Managing a Wine Cellar Using a Spreadsheet 2.0

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Abstract
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Keywords
restaurants, wine cellars, spreadsheets, wine cellar management

Disciplines
Business | Food and Beverage Management | Hospitality Administration and Management

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Managing a Wine Cellar Using a Spreadsheet

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by Gary M. Thompson, Ph.D.
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Cornell University
School of Hotel Administration
Managing a Wine Cellar Using a Spreadsheet

by Gary M. Thompson

EXECUTIVE SUMMARY

Using examples from a new Wine Cellar Management Tool, this report describes the many spreadsheet-based analyses in this tool that can assist an individual, restaurant, or bar to manage a wine cellar. If one is disciplined about recording the inflows and outflows to and from the cellar, the spreadsheet tool will provide several cellar analyses. In addition to providing insight into the key questions of what to consume and what to promote, the tool shows such interesting and informative analyses as appellations, vintages, and types of wine. In the tool described in this report, the spreadsheet itself incorporates form-based sets of data entry fields. The Wine Cellar Management Tool, which is available at no charge from The Center for Hospitality Research at Cornell University, does not require actual knowledge of how to construct a spreadsheet. It does require diligent data entry regarding wine purchases and withdrawals.
Gary M. Thompson, Ph.D., is professor of operations management at the Cornell University School of Hotel Administration (gmt1@cornell.edu), where he teaches undergraduate and graduate courses in service operations management. His research, which focuses on wine cellars, restaurant operations, scheduling conferences, and on workforce staffing and scheduling, has appeared in a number of outlets. He has consulted for several prominent hospitality companies and is the founder and president of Thoughtimus, Inc., a small software development firm focusing on scheduling products.
Managing a Wine Cellar Using a Spreadsheet

by Gary M. Thompson

This report serves as a companion piece for the “Wine Cellar Management Tool,” which is available for use at no charge on the Center for Hospitality Research web site (www.hotelschool.cornell.edu/research/chr/pubs/tools/). Although the tool is based on a spreadsheet, it requires only data entry in predefined forms within the spreadsheet. The spreadsheet calculations underlie the resulting analyses. In addition to the blank spreadsheet that you can use, I have posted a sample spreadsheet with fields filled in. As you read this report, you may wish to consult that sample spreadsheet.
Having developed the tool, I wrote this report to explain how the tool will allow individuals (or restaurants and bars) to manage their wine inventories. Throughout, I use the term “wine cellar” to mean wine inventory, even though wine inventories are not always held in cellars. I developed the tool because I have been surprised at the number of times I have read about people who claim to “track” their wine cellars in their heads, even those whose cellars run into the thousands of bottles. Even granting that these people may have excellent memories, I think it’s easy to mismanage a cellar using one’s head. The key result of mismanagement is failing to drink wines at their peak. Managing a wine inventory can be complex, since wines exhibit different aging profiles that reflect how the wine evolves over time. Some wines peak early and then decline fairly quickly, while others improve slowly over time, have a long window of peak drinking, and then decline slowly.

This report and tool complement an earlier CHR report, which Professor Steve Mutkoski and I wrote. That report described how one could take an optimization perspective to managing a wine cellar. The limitation of that report is that implementing the method that we described requires a sophisticated optimization model. By contrast, the tool presented here is based on a spreadsheet model that can be used to help manage a wine cellar. The spreadsheet-based tool allows you to input your wine-cellar information, without worrying about the underlying spreadsheet rules and arguments. The simplicity of this approach can broaden its applicability, since users need not actually understand how to operate the spreadsheet. All they need do is input the requisite data, as I explain at the end of this report.

The Wine Cellar Management Tool does not tell you what you must drink (or what to promote). However, once you have input the information regarding your cellar, the tool can help guide your wine selections, so that you have an appropriate selection of wines in different categories and so that you don’t miss drinking wines at their peak. To be effective, the tool requires a disciplined approach—recording purchases and consumption and, occasionally, verifying the accuracy of the inventory counts by taking a physical inventory. I believe this disciplined approach is well worth the time, so that no wine you own ages past its peak drinking

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After that, I describe the required data. In reality, the data must come before the analyses. However, I present them in reverse order, since it is the usefulness and extent of the analyses that will allow you to determine whether using this tool is worth your while.

**Cellar Analyses**
The cellar analyses can be broken down into those that are interesting or informative and those on which you will base your cellar-management actions. All of the analyses presented in this report are based on data from a real wine cellar, but the data have been disguised to some extent to “protect the innocent.”

**Interesting and informative analyses**. The Wine Cellar Management Tool presents its analyses as a series of charts and tables. For example, Exhibit 1 illustrates the composition of the cellar, by country of wine origin. In this particular cellar, wines from three countries dominate. Australian wines constitute about a third of the cellar, French wines make up about one quarter of the cellar, and wines from the United States constitute a little more than one-fifth of the wines. The remaining wines are from Argentina, Spain, Italy, Portugal, and South Africa.

It can be useful to create “Special Designations” for outstanding wines. These designations might be based on particularly good vintages from certain growing areas, such as 2001 Brunellos (from Italy). Exhibit 2 illustrates the tally of two special designations—2005 Bordeaux, numbering about three cases in the sample cellar, and 2005 Châteauneuf-du-Pape, of which there are about two cases.

Tracking the cellar composition by vintage can yield information about whether the cellar is being replenished, or whether particularly strong vintages are well represented. Exhibit 3 illustrates the cellar's composition, depicting a relatively young cellar containing wines only from the 2001 period. Other benefits are a wide variety of interesting and informative analyses that reflect the wine held in your cellar. From my own use of the tool over a number of months, I can attest to minimal efforts required to keep it updated.

In the remainder of this report I first present the many analyses related to a wine cellar that one can perform with the spreadsheet underlying the Wine Cellar Management Tool.
vintage onwards. The 2005 vintage is particularly well represented, with close to 200 bottles on hand.

A related analysis examines the cellar composition by varietal type, as shown in Exhibit 4. One is faced with a decision about the level of detail to use in defining the varietal types. Exhibit 4 uses a moderate level of detail. Thus, reflecting the cellar’s large Australian component, Shiraz and Syrah (pure and blends) are the dominant wine, representing about 40 percent of the bottles on hand. You can, however, define the varietal types at a broad level. One could use “Rhone-Style” to encompass the Grenache, Grenache Blend, Shiraz/Syrah (pure and blend wines), which in this cellar constitute about 58 percent of the bottles on hand.

Tracking the vendors from which one has purchased wine can also be valuable, if you identify a particularly reliable vendor. Exhibit 5 illustrates this analysis for the cellar in question (with vendor names omitted). The exhibit displays both the number of bottles on hand, and the total number of bottles purchased from each ven-

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**Exhibit 3**

Cellar composition by vintage

**Exhibit 4**

Cellar composition by varietal

**Exhibit 5**

Wine purchases by vendor
For this cellar, Vendor 31 has been the dominant supplier, followed by Vendor 18.

Rating wines is a common practice. The three most popular rating sources use 100-point scales: International Wine Cellar, Wine Advocate, and Wine Spectator. The tool allows you to apply these ratings or develop your own ratings. Regardless of the source of the ratings, it can be useful to examine the cellar composition with respect to the rating

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scores of the wines, such as is done in Exhibit 6. In this cellar, 91- and 90-point wines are the most common. The chart is informative, in that it shows the representation in the cellar of higher-rated wines, which are often considered to be more worthy of longer cellaring.

It often seems that there is a weak relationship between the price of wine and its quality. A simple way to examine this relationship is to plot the price of the cellar’s wines as a function of their rating score, an analysis shown in Exhibit 7. This chart clearly shows a relationship between price and rating. However, the relationship does not appear to be linear, since price is increasing proportionally faster than rating. These results are consistent with the law of diminishing returns.

The wine purchases can be examined with respect to price, as illustrated in Exhibit 8. Here, the number of different wines in the cellar (not the number of bottles) is plotted for different ranges of price per bottle. For the cellar in question, bottle prices in the $15 to $20 range are the most common, followed by wines in the $10 to $15 price range. It is important to note that the price-range categories are not equal in this exhibit; the ranges expand with more expensive bottle prices. One’s wine budget will largely determine whether the purchases are skewed to the left, as they are in this exhibit, where budget-priced wines dominate, or skewed to right.

When purchasing wine, there is always the issue of the number of bottles of a particular wine to purchase. As noted in my earlier CHR report with Professor Mutkoski:

Having multiple bottles of the same wine allows one to taste the wine over time, seeing how it develops and ensuring that at least some bottles are consumed at their peak. Another reason to buy more than a single bottle of each wine, particularly for good wines, is that a person may wait too long for an occasion that’s “special enough” to merit opening that one outstanding bottle. Then when it is opened, it may be past its peak.

Exhibit 9 shows the number of different wines in the cellar, by the number of bottles on hand. In this cellar, the most common numbers of bottles on hand are 6, 10 and 11, while two of the wines have 24 bottles on hand.

As I described in the introduction, wines vary in how they age over time. Each wine can be thought of as having a peak drinking window—the period of time during which the wine is best consumed. That window will vary, based on, among other things, the grape varieties in the wine, the growing conditions of the vintage, and the how the wine was made. Experienced wine drinkers can estimate the peak drinking window. Also, it is common for the rating services mentioned earlier to provide information like “drink now” or “best from 2015 to 2025.” By assuming that each wine will be consumed at a more or less constant rate over its peak

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3 Ibid.

4 Thompson and Mutkoski, p. 10.
drinking window, you can get an idea of how many bottles will be available for consumption each year by summing the predicted consumption across all wines (see Exhibit 10). For the cellar in question, about 73 bottles would be available in 2009, rising to about 86 in 2010, and then declining until fewer than ten bottles would be available per year beginning in 2016. Obviously, the shape of this curve will vary with the time of the year (the current year will look different early in the calendar year compared to late in the calendar year) and with the nature of the wines in the cellar (long-lived wines will yield a chart that looks different than that from short-lived wines). Moreover, this chart does not say which wines will be consumed, since that is a personal choice. However, if the number of bottles to available for consumption in a year exceeds the number of bottles that you typically do consume in a year, chances are that many wines are nearing the end of their peak drinking periods. In that case, it may either be time to have some large parties or to sell some of the wine on the auction market.
Another way to look at this cellar is to assess its peak drinking windows. Based on the end of the peak drinking period, each wine can be categorized as short-lived, medium-lived, or long-lived. Short-lived wines can be defined as having a peak drinking periods that expire within three years from the analysis date. By contrast, the peak drinking windows of long-lived wines expire more than six years in the future. Medium-lived wines fall in the middle of these time frames. The percentages of wine in the cellar that fall in each of these categories can then be examined, as shown in Exhibit 11. The cellar in question is balanced between short-, medium-, and long-lived wines, since each category represents about one third of the bottles in the cellar.

All of the analyses that I have discussed so far are static. They describe the state of the cellar at any time, but they do not track how the cellar’s status has changed over time. Exhibit 12 presents an example of two analyses that can be tracked over time (and that are tracked automatically in the Wine Cellar Management Tool)—namely, the number of bottles in the cellar, and the average age of the wines in the
cellar. This exhibit shows that the sample cellar was increasing in size for the first nine months that it was tracked, but that the size has stabilized over the last five months. Over the entire period, the average age of the wine in the cellar has increased. Stability in the number of bottles in the cellar and the age of the wines in it are indicative of a stable cellar.

In addition to the analyses that can be presented in chart format, the tool presents certain numerical statistics, as shown in Exhibit 13. The average price per bottle and average rating score can be calculated both for total purchases and for the wines on hand. Comparing these numbers for the cellar in question shows that the on-hand wines are both more expensive and higher-rated than the total purchases, which indicates that the less-expensive and lower-rated wines are being consumed at a higher rate than the more-expensive and high-rated wines. That outcome is consistent with the goal of keeping the “better” wines in the cellar a longer time (and for saving certain wines for special occasions, as I discuss below). Many of the analyses shown in Exhibit 13 are performed on the actual number of bottles and also for the “standard bottle equivalents,” which adjusts the calculations based on the sizes of the bottles in the cellar, and converts the values to the equivalents of standard (i.e., 0.75 liter) bottles.

The “zero-inventory date” shown in Exhibit 13 is the date at which the cellar would be empty if no additional bottles were purchased and consumption continued at its current rate. The summary statistics can also track the percentage of wines in the cellar that have rating scores higher or lower than specified values. For the cellar in question, 11.5 percent of the bottles have rating scores of 95 or higher, for instance, while 9.6 percent of the wines have rating scores of 89 or lower.

### Actionable Analyses

I describe the above analyses as interesting and informative, because they don't guide you in deciding when and which wine to drink. The analyses I present next can provide the necessary insight, such as providing information helpful in guiding consumption and promotion choices or decisions to reorder certain wines. Perhaps the most important actionable analysis is a watch-list of wines, which is based on each wine’s peak drinking window. For each wine, the tool divides the number of days that remain in the peak drinking window by the number of bottles on hand, and presents the wines in order, starting with those having the least time left per bottle, meaning those that are closing in on the end of their peak drinking window. This calculation presents the average number of days between consumption of each bottle, if the wine is to be fully consumed within the peak drinking window. As shown in Exhibit 14 the wine highest

---

**Exhibit 13**

**Summary statistics for cellar.**

<table>
<thead>
<tr>
<th>Purchased Wines</th>
<th>Actual Bottles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average $/Bottle</td>
<td>$ 20.15</td>
</tr>
<tr>
<td>Average Rating Score per Bottle</td>
<td>90.69</td>
</tr>
<tr>
<td>Number of Bottles</td>
<td>909</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Bottle Equivalents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average $/Bottle</td>
</tr>
<tr>
<td>Average Rating Score per Bottle</td>
</tr>
<tr>
<td>Number of Bottles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On-Hand Wines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Bottles</td>
</tr>
<tr>
<td>Number of Bottles</td>
</tr>
<tr>
<td>Average $</td>
</tr>
<tr>
<td>Average Rating Score</td>
</tr>
<tr>
<td>Average Age (Days)</td>
</tr>
<tr>
<td>Average Age (Years)</td>
</tr>
<tr>
<td>Zero-Inventory Date</td>
</tr>
<tr>
<td>Bottles Consumed per Week</td>
</tr>
<tr>
<td>Total $</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Bottle Equivalents</th>
</tr>
</thead>
<tbody>
<tr>
<td># Bottles</td>
</tr>
<tr>
<td>Average $</td>
</tr>
<tr>
<td>Average Rating Score</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On-Order Wines</th>
</tr>
</thead>
<tbody>
<tr>
<td># Bottles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rating Score</th>
<th>Number of Bottles</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 94</td>
<td>165</td>
<td>11.49%</td>
</tr>
<tr>
<td>&gt; 93</td>
<td>226</td>
<td>15.74%</td>
</tr>
<tr>
<td>&gt; 92</td>
<td>392</td>
<td>27.30%</td>
</tr>
<tr>
<td>&gt; 91</td>
<td>591</td>
<td>41.16%</td>
</tr>
<tr>
<td>&lt; 90</td>
<td>138</td>
<td>9.61%</td>
</tr>
<tr>
<td>&lt; 89</td>
<td>106</td>
<td>7.38%</td>
</tr>
<tr>
<td>&lt; 88</td>
<td>16</td>
<td>1.11%</td>
</tr>
</tbody>
</table>
on the watch list for this cellar has a consumption metric of 24.6 days. This wine has to be consumed at the rate of about one bottle a month so that it is consumed completely within the peak drinking window. Since drinking about a bottle per month is not a challenge, it is doubtful that there would be a problem consuming this wine within its peak drinking window. However, if many wines in the cellar were nearing the end of their peak drinking window, the watch list would grow, and the number of days between consumption would become much smaller. At that point, the wines would be candidates either for being consumed at a party you host or for being sold on the auction market.

A related analysis is the consumption rate of each wine. As I just explained, wines that are nearing the end of their peak drinking window should have high consumption rates, as would those that are particular favorites of the cellar owner or the restaurant’s customers or those that have been strongly promoted. Exhibit 15 shows this analysis from the Wine Cellar Management Tool for the sample cellar, which sorts the wines from highest to lowest consumption rates. The top five wines are all being consumed at the rate of at least a bottle per month, so these wines could be candidates for additional purchases.

Using the number of bottles on hand and the consumption rate of a wine, one can predict the date at which all of that wine will be consumed, assuming the consumption rate stays constant. I’ll call this date the “expiry” date. The wines can then be sorted from near to far expiry dates. Exhibit 16 shows this analysis from the Wine Cellar Management Tool, which is predicting that ten wines will be fully consumed...
by the end of 2009. Again, wines that have predicted expiry dates near at hand may be candidates for additional purchases.

The wines in one’s cellar can be separated into the following three categories. Everyday wines, or wines for everyday consumption, would typically be the lowest rated and (most likely) the least expensive wines in the cellar. “Reward day” wines would be wines consumed on a special day of the week, such as a Friday evening. These wines would be rated higher and typically be more expensive than the everyday wines. Finally, there are the special occasion wines which are generally the most expensive wines in the cellar. The tool allows cellar owners to determine how they would classify their wines into these categories. An exceptional cellar might have everyday wines rated 98 or lower, while the special occasion wines might be those with perfect scores (i.e., scores of 100). Other cellar owners might apply lower score cutoffs for what makes a reward day or special occasion wine. Exhibits 17, 18, and 19 show lists of the cellar’s everyday, reward day, and special occasion wines. In this

<table>
<thead>
<tr>
<th>Wine Analysts</th>
<th>Analysis Options</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“Watch” List (drink-now wines)</td>
</tr>
<tr>
<td></td>
<td>High Consumption Rate</td>
</tr>
<tr>
<td></td>
<td>Predicted Expiry Date</td>
</tr>
<tr>
<td></td>
<td>On-Hand Only</td>
</tr>
<tr>
<td></td>
<td>Everyday Wines</td>
</tr>
<tr>
<td></td>
<td>Reward Day Wines</td>
</tr>
<tr>
<td></td>
<td>Special Occasion Wines</td>
</tr>
<tr>
<td></td>
<td>Notes</td>
</tr>
<tr>
<td></td>
<td>The “High Consumption” option lists wines in descending order of rate of consumption (measured in bottles per month).</td>
</tr>
<tr>
<td></td>
<td>The numbers in the second set of brackets are the number of bottles remaining of the number of bottles purchased.</td>
</tr>
</tbody>
</table>

Exhibit 15

Wines that have had the highest consumption rates, in bottles per month
cellar, the everyday wines have scores up to and including 92, the special-occasion wines have scores of at least 95, and the reward-day wines fall between 92 and 95. The Wine Cellar Management Tool also offers various frameworks for rank ordering the wines in each category. The options are by “drink-now” score, by rating score, and by winery, also compared in Exhibits 17, 18, and 19. By way of clarification, the “drink-now” score is a calculation that assigns a higher number to wines that are lower-rated, less expensive, single-vintage, and that are nearing the expiration of their peak drinking window. Wines that receive lower drink-now scores are those with higher rating scores, that are more costly, that are represented in the cellar by multiple vintages, and that have peak drinking windows extending further into the future.

In addition to the form-based lists that the Wine Cellar Management Tool includes (shown in Exhibits 14-19), the tool also includes two worksheets that provide actionable information and that contain the main data repositories of the tool. The first is the “Purchases” worksheet, which lists all of
the wine purchases that have inventory on hand or that have yet to be delivered. The second is the "Inventory" worksheet, which serves to aggregate multiple purchases of the same wine and to perform calculations related to each wine's peak drinking window. Neither of these worksheets can be edited directly. To ensure the integrity of the spreadsheets, data can only be added to or removed from these sheets using the tool's interface forms. Both worksheets contain formatting and sorting capabilities that provide additional information. Exhibit 20 shows the sorting options for the "Purchases" worksheet in the Wine Cellar Management Tool. For example, sorting the "Purchases" worksheet by "Rating Score" reorders the wines by declining rating score and ascending price, which allows the cellar owner easily to see what he or she has paid for wines of a particular rating score. This sheet also color codes the "Cellared Date" field for wines that have been purchased, but not yet received (such as those purchased as futures) and color codes fields for wines that were categorized into a special designation (e.g., as shown in Exhibit 2).

Sorting and printing options for the "Inventory" worksheet of the Wine Cellar Management Tool are illustrated in Exhibit 21. This worksheet also color codes three fields: the on-hand quantities, where wines with fewer than four bot-
Exhibit 18

A list of “reward day” wines

<table>
<thead>
<tr>
<th>Wine Analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wines Meeting the Criteria</strong></td>
</tr>
<tr>
<td><strong>Analysis Options</strong></td>
</tr>
<tr>
<td><strong>Notes</strong></td>
</tr>
</tbody>
</table>

Data Requirements

The basic requirement for managing a wine cellar using a spreadsheet is straightforward: being disciplined with respect to recording wine inflows (purchases and gifts received) and outflow (consumption, sales, and gifts given). As I mentioned above, it can also be beneficial to occasionally perform a physical inventory count, to reconcile the electronic tally with the actual counts of wine on hand.

With a tool like the Wine Cellar Management Tool, the selection of wines to consume or promote and for decisions about purchasing additional wine.

**Selection of wines to consume or promote and for decisions about purchasing additional wine.**

**Data Requirements**

The basic requirement for managing a wine cellar using a spreadsheet is straightforward: being disciplined with respect to recording wine inflows (purchases and gifts received) and outflow (consumption, sales, and gifts given). As I mentioned above, it can also be beneficial to occasionally perform a physical inventory count, to reconcile the electronic tally with the actual counts of wine on hand.

With a tool like the Wine Cellar Management Tool, the...
ongoing data recording efforts are minimal. Data recording will be relatively easy when you are starting a cellar from scratch, but I acknowledge that inputting the data for a well-established cellar will take time (or someone's assistance), depending on the size of the cellar. The sooner the status of the spreadsheet matches the cellar status, the sooner that you can start using the analyses to guide consumption and other decisions.

In addition to the basic data requirements, the Wine Cellar Management Tool also allows you to record tasting
notes for each wine purchased. In addition, you may decide to change the drink-from or drink-through dates (i.e., the peak drinking window for a wine) based on your sensory analysis of how the wine is drinking, in which the tool automatically recalculates all the affected analyses.

As noted earlier, to ensure the integrity of the Wine Cellar Management Tool spreadsheet, you cannot enter or edit data directly into any of the worksheets—all changes are made via the forms accessible from the "Switchboard" worksheet. I'll explain each of the functions illustrated in Exhibit 22.

Exhibits 23 through 25 display the interfaces in the Wine Cellar Management Tool for entering and modifying data. Exhibit 23 illustrates the form for recording a new wine purchase. Since the drop-down lists "remember" data that have already been entered, you won't have to repeat certain information for each wine purchase. Wines can be

<table>
<thead>
<tr>
<th>Wine Management Actions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Add New Wine Purchase</td>
<td></td>
</tr>
<tr>
<td>Update Wine Information</td>
<td></td>
</tr>
<tr>
<td>View Wine Analyses</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Maintenance Actions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain Other Data</td>
<td></td>
</tr>
<tr>
<td>Export Data</td>
<td></td>
</tr>
</tbody>
</table>

---

**Form for entering a wine purchase**

<table>
<thead>
<tr>
<th>Add a Wine</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Producer/Winery</strong></td>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Detailed Variety Info</th>
<th><strong>Varietal Category</strong></th>
<th><strong>8L Size (L)</strong></th>
<th><strong>Score</strong></th>
<th><strong>Rating Source</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Purchase Price</th>
<th><strong>Number of Bottles</strong></th>
<th><strong>Drinking</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Purchase</td>
<td>Collared</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Purchased</strong></th>
<th><strong>Date Purchased</strong></th>
<th><strong>Date Collared</strong></th>
<th><strong>Purchased From</strong></th>
</tr>
</thead>
</table>

| Notes |  |
|-------|  |
| Please enter the data for the new wine purchase. Click the 'Add Wine Purchase' button to record the purchase. |  |
purchased without a “cellared date” being recorded, as would be the case for a wine purchased as a future. The cellared date can be entered when the wine is received, via the form shown in Exhibit 24. Whether the cellar date is filled in automatically when the form is opened depends on whether you specify, on the main switchboard screen of the spreadsheet, whether most of your wine purchases are made in-person or are orders. If the purchases are in person, the cellared date is automatically completed as the current date, whereas if the purchases are by orders, then the cellared date is left blank.

Any other changes to a wine purchase are also recorded via the form shown in Exhibit 24. Once a wine has been selected, you can view, add to, or modify the tasting notes by clicking the “Show Tasting Notes” button. When the on-hand quantity of wine of a purchased wine falls to zero, the wine is removed from the tool’s “Purchases” worksheet and archived in the “Fully Consumed” worksheet.

The final interface form in the Wine Cellar Management Tool is for modifying other data items, such as the lists of producers, wineries, or vendors. Exhibit 25 displays this form for the sample cellar. By double-clicking on a particular data item, the tool displays all the wines that match that item. If you choose to delete a particular data item, the data field is reset as blank for all the selected wines (but the wines themselves are not deleted).
The final action accessible from the “Switchboard” worksheet of the Wine Cellar Management Tool is the ability to export data (see Exhibit 21). Selecting this action will export the spreadsheet data to a file named “WineCellarData.txt,” which will appear on your computer’s desktop. The purpose of this export is to facilitate migrating the data to any future version of the Wine Cellar Management Tool.

Summary
This report explains how you can use the spreadsheet-based tool described here to help manage your wine cellar. The tool is designed to be as useful and straightforward as possible. If you are methodical about recording the inflows and outflows of wine to and from the cellar, you may find the large number of possible analyses useful in guiding your decisions about the cellar. Managing a wine cellar using a spreadsheet is an ongoing process, which changes as the composition of the cellar changes. I’ve tried to make the spreadsheet tool useful in the sense that it will not tell you what to drink or what to promote, but to provide guidance regarding these matters, so that no wine passes its peak drinking window. I believe that the Wine Cellar Management Tool fulfills these objectives.
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Index

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Vol 9, No. 8 Effects of Menu-price Formats on Restaurant Checks, by Sybil S. Yang, Sheryl E. Kimes, Ph.D., and Mauro M. Sessarego

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