The Small Winery Perspective: Tyrrell's Vineyards

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Quality management - why address the issue?
In 1989, Tyrrell's Vineyards made a commitment to change; to create a new position within the organization and formally develop a Quality Management program. It was felt that certain perceived problems could be corrected by Quality Management. Specifically, there were spiralling problems with bottled wines (e.g. corks, microbiological stability), materials purity and bulk wine purchasing. At the same time, an expansion in export made it necessary to increase awareness of international regulations and the possible need for quality accreditation.

The principles
The principles of Quality Management have been covered by other presentations so there is no need to deal with them again in detail. Tyrrell's approach to Quality Management is based on three principles:
1. The supplier-customer relationship concept (internal and external).
2. The necessity of quality consciousness and involvement at all levels of the company.
3. The cycle of quality improvement (policy - monitor - feedback).

Prerequisites
There are certain pre-requisites for Quality Management to be successful. These are:
1. Commitment to the principles of quality - must be throughout the company and led from the top.
2. Open-mindedness and willingness to change - Quality Management is about continual change.
3. Education - all staff need to fully understand the 'why's?' and their own role in Quality Management.
4. Logical and technical approach - there is a need for analytical thought and critical assessment.
5. Objectivity - in assessing data (this is very difficult in the wine industry).
Without these, it is extremely difficult to obtain any quality improvement.

Tyrrell's approach
Tyrrell's approach has been to follow a simple strategy in order to achieve gradual change, reducing an apparently mammoth task to one that can be divided into more manageable projects. Small wineries have a distinct advantage here in that the management structure is generally quite flat (three tier maximum) which allows for constant dialogue with management (i.e. owners) making change more rapid and effective. The strategy involves a number of steps:
1. Identify problems in consultation with staff.
2. Assign priorities for examining the problems.
3. Source literature for existing knowledge.
4. Conduct trials with staff involvement.
5. Draft quality guidelines which state aims, monitoring method and success criteria.
7. Continually improve through the quality cycle.

Some results
The quality data presented here has been collected from three sources viz. on-site tasting room, process plant records, and direct customer feedback. The results (Tables 1 and 2) are examples of the sort of improvement that can easily be achieved.

The major factors behind the improvement in bottled wines (Table 1) have been:
1. Investment in appropriate capital equipment
2. Increased reliance on supplier quality assurance and
3. Active specification and verification of packaging materials.

Fermentation improvements have been due to changes in winemaking approach with regard to inoculation and fermentation control, stricter hygiene regimes and program, and

Table 1. Maximum levels of parameters with data sourced from (a) on-site tasting room, and (b) process plant records.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Pre-1989</th>
<th>Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bottled wine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cork taint</td>
<td>10%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Leakers</td>
<td>40%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Wine travel (&gt; 2/3 cork length)</td>
<td>60%</td>
<td>5%</td>
</tr>
<tr>
<td>2. Fermentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2S produced</td>
<td>60%</td>
<td>20%</td>
</tr>
<tr>
<td>MLF time</td>
<td>60 days</td>
<td>30 days</td>
</tr>
<tr>
<td>Excess volatility (&gt; 0.6 g/L)</td>
<td>30%</td>
<td>5%</td>
</tr>
<tr>
<td>M microbiological spoilage</td>
<td>10%</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2. Frequency of complaints as percentage of customer feedback registered.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Pre-1989</th>
<th>Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premium wines</td>
<td>44%</td>
<td>73%</td>
</tr>
<tr>
<td>Commercial and consumer wines</td>
<td>56%</td>
<td>26%</td>
</tr>
<tr>
<td>2. Corks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taint</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Other fault</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>3. Microbiological stability</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>4. Physical stability</td>
<td>10%</td>
<td>6%</td>
</tr>
</tbody>
</table>
routine wine quality monitoring procedures. Major benefits have resulted from this, particularly with regard to ease of processing and reduction of labour.

Table 2 shows the breakdown by percentage of problems registered by direct customer feedback. There is a significant shift in the product class proportions. Premium wine complaints usually relate to bottle-aged wines and reflect problems which originated anywhere between 3 to 8 years earlier. Of note is the decrease in complaints in commercial and consumer classes as they represent current problems (these products are consumed generally without bottle ageing). Consumers in this product range are generally far less brand-loyal and highly sensitive to product quality problems. The reduction in complaints would therefore imply a reduction in customer loss.

Given the above measured improvements in quality, and Tyrrell’s sales growth by far outpacing the Industry (Figure 1), it is reasonable to conclude that growth in these classes of wine has been at least in part driven by quality.

Some practicalities
There are some points of advice that I feel should be well regarded by any wine industry company proposing to undertake a Quality Management program. The industry is steeped in tradition and its technology seemingly mystical (or is it merely archaic and ignorant?), but things are changing, even in the bastion of wine conservatism, southern France, where, interestingly, some Australians are leading the way (Hooke 1993).

It is important to remain focused on needs, that is, ‘Is there a real problem and do you need to correct it?’ It is also important to recognize the role that Quality Management can play, that is, ‘Can Quality Management fix the problem?’.

It is appropriate to expose just a few time-honoured myths that will not fix your problems.

1. ‘Do some QC on this batch of _____ and assume it will be OK’ – it is too late.
2. ‘Just write a Quality Manual.’ – this is not the first and only step.

In conclusion, I would recommend the following approach;

1. Be simple and logical.
2. Evolve your system with time.
3. The system should complement the company’s culture.
4. Avoid excessive bureaucracy.

References