Below are some common questions related to set up and calculation additional costs in the production process:

How can Orchestrated account for overhead, labor, utilities, etc. using recipes?

- This is done by setting up one or more non-inventory "Overhead Items" (labor, utilities, depreciation/Amortization, yeast generation, etc.).
- These items are then added to the Bill of Material (BOM) for any production step in which you want to factor in an additional cost.
- Keep in mind that you can capture as much production detail in Orchestrated for overhead as you would capture in the real world, but how complex you want to make it is up to you.

How do I break out my costs into an Overhead item?

- If you have that detail in your actual costs, you could setup overhead items accordingly in Orchestrated (Overhead Brew Labor, etc.).
- For example, with payroll costs, some customers choose to split these between the brewery, cellar, and packaging payroll.
- You would then set these overhead items up as standard cost, non-inventory items, and then add them to the BOMs they are associated with.
- It is most common is to set the standard cost for the overhead item based on the amount produced (e.g. number of barrels).
- Consider the case where brewing a 100 BBL batch should accrue $500 in labor.
    - You would setup the Overhead Brew Labor item with a standard cost of $5, then add it to the BOM with a quantity of 1 unit per barrel produced, or $500 per 100 barrels produced.
    - If you end up producing more or less liquid, your labor is adjusted proportionately (i.e. if you knock out 105 BBLs, you will have $525 in labor).
- Since labor costs for cellar and packaging would be different than that for brewing, you can set those at a different per BBL rate.
- Using the example above, you would still associate it with the amount produced so that if you filter/package more product, you accrue more costs.
    - On your packaging BOM, for instance, you might add $7 per barrel packaged or $700 per 100 barrels packaged.
- If you would like to add even further complexity, you can also have packaging line specific labor (i.e. bottling labor vs kegging labor), which is common if you have totally different costs per BBL on those different packaging lines.

General Overhead (Utilities, etc.)

- These items are setup the same way as described above, but they use different rates per BBL based on your actual estimated usage.
- In order to determine what to add to the BOM, someone with access to the overhead costs can relay this information to the production staff (if they don't already know this information, anyway) and non-inventory expenses such as utilities, rent, general maintenance, etc. can be added to the BOM as needed.

Why not just list actual labor hours rather than per barrel costs for labor?

- For some this might be feasible, for others it might be too difficult to truly capture the time spent on each batch.
    - It's not uncommon to have one batch start before another is finished, so tracking this labor could be more difficult.
- The method mentioned above, where labor is set as a standard cost and backflushed for each batch, requires no additional work whereas tracking actual labor hours requires the staff to track these hours and then someone to manually adjust component level details of the production order **BEFORE** the production order is processed.
- If you do decide that you would rather track labor hours manually per batch, you would want to update the 'Base Quantity' of an overhead item directly on a production order before you process that production order.
    - For example, if you had planned to complete 10 BBLs, but had only completed 8 BBLs, and you still need to account for 10 BBLs worth of labor costs on that order, you would change the Base Quantity of your overhead item in the PdO to 10/8 = 1.25 so that 10 units of labor will get issued out when you receive only 8 BBLs of liquid.
- In many cases this costing method may not be feasible, either because of the manual step or because your labor costs will not be known until after you process the production order.

What do other breweries do?

- Smaller breweries might track hours manually and adjust their 'Planned Quantities' on their overhead items, whereas most of our larger customers prefer the straight forward "per barrel" backflush method as described above.

- The automatic backflush method is how the world's largest breweries do it, as the tracking and documenting of hours becomes extremely difficult, if not impossible at times.

Do I need to use more that one non-inventory item to track additional costs in the production process?

- How complex the non-inventory item setup is will be up to the discretion of each customer.
    - One non-inventory item can be used for labor and another for all overhead to simplify the setup.
    - In order to build in more complexity/tracking abilities, it is also possible to create multiple labor and/or overhead non-inventory items and associate them respectively.
- The degree of complexity with additional costs also depends on the depth of detail you're able to obtain regarding specific costs.
    - For example, if you want to factor in the cost of water, you would need to know the $ cost per gallon or per barrel.

Important Note:

Applying Additional Costs to Production is a complicated topic: even the largest breweries struggle with it at first. As with many places in Orchestrated, it is best practice to start simple with one or two basic overhead items and only apply them on one production step, for example, Bright Beer or Bottle Proofed Liquid. Once you are comfortable/familiar with the process, you can add it to additional production steps. Ultimately, you will want to refer to your accountant to decide exactly how much cost detail you need to add into production.

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