Yield Percentages

Supplemental Information
Source:
Culinary Math Principles and Applications

Formulas involving yield percentages:

➢ Calculating Yield Percentage:

    ➢ Use when a yield percentage cannot be found for a particular food item in any reference material (such as *The Book of Yields*).

$$\text{YP} = \text{EPQ} \div \text{APQ}$$

Where:
YP = yield percentage
EPQ = edible portion quantity
APQ = as purchased quantity

Calculating Yield Percentage: example

- YP = EPQ ÷ APQ

- ? = EPQ ÷ APQ

- .60 = 9.6 ÷ 16

  – Purchase and weigh one pound of raw carrots (16 oz.).

  – Peel and trim the pound of carrots.

  – Weigh the peeled and trimmed carrots (about 9.6 oz.)

  16 oz. (AP quantity) – **9.6 oz. (EP quantity)** = **6.4 oz. (waste)**

Calculating Yield Percentage: solution

- .60 = 9.6 ÷ 16

- .60 × 100 = 60%

- Yield Percentage of raw carrots is 60%

Question: If you need one pound of peeled, trimmed and cut carrots for your recipe how many pounds of whole carrots do you need to purchase?

16 oz. ÷ 60% = 26.67 oz. (about 1.7 pounds)

EPQ   ÷ YP   = APQ

Question-

- How does Yield Percentage impact recipe costs?

Recipe Costing Form: Savory Matchstick Carrots			(amount per pound from purchase invoice)		(AP Unit Cost ÷ Yield %)	(EP Quantity × EP Unit Cost)
Ingredient	EP Quantity	EP Unit of Measure	AP Unit Cost	Yield Percentage	EP Unit Cost	Total Ingredient Cost
Fresh carrots, cut into Julienne strips	1	pound	.38 cents	60%	.38 ÷ 60% = .63 cents	1× .63 cents = .63 cents

It will cost .63 cents to produce one pound of prepared carrots for this recipe.

Other formulas involving yield percentages:

- Using basic algebra we can solve for the other two parts of the equation.

  Where:
  APQ = as purchased quantity
  EPQ = edible portion quantity
  YP = yield percentage

Formulas involving yield percentages:

➢ Calculating AP Quantity:
  ➢ Use when the amount of a food item that is required for a recipe (the Edible Portion quantity) and the Yield Percentage are known, and the amount to be ordered needs to be determined.

$$APQ = EPQ \div YP$$

$$APQ = 16 \text{ oz.} \div 60\%$$

$$26.67 \text{ oz.} = 16 \text{ oz.} \div 60\%$$

Where:

APQ = as purchased quantity

EPQ = edible portion quantity

YP = yield percentage

Formulas involving yield percentages:

➢ Calculating EP Quantity:
  ➢ Use when a purchased amount of food (AP Quantity) is already on hand, we know the Yield Percentage, and the edible or usable amount of the food needs to be calculated.

$$EPQ = APQ \times YP$$

$$EPQ = 16 \text{ oz.} \times 60\%$$

$$9.6 \text{ oz.} = 16 \text{ oz.} \times 60\%$$

Where:

APQ = as purchased quantity

EPQ = edible portion quantity

YP = yield percentage

Citation

- McGreal, M. J. (2010). *Culinary Math Principles and Applications.* Orland Park: American Technical Publishers.