

## ECONOMIC ORDER QUANTITY INVENTORY MODEL FOR POULTRY FARMING WITH SHORTAGES, SCREENING, AND AFFILIATED COSTS CONSIDERATIONS

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### **ABSTRACT**

*Poultry is the fastest growing subsector, especially in developing countries. Poultry farms, mainly chicken farms producing meat and eggs are highly specialized operations. This study considers poultry farming especially broilers, where the inventory system of new-born poultries is fed to reach the ideal weight for consumers. This field is contemplated to be lucrative since it incurs low costs for maintenance. Legitimate management certifies efficient production and good quality products. An EOQ inventory model for growing items (poultries) is proposed and investigated the various costs of the system. Since the customers prefer for fresh products, it is assumed that shortages are permitted and are completely backlogged. The screening process takes place at the time the broilers are ready to slaughter. The aim of the inventory model is to determine the optimal values for shortage and cycle length that minimizes the total cost of the system. A numerical example is given to illustrate the model framed.*

**KEYWORDS:** *EOQ Inventory Model, Poultry Farming, Broiler Chicken, Screening Cost, Shortages, Vaccination Cost*