

Planning for Food Profit and Controls

Learning Objectives

After reading this chapter, you should be able to:

- distinguish targeted, potential, and actual costs of food products and identify the components of each;
- determine your targeted ideal cost;
- know the importance of accurate database information for potential costing;
- differentiate between purchase price and yield price;
- apply yield percentage to potential cost;
- derive potential cost using the following techniques:
 - listing and costing out ingredients
 - batch prep recipe costing
 - accompaniment recipe
 - sales mix recipes
- derive actual food cost results;
- understand the following components of actual food cost:
 - cost of food sold to customers
 - cost of food lost through poor purchasing practices
 - cost of food lost in receiving and storage
 - cost of food lost in production process
 - cost of food lost by the front of the house
- using knowledge about actual food cost, control the cost of entrée items.

In Practice

Myla Thomas, the new manager at the Sea Breeze Hotel, took a walk-through visit to the kitchen of the hotel. She saw the cooks busy at work preparing entrées for patrons. One of the cooks took a chit from the printer, read it, and clipped it on an overhead row of clips. He took out a steak and dropped it on

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the grill. Meanwhile, he pulled a steak off the grill, added a baked potato to it, put a ladleful of vegetables on the plate, grabbed a chit from the overhead rack, tore it halfway, and set it next to the plate under the heat lamp. “That’s exactly the way it should work,” Myla thought to herself.

Myla watched as a waiter walked into the kitchen and said to a young cook, “Hey, Eddy! I need a shrimp and chicken pasta number 2.”

“Sure thing!” Eddy replied, “Coming right up.” Myla could not believe her eyes. No chit came out of the printer for this order. “It’s no wonder food cost is higher than potential,” she thought. Nevertheless, Eddy promptly walked over to the refrigerator, grabbed a bag of shrimp and some precooked chicken, and started preparing the meal. Myla realized that no sale was recorded for that transaction. She wonders to herself, “How much of a tip is the waiter getting for pulling off this little trick? Or is she just keeping the money for the meal?”

Myla walked over to the salad station. The young woman working at the salad station was busy filling orders coming off the POS printer. After ten minutes, the woman left for a moment. Meanwhile, the waiter walked into the kitchen, went behind the salad station, and opened a cooler. She grabbed a premade shrimp cocktail, took four additional giant shrimp from a pan, added them to the shrimp cocktail, and walked out of the kitchen. Not only was the shrimp cocktail not recorded on the order entry system, but the portion was 50 percent larger than standard, Myla noted.

Myla went to the dessert station and once again observed a young man filling orders based on chits coming out of the POS printer. He set the orders in front of him and put the chit next to the order. Myla observed that he was not tearing the chits halfway to ensure they could not be reused. Meanwhile, a waiter walked in and said, “Michael, I entered three cheesecakes, but another customer at the table decided she would like one too. Give me a fourth cheesecake, and I’ll enter it when I get back to the POS station.”

“Sure,” Michael replied. He cut a slice from the cheesecake and placed it on the counter for the waiter. “I bet that chit never comes out on the printer!” Myla thought. “And where is the manager? It will be interesting to see the difference between target cost, potential cost, and actual cost.”

The concepts of targeted, potential, and actual food costs—and their relationships to one another—are the focus of this chapter. Calculating these costs, analyzing the results, and—most importantly—identifying opportunities for controlling expenses are approached from a pragmatic perspective. You will learn how to use these methods in the most practical and fitting fashion for your establishment.

INTRODUCTION TO FOOD PROFITABILITY

Profit is what remains when you subtract expenses from revenue. As economist Joseph A. Schumpeter said, “Profit is the expression of value of what the entrepreneur contributes to the production.” We have covered this fundamental role in earlier chapters. To improve your profit, or bottom line as it is sometimes called, management works to maximize revenue and

to minimize expenses. Expenses include food costs, labor costs, rent or mortgage payments, utilities, insurance, license fees, advertising, repairs and maintenance, and administrative or general expenses. The company must create—and act upon—a detailed action plan for each of these expenses.

Management's action plans are directed by what is called the profit objective. This is a specific percentage that the company can reasonably expect to earn in profit. The action plan, then, is a specific set of actions to be performed in order to achieve the profit objective. The restaurant manager, controller, food and beverage manager, purchaser, and owner should be involved in setting the profit percentage and in delineating the steps needed to reach it.

targeted ideal cost The ideal amount your company wants to spend; it is your goal, or what you have budgeted to spend.

potential cost The expectation of what the cost should be, if you comply with all cost control procedures. It is the standard whereby you measure the cost efficiency of your operation.

actual cost What you actually spend on the product. The product cost that appears on the profit and loss statement as expenditures.

In this chapter we will discuss one type of expense, which is very much under your control as purchaser: minimizing food cost. In this context, the profit objective will be related to three cost calculations: targeted ideal cost, potential cost, and actual cost. Many computer systems widely used in the industry, such as Foodco, will calculate these figures quickly and accurately.

Targeted ideal cost means the ideal amount your company wants to spend; it is your goal, or what you have budgeted to spend. **Potential** (or theoretical) **cost** is the calculated expectation of what the cost should be, assuming you comply with all cost control procedures. Finally, **actual cost** is what you actually spend on the product.

All of these new terms can be explained best by using an example, which is illustrated in Figure 10-1. We'll call it Michael's Bistro, and we'll assign it the following income and expense statement for last year.

Figure 10-1 Michael's Bistro

	Actual Dollars	Percent of Sales
SALES		
Food Sales	\$325,110	63%
Beverage Sales	\$191,060	37%
Total Sales	\$516,170	100%
EXPENSES		
Cost of Food Sales	\$94,580	29%
Cost of Beverage Sales	\$43,944	23%
Total F&B Cost of Sales	\$138,524	27%
LABOR		
Payroll Wages	\$190,800	37%
Other Payroll Expenses	\$51,400	10%
Total Payroll Cost	\$242,200	47%
OTHER EXPENSES		
(includes insurance, utilities, general expenses)	\$60,600	12%
TOTAL REVENUE	\$516,170	100%
TOTAL EXPENSES	\$441,324	85%
NET PROFIT	\$74,846	15%

To find the actual percentage Michael spent on cost last year, we divided cost by sales. In our example, you can see that this number is 29 percent for food. Now, we'll use this number to calculate our targeted ideal cost.

TARGETED IDEAL COST

Finding the targeted ideal cost is a balancing act. It must not be unrealistically low; nor can it be so high that your company cannot make a profit. The company must set a percentage amount that the owners want in profit, based on how much is needed to stay in business and how much return is expected for the investment. You are going to use that percentage to monitor and evaluate operations. Targets that are impossible to reach will be an endless source of frustration for management and staff.

At Michael's Bistro, the profit last year was 14.5 percent. Michael is forecasting increased business next year because he is located right next to the new convention center. His goal is a profit of 15.5 percent this year. However, Michael knows that increased sales will not mean more profit unless he cuts his percentage of cost. Therefore, Michael's plan is to reduce food and beverage cost by 1.5 percent. Now we can calculate Michael's targeted ideal cost.

First, consider the total sales amount as 100 percent. Next, subtract the percentages of other business expenses, including labor, from that 100 percent. This leaves a percentage that must be divided between two areas: profit and food cost. Subtract the desired profit percentage from this number, and the remaining percentage will be the percentage that can be spend on food. Review how this works in Figure 10-2.

Figure 10-2 Percentage to be Spent

100%	(total sales dollars)
-47%	Less payroll percentages
-12%	Less other expense percentages
=41%	Equals percentage of revenues remaining
-15.5%	Less desired profits
=25.5%	Equals the targeted ideal food and beverage cost percentage

Are those figures—25.5 percent food and beverage cost and 15.5 percent profit objective—realistic? This question is best answered by individual establishments, and the answer depends on individual operation and cost control measures.

As he makes his plan to save that 1.5 percent cost, Michael will need to consider the following possible problem areas:

- The menu prices may be too low or too high.
- He may be spending too much on purchasing goods.
- The chefs may not be preparing the recipes accurately.
- He may be losing money on products that do not yield much after having been prepared in the kitchen.
- His competitors may have more attractive prices or portion sizes.

Suggested Target Percentages

The target percentages you use will be entirely dependent upon your operation. You will need to weigh two competing factors. On one hand, the customer must be assured of sufficient value to warrant their continued business. On the other hand, the company must be assured of sufficient profit. Perhaps in your establishment, lowering prices may draw more business and therefore actually increase your profit. Figure 10-3 offers some target percentages currently in use; however, remember that you cannot take your own percentages from a chart in a book. You will have to calculate them in each establishment given the unique circumstances you face.

Figure 10-3 Suggested Target Percentages

Suggested Target Percentages			
Appetizers	= 20–30%	Breakfast entree	= 23–30%
Mexican food	= 20–28%	Breakfast side order	= 20–30%
Italian food	= 25–33%	Lunch entree	= 27–30%
Children meal	= 30–50%	Lunch side order	= 25–30%
French fries	= 15–20%	Dinner entrees	= 30–40%
Beverage	= 8–15%	Dinner side order	= 27–40%
Soft ice cream	= 15–25%	Salad bar	= 35–45%
Desserts	= 25–30%	Salads	= 25–35%
High profit special	= 20–25%		

We will assume that Michael's targeted ideal food cost percentage of 15.5 is a reasonable expectation, given his restaurant. This gives us a basis from which to work on calculating his menu items' potential cost.

POTENTIAL COST

A potential cost is the expectation of what the food cost should be, if you comply with all cost control procedures. In other words, it is the standard by which you measure the food cost efficiency of your operation. Using your menu recipes, you can easily calculate what each item should cost by adding the costs of each recipe ingredient. You should keep all of this information in your database and update it as prices or menu items change. The difficulty of potential costing is that it does not take into account possible waste, spoilage, or cooking errors. It is the cost of the menu item if nothing is burned, misused, spoiled, or wasted in any way.

You will need to update your potential cost calculations each time you purchase something new, when your product costs change, or when you create a new menu. These updates are important; menu item pricing, updated recipes, and changing ingredient costs will all affect your results. Each of these factors is discussed in upcoming sections.

To figure potential costs, you will want to prepare some data for the potential costing process. Using a computerized inventory system can simplify these tasks, but it can all be done

manually as well. In our discussion, we will introduce some of the features of the Foodco system in order to illustrate the steps you will take.

First, you will need to conduct product tests and document the results. These test procedures are detailed in Chapter 4. For example, in a butcher test you and your staff prepare and portion meat, poultry, and seafood products for sale. Prepare, or prep, the products by cleaning and cutting them to specified sizes. Then, portion the products to determine their costs. With this information you will be able to compare products from different vendors and establish your selling prices. This information will also be used in potential costing.

Figure 10-4 is a worksheet that coordinates your data for potential costing. You will need accurate inventory records to begin. From there, we will explain each part of the worksheet, why it is needed, and how to find the right data to include. You will begin to see the difference between purchase price and end-product price: The former affects your inventory calculation, and the latter is used for potential recipe costing.

Starting inventory # ①		Inventory group ②			GL code ③			
How you purchased the product from your vendor ④		How you inventory a part of a case ⑤			Recipe breakdown ⑥			
①	Inventory item description ④	Full case description (how you purchased from vendor) ⑤	Full case cost \$ ⑥	Part of case description for inventory purpose ⑦	Number of parts per case ⑧	Unit desc. ⑨	Units per case ⑩	Prep yield % ⑪
	Beef tenderloin	Case = 1 pound	\$6.69	Pound	1	WZ	16	65.50%
3245	Carrots baby	case=1/24ct	\$14.70	count	24	ct	24	100.00%
4024	Celery pascal	case=1/24ct	\$11.51	count	24	ct	24	100.00%
3223	Onion red	case=1/25#	\$11.20	pound	25	wz	400	100.00%
3208	Squash yellow	case=20#	\$8.64	pound	20	wz	320	100.00%
3207	Squash zucchini fresh	case=20#	\$10.56	pound	20	wz	320	100.00%
3856	Broccoli florrette iceless	case=4/3#	\$13.63	count	4	wz	192	100.00%
3218	Cauliflower florette	case=2/3#	\$10.66	count	2	wz	96	100.00%
4220	Base vegetarian	case=6/2#	\$82.75	count	6	wz	192	100.00%
4227	Tomato puree	case=6/#10can	\$16.50	count	6	wz	660	100.00%
4532	Spice thyme ground	case=6/11oz	\$33.59	count	6	wz	66	100.00%
4688	Spice basil sweet leaf	case=1/5.5oz	\$4.96	count	1	wz	5.5	100.00%
4659	Spice pepper grnd. black	case=1/5#	\$28.48	count	1	wz	80	100.00%
4452	Salt bulk	case=1/25#	\$3.20	pound	25	wz	400	100.00%

Figure 10-4 Inventory Worksheet

The numbers in Figure 10-4 are only examples; you will soon learn how to conduct your own yield tests and to complete this form on your own. The worksheet contains eleven fields or areas to fill out. We will go through each one and show how this sheet works. Steps 1 through 8, which describe the different phases of recording inventory items, form the foundation for the yield test results in Steps 9 through 11.

1. *Inventory Number (#)*. All inventory items should have a number to identify the items in the inventory and to control their use. The numbers here are just examples; your numbering system will depend on your company.

2. *Inventory Group*. Each item is assigned to a group. In this case, the items are in the food group, since we are dealing with potential costing for food. For beverages this would be classified under the beverage group.
3. *General Ledger Code (GL)*. This code provides internal tracking information when you receive a product from a vendor. It is also used in accounting to pay invoices by designating an account number to the group of items. The numbers may be designated for you by your computer system, or you may be able to input codes you have devised.

In Columns 4, 5, and 6, you will use information from your vendors' invoices. This information is included on the worksheet to set the stage for comparing the vendor's raw products with their yield. These three related columns are grouped together as *How you purchased the food from the vendor*, Group A.

4. *Inventory Item Description*. Simply write the product name in this column. In our example, we use beef tenderloin and several produce items. Note that the descriptions begin with the generic name, such as *beef* or *carrots*, and then are followed by more specific descriptions, such as *tenderloin* and *baby*. Always listing them in this way makes it easier to locate and categorize the items correctly.
5. *Full Case Description*. This column describes what a standard full case contains when it comes from the vendor. You may need this number for future calculations. Most entrée items, such as beef, are purchased by the pound. Therefore, the case description in this instance is 1 pound of beef tenderloin.
6. *Full Case Cost (\$)*. What you pay the vendor for one full case is recorded here. For the beef tenderloin, we show \$6.69 per pound.

Columns 7 and 8 describe how to inventory a *partial* case. These two columns comprise the chart's Group B. The information in these columns is used in the inventory, ordering, and receiving phases.

7. *Partial Case Description*. The information in this column describes how you inventory a partial case when taking a physical inventory. This can be done in a number of different ways, as not all vendors have the same packaging sizes on like items. For example, a case could equal four 5-pound blocks or eight 3-pound blocks.
8. *Number of Parts Per Case*. This column lists the number of partial units per case. This information is used to calculate cost breakdown on a part of a case. For instance, in our example a case of 1-pound beef tenderloin costs \$6.69. When you record the parts per case, it will record the pound cost at \$6.69. This will be different if you are calculating for a case of cans of tomato purée. In our example above, the case costs \$16.50 and the number of parts is six; this, then, will record the cost at \$2.75 per case part.

The third division of the chart, Group C, deals with your recipe breakdown. This refers to how many recipe units (such as ounces, counts, or teaspoons) you get per case, and how much they cost. As we saw in Chapter 4, you lose some of your product whenever you prepare it. This is unavoidable, but it can be minimized—and you are just the person to make sure this happens.

9. *Recipe Unit Description*. The recipe unit is the measuring unit from your recipe. The following units are typically used in the industry. A more extensive list is included in Appendix.

	Unit	Abbreviation	Examples
A.	weight ounce	(WZ)	meats, onions
B.	fluid ounce	(FZ)	soft drinks, milk
C.	count	(CT)	eggs, napkins
D.	teaspoon	(TS)	spices
E.	portion	(PR)	prep recipes, sales mix

Below are examples of common equivalent amounts. Again, see Appendix for a more complete list.

Common Unit Name	Abbreviation	Equivalent
pound	WZ	16 WZ per pound
gallon	FZ	128 FZ per gallon
#10 can	FZ	105 FZ per #10 can
quart	FZ	32 FZ per quart

10. *Recipe Units Per Full Case.* The number of recipe units per full case tells you exactly how many weight or fluid ounces, teaspoons, or counts of an item come in a case. For example, there are 400 weight ounces of onions in a 25-pound case. This may not be simple for every item. For example, a case of sliced pickles may contain 2,640 slices (CT), or a case of tomato sauce may have 6 #10 cans at 105 FZ per can, giving you a total of 630 FZ for all 6 cans. You may occasionally need to refer to a conversion table or measuring scales in order to determine the number of recipe units per case.

From these recipe units, you can break down the case cost and calculate the potential recipe unit cost. The potential recipe unit cost is also affected by Column 11, as follows:

11. *Prep Yield Percentage.* This last column lists your prep yield percentages for each item. You will find the process for calculating these percentages in Chapter 4. For our purposes here, you simply need to know that this is the yield (how much usable product you end up with after preparation) divided by the total purchase amount. In our example, beef tenderloin has a yield percentage of 65.5. The original, as-purchased price of \$6.69, multiplied by this yield percentage, becomes an end-product price of \$10.21 per pound.

It is important to note the different uses of the as-purchased price and the end-product or yield price. The as-purchased price is your inventory cost and is not altered by yield percentages. However, the end-product price and recipe unit cost calculations must take the yield percentage into consideration. In our beef tenderloin example, the computation of recipe cost requires the use of the yield percentage ($\$6.69/\text{pound} \times 65.5 \text{ percent} = \$10.21/\text{pound}$). The other recipe items were based on 100 percent for illustration, but the \$6.69 as-purchased price is used when computing inventory costs.

Most food products have a predictable and measurable amount of shrinkage or waste. Produce, meat, and seafood are examples of such products. Most inventory items in these groups

go through many stages of preparation before they become finished menu items. They might be thawed, trimmed, peeled, cooked, boiled, fried, baked, or made into equal portions. The yield percentage thus reflects the subtraction of waste, by-product, or evaporation to derive your usable yield. Appendix provides a list of tested industry averages for these percentages. However, it is recommended that you conduct your own tests rather than relying completely on industry guides.

actual recipe unit cost

The cost of each ingredient in a menu.

The prep yield percentage is also used to figure your **actual recipe unit cost**. In this way, your recipe costs will automatically factor in the prep yield percentage and raise or lower the recipe unit cost accordingly. This will allow you to compare actual costs between vendors or between products with different yields. This process is ongoing; as you update your yield percentages with new products and vendors, you also need to alter your menu item prices. This will ensure that when you perform potential costing, you get accurate and verifiable costs.

Conducting Food Potential Costing

Use this new item cost information to build your potential recipe costs. We will use vegetable soup and a recipe flowchart to demonstrate the process. For example, suppose you make this vegetable soup in 20-gallon batches and sell it in 12-fluid-ounce (FZ) portions. You need to convert that 20-gallon recipe to a menu recipe for the 12-FZ portion. Here is how this is done:

1. List your ingredients and their units. The chef will list the prep prep recipe items (for instance, the zucchini must be sliced or the onion must be diced).
2. Write down the large-batch prep recipe; in this case it is for 20 gallons of vegetable soup.
3. Write down the prep recipes for any accompaniments for the soup, such as the plate garnish, rolls and butter, and so on.
4. Write what are called your sales-mix prep recipes. These are used when the customer is selecting among items such as different soups, salad dressings, or types of potatoes.

These functions are typically performed by the chef and the cost controller in a larger organization. However, in a smaller establishment the chef him- or herself may be responsible for all steps. Now we will go into detail about each of these processes.

List Ingredients and Their Units

Figure 10-5 is an example of a prep prep recipe worksheet, listing the ingredients for vegetable soup. The worksheet is used to define and record recipes for menu items. Following the example is an explanation of the terminology for each area on the worksheet. The chef will need one worksheet for each recipe he or she writes.

We talked briefly about the inventory numbering system. A good practice is to use a similar recipe-numbering system that rationally connects the sets of items. This section will use the same format established in the inventory example above. The numbering sequence should be determined by the type of recipe.

1. *Item Number*. In a computerized system, this number will be generated automatically, and you can set categories. For example, the numbering of prep recipes might begin with P100, while menu item recipes might start with M100, for identification and control purposes.
2. *Is the Item Active?* An active item is one that is being used presently. Remove seasonal items from reports when they are not currently being used.
3. *Item Description*. The item description is the name of the recipe for which you are establishing a potential cost. In this case it is vegetable soup.

1. Item number: <u>100</u>		2. Item active: <u>YES</u> <u>NO</u>	
3. Item description: <u>Vegetable soup</u>		4. Revenue department: <u>Food</u>	
5. Prep location: <u>Main kitchen</u>		6. Saleable: <u>YES</u> <u>NO</u>	
7. G.L. account #: <u>100-125</u>		8. Period tracking: <u>DAILY</u> <u>MID</u> <u>MAIN</u>	
9. Batch size: <u>20 gallons</u>		10. Recipe group: <u>Soup</u>	
11. Ingredient item number	12. Ingredient Item description	13. Number of recipe units	14. Recipe unit description wz,lb,fz,cup, pint,qt,gal,ct
3245	Carrots baby	12	ct
4024	Celery pascal	4	ct
3223	Onion red	6	oz
3208	Squash yellow	12	oz
3207	Squash zucchini fresh	12	oz
3856	Broccoli florrette iceless	48	oz
3218	Cauliflower florette	32	oz
4220	Base vegetarian	1	fz
4227	Tomato puree	1	oz
4532	Spice thyme ground	16	oz
4688	Spice basil sweet leaf	8	oz
4659	Spice pepper grnd. black	16	oz
4452	Salt bulk	16	oz

Figure 10-5 Prep Recipe Worksheet 1

4. *Revenue Group.* Each item needs to be assigned to a revenue group so you can track actual usage by department. In this case, the revenue group is food.
5. *Prep Location.* This identifies the prep location, or where the recipe is used, for companies with multiple locations. This helps new employees, transferred personnel, and others who might not be familiar with the item.
6. *Is it Salable?* Prep recipes are not salable (able to be sold), while menu item recipes are. Circle YES or NO to correspond with the item’s status. This is used to determine whether this item will be counted when you report sales.
7. *GL Account Number.* This space lists a general ledger (GL) account number to which the expenses for this item should be assigned. The **general ledger** is where the accounting department records all the financial accounts for a business. The ledger contains debits and credits. Debits are all the costs and expenses of your business. Credits, on the other hand, consist of all revenue, assets, and other income. Your company will assign several GL account numbers to your department, and you will determine how to charge your purchases to them.
8. *Tracking Period.* In many operations, the tracking period is used to state the period of time used when tracking an item’s usage. Circle *daily* to indicate that the item is tracked every 24 hours, *mid* if the item is tracked semimonthly, or *main* for a standard

general ledger The formal listing of accounts (ledger) containing all the financial statement accounts of a business. Every transaction flows through it.

accounting period, usually one month. Typically, items that are most expensive or are used most frequently are tracked more frequently.

9. *Batch Size.* The batch size is the total amount produced by a recipe. In our example it is 20 gallons. You should prepare the item to measure the accuracy of the batch size.
10. *Recipe Group.* Recipe groups are categories of recipes used to control and report what is made and sold. In this case, the category is soup; you might also have categories such as appetizers, entrées, side dishes, and desserts.
11. *Ingredient Item Number.* The ingredient item number is the same code number used in the inventory worksheet above for the purpose of identifying and tracking specific ingredient use.
12. *Ingredient Item Description.* Again as in the inventory worksheet, the ingredient item description is simply the name of the ingredient. It is listed with the generic name first, followed by any specific types: *spice/cinnamon stick* or *berries/raspberries*.
13. *Number of Recipe Units.* Record here the number of units for each item used in the recipe.
14. *Recipe Unit Description.* The recipe unit description will be WZ, FZ, CT, or TS depending on whether the inventory item is measured in weight ounces, fluid ounces, unit counts, or teaspoons. Your establishment may use other measures and designations besides these four.

Write Down the Large Batch Prep Recipe

Our next task is to determine the cost of the 20-gallon batch of vegetable soup. Batch prep recipes are those made in large quantities. Since we are making more than one serving, there may be left-over product that needs to be inventoried. That is one reason batch prep recipes carry inventory numbers—because these inventory items will then be used as “ingredients” in menu item recipes.

To continue with our example, we will extend the table to include costs. Each field of information represents an important function in the process. When filling out these worksheets, you should gather all of the information before you enter it into the computer or manual spreadsheets. You’ll see how the unit costs are determined by this equation:

$$\begin{aligned} \text{Unit cost} &= \text{UC} \\ \text{Case cost} &= c \\ \text{Yield percentage} &= y \\ \text{Unit per case} &= u \\ \text{UC} &= \frac{c/y}{u} \end{aligned}$$

The same could be express as follows:

$$\frac{\text{case costs} / \text{yield percentages}}{\text{units per case}}$$

All this data comes from the inventory worksheet (Figure 10-5). If you are using a computer system such as Foodco, this can be automatically calculated by the system. Alternatively, you can complete the computations manually; all of the equations are defined here for your use. Figure 10-6 is an example of how you would derive a vegetable soup recipe.

Items 1 to 14 on this chart are the same as those on the prep recipe worksheet; we are simply adding costs.

15. *Unit Cost.* To determine **unit cost**, take the case cost of an item and divide it by the yield percentage. Then divide that result by the number of recipe units per case

unit cost Cost per item.

1. Item number: <u>100</u>		2. Item active: <u>Y/N</u>				
3. Item description: <u>Vegetable soup</u>		4. Revenue department: <u>Food</u>				
5. Prep location: <u>Main kitchen</u>		6. Saleable: <u>Y/N</u>				
7. G.L. account #: <u>100-125</u>		8. Period tracking: <u>DAILY MID MAIN</u>				
9. Batch size: <u>20 gallons</u>		10. Recipe group: <u>soup</u>				
11. Ingredient item number	12. Ingredient Item description	13. Number of recipe units	14. Recipe unit description wz,lb,fz,cup, pint,qt,gal,ct	15 Unit cost \$	16 Total cost \$	17 Cost %
3245	Carrots baby	12	ct	0.612	7.35	18.96%
4024	Celery pascal	4	ct	0.48	1.918	4.95%
3223	Onion red	6	oz	0.028	0.17	0.44%
3208	Squash yellow	12	oz	0.027	0.323	0.83%
3207	Squash zucchini fresh	12	oz	0.033	0.399	1.03%
3856	Broccoli florrette iceless	48	oz	0.071	3.397	8.76%
3218	Cauliflower florette	32	oz	0.111	3.567	9.20%
4220	Base vegetarian	1	fz	0.431	0.431	1.11%
4227	Tomato puree	1	oz	0.025	0.025	0.06%
4532	Spice thyme ground	16	oz	0.509	8.15	21.02%
4688	Spice basil sweet leaf	8	oz	0.902	7.215	18.61%
4659	Spice pepper grnd. black	16	oz	0.356	5.696	14.69%
4452	Salt bulk	16	oz	0.008	0.134	0.35%
				Potential Cost:	\$ 38.775	100%
				for 20 gallons of vegetable soup		

Figure 10-6 Batch Inventory Worksheet

(Column 10 on the inventory worksheet). That gives you the cost per teaspoon, count, weight ounce, or fluid ounce. For example, assuming that celery/pascal per our inventory worksheet yields 100 percent, the unit cost of \$0.48 is derived as follows:

$$\frac{\$11.51/1}{24} = 48 \text{ cents}$$

16. *Total Cost.* Next, multiply the unit cost (Column 15) by the number of units needed for the recipe (Column 13). For example, 4 counts of celery/pascal are multiplied by the unit cost of \$0.48 to derive \$1.92. Once you do that for all the ingredients, total all these amounts. The result is the total cost of the 20-gallon batch, or \$38.80
17. *Cost Percentage.* The cost percentages are proportions of the cost of each item to the cost of the whole. Divide an item's total cost by the total batch cost to get this percentage (Column 17). If management is considering trimming down the ingredient in the recipe, a review of cost percentage is the first step.

The last step is to divide the total batch cost into individual portion sizes. At 12-ounce portions, there are 213.33 portions in 20 gallons. Here is the equation:

$$128 \text{ wz/gal} \times 20 \text{ gal} = 2560 \text{ wz/batch}$$

$$2560 \text{ wz/batch} / 12 \text{ wz portions} = 213.33 \text{ portions/batch.}$$

Then we divide the total cost (\$38.775) by 213.33 servings to get our cost, \$0.18

Assume the accompaniment price is \$0.20 for bread and butter, and we sell this whole meal for \$2.00. We will make a one-serving worksheet as our example in Figure 10-7.

1. Item number: <u>102</u>		2. Item active: <u>YES</u> <u>NO</u>				
3. Item description: <u>Vegetable soup</u>		4. Revenue department: <u>Food</u>				
5. Prep location: <u>Main kitchen</u>		6. Saleable: <u>YES</u> <u>NO</u>				
7. G.L. account #: <u>100-125</u>				8. Period tracking: <u>DAILY</u> <u>MID</u> <u>MAIN</u>		
9. Batch size: <u>12 ounce/1 serving</u>		10. Recipe group: <u>Soup</u>				
11. Ingredient item number	12. Ingredient item description	13. Number of recipe units	14. Recipe units wz,lb,fz,cup, pint,qt,gal,ct	15	16	17
				Unit cost \$	Total cost \$	Cost %
L103	Vegetable soup	12	wz	\$0.015	\$0.182	9.10%
L104	Bread and butter	1	ct	\$0.200	\$0.200	10.00%
Potential vegetable soup cost:					\$0.382	
18	Menu price:				\$2.00	
19	Potential percentages:				19.10%	
20	Target food cost:				20.00%	
21	Ideal menu price:				\$1.91	

Figure 10-7 One-serving Recipe Costing Worksheet

For Numbers 1 to 17, the terms used are the same. Now, however, we are treating a menu item as a recipe and the components of the meal as ingredients. Then we add a new set of steps, Numbers 18 to 21, that will specify the cost of the whole menu item.

potential percentage
Determined by dividing the cost by the selling price.

18. *Menu Price.* In our example, we set the menu price at \$2.00.
19. *Potential Percentage.* **Potential percentage** is determined by dividing the cost (in our example, \$0.38) by the selling price, \$2.00. This percentage may be valuable in comparing your actual cost to this ideal cost. With such comparisons, you can evaluate how well you have been following control procedures.
20. *Targeted Food Cost:* We set 20 percent as our targeted food cost for the soup menu item above. This is the food cost percentage we wanted to achieve for the soup.
21. *Ideal Menu Price.* This is the calculated price goal. Derive the ideal menu price by dividing the cost of ingredients by the targeted cost percentage. In our example, this comes to \$1.91—but we are charging \$2.00, so the price has a cushion of about 1 percent. Maintaining this cushion is prudent because at this point management is not aware of waste and other negative factors that may influence the actual cost of the menu items.

Write Down Prep Recipes for Any Accompaniments

An accompaniment is something served alongside an entrée. In our example, the soup accompaniments are bread and butter, assumed to cost \$0.20. An accompaniment prep recipe looks

like other recipe worksheets, except that it contains only the accompanying items and their unit costs. Plate garnishes fall into this category as well.

Many accompaniments go with more than just one meal; for example, bread and butter might also go with a roast beef, meat loaf, chicken, or steak dinner. Thus, you can use this accompaniment prep recipe over and over. Using one set of accompaniments for several menu items will save you time in completing and updating your potential cost recipes. When you change the costs on one sheet, the change will apply to all the meals to which the accompaniment recipe pertains.

In addition to bread and butter, several accompaniments and garnishes (left column, Figure 10-8) can be added to multiple entrées (right column).

In this chart, you can see an important new term: **sales mix**. The quantities of each item you sell will affect your potential costing; these quantities, in relation to one another, are called your sales mix.

sales mix Number of sales of menu items; perhaps patternized. Also, the products and sales packages offered.

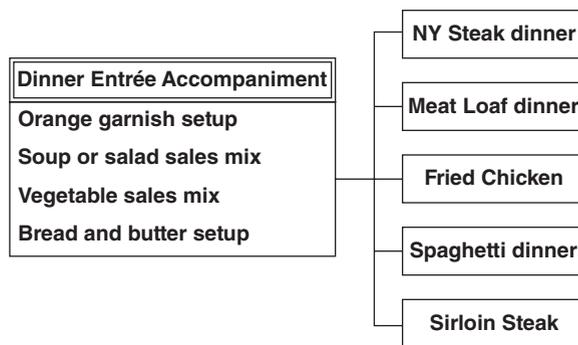


Figure 10-8 Dinner Accompaniment

Sales Mix Prep Recipe

The last type of prep recipe is called the sales mix recipe. This is a special type of prep recipe that allow you to account for cost fluctuations that happen when customers choose from a variety of items in varying quantities. Ideally, your **point of sale**, or **POS, system** will handle this for you; if your system does not have the capacity to do this, however, most menu-analysis systems (such as Foodco) will allow you to make an educated guess. This kind of guessing is adequate for potential-costing tasks.

point-of-sale (POS) system A sales transaction register and processor.

There are several different types of sales mix recipes that you may need to establish. The first type is used for items that are included with a meal but may change on a daily basis. Since soup selections change frequently, for example, you must determine the percentage of sales for each type of soup.

In this type of sales mix recipe, all the ingredients in the sales mix use the same unit of measure. This means that when you set up these recipes for soups or salad dressings, for example, each item will be measured by the fluid ounce (FZ). By setting up sales mix recipes with that measurement, you will have a much easier time determining and comparing the percentages of the products. It will also be easier to adjust the sales mix recipes when needed because the percentage of customer-selected choices will often change. Note, however, that you only need to make sales mix recipes if your POS cannot track which products are used when you offer such choices. Salad dressings might be one example of this situation. Figure 10-9 shows an example of a salad dressing sales mix recipe.

In Figure 10-9, we are using the following percentages as an example: thousand island dressing is used 15 percent of the time, blue cheese 35 percent, French 10 percent, and ranch

1. Item number: <u>106</u>		2. Item active: <u>YES</u> <u>NO</u>	
3. Item description: <u>Dressing sales mix</u>		4. Revenue Group: <u>Food</u>	
5. Prep location: <u>Main kitchen</u>		6. Saleable: <u>YES</u> <u>NO</u>	
7. G.L. account #: <u>100-125</u>		8. Period tracking: <u>DAILY</u> <u>MID</u> <u>MAIN</u>	
9. Batch size: <u>1 FZ</u>		10. Recipe group: <u>Sales mix</u>	
11. Ingredient Item number	12. Ingredient Item description	13. Percentage of recipe units	14. Recipe unit wz,lb,fz,cup, pint,qt,gal,ct
200	Dressing Thousand Island	0.15	fz
201	Dressing Bleu Cheese	0.35	fz
202	Dressing French	0.10	fz
203	Dressing Ranch	0.40	fz

Figure 10-9 Prep Recipe Worksheet 2

Discussion Point

Is it a good idea to build a small percentage of waste into potential costs, since some minor waste is inevitable? Why or why not?

40 percent, for a total of 100 percent. When you use a dressing in a menu item, just enter the number of fluid ounces.

In a perfect world the potential cost will equal the actual cost, but as there is no such thing as a perfect world, there will always be some differences between potential cost and actual cost. It is up to you and management to reduce this difference to acceptable profit-objective levels. It is with this in mind that we discuss the term *actual cost*.

ACTUAL FOOD COST

Actual cost is a fairly self-explanatory term: Actual food cost is how much you actually spend on food. This is the amount that will show up on your profit and loss statement. In Chapter 1 we presented a restaurant industry sales chart prepared by the National Restaurant Association. The chart revealed actual cost percentages from different types of restaurants. As you may remember, the most prominent cost was food cost percentages. As you saw in the chart, there are many expenses in doing business; some are controllable, while others are not. Actual food cost is the most controllable and flexible cost. It consists of the following five areas:

- *Cost of Food Sold to Customers.* This is equal to your potential cost.
- *Cost of Food Lost through Poor Purchasing Practices.* This includes incorrect items ordered or incorrect orders due to poor quality, inappropriate quantity, or other incorrect purchase specification.
- *Cost of Food Lost in Receiving and Storage.* This includes spoilage, theft from the receiving dock, theft from storage, short shipments, and improper receiving procedures.
- *Cost of Food Lost in Production.* This includes inaccurate yield tests, inaccurate recipes, overportioning, overproduction, and waste.
- *Cost of Food Lost by the Front of the House.* This includes incorrect orders, spills, and broken orders.

There are innumerable ways to affect your actual food cost percentage. You may think the process looks complicated, but it is really a combination of common sense and following practical steps. First you calculate the cost of goods used, as follows:

$$\begin{array}{l}
 \text{beginning inventory} \\
 + \text{ purchases} \\
 + / - \text{ requisitions and transfers} \\
 - \text{ ending inventory} \\
 \hline
 = \text{ cost of goods used}
 \end{array}$$

Let’s work through an example. Assume your beginning food inventory is \$1,000. You have purchased \$600 of goods and transferred \$100 between departments. Your ending inventory is \$950. Calculate actual food cost according to Figure 10-10. (Note: Some food cost adjustments are a bit more complex; these will be covered in the chapter on monthly inventory and monthly actual food cost, Chapter 11.)

Figure 10-10 Cost of Goods Used

Beginning inventory	1,000
Plus purchases	600
Plus (or minus) net requisitions and transfers	100
Total inventory before ending inventory	1,700
Minus ending inventory	950
Cost of goods consumed or used	750

The second step is to determine your food sales. Let us assume that your records show \$2,500 in food sales. Now you can calculate your actual cost of goods, as follows:

$$\text{actual food cost} = \frac{\text{cost of goods}}{\text{sales}} = \frac{750}{2,500} = 30\%$$

It is actually quite simple to derive actual food cost percentages. Now we have the challenge of finding out why this actual food cost differs from the potential cost. For instance, assume that the sales figure of \$2,500 is equal to selling 100 pounds of prime rib at \$25 per pound. But what if you actually used 120 pounds? If you bought the prime rib at \$6 per pound, you spent \$120 more than necessary, and you lost potential sales of \$500. If you do not control this type of loss, the problem will grow and you will be left wondering why. Any one of the forms of loss above could be affecting your loss dramatically; we will now examine each one.

Cost of Food Sold to Customers

This is the only legitimate reason for incurring food cost. The cost of food sold to customers is equal to the potential cost. Anything you spend over and above this is loss. According to the National Restaurant Association, 26 percent of restaurants foreclose each year due to lack of planning and effective cost control. Potential costing gives you an excellent basis against which to measure your success. Then you can analyze where your costs are out of control and fix them. If you account for your sales correctly, and your costing data are accurate, any food cost discrepancies will result from one or more of the factors discussed below.

⑩ Discussion Points

1. What are the causes of variances between potential and actual costs?
2. If the actual food cost percentage equals the target food cost percentage set by management, but exceeds the potential food cost percentage, is there a problem? If you were the owner of the operation, what would you suggest?

Cost of Food Lost through Poor Purchasing Practices

Purchasers must follow their own set of specifications in ordering, as discussed in Chapter 4. Loss can occur through this department if purchasers order product that cannot be used, for example. If too much product is ordered, the department loses money in waste and spoilage. If too little is ordered, guest satisfaction can be compromised. It is vital to monitor what and how much is purchased using detailed purchase specifications.

The significance of accurate yield test results cannot be overstated when it comes to food cost controls. If your yield result is not accurate, the information needed for purchasing at the right price and for establishing menu prices is called into question. The primary tenet of cost control is this: *know your cost*. Accurate yield test results will ensure that you are working from the correct cost structure as you plan and implement actions to save money. Take beef tenderloin as an example. Suppose the yield result is actually 40 percent, rather than the recorded 65.5 percent, and assume that the menu price is \$30.00. For this example we will also assume that the cost of other ingredients equals \$4.00. We already know that the original purchase price was \$6.69, and the yield percentage cost was \$10.21. We will make the calculation in Figure 10-11.

Figure 10-11 Purchasing Specifications

line		Correct Yield Test at 40%	Incorrect Yield Test at 65.5%
1	Menu Price	\$30.00	\$30.00
2	Less yield test cost (\$6.69 divided by %)	\$16.73	\$10.21
3	Less other ingredient cost	\$4.00	\$4.00
4	Total cost (line 2 plus line 3)	\$20.73	\$14.21
5	Cost percentage (line 4 divided by line 1)	69.10%	47.37%
6	Profit margin (line 1 minus line 4)	\$9.27	\$15.79

There is a great deal of difference when the yield percentage is distorted even minimally. The company could easily run into financial difficulties if all menu items reflect this kind of inaccuracy.

Cost of Food Lost in Receiving and Storage

You will need to follow all proper receiving procedures from this book to monitor incoming product, to check its value, to extend prices, and to document product movement through the company from the storage dock to the customer's plate. When a company does not adhere to these procedures consistently, unusable or incorrect products slip through—and end up as loss. On the other hand, shipments may not contain everything that was ordered and paid for; this, too, is a loss. Meat cuts, weights, prices, and purchase specifications must be verified for accuracy and compliance with each and every shipment.

The storeroom must be constantly reviewed to see which products need to be used before spoiling. If not kept to a minimum, spoilage can cost a company tremendously. Storeroom personnel must practice proper product rotation to ensure that items are used in a logical and timely manner.

Theft is an industry-wide cost concern. It is alarmingly common and extremely costly to the company. Shipments must be monitored from entry to exit. Even the receiving dock is an

unstable location, as are unstaffed storage areas. Every time a product is removed, it must be documented—who took which product, in what quantities, to which outlet or kitchen. Another avenue thieves commonly use is the trash can, in which they might throw whole goods in order to sneak them out of the building. Use clear trash-can liners to make this scheme easier to spot. High-cost meats and seafood are especially vulnerable; in the next sections we will introduce two forms that can help you monitor these items in an organized manner.

Cost of Food Lost in Production

A study conducted by Foodco reveals that between 22 and 25 percent of food cost variance is the result of food lost in kitchen production. In Chapter 1, the Sea Breeze Hotel Food and Beverage Division reported a profit of only 2 percent. The low food and beverage profit was due to high cost: Cost of sales was 38 percent.

When controlling cost, you must set values for your menu items. To be able to do so, you must be sure that each item will be prepared at the same cost each time it is prepared. This calls for great consistency on the part of the kitchen staff. Consistent portion size is critical; put into place measures to standardize portion size. The use of standard portion controls also ensures that the guest receives a consistent product. You will want to display standard portion instructions and photographs in the kitchen and butcher shop areas for constant reference. It is helpful to post exact weights and counts for each item. The restaurant manager needs to enforce consistent presentation; every meal must be prepared to meet your standard specifications. The advantages are twofold; both staff and guests will benefit. Both management and employees will be satisfied for the following reasons:

- Food cost is maintained at a consistent level. A cheeseburger meal will always have the same amount of meat, cheese, and fries per serving, and will therefore cost the same each time.
- Employees will be trained in consistency, so no one feels less qualified for each task. This promotes morale because employees can say, “I know how,” and demonstrate it.
- Standard portion control helps management with their documentation efforts. Management can tell the staff why portion control is important and show them some of the data affected by consistency.
- Putting photographs of the meals in the work area facilitates employee referencing and helps to maintain consistent presentation.
- Preparation and serving are easier because they are the same at all times. This translates to faster service, and the staff can be certain that what they promise a guest is what the guest will receive.

Customers will also be more satisfied, for the following reasons:

- They will receive the same portion size for the same menu item each time they come to your restaurant. Even new customers might notice if people at the next table get twice as many fries as they did.
- They will see the restaurant as reliable, uniform, and consistent. They will know what to expect, and they will know what they can afford.

Controlling Entrée Items

It is vital to monitor high-cost entrée items after they have been issued to the outlet kitchens. The purpose of controlling expensive inventory is to monitor the issue and return of such items to and from the butcher shop and through interdepartmental transfers. All high-cost food categories, such as prime cuts of meat, poultry, fish, and seafood, should be tracked in

this way. Whole pieces of cooked or raw meat, such as prime rib, tenderloin, and strip loin, should be monitored by weight. Items such as steaks, fish, and seafood that have not yet been portioned should be counted by their units. Items in boxes, such as scampi, are controlled by how many are in each box, or yield per box. One way you can control these items more exactly is by having an independent person perform audits on the process with the chef or the butcher. In a large operation, this person could be the accountant or the cost controller. Figure 10-12 is an example of the form you would use. The chef or butcher and independent auditor should complete this form for each outlet, each day. The following list describes what information goes in each row; the quantities are examples only.

1 CHEF _____
 2 COVER FORECAST _____
 3 DATE _____

4 OUTLET _____

ITEM	FILET 12 OZ	FILET 8 OZ	NY STRIP 16 OZ	RIBEYE 16 OZ	PRIME RIB 12 OZ	VEAL CHOP 8 OZ	LOBSTER TAIL 10 OZ
BEGINNING INVENTORY	5	3					
ORDER AMOUNT	10	15					
OPENING INVENTORY	15	18					
ADDITIONS	2	3					
TOTAL AVAILABLE	17	21					
CLOSING INVENTORY	3	5					
AMOUNT USED	14	16					
POS # SOLD	13	16					
VARIANCE	1	0					
COMMENTS	One 12 ounce of filet was returned due to over-cooking, and was replaced						

Figure 10-12 Entrée Control Form

1. The name of the person or persons filling out the form.
2. The number of meals, or covers, expected for the meal period.
3. The date.
4. The outlet name, for operations that have more than one.
5. The cut of meat. These can be preprinted, as in our sample, if you have standard offerings.
6. The portion size. These can also be preprinted.
7. The outlet's beginning inventory.
8. The amount that arrived in the day's order or requisition.
9. The amount available when the outlet opens.
10. Any other additions during the meal period.
11. The total available inventory.
12. The inventory after the close of business.
13. Line 11 minus line 12; how much was actually used.
14. The number actually sold during the meal period. Get this information from your POS system, if you have one, or from a manual tally.

15. The difference between lines 13 and 14; this will show any discrepancy that should be investigated.
16. The variance from line 15 should be explained here, if possible.
17. The second form, Figure 10-13, is analogous to the Entrée Control Form. This requisition should include the following data, entered by the butcher or the chef:

1 CHEF _____

3 OUTLET _____

2 DATE _____

4	ITEM	FILET	FILET	NY STRIP	RIBEYE	PRIME RIB	VEAL CHOP	LOBSTER TAIL
5		12 OZ	8 OZ	16 OZ	16 OZ	16 OZ	8 OZ	10 OZ
6	QUANTITY USED							
7	QUANTITY RETURNED							
8	OPENING INVENTORY							
9	TOTAL AVAILABLE							
10	CLOSING INVENTORY							
11	AMOUNT USED							
12	ACTUAL SOLD							
13	VARIANCE							
14	COMMENTS							

Figure 10-13 Butcher Requisition

1. The name of the person or persons filling out the form.
2. The date the meat is issued to the outlet.
3. The name of the outlet to which the items were issued (each outlet should have its own sheet).
4. The description of the cut of meat; these can be preprinted.
5. The portion size. These can be preprinted as well.
6. The quantity of each item issued to the outlet throughout the day.
7. The quantity of items returned the next day.

Then the accountant or cost controller enters the following information:

8. The sum of all inventory in a Total Available column.
9. Total available minus closing inventory; the amount used.
10. The actual quantity sold, according to the POS daily sales tape.
11. Quantity used minus actual quantity sold; the variance.
12. Brief descriptive comments, if necessary. The accountant should attempt to reconcile all variances.

From these controls, particularly from the comments, you can get an idea of where to focus your cost control efforts in the area of production losses.

Inaccurate Recipes

Another factor affecting production losses is recipe accuracy. Each recipe must be both tested and standardized. Ingredient specifications and amounts must be exact and must delineate the proper sequence of steps. This also helps to ensure consistency, so that the product comes out of the kitchen the same every time, regardless of who prepares it. You can use the prep and menu item recipe formats from the potential costing worksheets presented earlier in this chapter. Using different ingredients, amounts, or steps can create an excessive cost to the company; consistency and guest satisfaction are compromised, cost calculations are thrown off, and the end result could be completely wasted product. Most operations achieve recipe consistency through the following actions:

- Conducting test recipes for all items
- Placing recipe cards where chefs and servers can always use them
- Displaying photos of what each plate should look like
- Conducting menu tastings on a regular but random basis with all staff members
- Training staff to recognize inconsistencies and to appreciate standard methods

Controlling Waste

Waste is defined as any ill-considered or thoughtless food expenditure without valuable results. It is sometimes an inadvertent or inevitable loss without equivalent gain in food cost. Waste might take the form of spoilage, breakage, or spillage. In addition, production and preparation might not meet your standards. Take the simple case of an onion, for example: The yield factor will be affected by how many layers the cook removes in preparation. What difference will that make? It depends on how many onions you use, and how much of each onion is lost.

Keep an eye on your garbage cans to monitor how much is wasted there. Studies show that waste accounts for 15 percent of total solid trash, and your business has to pay to have that removed—a further loss. It is a worthwhile money-saving endeavor to keep an eye on your trash.

Increasing public concern about the environment lends additional impetus to the issue of waste. Crowded landfills do not need the food and beverage industry's excess. In some cases, waste can be used profitably. For example, residues from frying oil have some market value in the cosmetic industry. Although this does not translate into dramatic food cost savings, at least you can take advantage of an environmentally sound outlet for your otherwise wasteful products.

Waste is a part of production cost, and it should be reported as such. The amount may vary from time to time and from one employee to another, depending on experience with the product. Waste might also be attributable to defects in the products themselves. Though waste cannot be totally eliminated, management control efforts can have a positive impact. Reporting losses will at least show you the areas you need to focus on. Also, you can ask staff members how to control waste problems. This gets them involved and might provide you with innovative solutions. Figure 10-14 is a form commonly used to report products wasted through breakage, spoilage, or spillage. Management should require staff members to use this form or one like it. From this form the manager should determine the unit cost of what was lost, multiply that cost by the lost quantity, and keep records of each loss incident.

As indicated above, waste can also be due to product defects; if so, call it to the attention of the vendor. Depending on how severely the defects affect your food cost, you may wish to consult with vendors by using the questionnaire shown in Figure 10-15. In this way, you can solicit

TO BE USED FOR AUTHORIZING ALL SPILLAGE, BREAKAGE AND SPOILAGE

DATE: _____

AUTHORIZATION: _____

OUTLET: _____

Person Reporting Loss	Item Lost, and Quantity	Brand or Product #	Type: W - Wine L - Liquor F - Food	Value per Unit	Total Value	Reason

Figure 10-14 Waste Control Form

answers and recommendations on food product utilization and avoiding waste. Normally you would accompany this form with a request for a price quotation. We discuss it here because of its relevance to the topic of waste.

Cost of Food Lost by the Front of the House

Restaurant servers and bus personnel can also cause loss. They must be trained to take orders accurately and to be sure that the kitchen knows exactly what the guest wants. In this way you can limit the amount of loss from incorrect orders. Using trays, taking multiple trips, and soliciting help from other staff members can help to minimize dropped-food accidents. There are also proven plate-carrying techniques that help servers keep control of them.

SUMMARY

In this chapter, we discussed controlling the costs of food in a restaurant outlet. In order to help you learn to control these expenses, we showed you the basics of cost establishment. Targeted ideal food cost was defined as the expected percentage of cost that the company wishes to spend, calculated by first defining how much profit the company wants to make. Potential cost is the minimum cost of food products used in preparation; this is the best possible cost amount, based on the items you know you will purchase. Finally, actual cost is what you actually spend. We discussed how to arrive at all of these costs and outlined what they mean to your operation.

Controlling costs involves an amalgam of techniques that minimize your food expenses. You need to look for overspending in the purchasing department, where incorrect ordering and inaccurate yield testing can cost the company money. Receiving and storage personnel must be trained to keep their area free of waste and loss. Incorrect procedures, failing to check each shipment upon receipt, theft, and spoilage are all mistakes to watch for here. Also, the transfers of entrée items must be monitored, as these products are most often stolen and do the most damage to your inventory numbers when they're missing.

Figure 10-15 Waste Price Quote Form

Questions	Yes/No	Brief description of suggestion	Approximate savings if suggestion is approved
Will the quality of the products specified stay consistent throughout the year to eliminate waste and yield variances? If not, why? Which month or period?			
Can you suggest any preparation changes that will lower the cost of the item? Specify products to vendor.			
Can you suggest any product handling difference?			
Are there any finished requirements that could be eliminated or relaxed?			
Have you any other suggestions which might simplify portioning or reduce cost?			
Do you have a standard item that can be satisfactorily substituted for this product? What is it? What does it cost? Is it USDA or qualified? What would a qualification cost?			

In the production area, cooks must test recipes, and each must be measured and recorded accurately, photographed, and displayed to maximize consistency. Kitchen waste is also a loss leader, and it must be monitored daily. Finally, the front-of-the-house staff must be trained to take and deliver orders carefully and with a minimum of mistakes and breakage. With these controls in place, you are well on your way to success with your company's food cost control.

CHAPTER QUESTIONS

Critical Thinking Questions

1. If the actual food cost equals the potential food cost, yet is significantly above the targeted food cost, what is the problem? What should be done?

2. What can cause the actual food cost percentage to drop below the potential food cost percentage?
3. Your favorite purveyor has just approached you with a “great deal.” His company received a huge discount on beef by purchasing a massive quantity. Although your specifications call for USDA Prime beef, the price on the USDA Choice is exceptionally low. Given the following information, which should you purchase and why?

	GRADE	AP PRICE per #	YIELD %
Purveyor A	choice	\$4.65	85
Purveyor B	prime	\$5.98	80

Never compromise your quality standards.

4. Address this make-or-buy decision: You have made black forest cake at your restaurant for years, but your purveyor just showed you a premade cake that looks and tastes exactly like yours. Given the following information, how much does it cost per portion to make it, and how much does it cost to buy it?

To make:

total ingredients: \$8.65

time: 2 hours, 20 minutes

rate of pay: \$12.50 per hour

yield: 5 cakes (10 slices each)

To buy:

cost: \$40.00

yield: 6 cakes (10 slices each)

Objective Questions

1. Although manual cost control systems are typically more time consuming than computerized systems, they can be just as accurate. True or False?
2. Having an actual food cost percentage below the potential food cost percentage demonstrates that the chef is doing an excellent job. True or False?
3. If the total potential food cost for a menu item is \$4.57, and the targeted food cost percentage is 30, what is the targeted selling price?
4. If the selling price of an item is \$12.95, and the potential food cost is \$3.55, what is the potential food cost percentage?

For Question 5: Using the information provided, calculate how many purchase units would be needed to prepare a roast beef dinner serving 600 customers.

Menu Item	Purchase Unit	Portion Size	Edible Yield (Percent)
Beef	1 pound	6 oz.	80
Mashed potatoes	50-pound box	5 oz.	84
Winter squash	1 pound	4 oz.	64
Green beans	10-pound case	4 oz.	76
Wine	1 liter	6 oz.	98

For Question 6: Using the information provided, calculate the number of pounds needed to serve a forecasted weekly customer count of 3,200 covers.

Item	Standard Portion	Edible Yield (Percent)	Menu Mix (Percent)
Steak	12 oz.	75	32
Lamb loin	6 oz.	40	22
Baked ham	6 oz.	65	28
Veal loin	5 oz.	80	18

Multiple Choice and Open Response Questions

- Assuming the menu contains items with various cost percentages, which of the following can be calculated prior to sales?
 - Potential cost percentage
 - Actual cost percentage
 - Targeted cost percentage
 - Both A and C

For Questions 2–8: A food inventory taken at the Riverside Inn on January 1, 1998, totaled \$3,500. During the month the business purchased \$32,000 worth of food products. Prior to business operation on February 1, 1998, the restaurant calculated a food inventory of \$4,200. The restaurant brought in \$112,000 in food sales during the month of January.

- What is the cost of food sold for the month of January?
 - \$32,700
 - \$31,300
 - \$39,700
 - none of the above

3. What is the cost of food sold percentage for the month of January?
 - a. 32
 - b. 30
 - c. 28
 - d. 26

4. What should the potential food cost (in dollars and percentage) at the Riverside Inn have been given the following sales mix?

Item	Number Sold	Selling Price	Potential Food Cost (Percent)
Rib-eye steaks	1,000	\$23.75	25
Fish	2,000	\$28.00	32
Chicken	1,500	\$21.50	20

Potential Food Cost: \$_____

Potential Food Cost: _____ percent

5. What is the variance between actual and potential food cost? \$_____

6. To determine why the variance between the actual and potential food cost occurred, the Riverside Inn's management reviewed the following data:

Item	Portion Size	Yield (Percent)	Beginning Inventory	Purchases Inventory	Ending Inventory
Steaks	12 oz	80	#120	#1,000	#182.5
Fish	8 oz	70	#70	#1,600	#130
Chicken	6 oz	90	#85	#650	#110

7. Which item exceeded purchase needs? By how much?

8. Fill in the numbers missing from the income statement below:

Sales

Food	500,000	___
Beverage	200,000	___
Total Sales	_____	
Cost of Sales		
Food	_____	30%

Beverage	_____	20%
Total Cost of Sales	_____	27%
Gross Profit	_____	_____
Controllable Expenses		
Payroll	_____	35%
Utilities	10,000	—
Repairs	2,000	—
Total Controllable Expenses	_____	_____
Profit Before Rent or Occupancy Costs	_____	_____
Rent or Occupancy Cost		
	70,000	—
Net Profit before Income Tax	_____	_____

CASE STUDIES

Case Study 1: Cost Control: Dollars and Sense

Michael's Bistro has been losing one cent on the dollar for a number of years, and Joe William, the owner, is tired of writing checks to cover losses. This exercise will show you how to trace where loss is occurring and put a stop to it.

In 2005, Michael's profit and loss statement looked like this:

	Actual Dollars	Percent of Sales
SALES		
Food Sales	\$407,774	79
Beverage Sales	\$108,396	21
Total Sales	\$516,170	100
EXPENSES		
Cost of Food Sales	\$152,786	37.5 (percentage by category)
Cost of Beverage Sales	\$43,358	40 (percentage by category)
Total Cost of Sales	\$196,144	38 (percentage of total sales)
LABOR		
Payroll Wages	\$144,528	28 (percentage of total sales)
Tax and Benefits	\$25,808	18 (as a percentage of wages)

Total Payroll Cost	\$170,336	33 (percentage of total sales)
OTHER EXPENSES		
All other expenses	\$154,851	30 (percentage of total sales)
TOTAL REVENUE	\$516,170	100
TOTAL EXPENSES	-\$521,331	-101
NET PROFIT AND LOSS	-\$5,161	-1

According to the annual National Restaurant Association Operating Report, the median cost percentages for full-service restaurants are as follows:

The Restaurant Industry Dollar: Full-Service Restaurants	Percentage
Where it came from:	
Food and Beverage Sales	100
Where it went:	
Cost of Food and Beverage Sales (Note: Beverage is 40 percent of revenue)	33
Salaries and Wages, Including Benefits	33
Operating Expenses	6
Corporate Overhead	3
General and Administrative Expenses	3
Depreciation and Insurance	18
Income Before Income Taxes	4

Your task:

1. Given the situation above, how would you present your concern without creating panic among junior-level staff or revealing figures that would likely find their way into the local paper or a competitor's boardroom?
2. How would you go about identifying cost of sales problems?
3. What corrective steps would you take to address cost of sales problems?

Case Study 2: Loss from Production Waste

"These statements can't be right," said Patrick Matthew, president of Michael's Bistro. "Our sales in the second quarter were up by 25 percent over the first quarter, yet these income statements show a precipitous loss in net income for the second quarter. Those accounting people have fouled something up." Patrick was referring to the following statements:

MICHAEL'S BISTRO					
Income Statements					
For the First Two Quarters					
	1st Quarter	Percent	2nd Quarter	Percent	Variance
Food Sales	1,000,000	83.33	1,250,000	83.33	
Beverage Sales	200,000	16.67	250,000	16.67	
Total Food and Beverage Sales	1,200,000	100.00	1,500,000	100.00	25
Food Cost	320,000	32.00	500,000	40.00	
Beverage Cost	76,000	38.00	95,000	38.00	
Total Cost of Sales	396,000	33.00	595,000	39.67	7
Salaries and Wages	330,000	27.50	405,000	27.00	
Employee Benefits	35,000	10.61	42,971	10.61	
Tax and Benefits	31,000	9.39	38,030	9.39	
Total Payroll	396,000	33.00	486,000	32.40	-1
China, Glass, Silverware	10,000	0.83	10,000	0.83	
Credit Card Fee	12,000	1.00	15,000	1.00	
Decorations Expense	4,000	0.33	4,000	0.33	
Equipment Repairs—General	8,000	0.67	8,000	0.67	
General/Office Supplies	2,000	0.17	2,000	0.17	
Janitorial/Cleaning Supplies	5,000	0.42	5,000	0.42	
Laundry and Dry Cleaning	2,500	0.21	4,000	0.21	
Linens—Replacement	1,500	0.13	1,500	0.13	
Operating Supplies	25,000	2.08	30,000	2.08	
	1st Quarter	Percent	2nd Quarter	Percent	Variance
Postage	5,000	0.42	5,000	0.42	
Printing Supplies/Forms	5,000	0.42	5,000	0.42	
Promotion	10,000	0.83	10,000	0.83	
Smallwares/Utensils	10,000	0.83	12,000	0.83	
Telephone	3,000	0.25	3,000	0.25	
Trash Removal	5,000	0.42	5,000	0.42	
Uniforms—Replacement	3,000	0.25	3,000	0.25	
Utilities	15,000	1.25	20,000	1.25	
Controllable Profit	126,000	10.50	142,500	9.50	-1
Rent	36,000	3.00	36,000	3.00	

Interest Expense	144,000	12.00	144,000	12.00	
Depreciation—Equipment	60,000	5.00	60,000	5.00	
Property & Liability Insurance	60,000	5.00	60,000	5.00	
Total Noncontrollables	300,000	25.00	300,000	20.00	-5
Profit and Loss Before Tax	-18,000	-1.50	-23,500	-1.57	

After studying the statement briefly, Patrick called the controller to see if the mistake in the second quarter could be located before the figures found their way to the press. The controller stated, “I’m sorry to say that those figures are correct, Patrick. I agree that sales went up during the second quarter, but the problem stems from the loading dock, the storeroom, the kitchen, and dining room.”

Patrick was confused by the controller’s explanation. He replied, “This doesn’t make any sense. I ask you to explain why we are losing money, though sales went up, and you talk about the production area. You always tell me that food cost is high because the customer orders high-cost items from the menu. If sales go up, then profit should go up. Shouldn’t that be happening? Do you have a better explanation?”

Your answers will be guided by the following information:

	1st Quarter	Percent	2nd Quarter	Percent
Beginning Inventory	100,000		80,000	
Purchases	300,000		490,000	
Ending Inventory	80,000		70,000	
Product Yield	5.12	86	?	
Average Check	\$ 16.00		\$ 16.00	
Cover Count	62,500		78,125	

The restaurant consistently uses last-price method for inventory valuation. The restaurant scale is not calibrated.

Your task:

1. Identify and discuss potential problems in receiving.
2. In our case study, the restaurant has a walk-in cooler, and the temperature is very inconsistent, resulting in short product shelf life. Given that, how would you address this problem?
3. What is the percentage for second quarter product yield?
4. Identify and discuss your potential product yield issues.
5. Assuming the yield percentage is correct, what should the cost of sales be?
6. What did the controller mean when he said the problem extended to the dining room?

Case Study 3: Development of Costing and Variance

Colin, the executive chef of the Terrace Restaurant, produces a variety of fruit-flavored frozen sorbets for his dessert menu daily. For many years, frozen sorbets had accounted for 90 percent of restaurant dessert sales, attracting young and old alike. However, other restaurants in the area began featuring similar sorbets on their menu, and price competition has now become increasingly important. Keri, the Terrace Restaurant controller, is planning to implement a potential cost for the fruit-flavored sorbets and has gathered considerable information from Colin on production and ingredient requirements. Keri believes that the use of potential costing will allow the Terrace Restaurant to improve cost control and make better pricing decisions.

The sorbets are produced in 10-gallon batches, with each batch requiring 6 quarts of good strawberries. The fresh strawberries are sorted by hand before they are blended with the other ingredients. Because of imperfection in the strawberries and normal spoilage, 1 quart of berries is discarded for every 4 quarts of acceptable berries. Generally, it takes two minutes of direct labor time to sort berries and to obtain 1 quart of acceptable fruit. These acceptable strawberries are then blended with the other ingredients. Blending requires 18 minutes of direct labor time per batch. After blending, the sorbet is packaged in 12-ounce containers. Packaging takes 30 seconds per container. Keri has gathered the following pricing information:

- The Terrace purchases strawberries at a cost of \$10 per flat or case, which is equivalent to 2 quarts of strawberries. All other ingredients cost a total of \$2 per gallon.
- Direct labor is paid at the rate of \$12 per hour.

We will assume that to produce a 10-gallon batch of sorbet, materials cost was \$63.75 and labor cost equaled \$24, or two hours at the rate of \$12 per hour.

Your task:

1. Calculate the potential cost of material per 12-ounce container based on the information above.
2. Calculate the direct labor cost per dozen 12-ounce containers.
3. Discuss the possible causes of unfavorable materials price variances, and identify the individual(s) who should be held responsible for these variances.
4. Discuss the possible causes of unfavorable labor efficiency variances, and identify the individual(s) who should be held responsible for these variances.
5. How much can the Terrace sell the sorbet for if the target food percentage is 25?