Summary

System	What It Protects Against	FIFO/Batch Cost Role	Risks Without It
HACCP	Biological/ Chemical/ Physical Hazards	Ensures freshness, traceability, expiration management	Spoilage, recalls, illness
TACCP	Intentional Harm (Sabotage)	Tracks product movement/ access, detects sabotage via pattern breaks	Insider tampering, sabotage
VACCP	Food Fraud/ Economic Gain	Reveals anomalies in sourcing costs, preserves batch integrity	Adulteration, mislabeling, substitution