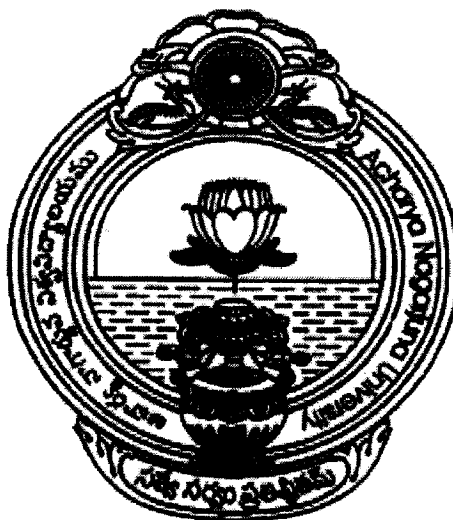


FOOD & BEVERAGE PRODUCTION
PGDHM,



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FOREWORD

Acharya Nagarjuna University, since its establishment in 1976, has been moving ahead in the path of academic excellence, offering a variety of courses and research contributions. The University achieved recognition as one of the eminent universities in the country by gaining A grade from the NAAC 2016. At present Acharya Nagarjuna University is offering educational opportunities at the UG, PG levels to students of 447 affiliated colleges spread over the two districts of Guntur and Prakasam.

The University had started the Centre for Distance Education in 2003-04 with the aim to bring Higher education within the reach of all. The Centre has been extending services to those who cannot join in colleges, cannot afford the exorbitant fees as regular students, and to housewives desirous of pursuing higher studies to study B.A., B.Com, and B.Sc., Courses at the Degree level and M.A., M.Com., M.Sc, M.B.A. and LL.M. courses at the PG level.

For better understanding by students, self-instruction materials have been prepared by eminent and experienced teachers. The lessons have been prepared with care and expertise. However constructive ideas and scholarly suggestions are welcome from students and teachers. Such ideas will be incorporated for the greater efficacy of the distance mode of education. For clarification of doubts and feedback, Weekly classes and contact classes are arranged at UG and PG levels respectively.

I wish the students who pursue higher education through Centre for Distance Education will not only be personally benefited by improving their qualifications but also strive for nation's growth by being a member in Knowledge society. I hope that in the years to come, the Centre for Distance Education will grow in strength by introducing new courses, catering to the needs of people. I congratulate all the Directors, Academic coordinators, Editors, Lesson - Writers, and Academic Counsellors and Non-teaching staff of the Centre who have been extending their services in these endeavours.

Prof. A. Rajendraprasad
Vice - Chancellor
Acharya Nagarjuna University

PGDHM

PAPER – I: FOOD & BEVERAGE PRODUCTION

Objectives: To impart knowledge of controls aspect of F & B department and related functions.

Unit – I

Importance of controls in hotels – Control cycle in a hotel – Determining F & B Standards – Standard recipes, standards yields, standard portion sizes.

Unit – II

The purchase cycle – Recognising need – preparing standard purchase specification, sources of supply, selection of supplier, Ordering goods, Purchase orders – Reviewing procedures – Delivery invoice receiving report – delivery house – storing : store design – Inventory control, perpetual inventory, bin card, inventory taking procedures – issuing – FIFO, LIFO.

Unit – III

The meaning of costs – types of costs – objectives of food costing – types of food cost reports – Standard food costs – variance analysis – food cost percentage – menu engineering – concept, applications.

Unit – IV

Food cost control – production planning, forecasting requirement, sales histories, formulating production plans, production planning and food purchasing, control of wastage – serving controls – server responsibilities, service procedures – use of computers in food cost control.

Unit – V

Purchasing of liquors – legal requirements, assessment of quality, receiving control, store room control – service control – Standard cost control Standard revenue control – quality control – Beverage dispensing equipment.

Recommended Books:

1. Jack. D. Ninemeier – Planning And Control for Food & Beverage - AHMA

Total No. of Questions : 10]

[Total No. of Pages : 01

**PG DIPLOMA EXAMINATION, MAY – 2015
HOTEL MANAGEMENT**

(Paper - I) : Food & Beverage Production

Time : 3 Hours

Maximum Marks : 75

Answer any Five questions.

All questions carry equal marks.

- Q1)** Bring out the phases in the control cycle of a hotel.
- Q2)** How are standards determined for food and beverages?
- Q3)** State the contents of standard purchase specification.
- Q4)** What are the merits of FIFO and LIFO methods of issue of inventory?
- Q5)** Explain different kinds of food cost reports.
- Q6)** Bring out the applications of menu engineering.
- Q7)** State the considerations while formulating production plans.
- Q8)** Describe the use of computers in food cost control.
- Q9)** Explain the legal requirements relating to purchase of liquors.
- Q10)** How do you select beverage dispensing equipment?

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2. Purchasing	1-10
3. Important Concepts	1-10
4. Production planning	1-6
1. Beverage Purchasing Control	1-18

Unit- I

Lesson: 1

CONTROLS

1.0 Objective :

Importance of Controls in Hotel Industry

Control : It is measuring standards to the actuals is called "Control". For proper control we must establish results and then compare the actual to the standards. If not acceptable take correct action and review standards and procedures and if acceptable then go on with the method.

Or

Control is a series of coordinated activities that helps managers assess the extent to which actual results of operations match the planned results.

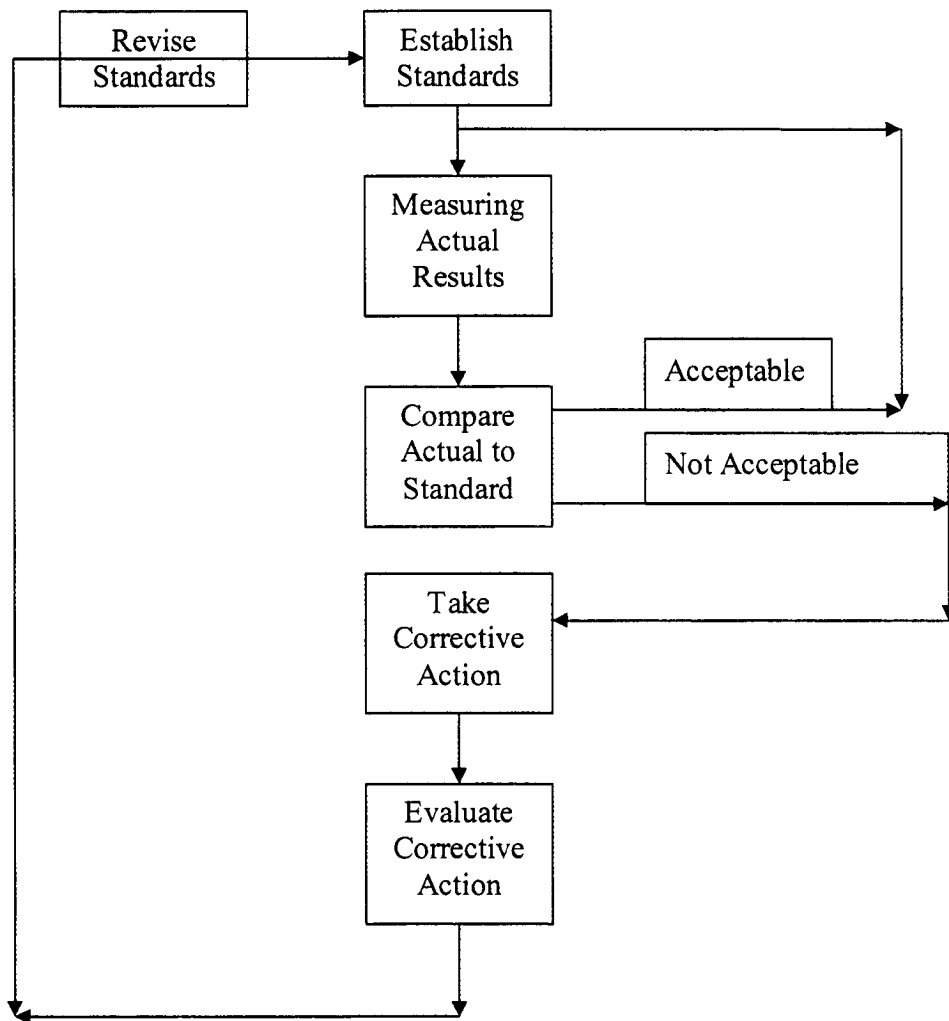
An effective control system is important because managers must know how the operation is doing - whether, and to what extent it is meeting its goals. Control Procedures can help managers

- Determine whether delegated tasks are being carried out correctly.
- Assess the effect of changes required by the economy, market, and /or reactions to competition.
- Identify problems early so they can be resolved before they create bigger problems.
- Determine where problems are occurring.
- Identify mistakes and lead to actions to correct these mistakes.

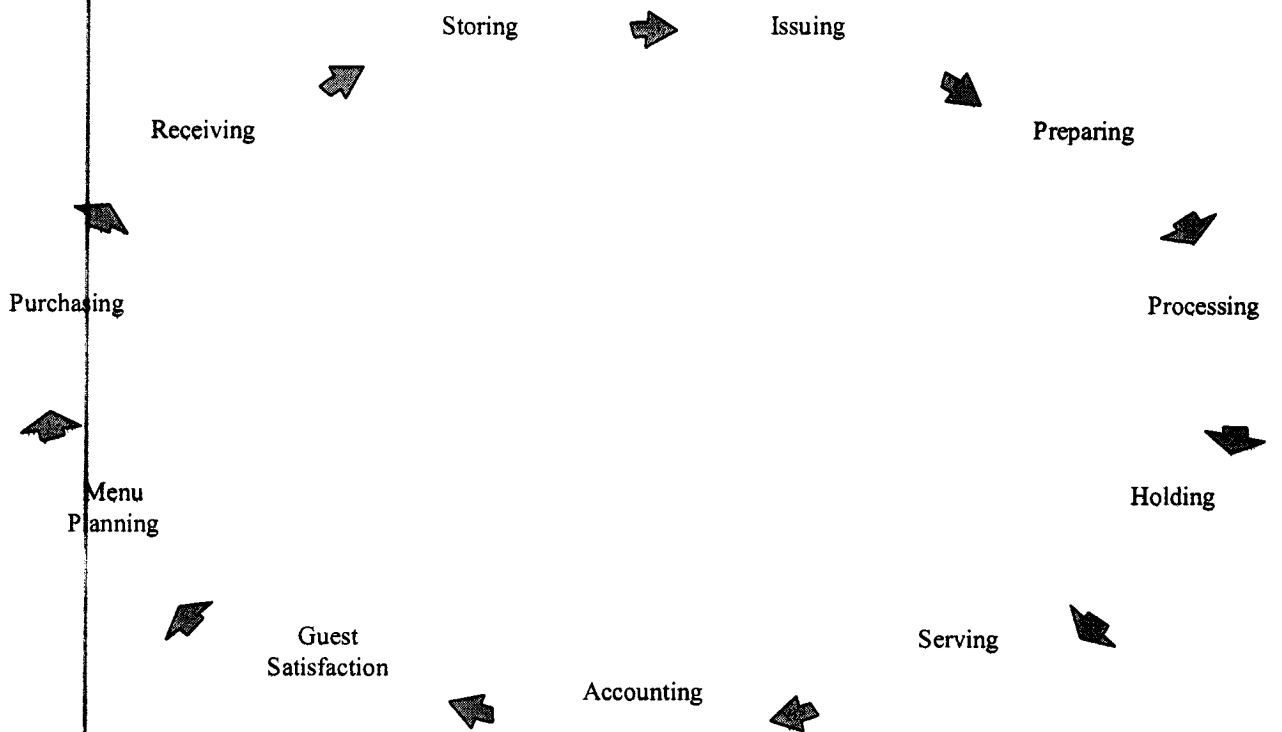
Control Process :

The Control Process follows a series of basic steps as illustrated in Exhibit 1. The process begins with the establishment of standards. Next, accurate information about the actual results achieved by the operation must be gathered. The food and beverage manager can then compare actual results to standards. If actual results do not conform to the standards, **corrective action** must be taken. The action taken will probably be a change in operating procedures. Finally, results of the corrective must be evaluated. This process may lead to a revision of the standards. By repeating the cycle, the effects of implementing corrective action can be evaluated.

Exhibit No 1



Cycle of Control in a hotel



Control Techniques

The control techniques available to the manager include the following:

1. Establishing Standards
2. Establishing Procedures
3. Training
4. Setting Examples
5. Observing and correcting employees
6. Requiring reports and records
7. Disciplining employees
8. Preparing and following Budgets

Establishing Standards

Standards are defined as rules or measures established for making comparisons and judgments. In business these standards are set by management and are used for judging the extent to which results meet expectations. Several types of standards are useful in establishing control over food and beverage operations. It is important to develop a working understanding of these several types of standards before proceeding.

Quality standards are used to define the degree of excellence of raw materials, finished products, and, by extension, work. In one sense, establishing quality standards is a grading process. Most food items are graded according to degree of excellence (many of them by government: the Department of Agriculture in the United States and similar agencies in other nations), and management should establish a quality standard for each food item that is to be purchased. Beef, for example, is generally available in a number of different grades for restaurant and institutional use, and it is important to determine which grade will be used for the preparation of a particular menu item.

Beverage items also require quality standards. For example, some spirits improve with age, and a 12-year-old scotch whiskey is generally considered to be of a higher quality than one that is only 8 years old. Management in beverage operations must determine which beverage items are of appropriate quality to ensure customer satisfaction.

Quality standards must also be determined for the workforce. In some hotels and fine restaurants, higher degrees of skill are required for the production and service of elaborate menu items. Lower levels of skill would probably be acceptable in the average roadside diner.

Quantity standards, defined as measures of weight, count, or volume, are used to make comparisons and judgments. Management must establish a number of quantity standards. Standard portion sizes for food and beverage products and standards for work output are simple examples. The portion size for every food item served must be clearly established. Each shrimp cocktail should contain a predetermined number of shrimp of specified size, a certain measure of sauce, and clearly identified quantities of garnishes. A portion of soup should be identified as to size of bowl or cup to be used, or the size of the ladle used to portion it, and the quantity of any garnish to be added. Similarly, entrée items must be identified as to the number of ounces or pieces. Surrounding items, such as

vegetables, should be portioned with a spoon of a particular size, as with peas, or identified by count, as with asparagus spears.

In bar operations, management must establish a standard quantity for each measure of liquor used. In many instances, bars operate with standard drink recipes indicating the specific quantities of ingredients to be used in preparing particular drinks.

Quantity standards are often important in the control of labor costs as well. When planning staff schedules, it is useful to know, for example, the number of tables or seats a server can cover during a given period or the number of sandwiches a pantry worker can make per hour. In addition to quality and quantity standards, it is ultimately necessary to determine and set cost standards for operation. Cost standards are more commonly referred to as standard costs.

The term **standard cost** is defined as the cost of goods or services identified, approved, and accepted by management. Standard costs are used for various purposes. They may be compared with actual costs in order to make judgments about the actual costs, and they may be used as a basis for establishing sales prices. Paradoxically, a standard cost is simultaneously both realistic and an ideal. For example, if one bottle of liquor containing 33.8 ounces costs \$16.90 to purchase, each ounce has a value of \$0.50. That is, the standard cost of 1 ounce is \$0.50. If the entire bottle is used to prepare drinks, each of which contains 1 ounce of the liquor, the standard cost of the liquor in each drink is \$0.50. Based on the actual purchase price of the bottle, that is the real cost of 1 ounce. However, this is an ideal: It does not take into account the possibility of spillage or evaporation, both of which are likely to occur in bar operations.

Standard costs are useful in measuring the effectiveness of operations in food and beverage establishments. As discussed later, comparing standard costs with actual costs can help determine how effectively food and beverage materials and labor resources are being used in day-to-day operations. Standard costs are particularly useful in cost control because they provide a means for management to compare what is actually happening in an enterprise with what *should* be happening, given the standards established for operations.

Standard costs must be calculated. There are various methods for doing this, each of which is discussed in detail in later chapters. In the case of foods and beverages, various kinds of calculations are necessary, the simplest form of which has been previously illustrated in the discussion of the standard cost of 1 ounce of liquor. In the case of labor, determination of standard costs is rather more complex.

Establishing Procedures

In addition to establishing standards for quality, quantity, and cost, food and beverage managers must establish standard procedures. **Procedures** are the methods employed to prepare products or perform jobs. **Standard procedures** are those that have been established as the correct methods, routines, and techniques for day-to-day operations. As discussed in later chapters, maintaining effective control over food, beverage, and labor costs requires establishing standard procedures for every phase of operations.

Ordering and purchasing procedures must be standardized to ensure that ingredients used to make food and beverage products are purchased at appropriate times in needed quantities, at the most favorable prices, and are of appropriate quality for their intended use. Receiving procedures must be standardized so that all goods received conform in quality, quantity, and cost to those ordered. Standard storing procedures must be put into effect to guard against both spoilage and theft, either of which will lead to excessive costs.

Issuing must be standardized so that food and beverage items will be used in the order in which they are received, thus preventing spoilage and the resulting excessive costs. To further guard against spoilage and theft, the quantities of foods and beverages issued must be linked to carefully determined production needs. Moreover, records of issues can be used to calculate cost per item produced; such costs can then be compared with standard costs to determine the efficiency of production and the effectiveness of operations.

Production procedures must be standardized for a number of reasons. One of the most important of these is customer satisfaction. Any given item should be produced by the same method and with the same ingredients every time it is served. It should also be served in the same quantity each time, partly so that regular customers will be given the same quantity each time they order the item, and partly to maintain cost standards.

Training

Although establishing standards and standard procedures is necessary for control, doing so is really just the first step in a process. None of the standards are of any significance unless employees are aware of them, and employees will not become aware of the standards unless management is willing to undertake staff training. **Training** is a process by which managers teach employees how work is to be done, given the standards and standard procedures established. For example, if management has established a standard 4-ounce portion size for hamburgers, then all employees responsible for producing portions of hamburgers must be made aware that 4 ounces is the correct portion size. Moreover, each of these employees must be trained to produce portions of the standard size at his or her workstation, using the correct equipment and supplies provided for doing so. If all employees are not aware of the relevant standards and standard procedures established for their work and are not trained to follow these standards, the standards are completely useless.

Any foodservice manager who trains employees would doubtlessly agree that training is difficult, frustrating, time-consuming, and, in the short run, costly. Perhaps that is why a substantial number of poor managers ignore it and simply put new employees to work without devoting any time to demonstrating and explaining what they are to do. Sometimes a new employee is merely introduced to a co-worker, who is then expected to train the new person. Occasionally this works reasonably well; more often it does not, frequently because the co-worker is either unwilling or unable to train the new employee. After all, the typical foodservice employee is not hired for his or her ability to train others.

If employees are not suitably trained to follow established standards and standard procedures, the control aspects of the manager's job become difficult, at best; sometimes control becomes impossible. This topic is discussed further in relevant sections of the text and in the chapters on labor control.

Setting Examples

Sometimes the process of establishing standards and standard procedures is not quite as formal as the foregoing discussion may suggest. In many instances, standards are established in a very informal way: Employees in an operation follow the examples set by the manager—the manager's behavior, manner, responses to questions, and even a failure to speak or take action in some situations. In general, the behavior of individuals in a group tends to be influenced by the actions, statements, and attitudes of their leaders.

The attitudes and work habits of a manager are evident as he or she performs various tasks in the course of a workday. The behavior of the manager will influence the manner in which employees perform their work. If the manager who has occasion to help employees

plate food for the dining room serves incorrect portion sizes, employees will be more likely to do the same when the manager is not there. Similarly, if a manager is inclined to wrap parcels of food to take home for personal use, employees will be more likely to do so. And if the manager observes them doing so and fails to end the practice, the amount of food leaving the premises will usually increase.

It must be noted that any manager must be consistent in setting examples, as well as in directing, regulating, and restraining employees and their actions. In far too many cases, managers appear not to have long-range and short-range goals clearly in mind as they go about the business of managing. Consequently, their examples, actions, directions, and responses to employees' questions do not present a clear and consistent view to subordinates. Such inconsistency confuses employees and has the effect of working against the control processes and procedures in effect.

Observing and Correcting Employee Actions

If a manager were to see a bartender mixing drinks without measuring the ingredients and did not take the time to remind the individual to measure quantities carefully, then the bartender may reasonably assume that his or her work met the manager's standards. The manager would have missed an excellent opportunity to improve the bartender's work habits and to maintain control. Similarly, if a manager were to observe a receiving clerk failing to verify that quantities of meat delivered conformed to the quantity on the invoice and did not correct the individual, the employee might never know that his or her performance was unacceptable.

One of a manager's important tasks is to observe the actions of all employees continually as they go about their daily jobs, judging those actions in the light of the standards and standard procedures established for their work. If any are failing to follow the standards, it is a manager's responsibility to correct their performance to the extent necessary at the appropriate time.

Standard Recipes

- All foodservice operations regardless of type, size, location, or type of guest need standard recipes.
- **Standard Recipe.** Information required to prepare a food or beverage item to consistently meet a foodservice operation's required quality and quantity standards.
- A standard recipe should indicate the type and quantity of each required ingredient, preparation and turnout procedures including required large and small equipment, yield (number of portions and portion size), garnishes, and any other information needed to produce and serve the menu item.

Objectives for Standards

A standard recipe helps to assure **consistency** for both the guests and the foodservice operation. Consistency for the foodservice operation means that the selling price of the menu item should be based, in part, on the cost of the menu item ingredients.

The standard recipe becomes a road map for the preparation of a menu item.

Properly developed, a standard recipe will indicate the following:

- Each necessary ingredient, including the quantity (weight or volume) needed.
- The types of small utensils (measuring spoons, pots, pans, and mixing bowls, for example) needed to prepare the item.

- Large equipment needed for production such as slicer or convection oven, along with operating instructions.
- Exact preparation and turnout procedures.
- Yield (number of portions) and portion size along with portion-control tools, if applicable.
- Special instructions of numerous types, including work-simplification, suggestions and sanitation food safety concerns.
- Chained recipe. A recipe that yields an ingredient in another recipe. There will be a master recipe with all recipes and individual recipes for the separate component recipes.
- Once developed, standard recipes should be consistently used each time a food or beverage item is produced. Note that “used” does not necessarily mean that recipes (either hard copies on a workstation table or electronic copies on a computer monitor) must be physically available when items are produced. Rather, “used” means they must be followed.

Evaluating Recipes

- Ala Carte menus should always be monitored as well as banquet and prix fixe items. Menus with daily specials and buffets featuring several unspecified items provide opportunities to broaden the range of the menu offerings (and increase guest interest in the foodservice operation). Recipe evaluation is important when adding new items to the menu, but also the evaluation process should continue with existing recipes.
- **Blind Testing** can be a useful process to evaluate preferences for alternative recipes that address potential menu additions.

Recipe Adjustments

Adjustment for the Number of Portions- two steps/ways

- First- An adjustment factor is calculated by dividing the desired number of portions by the number of portions in the original recipe.
 - Second- The adjustment factor is multiplied by the quantity of ingredients in the original recipe to determine the quantity of ingredients for the new recipe.
 - **Adjustment for Portion Sizes-** changing portion sizes with same yield ratio
- Note-** the process to determine the recipe adjustment involves, first, determining the quantity of yield in both the original and desired recipes.
- After dividing the desired yield by the original yield, the resulting adjustment factor is used in Step 2 in the same manner the adjustment was used when only the quantity (not portion size) was changed. When the adjustment factor is multiplied by the amount in the original recipe the amount of this ingredient required for the desired recipe can easily be determined.

Recipe Adjustment for the Number of Portions and Portion Size-

- Changing both the number of portions and portion sizes.
- Similar to previous formula-
- First- involves calculating the quantity of yield in both recipes and dividing the desired yield by the original yield.
- Second- involves multiplying the resulting adjustment factor by the quantity of each ingredient in the original recipe.

Pre-costing Recipes

- **Pre-costing.** The process of determining the cost to produce all portions and a single portion of a menu item when a standard recipe is accurately followed.

- **Purchase Unit.** The measurement unit normally used to purchase food products. For example, fluid whole milk may be purchased by the gallon; flour is purchased by the pound.

Standard Yield

The standard yield of a particular food product is the usable part of that product after initial preparation, or the edible part of the product after preparation and cooking; for example, the standard yield for a whole fillet of beef is the number of fillet steaks that will be available for cooking and final sale to the customer after the fillet is trimmed and any unwanted meat removed. Any usable trimmed meat should be taken into account with the standard yield.

Standard yields may only be determined for the more expensive cuts of meat or fish such as whole fillets, lobsters, salmon etc. The development of standard yield by an establishment has a number of advantages/

1. Standard yields determine the most appropriate and advantageous size/weight to buy a particular commodity in.
2. They assist in determine the raw material requirements for the production forecasts, and therefore act as an aid in the purchasing of the establishment's food stuffs.
3. They act as a 'double check' for the purchasing department. Should an unsatisfactory delivery of meat, for example, be made to an establishment and is unnoticed at the receiving bay, this delivery is subject to a second 'checking' procedure in the kitchen where the meat should yield a standard number of portions.
4. they act as safeguard against pilferage or wastage occurring in the kitchen as th actual and potential yields can be compared and this acts as a measurement of the efficiency of the production department.
5. Finally they are an aid to accurate food costing for particular dishes offered on an establishment's menu, as the cost factor can be established

Yield Test summary Report

Item : Canadian Smokde salmon

Purchase specification : 437

Standard Recipe No : 520

Total Raw Weight as Purchased : 3lb 4 oz

Cost per Pound : Rs 7.00

Cooking and Preparation Details	Weight		%age Original weight
	Lb	oz	
As purchased weight	3	4	100
Less intial trimmings		9	17.3
Presentation Weight	2	11	82.7
Less unservable weight		11	21.2
Total servable weight	2	00	61.5

Ration of servable weight to original weight

= servable weight		2lb 0oz	32	
Original weight	=	3lb 4oz	53	= 61.5%

Cost per servable lb = $\frac{\text{as purchased price /lb} \quad 7 \quad 7}{\% \text{ of original weight} \quad 61.5\% \quad .615} = 11.38$

Cost Factor = $\frac{\text{Cost / servable lb} \quad 11.38}{\text{AP Price/lb} \quad 7.00} = 1.626$

Portion cost = $\frac{\text{Cost / servable lb} \quad 11.38}{\text{No portion/ serv/lb} \quad 16/2} = 1.42$

Yield and product test Report

Item : Pineapple
Brand L rosebrooke : pineapple rings in syrup
Country of origin : south African produce; Cayenne variety
Price per Can : Rs 3 **Size = A.10**
Net Weight : 6 lbs 12 oz
Liquour content ; 45 fl ozs
Drained Weight of contents ; 4 lbs 2ozs
Approx cost / lb of solids : 51.85
Approx cost / oz of solids : 3.24
Approx .cost / ring of solids : 7.78

Score

Eating Quality -----	(Max 25pts) -----	20
Flavour -----	(" 20pts) -----	15
Tenderness -----	(" 20pts) -----	18
Colour -----	(" 15pts) -----	12
Blemishes -----	(" 10pts) -----	9
Wholeness -----	(" 10pts) -----	10
Maximum 100 ----- Total		84

Remarks and opinions

An excellent sample of rings, 3" in diameter with a count of 45/ can. Slightly tart without acidity and with a glazed appearance, free of blemishes making an attractive dessert fruit.

Summary

Price/ lb	Cost per oz	Count	Score
40.14	3.24	45	84

Standard Portion Size

A standard portion is the quantity of a particular food item that will be served to the customer; the quantity may be measured in terms of ounces, or a numerical quantity. The portion sizes of the food items are determined by management in conjunction with the heads of both the kitchen and restaurant departments.

1. By buying in pre-portioned food items, for example 8 oz rump steaks, pre-wrapped packs of butte and condiments etc.
2. By buying in food items in bulk and portioning them in the production kitchen before service, for example, pre-plating salads to be served in a display cabinet in an cafeteria line.
3. by portioning food items as they are being served to customer, for example, food in hot baine-maries in a cafeteria line being plated and served when the customer requests the food item.

Standard portion sizes, like standard recipes, are an aid to food costing, as once the standard portion size has been established the gross profit may be calculated for the dish.

Any fluctuations in the sizes of the portions, for example serving larger portions, will therefore be reflected in the restaurant's gross profit, particularly so if this is occurring with a number of menu items. It is important also to provide kitchen and restaurant staff with the correct portioning equipment, so that if the customer is to receive 3oz of vegetable, the operative has a 3 oz ladle to serve the vegetable with. Spot checks should also be regularly made to ensure that the correct portioning equipment is being use, often if a certain sized ladle goes missing, the operative will simply use another which could be 1 or 2 oz larger. Therefore a number of techniques that may be employed by an establishment to assist in the planning of food production requirements. If these techniques are to be used effectively they must be co-ordinates, so that from standard yields, standard recipes are written and from these standard portion sizes are establishment, and so on. These management techniques are also applicable to different size establishments. The only difference is in the degree of sophistication s, the principles remain very much the same.

Unit II

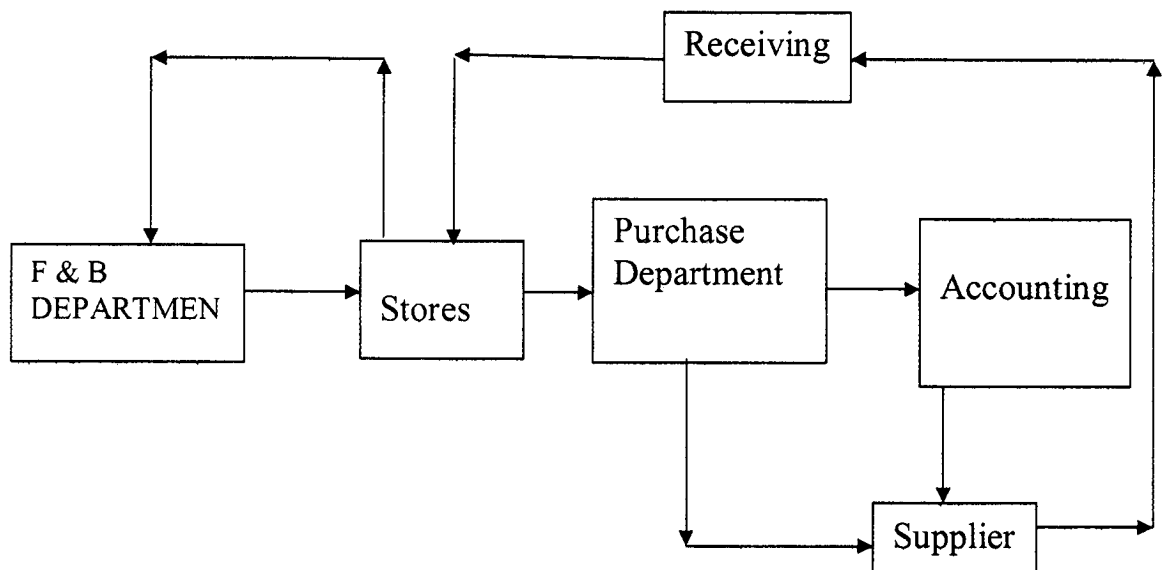
Purchasing

Purchasing can be defined as “a function concerned with the search, selection, purchase, receipt, storage and final use of a commodity in accordance with the establishment. This suggests that the person employed to purchase foods and beverages for an establishment will be responsible for not only purchasing, but also for the receiving, storage and issuing of all commodities as well as being involved with the purpose for which items are purchased and the final use of them.

PURCHASING OBJECTIVES

1. The buying practice must supplement a policy of minimum stock-holding
2. It must meet the requirements of all concerned departments.
3. The buying procedure which provides a food operation with the products should be most suited to its merchandising policy at the most economical price possible.
4. It must follow a set of standard specification for different products.

THE PURCHASE CYCLE:



1. Food and beverage Departments make the store requisition to the stores.
2. Stores if the product is available issues the product to the concerned dept.
3. When products in inventory reach a predetermined reorder point, the store room forwards a purchase requisition to the purchasing department.

4. The purchasing department orders required products from the proper supplier, by way of purchase order. Purchase personnel send copies of purchase order to the receiving and accounting departments.
5. The suppliers delivers the product to the receiving department along with a deliver invoice
6. The receiving clerk places the products in the storeroom and forwards the delivery invoice, perhaps with other documents, to the accounting department.
7. After further processing of necessary documents, accounting department personnel send payment to the supplier and file copies of the purchasing. Receiving forms for accounting and or control purposes.

This purchasing cycle is repeated every time products are ordered. You can see that purchasing is more than” picking up the phone and calling in an order”. It is a complex cycle of activities requiring special planning and control procedures that create an audit trail. An audit trail is a series of records, documents, and or reports that trace the flow of resources thought an operation.

PREPARING STANDARD PURCHASE SPECIFICATION

In relation to the purchasing function, the term quality refers to the suitability of a product for its intended use. The more suitable a product, the higher its quality.

Decisions about quality requirements are first made when the goals og the business are established and subsequent marketing plans are developed. At that time, the spirit and intent of the food and beverage operation’s quality standards are determined. Later, “ **STANDARD PURCHASE SPECIFICATIONS**” are documented in detail to indicate the requirements for products suitable. For every intended purpose. These specifications provide detailed descriptions of the quality, size, and weight desired for particular items.

The format for purchase specifications illustrated below indicates specific quality requirements. Notice that it not only describes the desired product, but also specifies how the product will be use. In addition, it informs the supplier about the operation’s procedures for ensuring that the delivered item does, in fact, meet the required quality specification. Standard purchase specifications must:

- Accurately describe minimum quality requirements
- Clearly and simply indicate the food and beverage operation’s needs
- Realistically define needs, yet not limit the number of acceptable suppliers.

These are the specification denoting the quality of food. These are very important for a purchasing officer or assistant dealing with daily food purchases. This does not necessarily mean buying the best and most expensive grade of any particular item. It does mean “ the best grade sold to fit the need”. The right grade where “Eye appeal” is important, such as in “Stuffed tomatoes” for salads, may well be the highest grade, but certainly such uniformity and expensive quality are not necessary where the tomatoes are to be cooked.

An example of a standard food purchase specification may be as follows:

“Green Beans – Firm, Crisp and string less, uniform size, no decay, clear green colored and no blemishes.

The standard purchase specifications should be written or printed on charges for all foods purchased by the Purchase Department of the hotel and displayed prominently- The staff of the purchasing department should be trained in quality buying according to the standard specifications displayed.

Format of Purchase Specification

HOTEL XYZ

Name Of Food And Beverage Operation :

1. Product Name : _____
2. Product Used for:

Clearly indicate product use (such as olive garnish for beverage, Hamburger only for grill frying)

3. Product General Description:

Provide general quality information about desired product. Fro example “ Iceberg lettuce: heads to be green, firm without spoilage, excessive dirt or damage. No more than 10 outer leaves; packed 24 heads per case’.

4. Detailed description;

Purchaser should state other factors which help to clearly identify desired product. Examples of specific factors, which vary by product described may include

- | | | |
|---------------------|----------------|--------------------|
| • Geographic origin | , Product size | Medium of pack |
| • Variety | Portion Size | Specific Gravity |
| • Type | Brand name | Container Size |
| • Style | Density | Edible Yield, trim |
| • Grade | | |

5. Product test Procedures:

Test procedures occur at time product is received and as/after product is prepared/ used. Ex products to be at refrigerated temperature upon delivery can be tested with a thermometer.

6. Special instruction and requirements:

Any additional information needed to clearly indicate quality expectations can be included here. Examples include bidding procedures, if applicable, labeling and or packaging requirements and special delivery and service requirement.

SOURCES OF SUPPLY and INFORMATION:

1. Wholesale supply houses : Buying from wholesale dealers does help in eliminating the middlemen and their profits and restore consistency and uniformity of quality, storage and delivery costs of goods purchased by the buyers.
2. Manufacturers and packers : These may sell their products directly to the buyers or wholesaler or both. Ice-cream, Condiments, and meats are some example of packed goods sold directly to the users.
3. Local Farmers and Producers _ In some areas this group constitutes the major source of supply for fresh fruits and vegetables and for farm and dairy products.
4. Municipal markets – These offer many possibilities for good buys, especially fruits and vegetables. Although these markets are primarily for wholesalers, keen buyer who knows his operation and his product can obtain excellent values.
5. Retail food stores – A side from their availability for emergency use, some chains frequently offer advantageous prices to those who buy in bulk quantities.

INFORMATION:

In order to supplement the market quotation sheet and to provide a check against quoted prices, the food buyer should make use of sooth professional sources of market information. Central and state government releases information concerning commodity food prices and other valuable data, appear in daily newspapers and in mailed newsletters. Very often, prices of butter, oils, eggs and poultry etc, are based don an agreed mark up over such reported quotations. In addition, there are local trade sheets, radio programmes and commercial market reports, which give much useful information.

SELECTION OF SUPPLIER:

Managers of Food and beverage operation should choose suppliers carefully. Detailed purchase specification and objective calculations of quantities to order are ineffective without professional supplier. Essentially, the food and beverage manager bases supplier evaluation on the consistency of :

- Correct quality products
- Reasonable prices
- Prompt delivery
- Service, including product information

When selecting suppliers, the purchasers must consider a number of factors. Not every supplier who carries the needed product is appropriate for the food and beverage operation. A supplier can be easily selected from amongst those that buyer has recently purchased and that the quantity of goods received for price and service offered during the time when seeking a new supplier. Caution must be exercised and detail enquires made to cover at least the following points:-

- **Location:** Delivery time, transportation cost, and unexpected delays may be reduced if the supplier's facility is close to the food and beverage operation
- **Quality of the Supplier's Operation:** Such things as sanitation, in-house processing, handling of orders, and the quantity and quality of items in stock must be assessed.
- **Technical Ability of the Supplier's Staff.** Good salespersons are more than order-takers. They know their products and can help the operation resolve problems involving the products they supply.
- **Value :** The purchaser must carefully assess the supplier's prices in relation to the quality of products needed by the operation
- **Compatibility.** A good working relationship between the food and beverage purchaser and the supplier requires mutual beliefs about ethics and the fair treatment of both the guests and the supplier.
- **Honesty and Fairness:** These traits must be part of the ongoing business relationship and the supplier's reputation
- **Delivery Personnel. :** Their appearance, attitude, and courtesy contribute to the impression formed by the food and beverage operation.

Ideally ground work must be done to establish the size of company's range of products the size of processor, storage facilities , size of their transport facilities and members of the management team .

Purchase orders and reviewing procedures

Once the menu is planned, a number of activities must occur to bring it into reality. One of the first and most important stages is to prepare purchase orders according to the materials needed to produce the menu items. It is the food and beverage manager who generally bears the ultimate responsibilities for the preparation of the purchase orders.

Problems that can arise when too much of a product is ordered include:

Cash flow problems resulting from excessive money tied up in inventory
 Increased storage costs such as interest, insurance, and, sometimes, rented storage space
 Deterioration in quality, or damaged products Increased chance of theft and pilferage

Purchasing in sufficient quantities also has potential disadvantages such as dissatisfied guests due to stock outs, emergency and rush orders which are frequently expensive and time consuming, and lost discounts from volume purchases.

Generally in small hotels, food and beverage managers periodically assess a number of factors that affect the purchase of proper quantities. It is important that control procedures be built into the actual purchasing process as well. For this purpose, large food and beverage operations use a purchase order system.

With a purchase order system, a purchase order is sent to the supplier awarded the order. Information about the order is retained in the purchasing department and is also circulated internally among the receiving and accounting departments. The purchase order commonly identifies the product quantity, unit cost, and the total cost that both the supplier and purchaser have agreed upon. In addition, the purchase order may include guarantees, warranties, payment requirements, inspection rights, "hold harmless" provisions, and other legal, contractual concerns.

A purchase order is the food and beverage operations report of the specifics of all incoming shipments. The property must pay the agreed upon price for no less than the agreed upon quality for the amount order. Higher than necessary food and beverage costs are frequently traced to communication and coordination problems among the several departments or personnel involved in purchasing. Properly used, the purchase order minimizes these problems.

Rather than using purchase order system, smaller food and beverage operations may simply summarize purchase order information by using an in-house purchase order form. The purchase record performs the same functions as the purchase order. It provides the food and beverage operations with a detailed record of all incoming shipments. Affected personnel in departments must know all the specifics about all the incoming food and beverage products. With out a written record, busy management staff may forget the details properly used, the purchase record helps to control higher than necessary food and beverage costs.

Receiving procedures

Control procedures adopted by food and beverage operations include the following.

1. Check incoming products against purchase orders or purchase records: Obviously, the property does not want to accept items it did not order, receive partial or no deliveries of required products, receive items of unacceptable quality, or pay a price higher than that agreed upon. These problems can be prevented by comparing incoming products against an in-house record of the purchase agreement.
2. Check incoming products against standard purchase specification: This requires knowledgeable and skilled receiving personnel. They should not allow them selves to be rushed by the delivery persons. Sometimes the suppliers will agree to deliver products at their risk, allowing the buyer to sign and send invoices after inspecting deliveries. Cooperation in receiving is an important item to consider when selecting suppliers.
3. Check incoming products against delivery invoices: The supplier provides the delivery invoice, which becomes the basis for subsequent payment claims. A definite policy must be developed, implemented, and enforced for the measuring, weighing, or counting of incoming products to ensure that the proper quantity of product is delivered and billed. Typically, it is not practical to weigh or count every case of product being delivered. It is helpful, however, to routinely weigh/count-selected cases on a random basis. Suppliers or delivery persons are less likely to short-weigh a count if they expect random inspections.

Likewise, price information on the invoice should be verified by reviewing the purchase order or purchase record. Any discrepancies should be handled by a request-for- credit memo.

Accepting incoming products. This is normally done by signing the delivery invoice. At this point, ownership of the products is transferred to the property, and the products become the responsibility of the food and beverage operations.

Move accepted products to storage immediately. Security to minimize employee theft is a concern here. Likewise, the quality of products needing low-temperature storage will deteriorate if they are left at room temperatures, which are frequently very warm in back-of -the-house production areas.

Request-for-credit memo

XYZ Hotel						
To,			No			
			Date :			
Please issue your credit memo for items listed below					Cost	
14	lb	Frozen Calf Liver	3	80	53	2
50	lb	Topside of Beef	2	20	110	0
Reason : 1. Liver not delivered but invoiced 2. Beef not as per specification						
Food and Beverage Controller		Accounting Dept	Delivery Persons	Requested by		

Every time a delivery invoice is modified at that time of receiving, a request-for-credit memo becomes necessary. For example, if the deliveries do not include the fully quantity specified on the delivery invoice, are refused because of quality problems, or are rejected

for any other reason, this is noted on the request for credit memo. The following procedures should be used to process a request-for-credit memo.

Note problems with items on the invoice

Complete the request-for-credit memo, have the delivery person sign it, and return a copy to the supplier along with the delivery invoice.

Attach the property's copy of the memo to its copy of the delivery invoice.

Call the supplier to advise that the original invoice has been amended by a request-for-the credit memo.

If the short or refused products are subsequently delivered, a separate invoice can accompany the items. The new invoice is processed in the usual manner.

Storing:

The storing and issuing control points plays an important role in linking receiving and production. Actually, food and beverage managers would do well to think of the storeroom as a bank vault. Products in storage and issuing systems. Stored products represents money in terms of both their initial cost as well as the cost to replace them if they are stolen, spoiled, or damaged because of improper storage practices. The same care and concern that go into procedures for controlling stored cash should also go into the procedures for controlling stored food and beverages.

There are many reasons why strict storage and issuing controls are needed in food and beverage operations. And it is very important to move food and beverage products into storage areas as soon as they are received. The principles of effective storage systems for both food and beverage products focus on three primary concerns.

- Keeping products secure from theft
- Retaining product quality
- Providing information necessary for the financial accounting system

Inventory control policy:

When designing storage systems, every control procedure must be cost-effective. It is generally not practical for managers to attempt to regulate all food and beverage products under a strict system of tight controls. Some properties, for example, may not be able to justify a perpetual inventory system for any but the most expensive items. As a result many food & beverage operations especially smaller ones, maintain tight control over meats, seafood, liquor, and wine but not as much control over less expensive and less theft-prone products. Others may expand the list of items needing special controls because of specific concerns. The point is that each property is different, and managers must develop basic control procedures that recognize their operations unique situation.

One approach that has been useful is based on an ABCD inventory classification system, which categorizes products according to their perishability and cost per serving. Category A items for example, include those products that are high in both perishability and cost per serving, where B items are relatively high in cost but low in perishability.

Perpetual inventory system

A perpetual inventory system keeps a running balance of the quantity of food and beverage products in the inventory. It operates like a bank checking account. When more

food and beverages are put in the bank (storage area), the balance is increased. As products are removed (issued), the balance decreases. At any time, then, the amount of products that should be currently available is known.

Large properties with specialized storage and accounting personnel may use a perpetual inventory system for all, or all most all, products in storage. Small food and beverage operations may find it more practical to use perpetual inventory control only for expensive items and those purchased in large quantities.

Issuing procedures

First in, first out (FIFO)

The FIFO approach assigns the first, or earliest, product costs to issues—in other words, it values issues in the order in which the costs were incurred. As a consequence, the products in storage are valued in the reverse order. That is, since the earliest product costs were applied to the products that were issued, the most recent product costs are applied to the products left in inventory.

By using the FIFO method, we value issues by assigning cost in the order in which they were incurred; consequently, we value inventory by assigning the most recent costs before earlier costs.

Last-in, first out (LIFO)

The LIFO approach assigns the last, or most recent, product costs to issues. As a consequence, the products in storage are valued in the reverse order—in other words, the order in which the costs were incurred. That is, since the most recent product costs were applied to the products that were issued, the earliest product costs are applied to the products left in inventory.

Using the LIFO method, we value issues by assigning recent costs first.

Unit III

Important Concepts

- **Revenue** is the amount of dollars you take in.
- **Expenses** are the costs of the items required to operate the business.
- **Profit** is the amount of dollars that remain after all expenses have been paid.

COSTS

- There are four costs a Food Service Manager must concern themselves with
- Food costs are the costs associated with actually producing the menu items. In most cases, food costs will make up the largest or second largest expense category you must learn to manage.

COSTS

Beverage costs are those related to the sale of alcoholic beverages. Costs of a non-alcoholic nature are considered an expense in the Food Costs category. Alcoholic beverages accounted for in the Beverage Costs category include beer, wine, and liquor. It may also include the costs of ingredients necessary to produce these drinks, such as cherries, lemons, olives, limes, mixers like carbonated beverages and juices, and other items commonly used in the production and service of alcoholic beverages.

COSTS

Labor costs include the cost of all employees necessary to run the business, including taxes and benefits. In most operations, labor costs are second only to food costs in total dollars spent.

Overhead costs include all expenses that are neither food, beverage nor labor, such as utilities, rent, linen, etc.

Getting Started

- Good managers learn to understand, control, and manage their expenses. Numbers can be difficult to interpret due to inflation. Therefore, the industry uses percentage calculations.
- Percentages are the most common standard used for evaluating costs in the foodservice industry.

Cost Percents

- $\frac{\text{Food Cost}}{\text{Food Sales}} = \text{Food Cost \%}$

- $\frac{\text{Beverage Cost}}{\text{Beverage Sales}} = \text{Beverage Cost \%}$

- $\frac{\text{Labor Costs}}{\text{Total Sales}} = \text{Labor Cost \%}$

There are various types of costs

- Fixed costs are those that are normally unaffected by changes in sales volume.
- Variable costs are those that are clearly related to business volume. Directly variable costs are those that are directly linked to volume of business, such that every increase or decrease in volume brings a corresponding increase or decrease in cost.
- Semi variable costs have both fixed and variable elements.

Monetary Sales

- Monetary terms include total sales Total sales may be given by category (such as total food sales or total beverage sales), by server, or by seat (total dollar sales for a given time period divided by the number of seats in the restaurant).
- Other monetary terms include sales price, average sale per customer (the result of dividing total dollar sales by the number of sales or customers), average sales per server.

Nonmonetary Sales

- Nonmonetary terms include total number sold (such as number of steaks sold in a given time period) and covers (one diner). Total covers refers to the total number of customers served in a given period.
- Other nonmonetary terms include seat turnover (the number of seats occupied during a given period divided by the number of seats) and sales mix (a term that describes the relative quantity sold of any menu item compared to other items in the same category).

Understanding the Profit and Loss Statement

- A simplified statement that details revenue, expenses and profit, for a given period of time, is called the **profit and loss statement (P&L)**. It lists revenue, food and beverage cost, labor cost, other expense, and profit.
- The P&L is important because it describes the efficiency and profitability of an operation.

Simplified Profit and Loss

- Put in another format, the equation looks as follows:

	Revenue (100%)
-	Food & Beverage Cost %
-	Labor Cost %
-	<u>Overhead Cost %</u>
=	Profit %

Understanding the Profit and Loss Statement

- The primary purpose of preparing a P&L is to identify revenue, expenses, and profits for a given time period.
- Common percentages used in a P&L statement:

Simplified Profit and Loss Statement

• Sales	<u> </u>	<u>100%</u>
• Food Cost	<u>349,725</u>	<u>33%</u>
• Labor Cost	<u> </u>	<u>29%</u>
• Overhead	<u> </u>	<u> </u>
• Profit	<u> </u>	<u>7%</u>

$$\bullet \text{ SALES} = \frac{349,725}{X} = \frac{33}{100}$$

$$\bullet \text{ LABOR} = \frac{X}{1,059,773} = \frac{29}{100}$$

$$\bullet \text{ PROFIT} = \frac{X}{1,059,773} = \frac{7}{100}$$

$$\bullet \text{ OVERHEAD} = 1,059,773 - 349,725 - 307,334 - 74,184$$

$$\bullet \text{ OVERHEAD \%} = \frac{328,530}{1,059,773} = \frac{X}{100}$$

Simplified Profit and Loss Statement

• Sales	<u>1,059,773</u>	<u>100%</u>
• Food Cost	<u>349,725</u>	<u>33%</u>
• Labor Cost	<u>307,334</u>	<u>29%</u>
• Overhead	<u>328,530</u>	<u>31%</u>
• Profit	<u>74,184</u>	<u>7%</u>

A major part of your prime cost is food cost.

Food cost can be calculated as follows:

Net food purchases/ Net food Sales (Net means after the change in inventory)

Costing out the menu is crucial to controlling food costs. The easiest place to begin is at the bar due to price control. From there, move on to the food.

Each category should be broken down into more useful ratios. Have the chef or sous chef cost out the menu since they deal the most with the product.

A few tips to help lower food costs are:

- **Raise prices.**
- **Cost out the menu and price the high cost percentage items accordingly.**
- **Control portion sizes.**
- **Minimize waste in the kitchen. Track waste as well.**
- **Spot-check prep staff. Make sure the pre-cut portions weigh what they are supposed to.**
- **Link the chef's pay to a pre-set food cost percentage. Set up an incentive deal for the chef.**
- **Set up Purchase Order System.**
- **Negotiate prices with vendors for bulk buying. Take vendor discounts when offered.**
- **Organize the storage room and keep inventory to a minimum.**
- **Purchase based on a budget.**

If food cost is a consistent problem, an operator should start taking inventory weekly. At one particular restaurant, the operator requires his kitchen staff to know daily food cost.

He ignores inventory and uses purchases over sales. He even makes the kitchen track each entree sold. So if only one lobster is sold, the staff better not order lobster the next day. Any operator can take this one step further by tracking daily sales and purchases.

A dollar budget can be set based on projected demand. For example, if an operator expects to do \$50,000.00 in food sales for the week, the chef should be given a budget of how much to spend. If the operator's food cost goal is 30%, they can order \$15,000.00 worth of food ($\$50,000 \times 0.3$). If the operator tracks purchases daily, he or she can let the chef know how close he is to the budget.

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The Four Aspects of Food Cost

Food cost has a direct impact on a restaurant's operating profit. Because no two operations are identical, it is necessary to calculate the food cost of your particular restaurant at least monthly - we recommend weekly!. Industry averages cannot be used as an accurate standard.

The concept of food cost must be examined at several different levels in order to take into account any and all variables. For example, one variable is your menu sales mix. When one menu item sells better than another, there will be variances in your overall food cost and you should know how this affects your profits.

Essentially, there are four aspects of food cost that must be individually calculated for each operation:

- * *Maximum allowable food cost percentage*
- * *Actual food cost percentage calculated for the income statement*
- * *Potential food cost percentage "determined by the menu sales mix"*
- * *Standard food cost percentage "includes a waste allowance"*

Maximum allowable food cost

The maximum allowable food cost figure determines the food cost percentage an operation needs in order to achieve its profit objectives. It is calculated from the actual operating budget of the business. To calculate the maximum allowable food cost percentage, select a representative accounting period and determine the amounts for: payroll related expenses (salaries, wages, taxes, and fringe benefit), overhead expenses (advertising, utilities, maintenance, other supplies excluding food costs)

Also include a target figure for profits before tax. Convert the dollar value for these three areas to a percentage of the total sales. Remember that food cost is not included.

Now subtract these numbers from 100 to determine the maximum allowable food cost percentage.

If you are working with following percentages of sales, payroll 27%, overhead 20%, profit 15%, then the maximum allowable food cost percentage is 37 % (100 minus 63).

Actual food cost

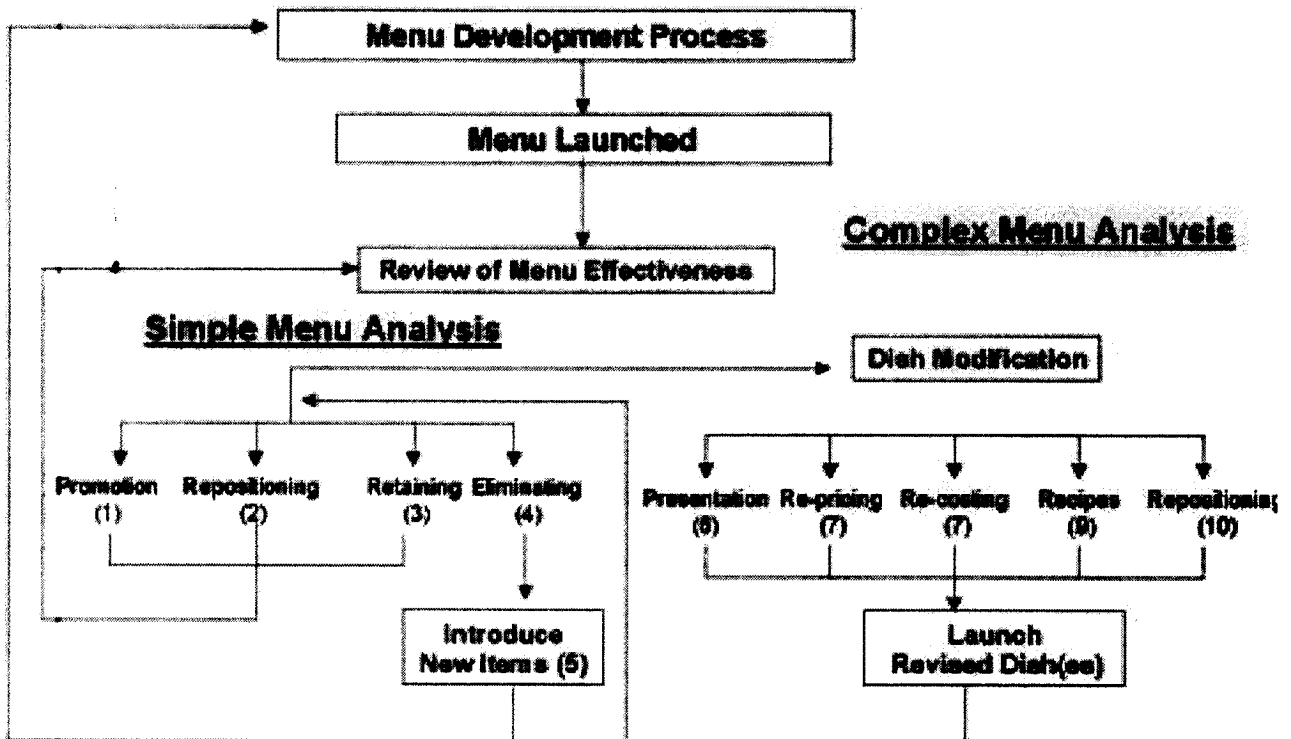
The actual food cost percentage appears on the monthly income statement. This is the cost of the food consumed by your customers, and does not include employee meals or spoilage. Although the actual food cost indicates what the food cost is currently running, it has little value unless the operator knows what the target percentage should be.

Potential food cost

Potential food cost is a theoretical or ideal percentage which indicates what the food cost should be in a perfectly run restaurant, given the sales mix. It reflects the fact that the most popular menu items will have the greatest influence on the overall food cost percentage. To calculate the food cost percentage of each dish: Multiply the food cost per item with the number of portions sold. Add both columns and then multiply the total cost by 100 and divide it by the total of the sales column. This will result in the potential food cost. If then your total cost is \$ 3,000.- and your sales \$ 10,000.- your potential food cost percentage will be 30.0. If the sales mix produces a potential food cost that exceeds the maximum allowable cost, profit objectives cannot be realized.

Standard food cost

Management needs to adjust the potential food cost to include waste and spoilage that occurs during normal preparation, as well as an allowance for complimentary or discounted meals to employees and guests. An acceptable variance will range from half to three percentage points of food sales. The exact percentage is determined from management studies. The standard food cost percentage is calculated by adding this variance percentage to the potential food cost. The difference between actual food cost and standard food cost reflects inefficiencies that should have been controlled by management.



How they relate

Bringing all four aspects of food cost together shows the importance of each in examining food costs

Assume that you have a maximum allowable food cost percentage of 35. The month-end food sales and inventory figures for the same period result in an actual food cost percentage of 34.0. If the food cost analysis stops at this point, one may conclude that the cost of food is in line because the actual food cost is slightly below the maximum allowable food cost percentage. However, further analysis using the weighted sales mix analysis reveals a potential food cost percentage of 29.4. The variance that exists between the actual and potential food cost percentage is 4.6 percentage points, much too high for the existing menu sales mix.

Management has set a standards food cost percentage of 2% to take into account as acceptable food waste, etc. The actual food cost percentage is still 2.6 percentage points higher than the standard food cost percentage. Thus minimum profit objectives are being exceeded, but they are not being optimized. Investigation is required and its results could improve the financial performance of the restaurant in the future.

Menu Engineering

Menu engineering provides the manager with information about a menu item's profitability, as well as popularity, so that proactive planning, recipe design and customer pricing decisions can be made. Menu engineering is not a substitute for proper purchasing, food rotation, standard recipes or any of the other basic kitchen controls that can negatively impact your costs. Rather it is a method of evaluating every item on your menu relative to its present contribution to bottom line dollars, thereby allowing managers to recognize the items they **want** to sell!

Contribution Margins

While the concept of **food cost percentage** (an item's ingredient cost divided by its menu price) is the most commonly used criteria for assessing effective cost controls, the concept of **contribution margin** (an item's menu price less its food cost) is the basis of menu engineering. A simple question should make the distinction clear. If you could sell one more item before your restaurant closed today, would it be a sirloin steak for Rs20 that costs you Rs 8 or a plate of pasta primavera for Rs 10 that costs you Rs 12. While the food cost percentage of the pasta is 20% versus 40% for the steak, the steak will contribute Rs 12 to gross revenue as opposed to \$8 for the pasta. I'll take the Rs12... thank you very much. Contribution margin then is based on the Rupee you take to the bank.

Accounting for the Popularity of Menu Items

While a menu item's contribution margin tells us how many dollars each individual sale of the item contributes to the cash register, you need to know how popular the item is to determine the total dollars it contributes to the restaurant's revenue. A popular item with a high contribution margin is a "star" while an unpopular item with a low contribution margin would fairly be called a "dog". Menu engineering therefore takes each menu items contribution margin and its popularity into account to determine into which of four categories it falls: **star**, **Ploughhorse**, **Puzzle** or **dog**. We'll get back to these categories shortly.

The Evaluation

I have included a completed Menu Engineering spreadsheet to demonstrate how the process is performed based on the required information listed below

A	B	C	D	E	F	G	H	L	P	R	S
Entrée	# Sold	Menu Mix%	Food Cost	Sales Price	Item CM	Menu Cost	Menu Rev.	Menu CM	CM Cat.	MM Cat.	Class
GS	72	12.52 %	\$4.65	\$14.45	\$9.80	\$334.80	\$1040.40	\$705.60	L	L	Dog
Steak	130	22.61 %	\$5.35	\$18.95	\$13.60	\$695.50	\$2463.50	\$1768.00	H	H	Star
Seafood	94	16.35 %	\$7.25	\$22.50	\$15.25	\$681.50	\$2115.00	\$1433.50	H	H	Star
Tofu	154	26.78 %	\$4.20	\$14.45	\$10.25	\$646.80	\$2225.30	\$1578.50	L	H	PlowH
Pork	125	21.74 %	\$6.90	\$16.45	\$9.55	\$862.50	\$2056.25	\$1193.75	L	H	PlowH
Total	N = 575	100%									
Addtl Calcs.						I = \$3220.8	J = \$9900.45	M = \$6679.35			
Addtl. Calcs.						K =		O = \$11.62	Q = 14%		

The information that you need to perform a menu engineering exercise is as follows:

1. **Column A.** A list of your competing menu items (a separate evaluation should be performed for each menu category e.g. appetizers, entrees, and desserts)
2. **Column B.** A periodic (weekly or monthly) total of the number of each item sold (use your POS report)
3. **Column D.** The ingredient cost of each menu item (not just the "center of the plate" cost but the entire cost of the item)
4. **Column E.** A list of the menu selling price for each item being evaluated

You can perform the evaluation yourself by manually calculating the numbers in the following: **Columns C, F, G, H, L, N, I, J, M, K, O, and Q.** (Note that the spreadsheet above automatically calculates these numbers)

The inputs in **Columns P, R and S** are calculated as follows:

Column P: Profit Category is **LOW** if the menu item profit is less than the menu's Average item profit (\$4.16 in this example). Conversely, enter **HIGH** in the cell if the menu items profit is greater than average for the menu.

Column R: Popularity Category is **LOW** if the menu item's menu-mix percentage (e.g. the total number of the item sold divided by the total number of items) is less than 80% of the average. Conversely this means that we are considering an item to be popular, and placing the word **HIGH** in the column, if it sells at least 80% of an average item's popularity. In the example below, the average menu popularity equals 8.3% (100% divided by 12 items = 8.3%). Therefore we consider an item popular (**HIGH**) if it sells 80% of 8.3% or 6.7%.

Column S: The Menu Item Class is determined by the results of Columns P and R. If an item is both profitable and popular then it's a **STAR**. If it's profitable but relatively unpopular then enter the word **CHALLENGE**. If the item is relatively unprofitable but popular then enter the word **WORKHORSE**. Finally, a **DOG** is an unprofitable and unpopular menu item.

How to Take Action Based on the Results

Let's start with the obvious. Keep the **STARS** and dump the **DOGS**.

Your creativity is now required dealing effectively with your **CHALLENGES** and **WORKHORSES**. Let's start with the **CHALLENGES**. These items are profitable but relatively unpopular. Your "challenge" is to make them more popular. There are many ways to accomplish this including changing the preparation (Veal Marsala may be more popular than Veal Putanesca, but still just as profitable). Re-naming or re-plating the item to make it sound and/or appear more appealing is another alternative. Alternatively you might want to create a whole new menu item using the same "center of the plate" ingredient, but doing it in a way that will be more appealing to your customers.

As for the **WORKHORSES**, they are popular items with less than ideal profit margins. Here is where your best opportunities lie. Your job is to re-engineer the menu item to reduce its cost while not sacrificing what makes it popular. This can involve substituting a single relatively expensive ingredient for a one that is less costly (e.g. Assiago cheese in a Caesar salad for Reggiano Parmesan). It may involve substituting one cut of meat for a less expensive one knowing that the preparation is what makes the item popular. It might be as simple as using a less expensive garnish. How about increasing the items selling price? Your chef's imagination and talent takes over here. If I knew how to perform this magic I would be wearing an apron and a toque instead of sitting in this chair banging on my keyboard!

UNIT IV

INTRODUCTION

Because guest satisfaction depends upon directly on the production and serving, these control points are in many ways the most important and complex. Production, for example, must ensure quality while complying with cost limitations. And serving-an art much like acting-requires proper timing, accuracy, and a host of other talents to provide a dining experience that will please guests.

Production and serving involve many more activities-and many more employees-than other control points. As control procedures for production and serving are being developed, the guest must be at the forefront of the decision making process. As the food and beverage manager plans control procedures for purchasing, receiving, storing, and issuing, it is sometimes easy to forget about the guests being served. However, production and service activities require the manager to focus on guest-related concerns and to match these with other priorities about back-of the house control procedures. Therefore, in addition to controlling the operations resources, such as products, labor, and revenue, the food and beverage manager must consider the impact that operating/control problems will likely have on guests.

Production planning

Production planning is the first step toward ensuring quality products and dining experiences that meet or exceed guest expectations. Production actually comprises three control points: preparing, cooking, and holding. Personnel assigned to these areas are responsible for the wholesomeness, goodness, and attractiveness of the foods and beverages that will be presented to the guests. Even though the cost and quality of foods and beverages may have been expertly controlled before their arrival at production centers, all gains will be lost if there are no control procedures to guide management and staff through production and serving.

Production planning is simply getting ready for production. Operations of all sizes must plan for production if they are to have food and beverage products, personnel, and equipment available when needed. Planned coordination among departments also prevents under-or over-utilization of resources. While planning does not guarantee that all problems will be eliminated, it certainly heads off many which may have serious economic and marketing consequences. Success, in most instances, correlates with successful planning.

Forecasting production requirements

Quantities of products required for expected production activities during the upcoming week must be estimated. These projections may be based on sales history records. A careful analysis of previous unit sales can help control production quantities and reduce leftovers. Seasons, weather, special events within the community and similar factors also

affect production estimates. These must be taken into consideration in forecasting production requirements during planning sessions.

Sales history records

Sales history records can be used to estimate production requirements. A common technique makes use of a separate sales history sheet for each day of the week. The sales history record provides space for recording the total of each item sold on a specific day of the week over a five-week period. In addition to recording the number sold, the planner computes the percentage of all guests ordering each item. With this form, trends can be identified and used to predict future sales.

Column 1 exhibits the average number of each menu item ordered daily over the past 80 days. Column 2 lists the percentage total, calculated by dividing the number sold by the number of guests served and multiplied by 100. For example, in the previous 80 days, an average of 46 shrimp cocktails were served, or 27.4% of guests ordered shrimp cocktails.

$$\frac{\text{Number sold}}{\text{Total guests}} \times 100 = \text{percentage of guests ordering item}$$

$$\frac{46}{168} \times 100 = 27.4\%$$

Information from the most recent Tuesday (4/13/xx) is listed in columns 3&4. Forty-nine guests of the 177 total ordered the shrimp cocktail appetizer. This amounts to 27.7%.

$$\frac{49}{177} \times 100 = 27.7\%$$

Once the total no. of guests for the next Tuesday is estimated, the percentage trend can be used to estimate the no. of portions of each menu item required. For example, assume that a total of 200 guests are estimated for the next Tuesday. If the manager assumes that the same percentage of guests will order this appetizer, the estimated no. of shrimp cocktails needed for next Tuesday can be calculated as follows:

Estimated guests	x	percent as a decimal	=	Estimated servings
200	x	.277	=	55

This process is repeated to estimate production requirements for all other menu items and for all other days in the forecast period. Another forecasting technique involves comparing unit sales data for the past month and six months from the past month. As shown in Exhibit 2, the total number of each appetizer (selected items for illustrative purposes only) sold in January (Top line) and July (second line), February (top line) and August (second line) etc is shown/. The total unit sales and sales mix (last two columns)

are also shown. Note that appetizer 1 (cup of the day [soup]), represents unit sales of 1793 (15.85% of all appetizers sold), for January to June (current year) plus January-march (previous year). Using sales data applicable to a six month period allows many variables to “average out” for production forecasting purposes. In addition, this data is very helpful input for menu revisions; managers wish to sell popular and remove unpopular items.

Computers can be very useful in the projection of production requirements, electronic files can store historic data, and computer software can be developed to apply these records for future use. While the formulations described above are popular for manual forecasting, computer systems tend to employ time series analysis.

Formulating production plans:

Regularly scheduled planning meetings should be held. Personnel most directly involved with production activities should attend these planning sessions. For example, in a small operation the manager and head cook may meet every Wednesday to review production plans for the week beginning on Friday or Saturday.

During these meetings, estimated of production needs, derived from a study of sales history and similar information, must be adjusted and converted into production plans. Sales history records using data from manual or computer tallies may be used to produce a master food production planning worksheet.

Food production personnel can use this form to determine the amount of menu item ingredients to purchase. The form also allows recording of actual results of each day’s operation, including the number of leftovers. This information can be used to modify and update sales history information. Revised counts can then be used in estimating production needs in subsequent weeks.

Other matters must be considered at the production-planning meeting. Based upon the estimated production needs, labor and equipment can be scheduled at this meeting. For example, perhaps a special catered event requires items to be produced in especially large quantities. The sample equipment schedule shown in exhibit 4 relates how to use existing equipment to produce a large quantity of bread products for a special banquet.

After the production-planning meeting, the required number of each menu item for the forecast period is known. Therefore, issue requisition forms for some days or items may also be partially completed. These requisition forms might be completely prepared for catered events if these costs are charged to a separate revenue center.

PRODUCTION PLANNING AND FOOD PURCHASING:

Typically, food purchase decisions are not made during production planning sessions. Perishable products, “directs”, are normally purchased several times weekly according to forecast needs. Non-perishable items, “stores” can be purchased according to the minimum/ maximum inventory system that takes into account normal usage rates.

When these types of inventory/ordering systems are used, specific purchase decisions need not be based on normal fluctuations in the number of guests expected. Since these purchased decisions are based on typical usage rates, the experience factor is built into the procedures for estimating quantities to purchase.

However, the number of guests estimated during the production planning meeting is important when making purchase decisions for special banquet functions. These activities may greatly increase the quantity of items needed, or may require special products not normally carried in inventory. In these cases, it is very important that there be effective communication between planners and purchasers. Although specific procedures will vary, a good policy is list provide purchasing staff with two weeks' notice of special events that will significantly increase the number of meals served or that have a special purchase requirements. A special event notice can be used to inform purchase personal about special purchasing requirements.

Production control:

The menu not only dictates what items are to be prepared, but it also is a major marketing tool that describes the plan for meeting or exceeding guests' expectations. In order to meet the needs of the customers it is very essential to follow some standards.

Quality Requirements: Manager must consider quality requirements in several different ways. These range from the detailed quality requirements of specific operating standards to the general perspectives of management policy and guest expectations. It is important to remember that control procedures must help—not hinder—the operation's ability to meet its required standards.

Control during production begins with adhering to establish operating standards. These include standard purchase specifications, standard recipes, standard yields, standard portion sizes, standard portion costs for food production, and standard glass and ice size for beverage production. Quality requirements are reflected in the property's marketing plans and strategies. Marketing position statements, operating goals, and management philosophies all express at least minimum requirements that must be built into the control system.

Maintaining Standards:

Control during production starts with adhering to established operating standards. Food and beverage cost standards---guides to planned or expected results—cannot be developed until standard cost control tools are in use. Cost standards are useless if the tools needed to attain them are not used in production areas. Several conditions make it possible for personnel to comply with production standards.

Training: Employees must understand the standards. Training programs for new staff and refresher sessions for experienced employees are needed. Seasoned employees often forget about, or find shortcuts to, operating procedures. New menu items, new equipment, and revised procedures are among the numerous everyday changes that point to the need for ongoing training for all staff members.

Information: Information must be available in workstations. For examples, standard recipes can be put together into readily available files or books for reference. When

computerized systems are in place, can be printed out and placed in workstations daily. Portion sizes should also be posted in production areas.

Tools and Equipment: Tools and equipment needed for production staff to follow standards must be available. Operating and control problems will result if proper equipment is unavailable or is improperly used. In correct substitutions can jeopardize the control system.

Supervision: Management must routinely supervise personnel to ensure compliance with all requirements. They must be alert and watchful of production practices. Food and beverage managers must be able to perform more than one task at a time. For example, when walking past the bar on the way to office, the manager can observe whether the bartender is using a short glass or jigger in preparing a drink. When passing a table in the dining room or the serving line in the kitchen, the manager can quickly judge the portion size of an entrée – even though there may be other important concerns at the moment.

Serving Controls: After food and beverage products are produced, they must be served to the guest. For purposes of our discussion we will refer to serving (which means moving the product from production staff to service staff) and service (moving products from service staff to guests) as one step in the control process, and we will use the terms *serving* and *service* interchangeably.

The serving activity is critical from a cost control standpoint because the responsibility for menu items changes from the kitchen / bar to the dining room/ lounge or other service area. This activity may enhance or detract from the quality of food and beverage products. Many factors affect the quality of service in a food and beverage operation. They include the communication and cooperation between kitchen, bar, and dining room personnel; the flow of products; the menu; the design and layout of the kitchen, bar, and dining room; and the style of service. Standards of service vary greatly with the type of establishment. Management is responsible for standardizing ordering procedures, serving procedures, sanitation practices, and personnel requirements. As with the other control points, the serving function requires sanitation, quality, and cost controls.

Food service assumes many forms today. Besides the traditional forms of table service found in many lodging and food service operations, other types of service are becoming more popular in hospitality establishments. Each requires slightly different standards. For example, special functions and banquets are served differently than cooked-to-order meals. Also, when food products holding becomes a critical control point. Similarly, hotel room service and carry-out service can be profitable and safe if designed properly.

Server responsibilities:

Food servers must meet and greet the guests. They are really the property's sales- persons, using the most powerful in-house marketing tool—the menu—to please the guests and, simultaneously, to generate revenue for the property and,

perhaps, for themselves (in the form of tips). Following are several procedures that are basic to the control of the food and beverage service system.

Accuracy. The correct order must be taken and served. Poor communication between service personnel and guests has the same consequences as poor communication between production and service staff—higher costs and guest dissatisfaction. Effective communication can be helped by such techniques as reviewing orders with guests and sing the bin number, if available, rather than pronouncing difficult names of foreign wines. As already noted, servers must be prompt, courteous, and tactful in all dealings with guests. Invariably, guests expect a certain quality of service relative to cost. If they are disappointed, revenues will be lost, guests will not return, and word-of-mouth reports will be negative.

Suggestive Selling: servers should know which menu items to recommend—generally those with the higher contribution margins. These items are the more profit able ones for the property. Managers should try to maximize the amount of revenue left after product cost is deducted from the selling price. The contribution margin represents money used to cover other costs and to contribute to required profit levels.

Suggestive selling techniques also help generate additional revenue and therefore affect operation control. If a server sells a bottle of wine, an appetizer of a dessert that guests would not have purchased otherwise, then all there parties benefit

- Guests have enjoyed products that they otherwise might not have ordered.
- The server has increased the check size and, probably, the tip.
- The food and beverage operation has generated increased revenue.

Use of computers in food cost control

An effective way to achieve control over the production-to-service link is through the use of computerized pre-check system. Pre-check system are composed of both hardware and software aimed at operational efficiency through sound internal control. Pre-check software usually resides in an electronic cash register or point of sale (POS) terminal that is connected to local and remote printers. This connections form a communication network between production work areas and service stations. Basically, the server enters an order through a pre-check terminal, which, in turn, relays the recorded items to the proper workstation for preparation.

Computerized pre-check systems ensure that no food or beverage items are produced unless they have first been recorded in a pre-check file. The elimination of actual orders being physically given to kitchen personnel or bartenders helps assure management that production will not begin with out a unit sale being posted. Some automated systems enable managers to randomly review guest checks while they are being processed. This helps managers to verify that items ordered that are in fact being served and that revenues from their sale will be collected.

UNIT V

Beverage Purchasing Control

Purchasing Beverage Products:

- While food products only require one level of quality per item, several qualities are chosen for alcoholic beverages.
- Beer is the most highly perishable of beverage products, with a pull date of only a few months. Operators must, therefore, carefully select brand and packaging methods.
- Generally, clientele, ambiance, and menu help determine what beer product will be selected
- Beer is typically sold in cans, bottles, or kegs.
- Draft beer (beer from kegs) is often the preferred choice and cheaper for operators to serve. However, special equipment is required.
- The shelf life of keg beer is the shortest of all packaging types, ranging from 30 to 45 days for an untapped keg, that is, one that has not yet been opened by the bartender, and even fewer days for a keg that has been **tapped** (opened).
- Wine must also be selected according to product and packaging.
- Operators generally sell wine by the glass, bottle, and split or half bottle.
- If wine is also purchased for cooking, it will be bought from the beverage wholesaler also, but generally not of the same quality as that purchased for drinking.
- As a good manager, you will build a **wine list**, the term used to describe your menu of wine offerings, that fits your own particular operation and guest expectations.
- In developing a **wine list**, operators must offer choices for guests who want to spend a lot or a little.
- A **vintner** is a wine producer.
- However, avoid the temptation to offer too many wines on a wine list.
- Wait staff should be trained to be knowledgeable but not intimidating to guests.
- Generally, if operators are having trouble selling wine, the difficulty lies in the delivery of the product rather than with the product selected.
- Distilled spirits have an extremely long shelf life; therefore, a wrong purchase is not usually a disaster.
- Quality levels are most pronounced with spirits.

- Packaging is not a particular issue when dealing with spirits.
- **Call liquors** are those requested by brand name; extremely expensive call liquors are sometimes referred to as **premium liquors**.
- Operators generally charge a higher price for call and premium liquors.
-
- In general, operators will select spirits in two major categories, well and call. **Well liquors** are those spirits that are poured when the customer does not specify a particular brand name.
-

Affect of Sales Mix on Beverage Cost

Rock and Roll Bar had a beverage cost of 35.8% in May. Beverage cost in June dropped to 34.1%. Is this a desirable trend?

Cost of Sales - Rock and Roll Bar

	MAY			JUNE		
	SALES	COST	%	SALES	COST	%
Liquor	4300	1006	23.4	6200	1519	24.5
Wine	7993	3781	47.3	5360	2589	48.3
Beer	6347	1891	29.8	4890	1506	30.8
TOTAL	18,640	6,678	35.8	16,450	5,614	34.1

An examination of sales mix indicates that the lower overall beverage cost was caused by a shift in sales patterns. In fact, each category of beverage cost actually increased from May to June. By separating our beverage number into liquor, wine, and beer we are able to identify a negative trend.

Also note, Gross Margin (profit) also decreased in June.

$$\begin{aligned}
 \text{May: } 18,640 - 6,678 &= 11,962 \\
 \text{June: } 16,450 - 5,614 &= \underline{10,836} \\
 \text{Change in Gross Margin} &= 1,126 \text{ Decrease}
 \end{aligned}$$

Establish the Selling Price

As bar manager you have decided to cost your drinks as follows:

Category	Cost %
Liquor	23.1
Wine	44.5
Beer	27.3

If a 40 oz. bottle of liquor costs \$30.40, a bottle of wine costs \$8.76 and a bottle of beer costs \$0.89; calculate the selling price for each. (Assume liquor drinks are 1 ounce each).

Solution

$$\text{Selling Price} = \frac{\text{Actual Cost}}{\text{Desired Cost \%}} \times 100$$

Liquor (1 ounce serving)

$$\frac{30.40 \text{ btl.}}{40 \text{ oz / btl}} = 0.76 \text{ ounce}$$
$$\frac{0.76}{23.1} \times 100 = \$3.29$$

Wine (btl)

$$\frac{8.76}{44.5} \times 100 = \$19.68$$

Beer (btl)

$$\frac{0.89}{27.3} \times 100 = \$3.26$$

∴ the selling price of liquor would be \$3.29, a bottle of wine \$19.68, and a bottle of beer would be \$3.26.

Determining Order Quantity

- Par Stock
 - Determine order period
 - Determine usage for the said period
 - Par stock -current inventory =purchase quantity

Beverage Receiving, Storing and Issuing

Standards for Beverage Receiving

- Quantity of an item delivered must equal the quantity ordered
- Quality of an item delivered must be the same as the quality ordered
- Price on the invoice for each item delivered should be the same as the price quoted or listed when the order was placed

Standard Procedure for Beverage Receiving

Quantity of an item delivered must equal the quantity ordered

- Quality of an item delivered must be the same as the quality ordered

- Price on the invoice for each item delivered should be the same as the price quoted or listed when the order was placed
- Call to the attention of management and the delivery driver any broken or leaking containers and any bottles with broken seals or missing labels
- Note all discrepancies between delivered goods and the invoice on the invoice itself
- Sign the original invoice and return it to the driver.
- Record the invoice on the beverage receiving report
- Notify the person responsible for storing beverages that a delivery has been received

To Secure Storage Areas, You Have Two Choices

- Assign the responsibility for the stored items to a single employee
- Keep the beverage-storage facility locked at all times

Storing Control Objectives

- Prevent pilferage
- Ensure accessibility when products are needed
- Preserve quality

Beverage Issuing Objectives

- To ensure the timely release of beverages from inventory in the needed quantities
- To prevent the misuse of alcoholic beverages between release from inventory and delivery to the bar

Issuing Procedure

- Limit access to beverage stock Match stock issued to requisition form
- Match empty bottle returns to requisition form Destroy empty bottles
- Update perpetual inventory cards
- Distribute requisition copies:
 - · accounting
 - · storekeeper's files
 - · order

Beverage Issuing Standards and Standard Procedures

Standards

- Carefully set issue quantities
- Issue beverages only to authorized people

Standard Procedures

- Establish par stocks for bars. Set up a requisition system

Empty Bottle Return

- Maintains constant par stock Checks for marked bottles
- Can be easily spot checked Normally used along with the requisition

The Importance of Bottle Marking

- Prevents bartender from pouring own stock
- Assign proper purchase price to bottle for inventory purposes Checks on proper stock rotation

BEVERAGE PRODUCTION CONTROL

Objectives of Beverage Production Control

- To ensure that all drinks are prepared according to management's specifications
- To guard against excessive costs that can develop in the production process

Devices for Measuring

Standard Quantities

- Shot glass (plain or lined)
- Jigger
- Pourer
- Automated dispenser

How to Calculate the Cost of Straight Drinks

Method

- Total number of ounces in bottle \div Standard portion size (ounces)
= Number of drinks per bottle
- Cost of bottle \div Result from Step 1 = Standard drink cost

Method II

- Cost of bottle \div Total number of ounces in bottle = Cost per ounce

- Result from Step 1 \times Standard portion size = Standard drink cost

Examples of Bartenders Bypassing Beverage Controls

When control is Shot glass used to measure drinks

- The bartender may: under pour each drink until he/she has accumulated enough liquor to sell. Pocket money from sale, e.g., if bartender under pours each drink by 1/16 oz., every sixth drink can be pocketed.
- over pour drink to entice a higher tip

When control is Bottles are measured nightly to balance sales

- The bartender may: bring in, own liquor and sell from that bottle, pocket profit water down liquor to top up bottle charge for premium brand, pour from bar brand
- pocket profit

When control is Bottles are marked to avoid staff bringing in their own

- The bartender may: Pour 2/3 of bottle, then drop bottle and break it- apologize profusely – tell the supervisor the bottle was almost full
- Pocket the money

When control is Electronic dispenser measures and counts each shot

- The bartender may: overcharge on group tab and pocket the money

When control is all drinks must be registered before preparation

- The bartender may: Register drink, collect payment- tell supervisor that drink was spillage or complementary

Example of Service Staff Bypassing Service Control

- Use the same check twice
- Overcharge customers when adding bill, especially when no check is given
- Receive product from bar without registering it
- Lose check after it has been paid
- Void items that have been paid
- Under add a check (to benefit friends or induce bigger tip)

Beer Count Form

Room: <u>Lizard Lounge</u>		Date: <u>3/21/91</u>			
Bartender: <u>Sue Smith</u>		Shift: <u>5 - cc</u>			
Brand	Open	+	Issued	-	Closed
Blue	113			81	32
Blue Light	56			45	11
Canadian	173			41	132
Canadian Light	96			89	7
Export	13		24	30	7
Golden	49			49	0
Coors Light	151			101	50
Budweiser	18			17	1
Molson Dry	101			90	11
Labatt Dry	43			43	0
Heineken	12			10	2
Corona	12			8	4
Michelob	18			18	0
Strohs	6			5	1
Becks	3			3	0
Total	864		24	630	258

Total Par Register: 255
 Less: Total Per Count: 258
 Add: Spillage 2
 Variance: <1>

Liquor Par Form

Bartender: <u>Jack Jackson</u>				Date: <u>13.7.91</u>			
Room: <u>Sunset</u>				Shift: <u>5 - 11</u>			
Brand	Par	On Hand	Empty	Brand	Par	On Hand	Empty
Bar Rye	4	1	3	Gordon Gin	1	1	0
Bar Vodka	4	2	2	Baileys	2	1	1
Bar Scotch	2	2	0	Amaretto	1	1	0
Bar Rum	3	2	1	B & B	1	1	0
Bar Gin	2	2	0	Kahlua	3	2	1
Canadian Club	2	2	0	Tia Maria	1	1	0
Absolute	1	1	0	Grand Mariner	2	2	0
Smirnoff	2	2	0	Menthe-Wt	1	1	0
J.W. Black	1	1	0	Menthe-Gn	1	1	0
J.W. Red	1	1	0				
Chivas	1	1	0				
Glenfiddich	1	1	0				
Bacardi White	2	2	0				
Morgan Dark	1	1	0				
Bacardi Amber	1	1	0				
Beefeater	2	2	0				

Metered Liquor Variance Form

Room: <u>Party Bar</u>						Date: <u>14.2.91</u>	
Bartender: <u>David Davis</u>						Shift: <u>5 - 11</u>	
Meter #	Open	Close	Sold	Tape	Spill	Variance	Comments
1	36531	36576	45				
2	74939	74991	52				
Total	1114570	111567	97	98	1	· 0	1 vodka spilt

MONITORING BEVERAGE OPERATIONS

Ways to Monitor Beverage Production

- Management observes bar operations
- Designated employee observes others working at the bar and reports back to management
- Individuals unknown to the bartender visit the bar, observe employees, and report back to management
- Closed-circuit television systems permit observation from some remote location

Approaches for Monitoring Beverage Operations

1. The Cost Approach
 - Cost percent methods, Monthly calculations, Cost calculations by category, Daily calculations
2. The Liquid Measure Approach , Ounce-control method
3. The Sales Value Approach
 - Actual sales record method Average sales value method Standard deviation method

Calculate the Beverage Cost

Dawson Village Bar had the following financial data available at the end of May:

April Closing Inventory:	\$13,586.00
Beverage Purchases for May:	7,444.00
Bar to Food Requisitions:	217.00
Food to Bar Requisitions:	131.00
May Closing:	11,460.00

Calculate the beverage cost of goods sold.

$$\begin{aligned}
 \text{Beverage Cost} &= \frac{\text{Open}}{\text{Inv}} + \frac{\text{Bev.}}{\text{Purchases}} + \frac{\text{Food to}}{\text{Bar}} - \frac{\text{Bar to}}{\text{Food}} - \frac{\text{Closing}}{\text{Inv}} \\
 &= 13,586 + 7,444 + 131 - 217 - 11,460 \\
 &= 9,484
 \end{aligned}$$

Beverage cost is \$9,484. in May.

Calculate the Beverage Cost Percentage

Dawson Village Bar had a beverage cost of \$9,484 for the month of May. Beverage revenues for May were \$30,994. Calculate the beverage cost percentage.

$$\begin{aligned} \text{Beverage Cost \%} &= \frac{\text{Beverage Cost}}{\text{Beverage Revenue}} \times 100 \\ &= \frac{9498}{30994} \times 100 \\ &= .3059 \times 100 \\ &= 30.6 \end{aligned}$$

Calculate the Beverage Turnover Rate

Calculate the Beverage inventory turnover rate using the following data:

Opening Inventory:	\$12,447.
Closing Inventory:	\$13,139.
Beverage Cost:	\$19,612.
Solution:	

$$\begin{aligned} \text{Average Beverage Inventory} &= \frac{\text{Open Inv.} + \text{Clos. Inv.}}{2} \\ &= \frac{12447 + 13139}{2} \\ &= 12793 \end{aligned}$$

$$\begin{aligned} \text{Beverage Turnover Rate} &= \frac{\text{Beverage Cost}}{\text{Average Bev. Inventory}} \\ &= \frac{19612}{12793} \\ &= 1.53 \end{aligned}$$

The turnover rate is 1.53 times.

Cost Percent Formulas and Equations

$$\begin{aligned} & \text{Opening beverage inventory} + \text{Beverage purchases this month} \\ & = \frac{\text{Total available for sale this month} - \text{Closing inventory this month}}{\text{Value of beverages issued to the bar}} \end{aligned}$$

$$\frac{\text{Bar inventory value at the beginning of the month} - \text{Bar inventory value at the end of the month}}{\text{Bar inventory differential}}$$

Or

$$\begin{aligned} & \text{Opening beverage inventory} + \text{Beverage purchases this month} \\ & = \frac{\text{Total available for sale this month} - \text{Closing inventory this month}}{\text{Value of beverages issued to the bar}} \end{aligned}$$

$$\frac{\text{Bar inventory value at the beginning of the month} - \text{Bar inventory value at the end of the month}}{\text{Bar inventory differential}}$$

The Three main Methods Used to Control Beverage

- Potential sales
- Quantity (once) control
- Standard sales

Potential Sales Method of Beverage Control

- The potential sales method compares the revenue which **should** have been received per bottle, based on usage, to the revenue which **actually** was received per bottle

SALES AND POTENTIAL COST ANALYSIS					
ITEM	ITEM		QUANTITY SOLD	TOTAL	
	COST	SALE		POTENTIAL COST	SALES
1	0.75	2.00	300	225	600
2	1.25	2.75	900	1 125	2 475
3	4.00	6.50	250	1 000	1 625
4	2.10	6.00	1 000	2 100	6 000
5	1.50	5.50	470	705	2 585
TOTALS				5 155	13 285

Sales and Potential Cost Analysis

Sales and Potential Cost Analysis				Week Ending: <u>December 14</u>										
Item	Item		Percent Cost	Quantity Sold	Total Cost	Total Sales								
	Cost	Sale												
Bar Scotch	0.79	2.75	28.7%	41	\$32.39	\$112.75								
Cutty Sark	0.84	2.95	28.5	9	7.56	26.55								
Chivas Regal	0.89	3.25	27.4	12	10.68	39.00								
Ballantine	0.84	2.95	28.5	3	2.52	8.85								
Dewer	0.87	2.95	29.5	9	7.83	26.55								
Totals					\$1450.21	\$4651.75								
$\text{Potential Cost Percent} = \frac{1450.21}{4651.75} \times 100 = 31.2$														
<table border="1"> <tr> <td>Actual opening inventory</td> <td>2765.51</td> </tr> <tr> <td>Add: purchases for week</td> <td>1371.60</td> </tr> <tr> <td>Less: actual closing inventory</td> <td>2666.82</td> </tr> <tr> <td>Actual Cost</td> <td><u>\$1470.29</u></td> </tr> </table>							Actual opening inventory	2765.51	Add: purchases for week	1371.60	Less: actual closing inventory	2666.82	Actual Cost	<u>\$1470.29</u>
Actual opening inventory	2765.51													
Add: purchases for week	1371.60													
Less: actual closing inventory	2666.82													
Actual Cost	<u>\$1470.29</u>													
$\text{Actual Cost Percent} = \frac{1470.29}{4651.75} = 31.6$														
Variance = 0.4														

Standard Beverage Recipe

Drink Name: <u>Bloody Caesar</u>		
Selling Price: <u>\$4.47</u>		
Ingredients	Quantity	Cost
Celery Salt		.02
Tobasco Sauce	2 drops	.01
Worchestershire Sauce	dash	.02
Salt and Pepper	dash each	.02
Vodka	1 1/2 ozs	1.08
Clamato Juice	6 ozs	0.36
	Total	1.51
Procedure		
Rim Glass With Celery Salt		
Build With Ice		
Glass: Beer		
Garnish: Lemon Wedge Celery Stalk (flowered) Stir Stick		

Calculate the Potential Cost Percent

Using the information provided, calculate the potential cost percent.

Drink (1 oz)	Price	Cost	Qty Sold
Rye	3.25	.81	47
Gin	3.25	.79	15
Vodka	3.25	.84	103
Bloody Caesar	4.75	1.05	47
Martini	4.75	.93	36

	Potential	
	SALES	COST
Rye	152.75	38.07
Gin	48.75	11.85
Vodka	334.75	86.52
Bloody Caesar	223.25	49.37
Martini	171.00	33.48
Total	930.50	219.29

$$\begin{aligned}
 \text{Potential Beverage} &= \frac{\text{Potential Cost}}{\text{Potential Sales}} \times 100 \\
 &= \frac{219.29}{930.50} \times 100 \\
 &= 23.6
 \end{aligned}$$

Quantity (ounce) Method of Beverage Control

- The Quantity (ounce) Method compares the actual sales with the actual consumption, measured in ounces

Inventory Consumption Record

Inventory Consumption Record						Date: <u>November 7</u>	
Item	Size	Previous Inventory	Added Per Requisitions	Total	Present Inventory	Total Used	
						Bottles	Ounces
Bourbon	32 oz	10.4	6.0	16.4	8.1	8.3	266
Gin	32 oz	6.8	4.0	10.8	6.0	4.8	154
Rum	25 oz	7.1	5.0	12.1	4.9	7.2	180
Rye	25 oz	8.4	2.0	10.4	9.2	1.2	30
Scotch	26 oz	4.5	4.0	8.5	5.1	3.4	88
Vodka	32 oz	9.2	2.0	11.2	6.4	4.8	154

Standard Sales Method

Standard Sales method compares the actual sales against the weighted average sales

Using the following information, calculate the weighted standard sales for a 40 oz bottle of vodka.

Type of Drink	Number Sold	Drink Size	Selling Price	Ounce Sold	Total Sales
Vodka Straight	47	1 oz	3.95	47	185.65
Bloody Mary	12	2 oz	5.25	24	63.00
Bloody Caesar	24	2 oz	5.25	48	126.00
Screwdriver	13	1 1/4 oz	4.25	16.25	55.25
Greyhound	4	1 1/4 oz	4.25	5	17.00
Total	100			140.24	446.90

$$\text{Total Bottles Sold} = \frac{\text{Total Ounces}}{40} = \frac{140.25}{40} = 3.5$$

$$\text{Weighted Standard Value} = \frac{\text{Total Sales}}{\text{Total Bottles Sold}} = \frac{446.90}{3.5} = 127.69$$

The weighted standard value⁶² of a bottle of vodka is **\$127.69**.