Taking Back Control

How to Put In Place a Menu Cost System to Combat Rising Food Costs

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are rarely the best solution to increased food costs.

By Joe Erickson

Do you know what each item on your menu is costing you? When is the last time you updated your menu cost? If it's been more than three months since the last time you calculated the cost of your menu then there is a good chance you are either losing money or missing an opportunity to make more.

Regardless of what you sell, you need to know your product cost before you set a selling price. The primary reason you need to know what each menu item costs you is that it's the only way you can truly know how much gross profit your menu should make. Over time, rising prices or a change in ingredients can quickly alter your best-seller from being a cash cow to a white elephant you can't afford. Unless you keep up with your current menu cost, you won't know how profitable a menu item is.

As costs increase, profits decrease. Some operators react by applying across-the-board price increases to offset swelling food and beverage costs. While raising prices is an option, customers will only tolerate so much before either deciding on another menu item or, even worse, another restaurant.

Across-the-board price increases are rarely the best solution to increased food costs. Typically, rising costs only affect a certain part of your menu — or maybe even just a couple of menu items. Knowing which menu items cost you more helps you decide how best to deal with it.

Putting in place a menu cost system provides benefits far greater than simply an aid to price setting. Once employed, the process of keeping it up to date helps you more accurately calculate inventory valuation, compute your ideal cost of sales and engineer your menu for greater profitability. If configured properly, all you need to do to keep it updated is to ensure you have the most recent price of the ingredients you purchase. (See "2 More Reasons to Keep Menu Costs Current" on Page 21.)

3 Components
of a Menu Cost System

To create a menu cost system requires a three-step process. The first step is to create a master inventory list of all ingredients used to produce your menu. The second step is to document and calculate the cost of all batch recipes. And the final step is to create a menu cost worksheet for each menu item you sell. Here's how it works.

The Inventory Master. Every restaurant should maintain a Master Inventory List that includes all the ingredients a restaurant must use in the preparation of their menu items. This list can be maintained using a spreadsheet format that includes purchasing information, such as the pack, size and price of the ingredients — information that is useful when creating other management forms such as inventory and order forms. But to accurately calculate the real cost to produce a menu item, the Master Inventory list should not only reflect the purchasing cost and unit of measure, but also the corresponding recipe cost and unit of measure.

The Inventory Master chart below has been modified to illustrate the minimal information required for accurate menu costing. Other information (not shown in chart) can be included to facilitate ordering and inventory counts, such as the vendor, vendor product code, par level, inventory count unit and inventory category.

1. The Item Description column is used to list the products you purchase. Typically they will appear the same way they do on the invoice. In the Menu & Recipe Costing Template, this column is used to display the drop-down list for inclusion in batch recipes and menu worksheets. It's a good idea to group ingredients by category so that it's easier to find when updating prices or finding in the drop-down list. We did not group them in this illustration so that we could show you a variety of ingredients.

2. The Case Pack/Size column is used to describe the number of units, weight or volume of how the ingredient comes packed. This information is critical when calculating the actual unit cost for both inventory and recipe cost calculations. Most incorrect menu cost calculations occur from incorrect math computation.

3. The Purchase Unit of Measure (PU) is the unit on which the purchase price is based upon. While some ingredients are purchased by the case, others, such as beef, poultry or seafood, might be delivered by the case but purchased by the pound.

4. The Current Price column is used to reflect the most current purchase price for this ingredient. Each time you update the purchase price, the batch recipes and menu cost worksheets are updated when using the template.

5. The Recipe Cost Unit (RU) is the unit cost expressed in how it is most commonly used in recipes. Any ingredient used in cooking can be expressed in one of three units of measure when using it in a recipe — weight measure (typically ounces, grams, kilos or pounds), volume measure (such as fluid ounces, teaspoons, tablespoons, cups, gallons, milliliters or liters), or by the unit (each). Many products are purchased by weight unit of measure but are measured for recipes in volume (fluid) measure. The U/M column is where you will designate the RU (weight, volume or piece). For this article we have used ounces (OZ.-wt) as the com-

		Purchase Unit (PU)		Recipe Cost Unit (RU)			
Item Description	Case Pack/ Size	U/M	Current Price	U/M	# RU per PU	Yield %	Cost
Shrimp 36-40 ct. P&D	4/2.5-lb. box	Case	43.00	OZ-wt	160	100%	0.269
Mushrooms - fresh (med.)	1/10-lb. box	Case	18.85	OZ-wt	160	100%	0.118
Chopped garlic (in oil)	12/32-oz. jar	Case	35.01	OZ-fl	384	100%	0.091
Lobster base (no MSG)	6/1-lb. jar	Case	35.75	OZ-fl	77	100%	0.464
Butter	30/1-lb.	Case	49.40	OZ-fl	480	100%	0.103
Parsley bunch - fresh	Bunch	Each	0.50	OZ-fl	21	53%	0.045
Cappellini (Angel hair pasta)	20-lb. box	Box	16.35	OZ-wt	320	200%	0.026
Parmesan - fresh (grated)	2/5-lb.	Case	39.65	OZ-fl	426	100%	0.093
Back fin lump crabmeat	1-lb. pack	LB	14.00	OZ-wt	16	100%	0.875
Lemons - fresh (medium)	75-ct. box	Case	36.30	EA	75	100%	0.484
Salt - granulated	24/26-oz. rds.	Case	17.20	OZ-fl	499	100%	0.034
Cayenne pepper	14-oz. btl.	Bottle	7.20	OZ-fl	37	100%	0.195
Black pepper	18-oz. btl.	Bottle	7.20	OZ-fl	38	100%	0.189
Basil leaves (dried)	5-oz. btl.	Bottle	7.20	OZ-fl	28	100%	0.257
Thyme leaves (dried)	6-oz. btl.	Bottle	7.20	OZ-fl	30	100%	0.240
Oregano leaves (dried)	5-oz. btl.	Bottle	6.57	OZ-fl	25	100%	0.263
Green onions	24-ct.	Carton	11.90	OZ-fl	336	82%	0.043
Baking powder	6/5-lb. tn	Case	60.40	OZ-fl	556	100%	0.109
Mayonnaise	4/1-gal.	Case	20.40	OZ-fl	512	100%	0.040
Eggs (large)	1/15-dz. case	Case	24.15	EA	180	100%	0.134
Sour cream	3# tub	Carton	4.79	OZ-fl	45	100%	0.106

mon denominator for weight, fluid ounces (OZ.-fl) for volume and each (EA) to represent individual units or portions used in recipes.

6. The #RU per PU column represents the number of recipe units (RU) there are within each purchase unit (PU). Many products, such as spices, are sold by weight (oz. or lb.), yet they are often used in recipes by volume (tsp; cup; Tbsn; etc.); therefore you need to know how many volume ounces there are for each weight ounce.

Example 1: The conversion factor differs for each ingredient. For instance, 1-ounce weight of dried oregano yields about 5 fluid ounces; therefore the number of volumetric recipe units in a 5-ounce bottle of oregano would be 25 fluid ounces.

Example 2: Sour cream can be purchased in 3-pound tubs (48-ounce weight). Each fluid ounce of sour cream weighs about 1.06 ounces weight; therefore to calculate the number of fluid ounces in a 48-ounce-weight container you would divide 48 by 1.06 (48/1.06 = 45.2) which means you get about 45-fluid-ounce recipe units (RU) per every 3-pound tub purchase unit (PU).

To properly calculate the correct weight-to-volume conversions may require weighing some products. A useful resource for finding weight-to-volume conversions for common restaurant ingredients is "The Book of Yields" by Francis T. Lynch (available on Amazon.com).

7. The Yield % column is used to calculate the usable portion of the raw product. Many ingredients require cleaning or trimming before they can be used in recipes; thus the usable remainder is less than the purchased amount. Conversely, some products such as dry pasta require a consistent cooking process, such as boiling, before it can be used in recipes; the result is a yield greater than the purchased amount.

Example 1: Onions must be peeled before using in a recipe. Generally, this results in about a 15 percent loss of the original weight. Therefore, the yield for onions is 85 percent.

Example 2: Most dried pasta increases by two to three times its original weight because of the added water. Thus, if all your pasta is preboiled before it can be used in a recipe, then the yield might be 200-300 percent.

Example 3: Although rice is often cooked before being used in a recipe, some recipes, such as fried rice, call for it to be added before it is cooked. Therefore it is best to keep the yield at 100% on the Inventory Master than reflect the yield within the batch recipe.

ADDITIONAL SOURCES:
RestaurantOwner.com
Menu & Recipe Costing Template

If you've spent any time visiting restaurant trade shows, reading this magazine or browsing the Internet, you've most likely run across dozens of inventory control software packages that include menu and recipe costing components. Used properly, restaurant-specific inventory control software can eliminate the need for the multiple spreadsheets and systems.

Another resource, downloaded by more than 35,000 RestaurantOwner.com members, is the Menu & Recipe Costing template from the RestaurantOwner.com website. Once you've completed the setup for each menu item, enter the current purchase prices for ingredients you buy and then watch as each recipe and menu item is automatically updated with current pricing.

Additional Resources
From RestaurantOwner.com
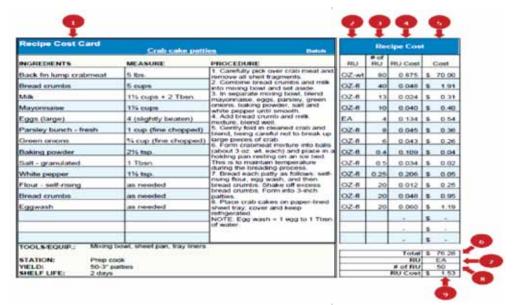**DOWNLOAD: Menu & Recipe Cost Spreadsheet Template**
www.restaurantowner.com/public/DOWNLOAD-Menu-Recipe-Cost-Spreadsheet-Template.cfm

This template is an expanded version of the tools used to create the RecipeMapping series in this magazine (see Page 37 for this month's installment), a step-by-step method for adding menu items and illustrated using tested recipes from actual restaurants. Using this menu costing system, Chef Tom Bruce of Central Coast Food and Beverage has mapped the recipes and menu costs for hundreds of different menu items from restaurants he has worked with over the years.

NOTE: Not all ingredients have the same yield for all recipes; thus the yield must be done at the recipe level rather than on the Inventory Master.

8. The cost column in the Recipe Cost Unit shows the adjusted RU cost by using the following formula: [Purchase Unit price] ÷ [# of RU per PU] ÷ [Yield %] = the RU cost.

The Batch Recipe. Most all menu items require advance preparation before the final cooking process to reduce the time from order to service. These preparation

recipe will be expressed in finished product. Like the Inventory Master, RU is the recipe unit expressed as weight, volume or individual units.

8. The # of RU shows the yield of the recipe in the number of recipe units this recipe makes.

9. The RU Cost line displays the cost per recipe unit. In this example, the crab cake recipe yields 50 3-inch crab cakes, each one costing about $1.53.
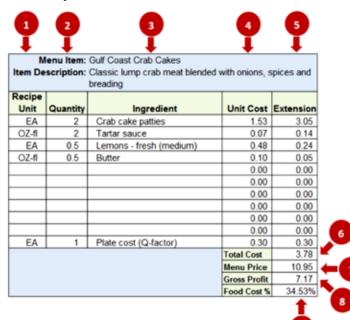
stages, often referred to in the industry as the prep list, are simply an assortment of batch recipes and processes (subrecipes) that will be used in the final preparation of the menu item. Even a simple, single menu item often requires several subrecipes before the menu item is ready for service. A subrecipe can be as simple as preparing a pan of chopped onions or a more complex recipe that has step-by-step instructions for creating large batches of product.

A subrecipe could include a combination of ingredients and other subrecipes; therefore, each subrecipe must have a cost and recipe unit designation, much the same as the ingredients on the Inventory Master. The batch recipe chart at top right shows how to formulate the true cost of a recipe.

1. The Ingredients column displays the selected ingredient (or subrecipe) from drop-down listing of the Inventory Master. The Measure and Procedure columns are used to describe the instructions and steps for creating the recipe.
2. The RU column displays the designated recipe unit for the selected ingredient or subrecipe.
3. # of RU column is where you enter the number of recipe units used. Note that this recipe calls for 5 lbs. of crabmeat. The RU designation for crab on the Inventor Master is OZ-wt. There are 16 ounces to the pound so this means there are 80 OZ-wt used in this recipe.
4. The RU Cost column displays the cost per RU for the ingredient or subrecipe based upon the purchase price set on the Inventory Master. When the purchase price changes, so does the RU cost.
5. The Cost column shows the total cost of ingredients by multiplying the RU cost by the number of RU used.
6. The Total line is the total cost to produce this recipe and is the sum of all the ingredient costs in the recipe.
7. The RU for the recipe is where you designate how this

The Menu Cost Worksheet. The cost of the menu item is determined by calculating the cost of each recipe unit or ingredient needed to produce the menu item, then affixing a selling price that produces the desired profit. It should include the cost of all side dishes, accompaniments and plate garnishes served with it.

Typically a menu cost worksheet is prepared for every item on your menu. Ideally, your point-of-sale system is programmed with individual menu item pricing as well. This allows you to track your ideal cost of sales by multiplying the sales of each menu item by the menu cost for that item. See the below Menu Cost Worksheet as an example.

Menu Item: Gulf Coast Crab Cakes
Item Description: Classic lump crab meat blended with onions, spices and breading

Recipe Unit	Quantity	Ingredient	Unit Cost	Extension
EA	2	Crab cake patties	1.53	3.05
OZ-fl	2	Tartar sauce	0.07	0.14
EA	0.5	Lemons - fresh (medium)	0.48	0.24
OZ-fl	0.5	Butter	0.10	0.05
			0.00	0.00
			0.00	0.00
			0.00	0.00
			0.00	0.00
			0.00	0.00
			0.00	0.00
EA	1	Plate cost (Q-factor)	0.30	0.30
			Total Cost	3.78
			Menu Price	10.95
			Gross Profit	7.17
			Food Cost %	34.53%

1. The Recipe Unit column shows the RU for the selected ingredient or subrecipe.
2. The Quantity column is where you enter the number of recipe units used in this menu item.
3. The Ingredient column shows the description of the selected ingredient or subrecipe.
4. The Unit Cost shows the cost of the Recipe Unit for the ingredient.
5. The Extension column shows the total ingredient cost and is computed by multiplying the Quantity by the Unit Cost.
6. The Total Cost line is the total cost to produce this menu item and is the sum of all the ingredient costs.
7. The Menu Price line is where you enter the selling price of the menu item. You can enter different prices to see the resulting food cost percentage.
8. The Gross Profit line displays the difference between the selling price and the cost. This is how much gross profit dollars this item generates.
9. The Food Cost % line is automatically calculated by dividing the Total Cost ($3.78) by the Menu Price ($10.95). In this example it shows this item to have a 34.53% food cost.

A common practice when calculating menu cost is to include a common charge for plate cost. Sometimes referred to as the Q-factor, the plate cost typically consists of the amount spent for things like condiments, bread and butter or salt and pepper. For instance, many Mexican restaurants serve complimentary chips and salsa, regardless of what the guest orders. The cost for these needs to be allocated to all menu items to be reflective of accurate food cost. You can estimate the plate cost allocation by adding up the cost for all the freebies you provide over a specific period, for instance a week, and then divide that cost by the number of menu items sold during the same period to find out the average plate cost that should be added.

2 MORE REASONS TO KEEP MENU COSTS CURRENT

It's been established that knowing your menu cost is an important factor when setting prices, creating recipes and deciding whether you should make something from scratch or buy prepared product. Likewise, your profitability odds hinge on having a menu that is as pleasing to the bottom line as it is to the palate.
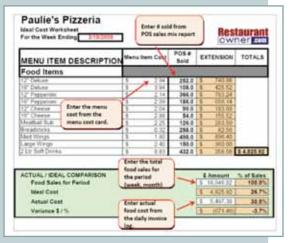
Two very important systems for maintaining profitability can only be put in place if you have up-to-date costs for every item on your menu. They are "ideal cost" and "menu engineering" systems.

Ideal food cost, often called theoretical cost, is the cost expected for a given sales mix over a period of time, assuming proper portioning and normal waste and yields. It is impossible to know the ideal food cost unless you first know the portion cost for each ingredient of every menu item. Even then, as cost for ingredients change, so will ideal cost.

The prerequisite for controlling food cost is to know what your food cost should be — your food cost target. There are three basic steps for establishing your food cost target. First, you must go through the exercise of costing out your entire menu; second, calculate the ideal cost based upon actual menu sales mix; and third, compare your ideal food cost with that of actual food cost expenditures. It is impossible to know your ideal cost if you do not know what each menu item costs you. An example of an Ideal Cost worksheet is shown below.

Menu engineering is the art and science of how, where and why a menu item is listed on your menu or menu board. Menu engineering, like the Ideal Cost system, is also dependent upon having current menu costs. This magazine's Menu Makeover department (see Page 50 for this month's installment) often demonstrates the correlation between profitability and popularity within the menu matrix while illustrating the techniques and strategies for revamping menus.

The basic premise of the menu matrix is to categorize each menu item into one of the following categories:
• Higher-than-average profit — Higher-than-average sales.
• Higher-than-average profit — Lower-than-average sales.
• Lower-than-average profit — Higher-than-average sales.
• Lower-than-average profit — Lower-than-average sales.

The objective is to use menu item placement and special graphic techniques to steer your guests toward the higher-than-average profit items. Unless you know your menu costs, you won't know where to steer them.

Implementation

Having the right tools to develop an effective menu and recipe cost system is just the first step. Getting your system in place requires commitment and dedication, not to mention hours and hours of tedious work.

The first step is to complete the Inventory Master section of the Menu and Recipe Cost template. To do this you will need your existing inventory list and all of the invoices for food purchases you've made over the last three months or so.

As mentioned earlier, it is a good idea to group the Inventory Master list by specific categories so that it is easier to locate the item within the list. Some common groupings for food inventory include:

- Bakery.
- Dairy.
- Grocery (Canned/Dry goods).
- Grocery (Refrigerated/Frozen).
- Grocery (Herbs and Spices).
- Meat.
- Poultry.
- Produce.
- Seafood.

Much of the information needed for the Inventory Master will come directly from the invoice, such as item description, the pack and size, the purchase unit and the purchase price. However, you'll need to put on your thinking cap when defining the recipe unit information. The rule of thumb for assigning which recipe unit to use (weight, volume or units) is to ask how this particular item is "most often" referred to within recipe instructions. For instance, spices and herbs are almost always expressed in volume measure whereas beef, pork and other proteins are usually measured by weight.

Once you decide on the proper recipe unit, you'll need to pull out the calculator to compute the correct number of recipe units in each purchase unit. It is imperative you get the math right on the Inventor

Master list; otherwise, any recipe containing an incorrect item cost will be incorrect as well.

Once the Inventory Master is complete you will need to keep it up to date by changing the purchase price of ingredients when you get the price change from the vendor. The best way to do this is to identify changes each week and adjust accordingly.

The next step is to create the batch recipes. This step is much easier to complete if you already use a prep list or recipe manual. This too can be a tedious process considering many restaurants have at least a hundred or more prep items to keep up with.

For each batch recipe you'll need to decide on the most appropriate recipe unit to assign by determining how this batch is to be used within a menu item or other recipe. Typically sauces, dressings and soups are portioned by volume so the recipe unit should be counted by volume as well. Other items, such as the crab cake example mentioned earlier, are portioned by each unit. And still other items, such as meatloaf, fajitas or other prepared meats, might be portioned by weight.

The final stage, completing the menu cost worksheet for each menu item, is the easiest, provided you did a good job on the first two stages. As you can see in the menu cost worksheet for the crab cakes, completing it simply entails listing how many crab cakes are in the dish, how much tartar sauce is to accompany it, adding the quantity of the lemon garnish and listing how much butter is used to grill the crab cake for service.

Restaurants that maintain current menu costs are more likely to be profitable than those that don't. At the very least, having a menu and recipe cost system will make it much easier to spot the white elephants — and maybe even replace them with some cash cows. **RS&G**