<table>
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<th>Problem</th>
<th>Diagnosis</th>
<th>Cause</th>
<th>Solution/ Prevention</th>
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| Fermentation has not started at 2 days since | 1. Lag time.                                  | 1. Natural period where the yeast builds its cell count in initial     | 3. Use a hydrometer to see if the sugar concentration has dropped from its OG. If it has then it is fermenting.  
| yeast was added.                             | 2. Fermentation may be occurring without      | stages of fermentation.                                               | 4. Reduce lag time by using a good strain of yeast, ensure it is not pitched at a low temperature. Rehydrate the yeast in tepid water prior to use to reduce lag time. Take liquid yeast out of the fridge to room temperature before usage. Give the yeast time to catch. This is not a problem but part of the natural process which can be helped or reduced.  
|                                              | evident signs (eg bubbles)                    | 2. Incomplete seals on fermentation vessel or natural lack of kraeusen | 5. Check seals on fermentation vessel; use a hydrometer to see if the sugar concentration has dropped from its OG. If it has then it is fermenting. This is not a problem so long as the sanitary environment of the fermentation vessel is not compromised by a leak or crack  
|                                              |                                               |                                                                      | 6. Bear in mind different conditions provide varying patterns in the natural process of fermentation. Exercise patience.  
|                                              |                                               |                                                                      | 7. Try making up a yeast starter in future to increase the number of yeast cells prior to pitching, simply sterilise a jar and introduce the yeast to a small measure of dissolved malt extract a few days in advance, continue adding sugar over time until you are ready to pitch the yeast.  
|                                              |                                               |                                                                      | 8. Ensure the must is sufficiently aerated before pitching your yeast, yeast requires oxygen for |
Fermentation has not started and it has been over 3 days.

1. Fermentation may be occurring without evident signs (eg bubbles)
2. Bad Yeast. Yeast may not have worked or may be damaged and really struggling.
3. Must got too cold
4. Must was too hot

1. Incomplete seals on fermentation vessel or natural lack of kraeusen.
2. Check the age of the yeast, it may have gone out of date. Some yeast sachets are not fully viable.
3. Yeast goes into hibernation when it is too cold, check the fermentation temperature.
4. Yeast damaged by being pitched into must before the must was cooled beneath 30 degrees Celsius.

Wine appeared to be fermenting but then stopped before schedule.

1. Stuck Fermentation

1. Too cold- If temperature dropped overnight the yeast may have gone into hibernation.
2. Inappropriate choice or preparation of yeast for wine.
3. Environment became too warm-
   Likely to have completed the fermentation extremely quickly. Not likely to have killed the yeast
4. Yeast was particularly strong and completed fermentation quickly

1. Use a hydrometer to see if the sugar concentration has dropped from its OG. If it has then it is fermenting.
2. Purchase new yeast; ensure it is for the right style. Have spares just in case.
3. Ensure must is between 17-29 Degrees Celsius before pitching yeast.

1. Stir the wine and get put in a warmer room.
   Ensure the wine sits in condition between 16-26 degrees Celsius.
2. Ensure the appropriate choice and preparation of yeast. For high gravity wines pitch more than a sachet or make a yeast starter. Aerate the must appropriately. Rehydrate yeast prior to use.
3. Quick fermentation or fermentation at high temperatures can produce esters and off flavours so check by looking and sniffing, leave in secondary fermentation for a short period before bottling.
   - Check everything with the hydrometer for the most accurate information on the progress of the fermentation.
   - Bear in mind different conditions provide varying patterns in the natural process of
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<th>Issue Description</th>
<th>Possible Causes</th>
<th>Solutions</th>
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<td>The airlock doesn’t appear to be bubbling.</td>
<td>Loose seals. Stuck fermentation.</td>
<td>Check for cracks, or that the lid is firmly fitted. This is not a problem so long as the wine is not exposed. Check for signs of fermentation, if there are none, new yeast may need to be added.</td>
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</table>
| Mold, floating green or white spots, hairs.                                       | Mold, Bacterial infection.                                                       | 1. Some sources say such infections can be skimmed off the top but it is highly recommended that the batch will need to be poured away.  
2. Chance storage conditions; ensure the wine is fermenting in preferably in dry shaded conditions.  
3. Thoroughly sanitise all equipment after an infection so the problem does not resurge.  
4. If the problem persists you may need to buy new fermentation bins. |
| Final Gravity (FG) seems too high                                                | 1)Stuck fermentation  
2) Low attenuating yeast or extract  
3) Mashing too highly                                                            | 1. Too cold- If temperature dropped overnight the yeast may have gone into hibernation. Inappropriate choice or preparation of yeast for wine. Environment became too warm-Likely to have completed the fermentation extremely quickly. Not likely to have killed the yeast. Yeast was particularly strong and completed fermentation quickly.  
2. Yeast has fermented as much as it can or must is high in un-fermentable sugars.  
1. Use a hydrometer to see if the sugar concentration has dropped from its OG. If it has then it is fermenting. Purchase new yeast; ensure it is for the right style. Have spares just in case. Ensure must is between 17-29 Degrees Celsius before pitching yeast.  
2. Only a problem is the sweetness is intrusive on the overall impression of the wine. If so add highly attenuating yeast or fermentation ‘re-start’ yeast |
<p>| Original Gravity (OG) seems too low when                                            | 1. Poor ‘must’ efficiency in                                                     | 1. Use warm water and/or vigorous stirring to fully dissolve any sugars before topping up |</p>
<table>
<thead>
<tr>
<th>measured on the hydrometer.</th>
<th>extracting sugars.</th>
<th>measured on the</th>
<th>measured on the hydrometer.</th>
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<tr>
<td>2. Not enough sugars added.</td>
<td>1. Sugars not fully dissolved in the must.</td>
<td>2. Add more sugar dissolved to the must.</td>
<td></td>
</tr>
<tr>
<td>3. Sugars not fully dissolved in the must.</td>
<td>3. See ‘preparing a must’ for methods of improving your efficiency of the must</td>
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**Wine is Hazy**

1) Pectin Haze
2) Yeast Haze
3) Protein Haze

1) Pectin Haze - Presence of pectin, found in rich fruits, often used to coagulate jam.
2) Yeast uses the sugars and nutrients to multiply. As a result there is a lot of yeast left at the end of the fermentation. Some yeasts fall out of solution (floculate) if given time and patience, others need some encouragement.

1) Use pectolase, pectin destroying enzyme, in the must for great efficiency or at any other stage in the process.
2) Patience and racking (transferring between vessels leaving the yeast behind) are a good means of letting the majority of yeast to settle out and be removed. To remove more stubborn hazes use finings or filtering. If Finings are not working the co2 may be preventing them from working, stir the wine to remove co2 and then add more finings. These methods may be used on many protein hazes as well.

**Thick foam has formed on top of the wine.**

Natural result of fermentation. (Kraeusen)

The kraeuesen is a consequence of yeast rehydrating. The co2 the yeast produces carries yeast to the surface forming this layer. It can be somewhat protective, stopping microbes from falling directly into the wine.

This is not a problem but provides a reason for racking your wine after primary fermentation to a secondary fermentation vessel, to ensure reduced yeast while bottling.

**Thick foam (kraeusen) has not formed on top of the wine.**

Natural lack of kraeusen. Failed fermentation.

The kraeusen is a consequence of yeast re-hydrating. Sometimes the kraeusen naturally doesn’t form, but the wine will still be fermenting, so it is not a problem.

Check surface of wine for any sign of small bubbles. Shine a torch through the fermentation vessel to reveal if bubbles are forming within the wine. Check the wine is fermenting using a hydrometer. If it is not fermenting then it may be that the fermentation never began or has become stuck.

**The thick foam is coming through the Blowout.**

1. Vigorous fermentation.
2. Fermentation vessel too small.

1. Fit a blow off pipe, tubing instead of an airlock which runs into a jug of water. Some wine is
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<th>Likely Cause</th>
<th>Possible Solution</th>
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<tr>
<td>Airlock and causing a mess. The Airlock is clogged.</td>
<td>Infection. Oily residue</td>
<td>Poor sanitisation or exposure of wine. Infections take many forms. Closer identification of the infection may be yielded by smell. Hop oils or residue can form a slight film. This is of no concern.</td>
<td>Improve sanitising regime. Check seals on fermentation vessel and reduce air contact or exposure time. Thoroughly sterilise equipment after pouring infected batch away. If the problem persists you may need to buy new fermentation bins.</td>
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<tr>
<td>A peculiar surface has formed on the surface in secondary fermentation. It is definitely not a krausen.</td>
<td>Too tight or loose. Perished seals.</td>
<td>If the tap has been tightened too much the rubber washer can be put out of place.</td>
<td>We recommend that you only attach a tap to a bottling vessel, having a tap on a primary fermentation vessel causes more problems than it solves in our experience. Check the washers and o-rings for wear. Check tightness of tap. Seals can be completed by the application of petroleum jelly.</td>
</tr>
<tr>
<td>Thin whitish growth on surface of wine, steadily growing.</td>
<td>Flowers of wine (fleur)</td>
<td>Wild yeast infection.</td>
<td>Improve sanitising regime. Check seals on fermentation vessel and reduce air contact or exposure time. Thoroughly sterilise equipment after pouring infected batch away. If the problem persists you may need to buy new fermentation bins.</td>
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2. If using a 25 litre fermentation vessel for a 23 litre batch of wine, think about purchasing a larger vessel.