

Back Order Model

Visser, Inc. sells nutritious rich crab meat in 24 ounce recyclable containers. The cost to Visser to purchase crab meat and packaging is \$50 per unit. The annual demand is 20,000 units. Holding costs are 20% of unit cost, the order costs are \$25 per order, and the backorder cost is \$30 per unit.

- a. How many units should Visser order should management decide to implement a backorder policy (Q_{bo})?
- b. What is the average number of units on backorder (S_{avg})?
- c. What is average inventory (Q_{avg})?
- d. How many orders would be placed in one year (N)?
- e. What is the Total Cost for a back order policy (TC_{bo})?
- f. If the total cost as computed with EOQ, TC_{eoq} is \$3162, would you recommend a backorder policy?