Production Wizard™

Using the Batch Sheet Creation Tool

The main purpose of Production Wizard™ is to provide a controlled means to accurately batch product. This is accomplished by using the Batch Creation Tool. This tool provides access to formulas that have been configured by the administrator.

1. To start, select **Start Batch Creation Tool** from the **Production Wizard** menu.

The main steps in the Batch Creation Tool are:
1. Start
2. Select formula to batch.
3. Enter batch amount.
4. Select ingredients.
5. Enter ingredient composition.
6. Enter ingredient amount.
7. Reformulate.

2. The **Batch Creation Tool** window will appear. Click the **Next** button (**A**) to continue.

Batch Creation Tool - Step 1

3. In Step 2, select a formula (**B**) and continue to press the **Next** button (**C**). In general the user will follow the instructions provided in the green text (**D**). If you wish to see the latest tank information press the **View Tank Info** button (**E**). If you need to use secondary formula file, click the option button next to it (**F**) if active.

**Batch Creation Tool - Step 2**
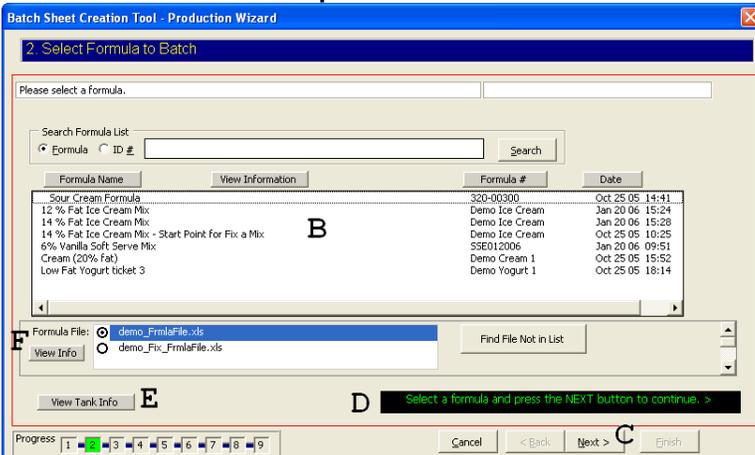
Entering the Batch Amount in the Batch Creation Tool

The batch size is entered in step 3 of the Batch Creation Tool. The user enters how many copies of the batch sheet to print, the batch size, and the units of measure.

The following is a typical display for step 3. The user would enter the batch size (**A**) and select units (**B**) then press the **Next** button (**C**).

Batch Creation Tool - Step 3 (When not making a fix it formula).
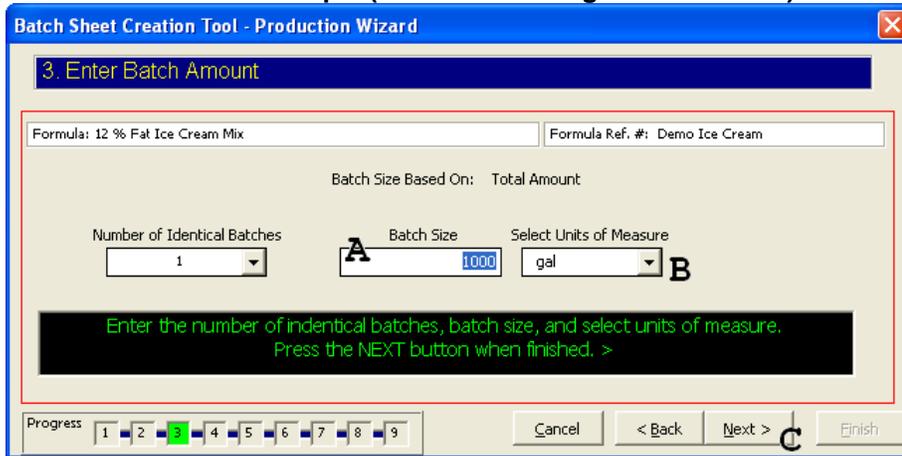
In the display shown below, the formula was pre-configured to use up a given amount of an ingredient. Notice that the batch size is based on the property rework (**D**). The user would enter a value that corresponds to the amount of ingredient to use up or re-standardize (**E**). The user can also enter the tank capacity (**F**) then press the **Next** button (**G**). Later, the user is warned if the total batch size necessary to use up all of the ingredient is greater than the tank capacity.

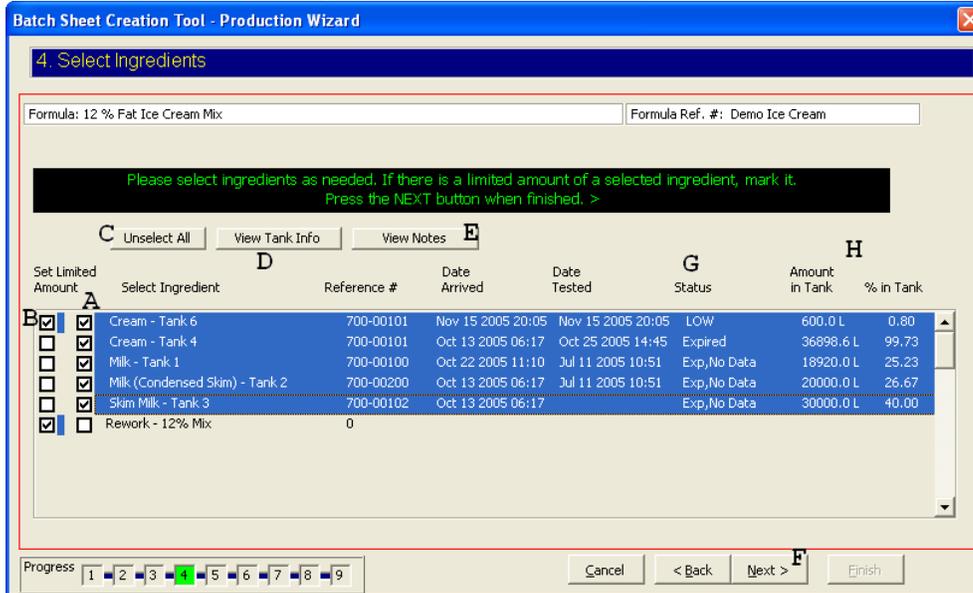**Batch Creation Tool - Step 3 (When making a fix it formula)**
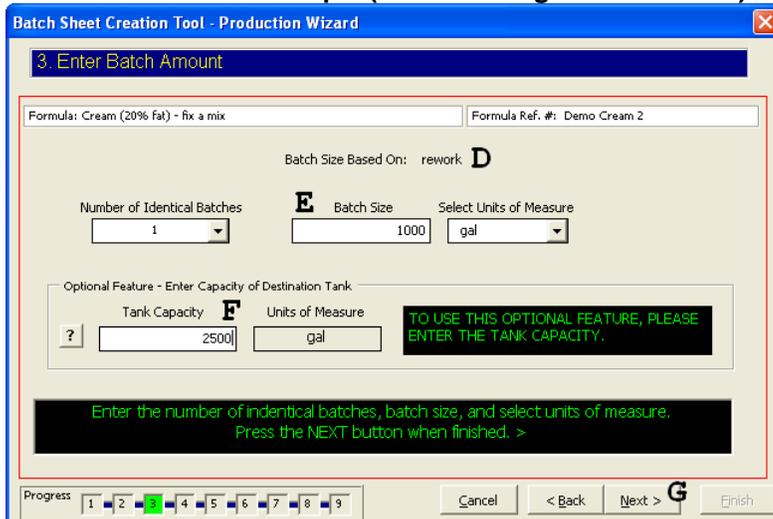
Selecting Ingredients from the Batch Creation Tool

Ingredients are selected in the fourth step in the Batch Creation Tool. This step appears only if there are ingredients to be selected. For each ingredient there are two boxes. Checking the inside box selects that ingredient (**A**). Checking the outside box marks the ingredient as having a limited amount available (**B**). In the figure shown, Cream – Tank 4 and

Cream – Tank 6 are selected along with other dairy ingredients. Notice that only 600 L (0.80 %) is left in Cream – Tank 6 (**H**). Its status is LOW (**G**).

Batch Creation Tool - Step 4
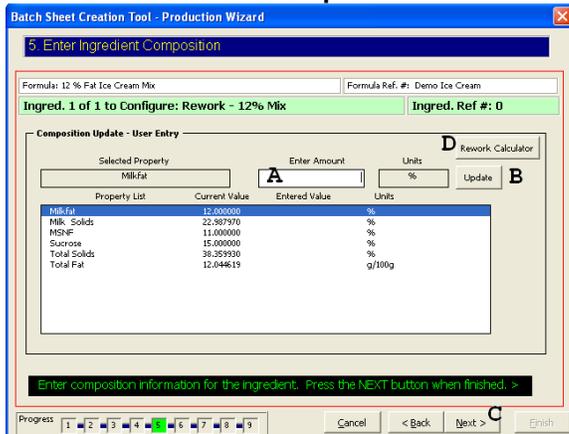

If the inside box is not selected; the ingredient is deleted from the formula regardless of whether or not the limited amount box is selected (for example, Rework -12% Mix shown above). One of the tanks having a limited amount is the only time that two tanks for the same ingredient would be selected (cream in this example). The user can press the **Unselect All** button (**C**) to clear all selections. The user can view tank information (**D**) or view notes (**E**) that would provide the user instructions on what ingredients to select. After selecting ingredients and limiting amounts as needed, the user presses the **Next** button (**F**) to continue.

Updating the Composition of an Ingredient in the Batch Creation Tool

Ingredient composition is updated in the fifth step of the Batch Creation Tool. Whether or not this step appears depends on how the formula is configured. In the figure shown below the user needs to enter the compositional amount for Milkfat (**A**) for this ingredient and press the **Update** button (**B**). Once all the compositional information is entered, the user presses the **Next** button (**C**) to continue.

Batch Creation Tool - Step 5

Entering Ingredient Amounts in the Batch Creation Tool

Ingredients amounts are entered in the sixth step in the Batch Creation Tool. Whether or not this step appears depends on how the formula is configured and if any ingredients are marked as having limited amounts in step 4
.

Batch Creation Tool - Step 6
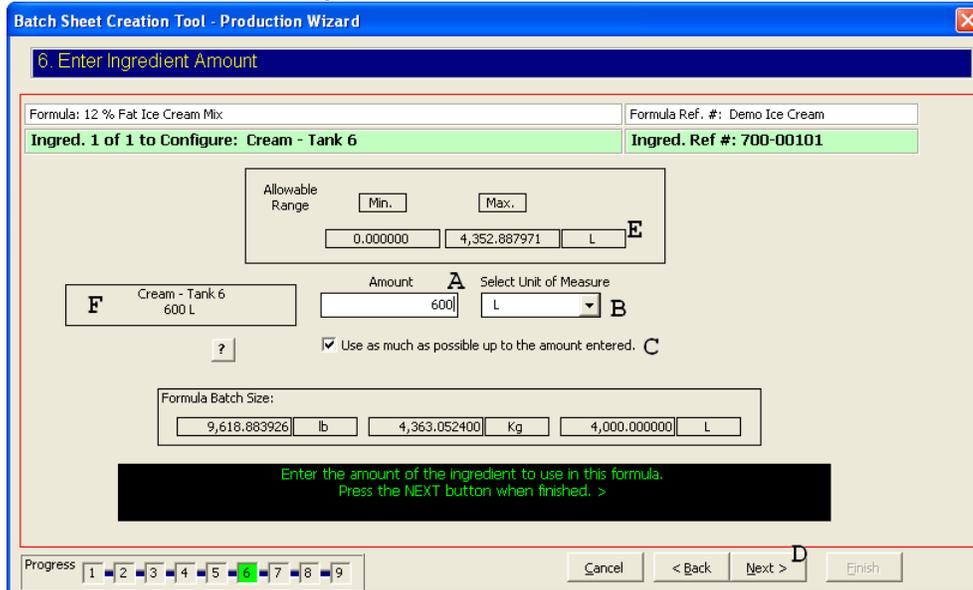
The user can change the units of measure (**B**) and enter an amount in the box provided (**A**). After entering an amount, the user presses the **Next** button (**D**) to continue. The maximum amount of the ingredient allowed is also shown (**E**). If the check box is marked for "**Use as much as possible up to the amount entered**" then the program will try to use as much as it can up to the amount requested while still meeting all compositional requirements (**C**). If the box is not checked then the program will try to use the exact amount entered regardless of the consequences. In the case of the ingredient, "chase water", the formula may be configured to use an exact amount and that amount may already be entered. In that case the user would simply press the **Next** button (**D**) to continue. Notice, this is a tank ingredient, the amount currently in the tank is shown (**F**).

Reformulate in the Batch Creation Tool

Reformulation involves determining the amount of each ingredient needed to meet some compositional requirement. This process occurs in step 7 of the Batch Creation Tool. The first screen that appears is shown below. The user is asked to press the **Next** button (**A**) to start the reformulation process.

Batch Creation Tool - Step 7
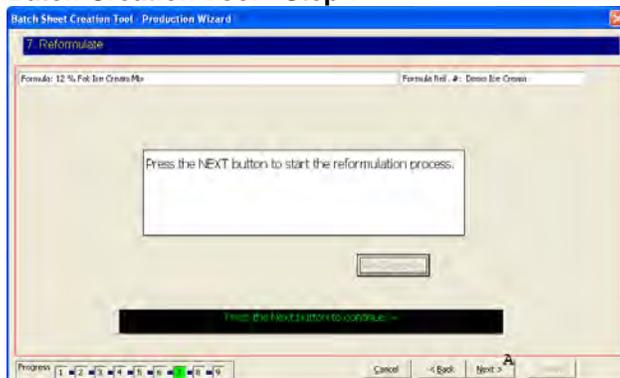
If reformulation is successful, this window appears. Press the **Next** button to continue.

Batch Sheet Creation Tool - Production Wizard

7. Reformulate

Formula: Cream (20% fat) - fix a mix   Formula Ref. #: Demo Cream 2

THE FORMULA MEETS ALL REQUIREMENTS.
Press the NEXT button to continue.

View Diagnostics

Press the Next button to continue. >

Progress 1 2 3 4 5 6 **7** 8 9   Cancel   < Back   Next >   Finish
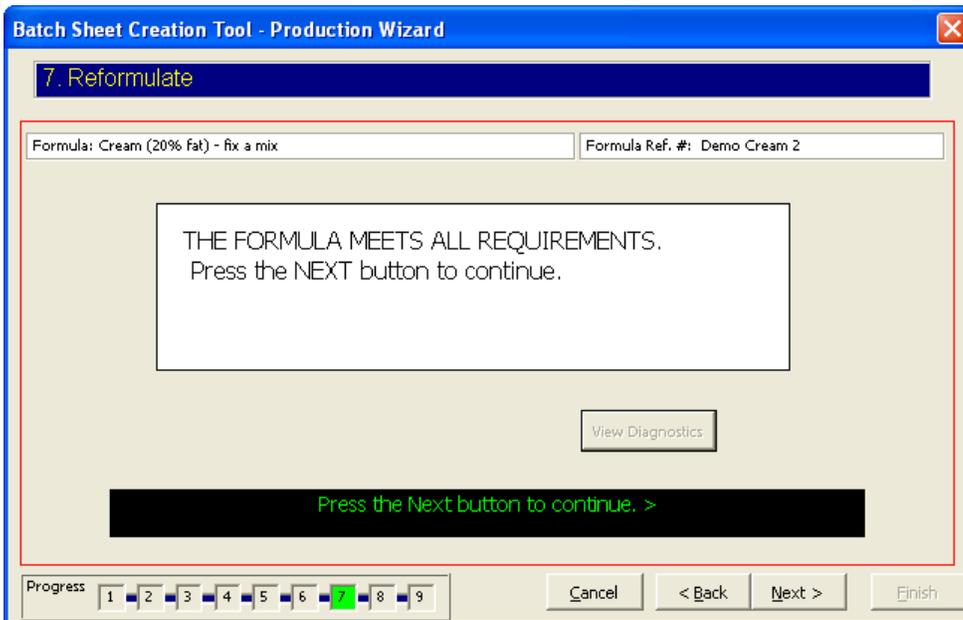
If the reformulation is not successful an error message appears and the diagnostic button is enabled. If the user presses the **View Diagnostics** button (**B**), a screen appears showing what went wrong with the formulation. The user can select the **Back** button (**C**) to try again. The some cases the **Next** button (**D**) may not be enabled if the formula fails.

Batch Creation Tool - Step 7

Batch Sheet Creation Tool - Production Wizard

7. Reformulate

Formula: 12 % Fat Ice Cream Mix   Formula Ref. #: Demo Ice Cream

ERROR - The formula DOES NOT meet all requirements.
Press the VIEW DIAGNOSTICS button to learn more.

View Diagnostics B

Press the Next button to continue. >

C   D
Progress 1 2 3 4 5 6 **7** 8 9   Cancel   < Back   Next >   Finish
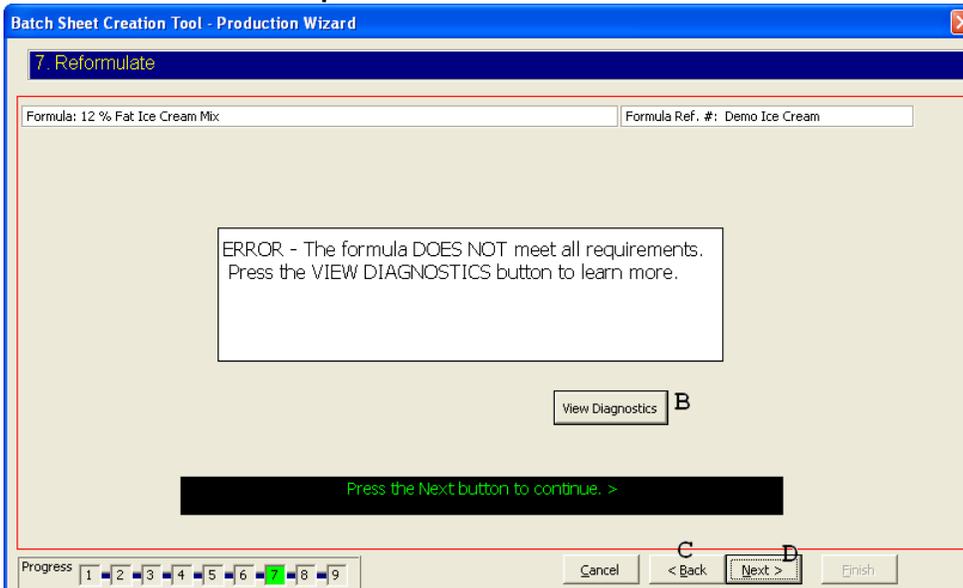
Below, the diagnostics window highlights in blue the amounts that do not meet specifications. In this case, Total Fat is too low. The user can press the **Print Report** button (E) to get a record of this failed batch. When finished, press [**X**] (**F**) in the upper right corner to close the window.

Formula Diagnostics - Production Wizard [X] **F**

Formula: 12 % Fat Ice Cream Mix | Formula ID: Demo Ice Cream

Ingredient	Ref. #	Diagnostic	% (wt./wt.)	Min. (%)	Max (%)	Off (%)
Skim Milk - Tank 3	700-00102	Min	0.00000	0.00000	100.00000	
Milk - Tank 1	700-00100	OK	57.77961	0.00000	100.00000	
Milk (Condensed Skim) - Tank 2	700-00200	OK	17.54678	0.00000	100.00000	
Swtnr, sugar, granulated	760-00201	OK	15.01502	0.00000	100.00000	
Stabilizer	760-00033	High	9.37199	0.20000	0.20000	4585.995000
Flvr, Vanilla, pure extract	460-00101	Min	0.28660	0.28660	0.28660	

Property	Diagnostic	Composition	Min. (%)	Max (%)	Units	Off (%)
Milkfat	OK	2.01715	0.00000	100.00000	%	
Milk Solids	OK	13.01715	0.00000	100.00000	%	
MSNF	Min	11.00000	11.00000	11.00000	%	
Sucrose	Min	15.00000	15.00000	15.00000	%	
Total Solids	Min	37.00000	37.00000	40.00000	%	
Total Fat	Low	4.45387	12.00000	12.00000	g/100g	62.884417

Total Amount: 100.000000 OK

E
Print Report

Preparing the Batch Sheet in the Batch Creation Tool

Once all the information has been collected and appropriate values calculated, the batch sheet is created. The following is a typical batch sheet output. This output is specific to the plant using the Batch Creation Tool. Formula information (**A**) and ingredient usage information (**B**) is shown. The user can modify the total batch size by pressing the **Reset Batch Size** button (**C**) (To learn more see Appendix A). The user can view Diagnostics (**D**) or the processing instructions can be viewed by pressing the button of the same name (**E**). A different printer may be selected by pressing the **Printer Settings** button (**F**). The date and ticket number can be modified (**G**). This is useful when redoing a formula to match accounting records. The batch sheet created can be viewed behind this form by pressing the **View Batch Sheet** button (**H**).

Batch Creation Tool - Step 8

Batch Sheet Creation Tool - Production Wizard [X]

8. Prepare Batch Sheet

Formula: Sour Cream Formula | Formula Ref. #: 320-00300

A
Total Amount: 5377 L | Fat (%): Calc: 18.00 Target: 18.0 - 18.4 | Homo Stg1: 1500 psi | Date: Nov 18, 2005
Total Amount: 5501 Kg | MSNF (%): Calc: 7.70 | Homo Stg2: 500 psi | Time: 10:03 am
Density: 1.02302 Kg/L | TF (%): Calc: 26.28 Target: 26.0 - 26.5 | Microgap: 800 psi
| | HTST 2: 85C
| | HTST 1,3,4: 80C

C	**D**	**E**	**F**	**G**	**H**
Reset Batch Size	Diagnostics	Processing Instructions	Printer Settings	Date / Ticket #	View Batch Sheet

Maestro # Ingredient	Tank / Lot #	Litre	KG	Amount	% MF	% MSNF	% TS	% of Mix (w/w)
PRE-PASTEURIZATION								
700-00101 Cream	TANK 4	2431	2440.82	2431.3 L	40.00	5.00	45.00	44.374
700-00102 Skim Milk	TANK 3	2751	2852.31	2751 L	0.04	9.06	9.10	51.855
700-00103 Skim Powder		81	44.84	1 BAG 20 KG	0.77	96.07	96.84	0.815
760-00033 Stabilizer			47.00	47 KG	0.00	0.00	94.01	0.854
CHASE WATER		115	114.87	115.0 L	0.00	0.00	0.00	2.088
Added Water		0	0.00	0.0 L	0.00	0.00	0.00	0.000
POST-PASTEURIZATION								
760-00310 Culture			0.70	7 EA	0.00	0.00	6.88	0.013

☑ Print Batch Sheet   ☑ Subtract from Tank Amounts   Press the NEXT button to start printing. >

B (left margin label)
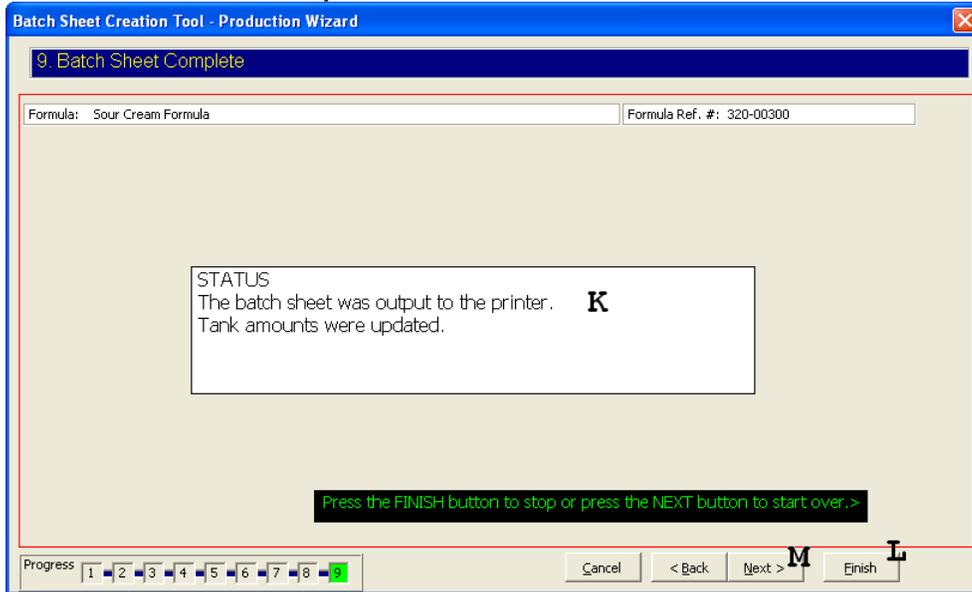
I **J**

Progress 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 | Cancel | < Back | Next > | Finish

The user can go back (**I**) or press the **Next** button to view the last window. The window shown below provides the status of the batch sheet output (**K**). The **Finish** button (**L**) is also enabled. The user can press the **Next** button (**M**) to create another batch sheet.

Batch Creation Tool - Step 9

APPENDIX A

***Reset Batch Size Feature in the Batch Creation Tool***

This feature is available in step 8 of the Batch Creation Tool. It allows the user to change to total batch amount either by:
A. Changing the batch quantity to use a give amount of a particular ingredient.
B. Changing the overall batch amount.

This feature is started by pressing the **Reset Batch Size** button (**A**).
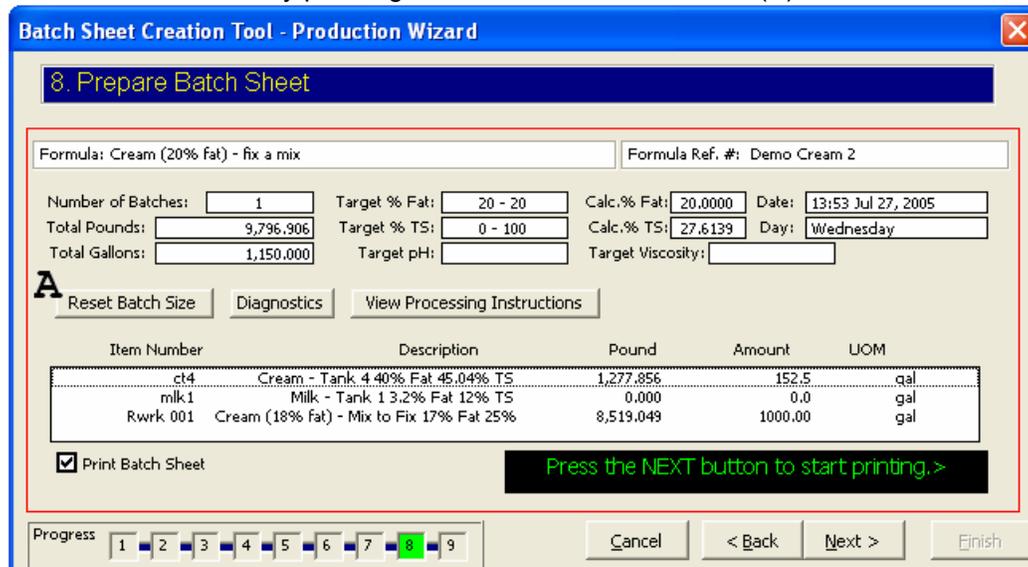
The **Calculate Batch Size** window appears. Shown below the **Batch Size Based on Using All of an Ingredient** tab is active (**B**).
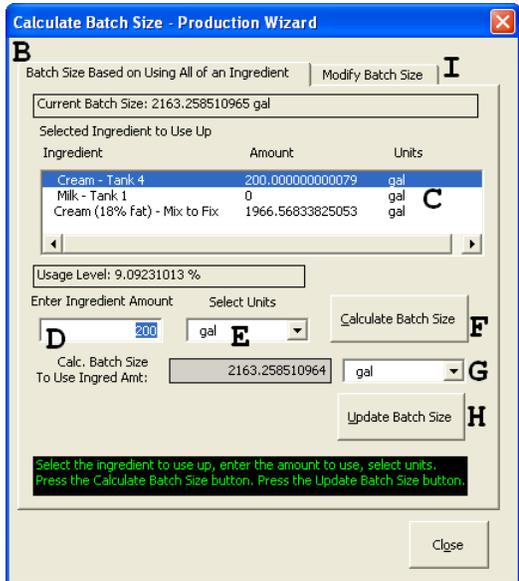
Changing the Batch Quantity to Use a Give Amount of a Particular Ingredient

1. To modify the batch size to use a given amount of a particular ingredient, select the ingredient (**C**).
2. Enter the ingredient amount (**D**) and select units (**E**).
3. Press the **Calculate Batch Size** button (**F**).
4. The batch size necessary to use this amount of ingredient is shown (**G**).
5. Press the **Update Batch Size** button (**H**) to modify the batch size.

Changing the Overall Batch Amount

1. To simply change the batch size, press the **Modify Batch Size** tab (**I**).
2. Enter the batch size (**J**) and units (**K**).
3. Press the **Update Batch Size** Button (**L**).
4. Press the **Close** button when finished (**M**).