

# RecipeMapping

A good recipe for home cooking doesn't always work out when you attempt to replicate it in the restaurant. Startup restaurateurs find out quickly that a recipe intended to yield four, six or even 10 servings might not be practical when feeding dozens or even hundreds of guests — every day. We've said it once, we'll say it again: Success in the restaurant business is often measured in pennies. Toss in an inaccurate purchase order here, a dash of wasted product there, and mix in a bit of inefficient labor use, and you've got a recipe for slim margins. And while your friends and family never minded waiting an extra half-hour or so for your famous meatballs, your restaurant

guests will not be so forgiving to slow service and inconsistency.

For good recipes to become great menu items, you must learn to make them pleasing to both your guests and your accountant. You must break them down into stages that assist purchasing and inventory control, organize prepping, reduce production time, and maximize yield. Then you must build them up to serve dozens of covers.

We call it RecipeMapping — a three-step process that allows you to add new items to the menu consistently, methodically and profitably. We hope it helps “map out” your strategy for adding items to your menu, as well as help you put your startup “on the map.”

**Step 1 – Add Ingredients to the Master Inventory List.** Every restaurant should maintain a Master Inventory List that includes all of the ingredients that 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. 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 or lbs.), volume measure (such as tsp., tbsp., cups, qts. or gal.), or by piece. Many products are purchased by weight units of measure but are measured for recipes in terms of volume (fluid) measure. To determine a true recipe unit cost, it can require measuring a pound of product to determine its recipe yield. We provide Recipe Conversion Notes to assist in this process.

**Step 2 – Create the Prep Stages.** Here we identify parts of the menu item that can be prepared prior to final cooking and presentation, to reduce the time from order to service. Even a simple, single menu item often requires several subrecipes that are produced in batch and become part of the routine preparation tasks. Each subrecipe is then added to the Recipe Manual for reference by the kitchen staff. The cost of each subrecipe ingredient is calculated by multiplying the number of recipe units used by the recipe unit cost listed in the Master Inventory. The subrecipe batch is then assigned its own recipe unit and cost based on total cost to produce the batch and how much it yields.

**Step 3 – Calculate Menu Item Cost.** Finally, the cost of the menu item is determined by calculating the cost of each individual recipe or ingredient needed to produce the menu item, then affixing a selling price that produces the desired profit. Restaurants should review their menu item cost every three to six months to ensure that cost expectations are accurate.

## This Month's Features: Seared Gulf Shrimp Pasta With Crispy Bacon and Grilled Rosemary Chicken Breast

This month's featured menu items were provided by the staff of Central Coast Food & Beverage, a foodservice consulting firm based in Capitola, California, just outside Santa Cruz on the Monterey Bay. Tom Bruce, founding chef and owner of Central Coast Food & Beverage, created the recipe mapping for these dishes.



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Menu items featured in our RecipeMapping department are available online at [www.RestaurantOwner.com/recipe.htm](http://www.RestaurantOwner.com/recipe.htm).

## Seared Gulf Shrimp Pasta With Crispy Bacon

8	ea.	Marinated shrimp
3	fl. oz.	Clam stock
6	oz.	Penne pasta
1½	oz.	Crimini mushrooms
2	oz.	Quartered artichoke hearts
1	oz.	Roma tomatoes
1½	oz.	Asparagus spears
1	oz.	Bacon slices
¼	oz.	Peeled garlic
½	fl. oz.	Extra-virgin olive oil
½	oz.	Parmesan cheese



### Line Cook Instructions:

1. Place the olive oil in a sauté pan and heat until it shimmers.
2. Add the shrimp and sear on both sides; you may need to do this in 2 batches to keep from losing the heat in the pan.
3. Remove the shrimp to a service plate.
4. Add the chopped garlic, mushrooms and asparagus and sauté lightly.
5. Deglaze with the clam stock and add the pasta; toss 2-3 times to heat the pasta then add the artichokes and tomato; toss and add the cooked bacon and seared shrimp.
6. Plate for service and garnish with parmesan.

## Grilled Rosemary Chicken Breast

1	ea.	Rosemary chicken quarter
6	oz.	Polenta
1½	fl. oz.	Marinara sauce
5	oz.	Asparagus spears
1	oz.	Shiitake mushrooms
½	fl. oz.	Extra-virgin olive oil



### Line Cook Instructions:

1. Place the breast portion skin side down on a medium hot area of the grill. Allow to grill for about a minute then turn to create a diamond pattern. Turn the breast and sear the other side. Place in a medium hot oven to finish cooking.
2. While the chicken is in the oven, sauté the mushrooms in olive oil and grill the asparagus.
3. Plate the finished breast with marinara, polenta, asparagus and mushrooms for service.

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## Step 1 Inventory Master

Item Description	Case Pack/Size	Purchase Unit (PU)		Recipe Cost Unit (RU)			
		U/M	Current Price	U/M	# RU per PU	Yield %	Cost
* Artichoke, hearts, quartered	6/5-lb.	Case	81.56	OZ-wt	438	100%	0.186
*** Asparagus spear, medium	1/11-lb.	Case	20.90	OZ-wt	176	70%	0.170
* Bacon, sliced, applewood, 14/16-ct.	1/15# avg.	LB	4.84	OZ-wt	16	50%	0.605
*** Chicken, fresh fryer	12/4-lb. avg.	Case	40.80	EA	12	100%	3.400
*** Clam juice	12/46-oz.	Case	38.40	OZ-fl	552	100%	0.070
*** Garlic, peeled, fresh	1/5-lb.	Case	12.76	OZ-wt	80	100%	0.160
** Herb, basil	1/1-lb.	Bag	7.11	OZ-wt	16	56%	0.794
** Herb, rosemary	1/6-ct.	Bag	5.06	EA	6	100%	0.843
** Herb, thyme	1/6-ct.	Box	6.45	OZ-wt	6	65%	1.654
** Lemons	1/165-ct.	Case	26.51	EA	165	100%	0.161
** Milk, 2%	2/1-gal.	Case	7.27	OZ-fl	256	100%	0.028
* Mushroom, crimini	1/10-lb.	Box	27.83	OZ-wt	160	75%	0.232
** Mushroom, shitake	3/1-lb.	Box	10.05	OZ-wt	48	83%	0.252
*** Olive oil, extra-virgin	3/1-gal.	Case	57.53	OZ-fl	384	100%	0.150
*** Onion, yellow jumbo	1/50-lb.	Box	11.33	OZ-wt	800	91%	0.016
** Pasta, penne rigate	20/1-lb.	Case	33.25	OZ-wt	320	275%	0.038
** Polenta, yellow corn meal	1/25-lb.	Bag	29.25	OZ-fl	582	100%	0.050
** Sauce, soy	1 gal.	Each	6.96	OZ-fl	128	100%	0.054
* Shallot, peeled, fresh	1/4-lb.	Jar	13.89	OZ-wt	64	100%	0.217
* Shrimp, white, peeled, 21/25-ct.	4/2.5-lb.	Case	91.95	OZ-wt	160	100%	0.575
* Spice, salt, kosher	12/3-lb.	Case	18.82	OZ-fl	541.4	100%	0.035
** Spice, bay leaves	1/8-oz.	Each	18.21	EA	1040	100%	0.018
** Spice, black pepper	1/18-oz.	Each	16.73	OZ-fl	37.8	100%	0.443
** Spice, oregano, ground	1/13-oz.	Each	13.20	OZ-fl	37.18	100%	0.355
** Sugar, granulated	1/50-lb.	Bag	36.88	OZ-fl	904	100%	0.041
** Tomato paste	48/6-oz.	Case	34.68	EA	48	100%	0.723
** Tomato, crushed in puree	6/#10 can	Case	26.70	EA	6	100%	4.450
*** Tomato, Roma	1/25-lb.	Case	18.61	OZ-wt	400	90%	0.052
** Wine, white	12/750-ml.	Case	43.10	OZ-fl	304	100%	0.142
* Cheese, parmesan	5#	Bag	19.15	OZ-wt	80	100%	0.239

\*Shrimp Pasta \*\* Rosemary Chicken \*\*\*Both Items

The first step is to identify each ingredient for all the subrecipes and then to get the purchasing unit pack, size and cost information from your foodservice distributor. Raw ingredients for these menu items were chosen based on availability from local distributors. Once you have the purchasing information, you're ready to calculate the number of recipe units there are in each purchase unit.

## Recipe Conversion Notes

Many products are purchased by the weight units of measure but are measured for recipes in fluid measures such as teaspoons, tablespoons or cups. Precise conversion formulas are necessary to attain accurate costs. Here are some facts we noted when calculating the number of recipe units:

- Chopped onions weigh 3.75 oz. per cup.
- Kosher salt weighs about 9.4 oz. per cup.
- Black pepper weighs 0.23 oz per Tbsn.
- Oregano weighs 0.175 oz per Tbsn.

- Granulated sugar weighs 7.1 oz. per cup.

*\*Please note that spices were used in recipes by weight rather than volume.*

## Step 2 Create the Prep Stages - Seared Gulf Shrimp Pasta With Crispy Bacon

Subrecipes are usually prepared ahead of time and can be components for one or several menu items.

Central Coast - Recipe Card			Recipe Cost			
Marinated Shrimp			Batch			
INGREDIENTS	MEASURE	PROCEDURE	RU	# of RU	RU Cost	Cost
Shrimp, white, peeled, 21/25-ct.	5 lbs.	1. Rinse defrosted shrimp lightly and drain thoroughly in a colander.	OZ-wt	80	0.575	\$ 45.98
Olive oil, extra-virgin	1 cup		OZ-fl	8	0.150	\$ 1.20
Wine, white	1 cup	2. Combine all remaining ingredients in a large mixing bowl and blend thoroughly with a wire whisk.	OZ-fl	8	0.142	\$ 1.13
Shallot, peeled, fresh	2 ozs. sliced		OZ-wt	2	0.217	\$ 0.43
Garlic, peeled, fresh	1 oz. sliced	3. Add the shrimp to the marinade and toss well to coat evenly.	OZ-wt	1	0.160	\$ 0.16
					-	\$ -
		4. Refrigerate for 6-8 hours then drain in a colander, remove any residual shallots and garlic.			-	\$ -
					-	\$ -
		5. Portion and hold refrigerated for service.			-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
TOOLS/EQUIP.: Cup measure, ounce scale, large mixing bowl, colander and wire whisk.			Total		\$ 48.90	
STATION: Prep cook			RU		EA	
YIELD: About 14 8-shrimp portions			# of RU		14	
SHELF LIFE: 2 days			RU Cost		\$ 3.49	

**Marinated Shrimp:** Chef's note: Gulf Coast shrimp are a far superior product than that of Asian imports.

Central Coast - Recipe Card			Recipe Cost			
Clam Stock			Batch			
INGREDIENTS	MEASURE	PROCEDURE	RU	# of RU	RU Cost	Cost
Clam juice	2 qts.	1. Combine all ingredients in a medium saucepot.	OZ-fl	64	0.070	\$ 4.45
Chicken stock	2 qts.		OZ-fl	64	0.013	\$ 0.82
Wine, white	2 cups	2. Bring to a simmer and reduce by about 1/3.	OZ-fl	16	0.142	\$ 2.27
Shallot, peeled, fresh	3 ozs. sliced		OZ-wt	3	0.217	\$ 0.65
		3. Strain through a wire mesh strainer and cool; refrigerate for service.			-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
					-	\$ -
TOOLS/EQUIP.: Cup measure, quart measure, ounce scale, medium saucepot and wire mesh strainer.			Total		\$ 8.20	
STATION: Line cook			RU		OZ-fl	
YIELD: About 32 3-oz. portions			# of RU		96	
SHELF LIFE: 3 days			RU Cost		\$ 0.09	

**Clam Stock:** Chef's note: This makes a great base sauce for seafood sautés and pastas. You can substitute dry vermouth for the white wine.

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## Step 2 Create the Prep Stages - Grilled Rosemary Chicken Breast

Central Coast - Recipe Card			Recipe Cost			
Rosemary Chicken			Batch			
INGREDIENTS	MEASURE	PROCEDURE	RU	# of RU	RU Cost	Cost
Chicken, fresh fryer	12 each	1. Using a boning knife, remove the leg and thigh portion, leaving the leg attached to thigh. Remove each breast from the carcass in one piece, leaving the wing attached. Remove the last 2 sections of the wings. 2. Set the carcasses and wing sections aside for stock. 3. Place the remaining ingredients in a large mixing bowl and blend well. 4. Add the chicken sections and toss in the marinade. Cover with plastic wrap and refrigerate. 5. Marinate the chicken for at least 24 hours, turning the product 2 to 3 times during the marinating process. 6. Remove the chicken and drain thoroughly, taking care to remove any pieces of onion, garlic or rosemary. 7. Hold under refrigeration for service.	EA	12	3.400	\$ 40.80
Olive oil, extra-virgin	3 cups		OZ-fl	24	0.150	\$ 3.60
Sauce, soy	1½ cup		OZ-fl	12	0.054	\$ 0.65
Lemons	4 each juiced		EA	4	0.161	\$ 0.64
Garlic, peeled, fresh	6 oz. slivered		OZ-wt	6	0.160	\$ 0.96
Onion, yellow jumbo	8 ozs. sliced		OZ-wt	8	0.016	\$ 0.12
Herb, rosemary	2 bunches		EA	2	0.843	\$ 1.69
					-	\$ -
					-	\$ -
					-	\$ -
TOOLS/EQUIP.: Cup measure, ounce scale, boning knife and large mixing bowl.					-	\$ -
STATION: Line cook			Total \$ 48.46			
YIELD: 48 quarters			RU		EA	
SHELF LIFE: 2 days			# of RU		48	
			RU Cost		\$ 1.01	

**Rosemary Chicken:** Chef's note: The bones and trimmings are used for chicken stock, another subrecipe used but not shown for preparation of this dish.

Central Coast - Recipe Card			Recipe Cost				
Marinara Sauce		Batch	RU	# of RU	RU Cost	Cost	
INGREDIENTS	MEASURE	PROCEDURE	EA	3	4.450	\$ 13.35	
Tomato, crushed in puree	3 #10 cans	1. Preheat a large rondo over medium heat. Add the olive oil then add the onions and garlic. Cook lightly until opaque.  2. Add the dried spices and fresh herbs and continue to cook over low heat for 2-3 minutes.  3. Add all of the remaining ingredients except the fresh Roma tomatoes. Bring to a simmer and continue to cook for 30 minutes.  4. Add the chopped romas and cook an additional 20 minutes.  5. Adjust the seasonings if necessary and cool for service.	OZ-wt	3	0.160	\$ 0.48	
Garlic, peeled, fresh	3 ozs. chopped		OZ-wt	6	0.016	\$ 0.09	
Onion, yellow jumbo	6 ozs. diced		OZ-wt	96	0.052	\$ 4.96	
Tomato, Roma	6 lbs.. chopped		OZ-fl	0.75	0.355	\$ 0.27	
Spice, oregano, ground	1½ Tbsn.		OZ-fl	1	0.035	\$ 0.03	
Spice, salt, kosher	2 Tbsn.		OZ-fl	4	0.150	\$ 0.60	
Olive oil, extra-virgin	½ cup		EA	3	0.018	\$ 0.05	
Spice, bay leaves	3 each		OZ-fl	1	0.443	\$ 0.44	
Spice, black pepper	2 Tbsn.		EA	1.5	0.723	\$ 1.08	
Tomato paste	1½ 6-oz. cans		OZ-fl	32	-	\$ -	
Water	1 qt.		OZ-wt	1	0.794	\$ 0.79	
Herb, basil	1 oz. chopped		OZ-wt	0.5	1.654	\$ 0.83	
Herb, thyme	½ oz. chopped		OZ-fl	2	0.041	\$ 0.08	
Sugar, granulated	¼ cup				-	\$ -	
					-	\$ -	
					-	\$ -	
TOOLS/EQUIP.: Cup measure, ounce scale, pound scale, measuring spoons, rondo and wire whisk.			Total \$ 23.07				
STATION: Prep cook			RU OZ-fl				
YIELD: 15 qts.			# of RU 512				
SHELF LIFE: 5 days			RU Cost \$ 0.05				

**Marinara Sauce:** Chef's note: Vine-ripened tomatoes are preferable.



# Recipe Mapping

<b>Recipe Cost</b>			
<b>RU</b>	<b># of RU</b>	<b>RU Cost</b>	<b>Cost</b>
OZ-fl	32	0.050	\$ 1.61
OZ-fl	32	0.028	\$ 0.91
OZ-fl	32	0.013	\$ 0.41
OZ-fl	64	-	\$ -
OZ-wt	24	0.239	\$ 5.75
		-	\$ -
		-	\$ -
		-	\$ -
		-	\$ -
		-	\$ -
		-	\$ -
		-	\$ -
		-	\$ -
		-	\$ -
<b>Total</b>			<b>\$ 8.67</b>
	<b>RU</b>	<b>OZ-wt</b>	
	<b># of RU</b>	<b>160</b>	
	<b>RU Cost</b>	<b>0.05</b>	

### Step 3 Calculate Menu Item Cost

<b>Menu Item:</b> Grilled Rosemary Chicken Breast <b>Item Description:</b> Served with parmesan polenta, housemade marinara, braised shiitakes and grilled local asparagus.				
Recipe Unit	Quantity	Ingredient	Unit Cost	Extension
EA	1	Rosemary chicken	1.01	1.01
OZ-wt	6	Polenta	0.05	0.33
OZ-fl	1.5	Marinara sauce	0.05	0.07
OZ-wt	5	Asparagus spear, medium	0.17	0.85
OZ-wt	1	Mushroom, shiitake	0.25	0.25
OZ-fl	0.33	Olive oil, extra-virgin	0.15	0.05
			0.00	0.00
			0.00	0.00
			0.00	0.00
	1	Plate Cost	0.35	0.35
			<b>Total Cost</b>	2.90
			<b>Menu Price</b>	13.00
			<b>Gross Profit</b>	10.10
			<b>Food Cost %</b>	22.33%

<b>Menu Item:</b> Seared Gulf Shrimp Pasta with Crispy Bacon <b>Item Description:</b> Imported penne, asparagus, Roma tomato, artichokes and crimini mushrooms finished with a light stock.				
Recipe Unit	Quantity	Ingredient	Unit Cost	Extension
EA	1	Marinated shrimp	3.49	3.49
OZ-fl	3	Clam stock	0.09	0.26
OZ-wt	6	Pasta, penne rigate	0.04	0.23
OZ-wt	1.5	Mushroom, crimini	0.23	0.35
OZ-wt	2	Artichoke, hearts, quartered	0.19	0.37
OZ-wt	1	Tomato, Roma	0.05	0.05
OZ-wt	1.5	Asparagus spear, medium	0.17	0.25
OZ-wt	1	Bacon, sliced, applewood, 14/16-ct.	0.61	0.61
OZ-wt	0.25	Garlic, peeled, fresh	0.16	0.04
OZ-fl	0.5	Olive oil, extra-virgin	0.15	0.07
OZ-wt	0.5	Cheese, parmesan	0.24	0.12
			0.00	0.00
	1	Plate cost	0.35	0.35
			<b>Total Cost</b>	6.19
			<b>Menu Price</b>	18.00
			<b>Gross Profit</b>	11.81
			<b>Food Cost %</b>	34.40%