

Hypothesis:

Preparing meatloaf in house is more cost effective than purchasing the premade meatloaf for service at Jackson Memorial Hospital.

Background:

High cost item: Meatloaf

The meatloaf for the “At Your Request” (AYR) section is premade and heated at time of order. Due to the fact that this delivery system is room service, having an item that is premade is convenient for production and the tray line. The meatloaf item can be ordered any day for those who are on the AYR system. The cost of each unit of meatloaf is \$1.23 for a 4 oz serving. Being able to prepare a meatloaf in house would be a cost effective benefit to the operation.

Making from scratch:

The meatloaf for the “Expressly For You” (EFY) section is prepared in house the day prior to it being the chef’s special for which the item is on the menu cycle. This item is also a 4 oz serving and the cost of the home made meatloaf is \$0.65. The production team can begin phasing in the meatloaf made from scratch by checking the item usage report to forecast what the item popularity is and to make additional to freeze and heat up at request for AYR.

Methods:

The ingredients for the homemade meatloaf were collected for cost, time, and equipment needed. The costs of both the homemade and premade meatloaf will be compared factoring in the labor and yield of the items. Since the premade meatloaf is traditionally used for the AYR section and item usage report will be collected to further analyze the cost savings over time. Customer acceptance will be assessed based on order popularity in EFY for the day which the menu item is on the menu.

Analysis:

Cost analysis was performed between the two meatloaves.

Results

Taste Test:

The homemade meatloaf is presently being used on the menu cycle for EFY. This meatloaf is considered a chef's special being both palatable and popular on the menu.

Recipe Standardization with cost per item:

| Item | Quantity | Cost |
|-----------------------------|-----------------------|--------|
| Oatmeal | ½ ounce-weight | \$0.03 |
| Fat Free Milk | 1- 1/3 Tablespoon | \$0.02 |
| Ground Turkey, 90/10 | 1 – 5/8 Ounce –weight | \$0.22 |
| Ground Beef, 80/20 | 1 Ounce – Weight | \$0.25 |
| Onions- Spanish, Fresh | 1/8 Ounce- Weight | \$0.00 |
| Peppers-Green, Fresh | 1/8 Ounce- Weight | \$0.01 |
| Celery- Fresh | 1/8 Ounce- Weight | \$0.00 |
| Egg Substitute, Pasteurized | 1- ¼ Teaspoon | \$0.02 |
| Parsley Flakes | 1 Teaspoon | \$0.02 |

| | | |
|------------------------------------|-----------------|------------------------------|
| Pepper- Black, Table Ground | 1/8 Teaspoon | \$0.00 |
| Garlic, Fresh | 0 Ounce- Weight | \$0.00 |
| Salt, Kosher | 1/8 Teaspoon | \$0.00 |
| Thyme, Leaf, Dried | 1/8 Teaspoon | \$0.00 |
| | | Total: \$0.58/serving |

| Step Number | Preparation |
|--------------------|--|
| 1 | Pre Prep: |
| 2 | Prepare Turkey & Beef Meat Base according to recipe. |
| 3 | For Service: |
| 4 | In a bowl, add oatmeal and milk. Stir to combine. Let soak for 10 minutes. |
| 5 | In another bowl, add all ingredients. Mix thoroughly until well-blended. <i>CCP – Hold refrigerated at internal temperature of 40 degrees F or below for use in 30 minutes.</i> |
| 6 | Combine meat base and thyme. Mix until well-blended. |
| 7 | Line loaf pans with parchment paper. Place 3 ½ pounds mixture into each pan. Evenly pat down. |
| 8 | <i>CCP—Bake in a preheated 350 degree F Convection (400 degree F standard) oven for 40 minutes or until minimum internal temperature is at least 165 degrees F (For 15 seconds).</i> |
| 9 | Let stand for 15-20 minutes. Cut into ½” slices. <i>CCP—Hold hot (140 degrees F or above) for service.</i> |
| 10 | <i>Shelf life: Use within 24 to 48 hours. CCP— Reheat quickly (per HACCP) to internal temperature of 165 degrees F (for 15 seconds).</i> |

Cost Benefits:

The labor costs for the premade meatloaf is lower than that of the in house made meatloaf. The employees involved in the production of the premade meatloaf are the tray line

associates who must heat up the meatloaf. The in-house meatloaf requires a cook to make and the tray line associate to tray the item. The meatloaf that is made from scratch is very labor intensive, and requires two days for the product to be made in completion.

The EFY meatloaf is more cost effective than the AYR premade meatloaf. The cost of a package of 4 oz premade meatloaf entrées brings 40 servings at \$49.30. This makes the cost of each serving to be \$1.23, for a 4 oz serving. The labor costs for this item is at a minimum as the chef does not need to prepare the item. The most labor involved is the EFY meatloaf is heating in the merry chef equipment for 3 minutes.

The EFY meatloaf that is from scratch costs \$0.58 for a 4 oz portion before the cost of labor. Labor takes the cook 3 hours maximum to prepare. The cook's cost is \$15/hour and at 3 hours makes \$45 total. On day of production, 700 servings are made. The percent yield is 85%, making edible portion 595 servings of meatloaf. This makes \$0.07 per serving of labor. Factoring in both the cost of the meatloaf (\$0.58) and the cost of labor (\$0.07) makes the total cost at \$0.65. With the costs of labor, ingredients, and edible portion considered the homemade meatloaf is \$0.58 cents cheaper per portion than the premade meatloaf.

After reviewing the item usage report for AYR (which uses the premade meatloaf) in one week 2,507 portions were ordered. The weekly cost of 2,507 portions of premade meatloaf is \$3,083.61 and the cost of that many portions of homemade meatloaf is \$1,629.55. The amount of weekly savings from making the meatloaf in-house is \$1,454.06 and annually can account for \$75,611.12.

| | Per portion | Weekly (2507 portions) | Annually |
|--------------------------------|-------------|------------------------|--------------|
| Premade Meatloaf | \$1.23 | \$3,083.61 | \$160,347.72 |
| In-House Meatloaf | \$0.65 | \$1,629.55 | \$84,736.60 |
| Savings with Homemade Meatloaf | | \$1,454.06 | \$75,611.12 |

Ingredient Procurement:

The procurement for the AYR premade meatloaf is purchased through one supplier, Sysco. For the procurement of the ingredients needed to make the meatloaf from scratch several suppliers are required for obtaining all the ingredients. For the fresh produce, Mac Edwards is the supplier. For the milk Borden is the supplier. For the meat, herbs, and oatmeal Sysco supplies these products. Lastly Fresh point is the supplier for the eggs.

Equipment Needs:

The premade meatloaf requires storage in the freezer and heating in a merrychef for approximately 3 minutes.

The in-house made meatloaf requires storage of ingredients in the appropriate refrigerator and/or freezer. The production of the meatloaf requires various equipment including mixing bowls, loaf pans, parchment paper, a walk in oven and refrigerators for storage between steps of the recipe.

Discussion

The results of the analysis proved the hypothesis correct that producing an in-house meatloaf is more cost effective for AYR than purchasing an already pre-made meatloaf for service. The cost difference per serving of meatloaf is \$0.58 cents. Accounting for weekly orders

in AYR for meatloaf, this can save the foodservice operation \$75,611.12 annually. Although the cost savings are very high, the feasibility of production must also be considered when making recommendations for the menu.

For the kitchen staff to produce the homemade meatloaf, more equipment and space is required than that of the premade alternative. Using proper forecasting techniques with the assistance of the ordering technology can allow for proper procurement of the ingredients. The forecasting can also allow for phasing out of the premade meatloaf and transition the kitchen to increasing the production of the meatloaf to have AYR use the homemade product. The acceptability of the product is already high as the meatloaf is a primary option on the weekly cyclic menu.

Conclusion

Based on the results of the analysis of the high cost premade meatloaf and the low cost homemade meatloaf, it is advisable that the foodservice operation consider phasing out of purchasing a premade meatloaf and make the product in house. The annual cost savings to the operation are \$75,611.12 factoring in cost of ingredients and labor. The equipment needs are far higher for the homemade meatloaf and require more space for the cooks to produce. At the high cost of this item, labor could be hired in substitution for making the product in house. Production should be executed during low traffic hours in the kitchen. Forecasting the item usage per week can allow for the storage of the extra product to be used for AYR, the meatloaf can be vacuum packed and frozen till need for use. The amount needed to be removed from the freezer to de-thaw in the fridge before heating can be forecasted from the item usage

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report for every day of the week within the past month, and then an average can be taken for each day.