



A Triple Crown Event

DISTRIBUTION, TECHNOLOGY & SUPPLY CHAIN



The Foodservice Distribution CONFERENCE & EXPO



**The Foodservice Distribution
CONFERENCE & EXPO**
OCTOBER 7-9, 2007
LOUISVILLE, KY



Buying for Warehouse Effectiveness

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Performance Food Group

Broadline Division





Buyer – Vendor Forecasts

- Buyer begins daily forecast
 - Is review time and lead time accurate for the vendor?
 - Determine order size and delivery date through buyer forecast



Buyer – Vendor Forecasts

- Is the order really needed?
- Will another order be needed again this week or next week?
- Pallet quantities should be ordered when you can move a pallet in 4 weeks or less



Balanced Receiving

- Operations and Purchasing working together to achieve manageable inbound workloads to reduce labor cost and improve service levels.



Benefits of Balanced Receiving

- Enables Operations to Staff Appropriately for the Workload
 - Improve Productivity reflected in Day and Overall Throughput
 - Reduce Overtime Hours and Expense
 - Apply appropriate resources to Day time Replenishment to consistently and properly prepare the Night Shift for Selection



Benefits of Balanced Receiving

- Enables Purchasing to be assured that the Resources are available to handle Inbound Volume Efficiently and Correctly
 - Encourages Purchasing to establish “standard” appointments by vendor.
 - Reduces “emergency” situations resulting in fewer receiving errors



Workload, Standards & Labor Expense

	Monday	Tuesday	Wednesday	Thursday	Friday	Week
Cases Received/Day	44,000	32,000	30,000	42,000	30,000	178,000
Cases/Pallet	32	32	32	32	32	
Standard Expectation	Receiver	Put Away Operator		Replenishment Operator		
Pallet Per Hour	65		30		18	Direct Labor
Pallet Per Day	520		240		144	Total Exp
Pallet Per Week	2600		1200		720	Per Pallet
Labor Rate Per Pallet						
\$	20.00	\$ 0.31	\$ 0.67	\$ 1.11	\$ 2.09	



Unbalanced Workload

Daily Balance	Monday	Tuesday	Wednesday	Thursday	Friday	Week
Cases per Day	44,000	32,000	30,000	42,000	30,000	178,000
Pallets Per Day	1,375	1,000	938	1,313	938	5,563
Daily percent of pallets	25%	18%	17%	24%	17%	100%
Variance to Avg by day	24%	-10%	-16%	18%	-16%	
Receiving Hours	21	15	14	20	14	
Put Away Hours	46	33	31	44	31	
Replenishment Hours	76	56	52	73	52	
Total Hours	143	104	98	137	98	580
Actual Hours Worked	143	116	116	137	116	628
Indirect 20%	29	23	23	27	23	
Throughput	256	230	216	256	216	
Daily Cost	\$ 3,441	\$ 2,784	\$ 2,784	\$ 3,285	\$ 2,784	\$ 15,078



Savings

- Balanced week of receiving \$13,921
- Unbalanced week of receiving \$15,078
- Savings for the week \$ 1,157
- Annualized **\$60,187**



EOQ

Economic Order Quantity

*Increase Inbound Cases per
Pallet*



EOQ Logic

- Purpose of EOQ for Operations is to increase the overall cases per Inbound pallet (decrease number of pallets handled) and reduce partial tiers
- Simply recommends ordering of a full pallet, full tier, or half tier multiple based on item's monthly movement



EOQ Logic

- Full Pallet Quantity
 - Monthly movement $> TI \times HI$
 - Recommends next full pallet quantity
- Pallet Tier (Layer) Quantity
 - Monthly movement $> TI$ and $< \text{full } TI \times HI$
 - Rounds any remainder up to next Tier Quantity
- Half Tier (Layer) Quantity
 - Monthly movement $< TI$
 - Recommends half Tier if monthly movement is less than half tier



Example of Full Pallet Recommendations

- TI HI is 10/10
- Monthly movement is 100 cases
Takes original system recommendation and rounds to nearest full pallet quantity – min. 1 pallet
- TI HI is 10/10
- Monthly movement is 125 cases
Takes original system recommendation and rounds to nearest full pallet quantity – min. 2 pallets



Example of Full Tier Recommendations

- TI HI is 10/10
- Monthly movement is 55 cases
System would recommend $55/10 = 5.5$
rounds up to 6 full tiers or 60 cases
- TI HI is 10/10
- Monthly movement is 12 cases
System would recommend $12/10 = 1.2$
rounds up to 2 full tiers or 20 cases



Example of Half-Tier Recommendations

- TI HI is 10/10
- Monthly movement is 6 cases
System would recommend $6/10 = .6$ rounds
up to 1 full tier or 10 cases
- TI HI is 10/10
- Monthly movement is 4 cases
System would recommend $4/10 = .4$ rounds
down to 1/2 tier or 5 cases



TI HI

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- All logic is based on Warehouse TI HI of the item
 - Critical to have full Warehouse TI HI set properly
 - TI HI must be updated when movement of item justifies a slot change



Master Pack Items

- Items bought in Master Pack quantities, broken, and sold as individual cases require unique treatment
- TI of these items must be a multiple of the Master Pack quantity



Receiving Expense Analysis Weekly Purchasing Versus Bi-Weekly or Monthly

Weekly Purchase				Bi Weekly Purchase				Monthly Purchase			
	# Cs	# Plts	Cost/Pallet		# Cs	# Plts	Cost/Pallet		# Cs	# Plts	Cost/Pallet
Week 1	5	1	\$ 2.50	Week 1	10	1	\$ 2.50	Week 1	20	1	\$ 2.50
Week 2	5	1	\$ 2.50	Week 2				Week 2			
Week 3	5	1	\$ 2.50	Week 3	10	1	\$ 2.50	Week 3			
Week 4	5	1	\$ 2.50	Week 4				Week 4			
Totals	20	4	\$ 10.00	Totals	20	2	\$ 5.00	Totals	20	1	\$ 2.50
Cost Per Case			\$ 0.50	Cost Per Case			\$ 0.25	Cost Per Case			\$ 0.125

Expense To Gross Margin Calculation

	Average Sell Price	Weekly \$/Case	Bi Weekly \$/Case	Monthly \$/Case
	\$ 27.00	\$ 0.50	\$ 0.25	\$ 0.125
% Of Sell		1.85%	0.93%	0.46%

Monthly vs Weekly reduces expense per case from .50 to .13 (.375 impact)

This creates a 1.39% increase in margin over average sell price!

How much effort does it take to increase 1.39% margin?

How many items do you sell that fall into this category?

Total Cases	7,280,000
Percent in Category	5%
Cases	364,000
Cost Opportunity	\$ 0.375
Expense Opportunity	\$ 136,500



- Why does purchasing typically have issues with implementing?
- Requires a change of habitual practice
- Requires an adjustment of initial order forecast
- Requires notifying sales that the 'norm' is changing and finally...and the primary barrier
- Purchasing associates do not understand the overall economics of the business with regard to how, in the case of balanced receiving and EOQ, their order cycles can negatively impact operational expense, thus reducing operating income for the entire organization.**



**Most distributors typically do not teach the economics of the business. Nor do most distributors give their associates any reason to consider operational and other distribution costs other than in the associates own discipline...

Thus, educating purchasing about the economics of the operations department is paramount to successfully implementing balanced receiving and EOQ...but it's only part of the equation.



The other half of the equation in initiating an operational change where purchasing acts as a true stakeholder, is to ensure that purchasing compensation is tied to successful implementation of both Balanced Receiving and EOQ, and ultimately operating income.



- Teaching the economics of our business
 1. Finance: return on capital (turns, terms, cost of money, inventory aging, etc...)
 2. Operations: handling cost per pallet and cost per case, direct and indirect labor, etc...
 3. Purchasing: COGs (vendor bracket pricing, logistics income, etc...)



Pallet Quantities

- Reduces touches and lets the equipment do the work rather than the people
 - Less damage and labor injuries
 - Direct put aways right to the slot
 - Reduces day/night letdown

Currently running \$.47/cs to ship/receive

WEEKLY

Week 1	Week 2	Week 3		
Receive 36cs x \$.235 Ship 18cs x \$.235	Receive/Ship 18 x \$.47	Receive/Ship 18 x \$.47	Total	\$29.61

PALLET QTY

Week 1	Week 2	Week 3		
Receive 56cs x \$.235 Ship 18cs x \$.235	Ship 18cs x \$.235	Ship 18cs x \$.235	Total	\$25.85
			Save	\$3.76





Key Points

- Consistency with ordering patterns gives scheduling and receiving patterns to work with
- Evaluate problem vendors and items that are having receiving problems
- Review certain velocity items and consider reconciling warehouse hi/ti with vendor hi/ti
- **Ongoing Communication with Operations!**

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Thank You! Have a great session at the 2007 Distribution Conference!

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