identify in the field, so this was the characteristic used in all the subsequent inspections.

In the OSU Mother Block, one plant of each of the three pairs was a replant, planted in 1982. The older vine of each pair was planted in 1977. In each case, the cluster characteristics of the replant matched the cluster descriptions we have published from KE and 5M; the older vines did not. On the older vines, UCD 17 was large and loose and UCD 1 and 29 were small and tight. I later found out the replants had

come from potted vines left over from the KE and 5M trials. So, what was the identity of the original Mother Block vines?

### **FPMS and Carneros Creek**

I went to Carneros Creek Pinot noir clonal trial in California to check the cluster characteristics of UCD 29, the only one of the three questionable clones in the trial. It had a small, tight cluster. UCD 23, a selection from Switzerland, was the only clone in that trial with a large, loose cluster type.

I then visited the FPMS Foundation vineyard at Davis. I inspected all of the Pinot noir clones in the Foundation vineyard (there are 25). Only two clones were found with the large, loose cluster type: UCD 17 and UCD 23. Both UCD 1 and 29 had tight, typical Pinot type clusters.

### **Older Oregon Trials**

There are at least two Pinot noir clonal plantings older than the trials at KE and 5M. One is the Washington County at Ron Johnson's vineyard and the other is in Yamhill County at Roy Wahle's vineyard. Both were planted in 1977. Clusters were collected from those vineyards and, in both cases, UCD 17 had large, loose clusters and UCD 1 and 29 had small, tight clusters.

### **Knudsen-Erath and Five Mountain Trials**

These trials were planted in 1979 and 1980 and were the trials used in our clonal research. Cluster samples were taken vine-by-vine from the KE and 5M trials and compared to the clusters from the older clonal trials. UCD 1 had uniformly large, loose clusters, UCD 17 had small clusters with very poor set at KE and small, tight clusters at 5M. UCD29 appeared to have two separate cluster types. Some vines had large, loose clusters and some had small, tight clusters. This vineby-vine difference in UCD 29 existed in both sites.

### **Correct Identities?**

The clone numbers of the older Mother Block vines appear to be correct. At least they match the cluster types at the Foundation vineyard at Davis, the Carneros Creek Trial, and the older clonal trials planted in Oregon. The replants are apparently not correctly identified.

The vine identities at KE and 5M are probably wrong. Their true identity is a good question. The only loose-clustered Pinot noir clone imported into Oregon is UCD 17 (Mariafeld). It is possible that the clone identified as UCD 1 in both these trials is, in fact, UCD 17. The clone identified as UCD 29 may, in fact, be a mix of two clones: UCD 17 and something else. The identity of the clone identified as UCD 17 is unknown.

More sophisticated identification techniques are obviously necessary to positively identify the clones in the KE and 5M trials.

### **Significance for Growers**

In our reports to the industry and in industry wine tastings, clone UCD 29 has been identified as a promising clone. Several growers in Oregon and California have propagated UCD 29 for small plantings. UCD 1 has been tried by a few growers. The origin of the propagating wood is very important in these cases.

Vines of UCD 29 propagated from the trials at 5M and KE is the plant material that we evaluated. But, there appear to be two plant types in that clone. The vines could be one of two types, or both. UCD 1 or UCD 17 from those trials will be incorrectly named. Vines propagated from the Mother Block could be a mix of any of the three clones. Vines propagated from FPMS will be correctly identified, but may not be the same material we described in our clonal evaluations. A notice will be sent to all growers who have ever received any of these three clones from OSU, and a copy of this notice will be sent to FPMS.

If growers are interested in planting Pinot noir clones with loose cluster types, our best current recommendation is to plant UCD 17 or UCD 23 from FPMS.

### **Future Plans**

1. The OSU Mother Block will be very carefully evaluated. The replants mentioned above will be removed and all varieties in the block will be carefully screened for trueness to type. This process began this summer with Lucie Morton's visit.
2. Anew Foundation or Mother Block will be planted at OSU to include all virus tested Pinot noir types currently available in the U.S.
3. The new OSU Pinot noir clonal trial at Woodhall III Vineyard will be reevaluated. Clones propagated from the OSU Mother Block will be removed and replaced with vines from FPMS. Clones UCD 17 and UCD 23 will be incorporated into the trials.
4. A research program on Pinot noir clonal identification will be developed. A means of positive identification for Pinot noir clones is essential to prevent future mistakes of this sort. Nurserymen need to have a means of identifying plant material to avoid mistakes, and a method of plant "fingerprinting" needs to be developed to sort out messes such as our current one.

To identify key visible differences between these clones, we will be recording cluster and vine characteristics. Leaf and shoot samples will be sent to either Lucie Morton or Raymond Bernard for ampelographic descriptions. For "fingerprinting" we will be working with scientists at OSU and possibly UC Davis. At OSU, Larry Daley and Alfonso Gardea are developing a method of identifying clones by separating enzyme types (isozymes) of certain enzymes using polyacrylamide gel electrophoresis. Several researchers at Davis have been investigating the feasibility of using DNA analysis for variety identification in grapes.

### **Conclusion**

These errors in our Pinot clonal trial are unfortunate, but not a disaster. None of the material has been widely planted. Further propagation of any of these clones, however, should wait until these identification questions are resolved. Our new clonal trial can still be manipulated without much harm. New, clearly identified clones can replace the questionable ones. The KE and 5M data is still good, just possibly misnamed. With careful vine identification, perhaps the correct names can be applied to those data. In fact, if UCD 29 from those trials turns out to be a blend of clones, we will have given an inadvertent demonstration of clonal blending.

Bear with us. If we can straighten this out, we will be better off than we were before.