# TECHNOLOGICAL / PHYSICAL CHANGES

# IN THE ENVIRONMENT

Moderator: Stanley Fletcher, Professor
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## Joint Industry Container and Pallet Design Progress

by

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Our industry is at a crossroad! Is there an optimum pallet design and management program ready for implementation? Should we isolate and sub-optimize the transport function? I think the third-party pallet rental system is our industry's best response. However, we need more field work before such decisions are made; plus there is more to this issue than meets the eye.

As most of you know, Procter & Gamble continues to test a pallet design and third-party rental system. This pallet remains under the load until the distributor decides to order, pick or shelve the merchandise. In the field and in the laboratory our test pallet and management system comes as close to a guarantee of perfection as can be designed into the operation. For more details and comparative costs, see Table 1. However, it is not just with system details or costs that we should concern ourselves. We must seek perfection! We must concern ourselves with total system quality, and with a host of new consumer acceptance factors just over the horizon.

We have proven that any transfer of the unit load from one method or device to another increases damage. We have proven that any complication of the equipment or method compounds the damage rate. Worst of all, we have proven that such extra handling is the insidious cause of hidden damage that does not show up until the store opens the case. What a terrible waste of effort and merchandise. However, I do not presume that P&G tests are conclusive. More testing is encouraged during this decision making period.

No matter who incurs the loss in the short term, we know that unacceptable quality is wrong and all costs eventually end up in the selling price of our goods. Pushing back with things like damage reclaim payments, excessive merchandise allowances, and the like, tend to divert our sense of responsible evaluation and commitment to the collective right answer. Tailoring the way each of us does business to achieve such objectives as reduced damage and improved safety and efficiency is essential, but isolating an entire problem area only delays real progress.

Can we honestly consider a system for tomorrow that dumps over a hundred million temporary devices into a waste problem that is just now reaching the public crisis level? The grocery industry is already a favorite target. Let's make our project a positive rather than a negative for the long term. I have great faith in our collective ability to do the right thing.

This paper presents a review of the published joint industry container design guidelines. It will discuss the six basic objectives and

**Table 1**

Dry Grocery Pallet System Costs

| | Current Cost-CCA Report *per pallet trip* | | CHEP System *per pallet trip* | |
|---|---|---|---|---|
| | Mfg | Wholesaler/Retailer | Mfg | Wholesaler/Retailer |
| Pallet purchased to initiate system | $1.28 | $ .60 | $ -- | $ -- |
| Pallet expense to maintain system (carrier costs) | 2.05 | -- | -- | -- |
| Productivity loss in order selection and shipment preparation | .63 | .95 | -- | -- |
| Sortation | .42 | .27 | -- | .25 |
| Repair | .10 | .45 | -- | -- |
| Administration | .25 | .08 | .08 | .02 |
| Worker Compensation | .20 | .06 | -- | -- |
| Exchange/sortation loss | .10 | .04 | -- | -- |
| Transportation to or from depot | -- | -- | .50 | .50 |
| Issue and transfer costs | -- | -- | 1.53 | -- |
| Daily rental | -- | -- | 1.05 *30 days @ $.035* | .18 *15 free days - 5 days @ $.035* |
| Subtotal | $5.03 | $2.45 | | |
| Damage | 2.03 | .58 | -- | -- |
| Total | $7.06 | $3.03 | $3.16 | $ .95 |

NOTE: Typical time for normal "turn" business is 20 days.

give a complete review of the pallet P&G is testing and the current status of the joint industry pallet subcommittee's recommendations. Then I will discuss briefly P&G's newest mechanized distribution center located outside of London, England. This center uses rental pallets, painted blue, supplied by the CHEP Company for the United Kingdom and Western Europe.

*Perfect quality, a safer work place,* and a *truly efficient total system* are the hallmarks of our joint industry effort. The joint industry associations known as the Grocery Manufacturers of America (GMA), the Food Marketing Institute (FMI), and the National American Wholesale Grocers Association (NAWGA) accounted for $331 billion in total grocery sales for 1988. That represents just under 18 percent of our disposable income. Although this paper talks about inefficiencies such as poor packaging, bad operating practices, and poor unit load fit on the grocery pallet, our industry still gives consumers the best "food" deal in the world.

Our industry gets good marks for net cost. We fall short on total quality and consumer satisfaction. For example, damage costs about $2.5 billion a year. That $2.5 billion dollar loss boils down to 20 cents per case for an industry where the retailer's net profit is 15 cents a case. The greatest single cause of damage is assigned to poor load stability and pallet fit. Most of the problem is overhang that produces 30 percent of the total. Next in line is 20 percent due to poor pallets themselves and the next is 19 percent due to cuts done at store level.

Realization that our industry is far from perfect led to a focus on packaging and container performance in 1985. The volume of damage became such that processing centers for accumulation and disposal of damage were justified. Although the centers serve to make collection and reclaim more efficient, the objective by all industry leaders is to eliminate the problem in the first place. There are about 200 reclamation centers now in operation around the United States. This efficient processing and almost automatic payment at the retail price by almost all manufacturers makes uniform commitment to damage reduction a difficult task indeed, but it is happening.

By January of 1988, the joint industry team produced a document called "Voluntary Industry Guidelines for Dry Grocery Shipping Containers." The booklet was introduced to 800 industry executives at the FMI midwinter meeting in Boca Raton.

This is a list of grocery manufacturers and distributors who were members of the joint industry committee during the writing of guidelines to date:

| | |
|---|---|
| Associated Groc. (WA) | Nabisco |
| H. E. Butt | Philip Morris |
| Byerlys | Pillsbury |
| C&H Sugar | Procter & Gamble |
| Campbell Soup | Publix |
| Cert. of California | Ralston Purina |
| Fleming | Safeway |
| General Foods | Scott |
| General Mills | Springfield Sugar |
| Giant Foods (Land.) | Stop & Shop |
| Kraft | Super Foods |
| Kroger | Wegmans |

The booklets that this team of experts produced are available from FMI headquarters in Washington, D.C.

Our booklet covers these basic guidelines:

1. Establish uniform 48 x 40 pallet design and dimensions.

2. Establish uniform 48 x 40 pallet load footprint with no overhang. (P&G is plus or minus 1 inch).

3. Develop suggested pallet patterns and stabilizing techniques for unit loads. (Stretch-wrap is primary thrust.)

4. Establish a maximum case weight of 50 pounds for now and 45 pounds for longer range.

5. Improve the visibility and clarity of case markings. A separate booklet gives details.

6. Define maximum and minimum container dimensions. (Maximum 30 x 24 x 18" for paper and minimum of 4" for all cases.)

When introduced in January 1988 the industry team set a goal of a three- to five-year implementation for these guidelines.

Exactly one year after introducing the voluntary design guidelines, Tom Laco and Dean Werries, the co-chairmen of the Industry Steering Committee reported back to the midwinter executive group. The bottom line seems to be that the U.S. Grocery Pallet Exchange Program is in a shambles, with 70 out of every 100 pallets in the system being unacceptable. Procter & Gamble is currently testing one pallet with three grocery

distributors and we are asking other manufacturers to get involved.

A preliminary report by a pallet subcommittee was delivered to the Container Committee on September 28. Although its report talked more about a low-cost "platform" yet to be designed, the Container Committee will seek more input before concluding anything. Will the final pallet design include a solid area top and minimum bottom openings? I really do not know, but I think so. The top and bottom will be connected with nine blocks that facilitate true four-way entry. The pallet weighs only 65 pounds. P&G will continue to test this design. We are convinced that the CHEP-3rd Party Management System offers a quick entry for U.S. shippers and receivers wishing to go to this quality of pallet. At present the distributors in the test are Super Valu, Fleming and Kroger with Super Foods having completed a six-month agreement with excellent results.

CHEP's expected income as well as all manufacturer, carrier and distributor costs for sorting, handling, and shipping the pallets totals $4.11 against a current (Cleveland Consulting Assoc.) total system cost of $7.06.

The manufacturer would carry the full burden of initial CHEP pallet rental and cover fifteen days of free rental for the distributor. That expense would be about $3.16 per use cycle.

The distributor, holding the pallet for an average extra five days and paying a transportation fee of approximately 50 cents to return it, would incur a total expense of about $.95 per use cycle.

If we use an average of, say, 40 cases per pallet cycle, the total expense of $4.11 boils down to about $.10 per case. The Cleveland Consulting Company told us that our real costs, including damage and inefficiencies within today's operations, are over $.16 per case. We obviously could afford the change on pure cost comparison alone.

Our joint industry study is far from complete. Call ten grocery manufacturers or distributors and you will get at least seven variances on what the pallet design should be and a few more variances on what the exchange program, if any, should be. Unlike Pete Rose, I am not placing any bets on the short term.

In Procter & Gamble's plant and distribution center in England, we are using the CHEP pallet. The cases on these pallets are wrapped--not contained in corrugated packaging.

The work done by the Container Committee regarding basic dry grocery containers gives direction for pallet fit within tolerances of plus or minus one inch with no overhang preferred. The expected stacking strength of any case is the equivalent of at least two unit loads as received. That means that, if you shipped me a pallet load 96 inches high in the truck or rail case, it had better be strong enough to store 192 inches high for 30 days at 90 degrees F. and 80 percent humidity. We started with old rules like Rule #41 and converted to realistic performance expectations as defined in our booklet. It is working and the directions continues to be useful to our industry.