



Producers of the World's  
Finest Pasta

A Division of Ralcorp Holdings, Inc.

January 19, 2012

Judy Cardin  
Chairman, Laws & Regulation Committee  
National Conference on Weights and Measures  
c/o Wisconsin Weights and Measures  
2811 Agriculture Drive  
Madison, WI 53708

Dear Ms. Cardin,

At the request of the National Conference on Weights and Measures' Laws & Regulations Committee, we are providing further supporting information regarding Agenda Item 260-2, Moisture Allowance for Pasta Products. This information was developed during a moisture loss study conducted between July 26, 2006 – August 4, 2007, supplementing information about this study that was previously shared with the Conference. The attached charts and data illustrate the following information:

Page 1

- Typical life cycles of pasta products from manufacturing to consumer purchase, illustrating the moisture loss for each stage
- Warehouse storage study with table of results for the average losses by month along with the minimum and maximum moisture loss values
- Retail outlet simulation outlining additional loss once product is uncased and put on the store shelf

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- Regional warehouse storage study results by month, outlining weight loss for 3 regions (West, Central, East) along with an average loss of the three.
- The first graph focuses on cartons, which comprise >70% of the sku's in the marketplace. The second graph includes all packaging types. All averaged data sets exclude lasagna, as its inclusion would increase the average moisture loss values.

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- Data tables for warehouse study charts provided on page 2

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- Warehouse storage study with tables detailing weight loss average by product type used in the study.

We appreciate the opportunity to share this information with the Committee and answer any further questions you may have. I look forward to seeing you at the Interim meeting next week.

Sincerely,

Jayne Hoover  
VP Quality Assurance

Attachments

### Warehouse Storage Study

#### Weight Loss Variability\*

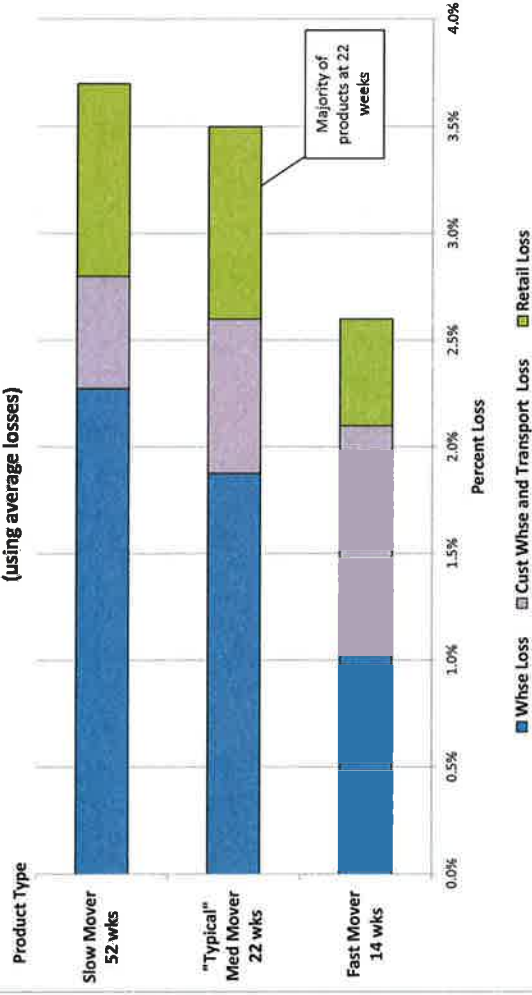
n=613 All Products w/o Lasagna\*\*

Month	Average	Min Loss	Max Loss
1	-0.6%	0.6%	-3.6%
2	-1.1%	0.4%	-3.6%
3	-1.7%	0.1%	-5.3%
4	-2.1%	-0.1%	-4.8%
5	-2.6%	-0.2%	-5.0%
6	-2.6%	-0.5%	-4.6%
7	-2.5%	-0.3%	-5.0%
8	-2.5%	-0.3%	-4.6%
9	-2.6%	-0.2%	-4.5%
10	-2.7%	-0.2%	-5.3%
11	-2.8%	-0.4%	-5.3%
12	-3.3%	-0.9%	-6.7%

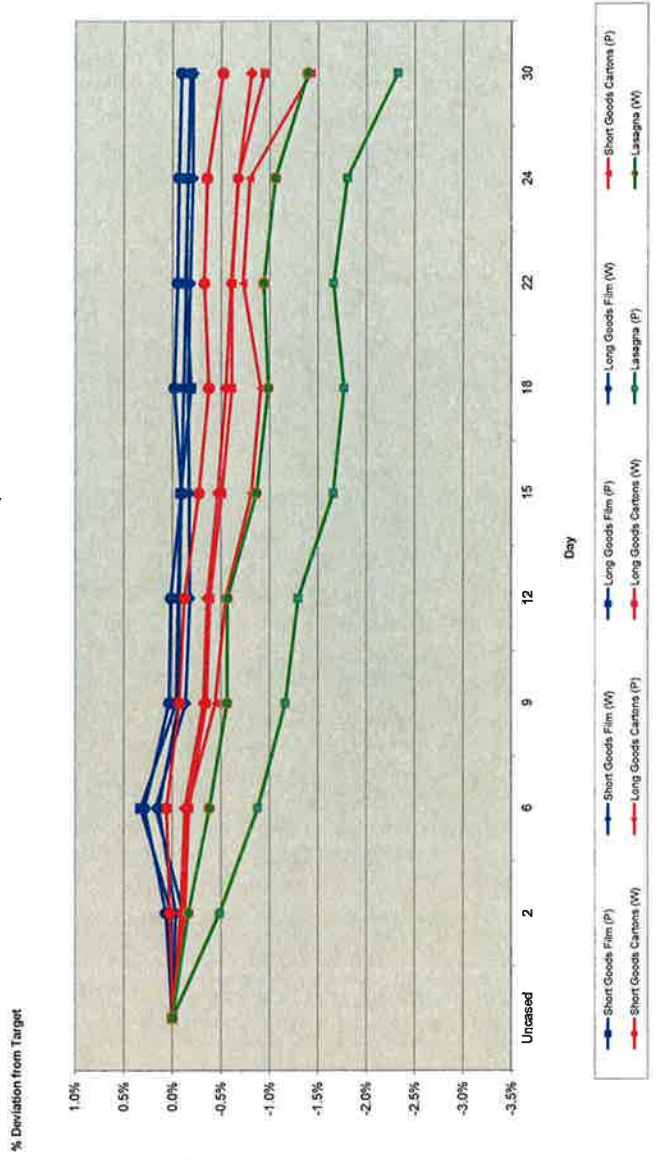
\*Dependent Factors-Seasonal (Humidity, Temperature), Packaging, Geography/Location

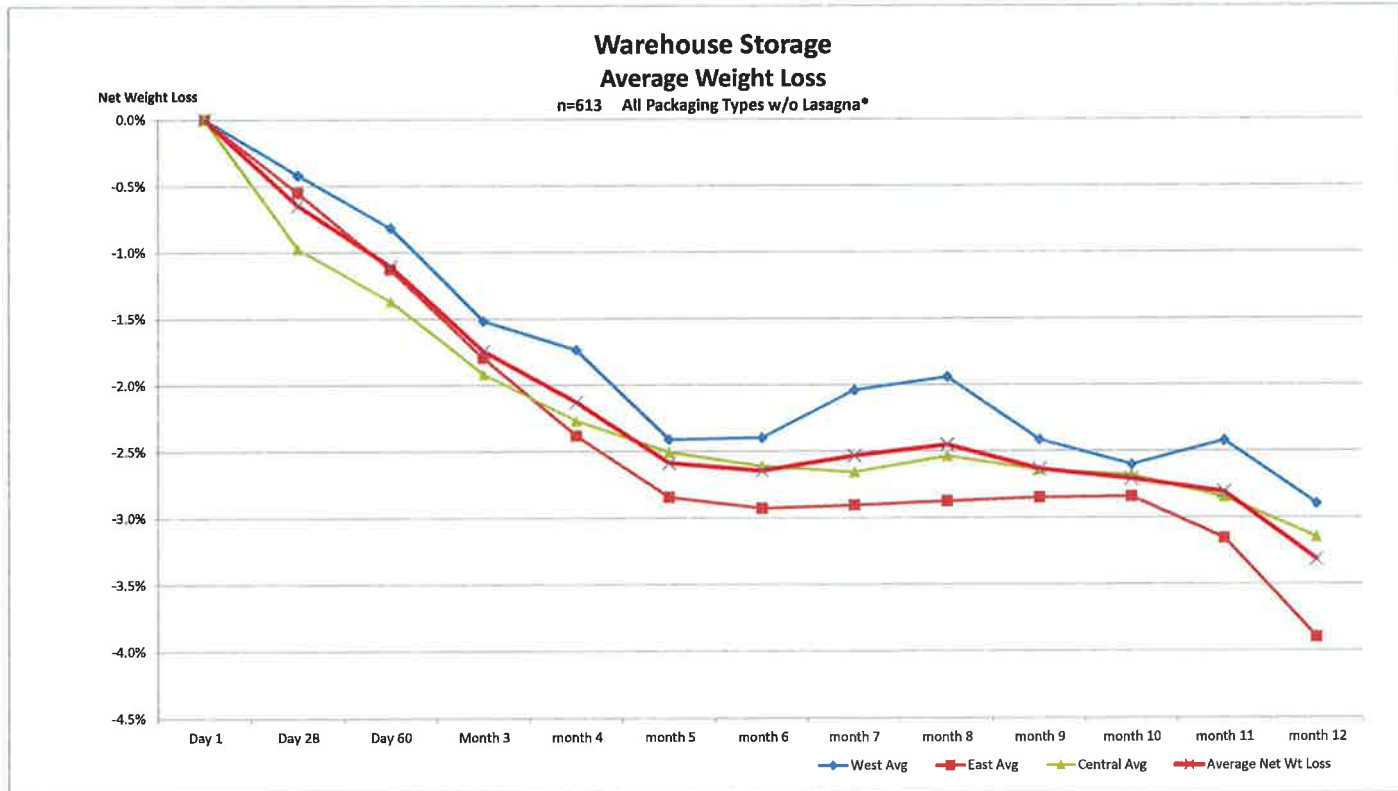
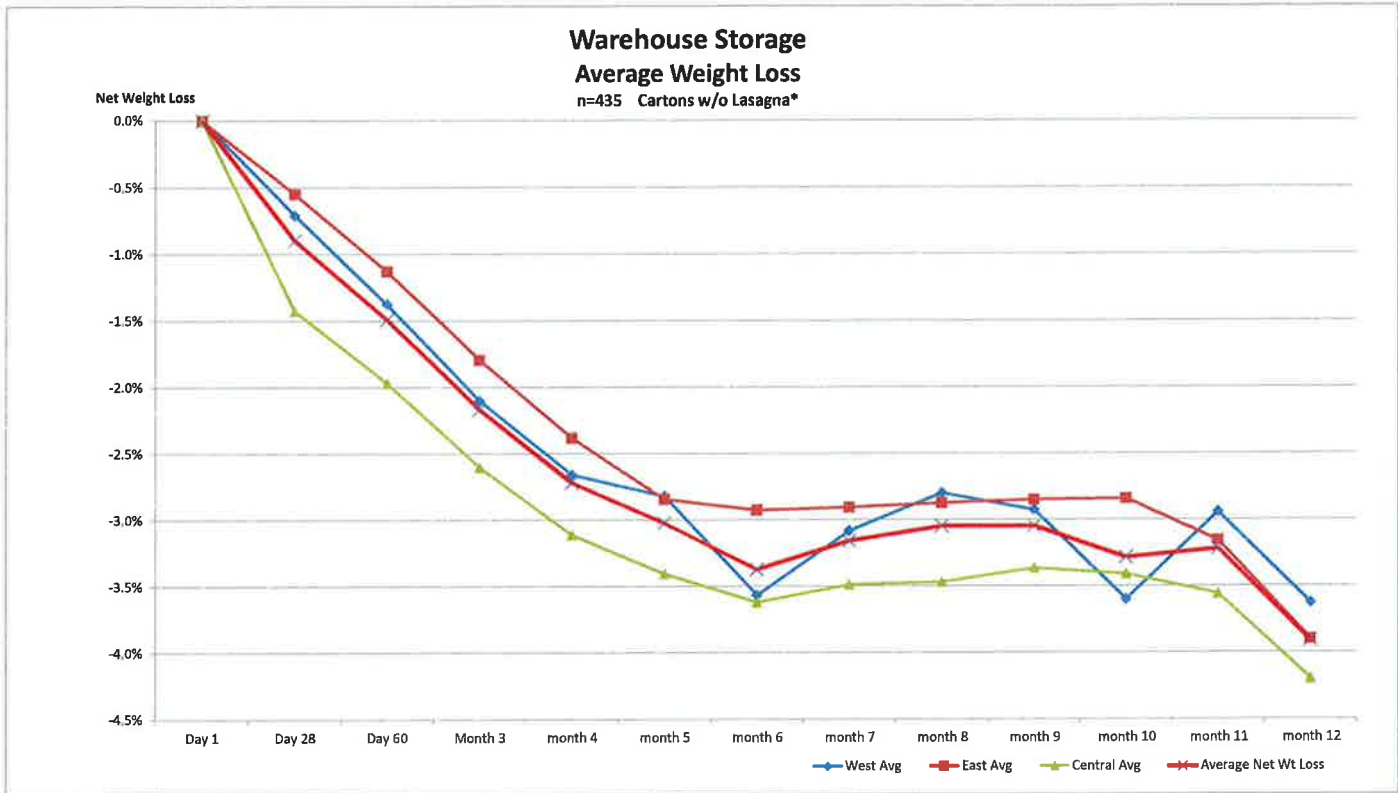
\*\* Inclusion of lasagna would increase the amount of average moisture loss

### "Typical" Pasta Life Cycle Production to Consumer Purchase (using average losses)



### Retail Outlet Simulation Additional loss when uncased and placed on shelf





\* Inclusion of lasagna would increase the amount of average moisture loss

# Warehouse Storage Study

Average Weight Loss by Location

7/26/06 - 8/4/07

Cartons w/o Lasagna

Month	West Avg n=132	East Avg n=171	Central Avg n=132	Avg Net Wt Loss n=435
1	-0.7%	-0.5%	-1.4%	-0.9%
2	-1.4%	-1.1%	-2.0%	-1.5%
3	-2.1%	-1.8%	-2.6%	-2.2%
4	-2.7%	-2.4%	-3.1%	-2.7%
5	-2.8%	-2.8%	-3.4%	-3.0%
6	-3.6%	-2.9%	-3.6%	-3.4%
7	-3.1%	-2.9%	-3.5%	-3.2%
8	-2.8%	-2.9%	-3.5%	-3.0%
9	-2.9%	-2.8%	-3.4%	-3.0%
10	-3.6%	-2.8%	-3.4%	-3.3%
11	-2.9%	-3.2%	-3.6%	-3.2%
12	-3.6%	-3.9%	-4.2%	-3.9%

## All Products w/o Lasagna

Month	West Avg n=240	East Avg n=171	Central Avg n=202	Avg Net Wt Loss n=613
1	-0.4%	-0.5%	-1.0%	-0.6%
2	-0.8%	-1.1%	-1.4%	-1.1%
3	-1.5%	-1.8%	-1.9%	-1.7%
4	-1.7%	-2.4%	-2.3%	-2.1%
5	-2.4%	-2.8%	-2.5%	-2.6%
6	-2.4%	-2.9%	-2.6%	-2.6%
7	-2.0%	-2.9%	-2.7%	-2.5%
8	-1.9%	-2.9%	-2.5%	-2.5%
9	-2.4%	-2.8%	-2.6%	-2.6%
10	-2.6%	-2.8%	-2.7%	-2.7%
11	-2.4%	-3.2%	-2.8%	-2.8%
12	-2.9%	-3.9%	-3.1%	-3.3%

\* Inclusion of lasagna would increase the amount of average moisture loss

# Warehouse Storage Study

Weight Loss Average by Product

7/26/06 - 8/4/07

Spaghetti n=168	
Month	Avg Net Wt (g)
0	465.1
1	462.0
2	459.5
3	457.4
4	453.6
5	452.9
6	452.9
7	452.3
8	451.7
9	452.7
10	451.1
11	452.3
12	448.9
Final Net Weight	448.9
Weight Loss	-18.2
% Lost	-4.1%

Penne n=36	
Month	Avg Net Wt
0	479.2
1	473.9
2	470.8
3	467.5
4	464.7
5	463.1
6	459.7
7	462.9
8	464.3
9	462.9
10	459.5
11	463.3
12	464.9
Final Net Weight	464.9
Weight Loss	-14.7
% Lost	-3.2%

Rigatoni n=129	
Month	Avg Net Wt
0	524.5
1	502.8
2	513.6
3	492.3
4	506.2
5	504.4
6	469.5
7	475.5
8	476.0
9	490.3
10	480.7
11	494.8
12	496.8
Final Net Weight	496.8
Weight Loss	-19.3
% Lost	-3.9%

Rotini n=93	
Month	Avg Net Wt
0	468.3
1	463.8
2	461.2
3	457.5
4	456.1
5	453.9
6	455.3
7	454.5
8	456.5
9	453.6
10	454.3
11	454.2
12	447.8
Final Net Weight	447.8
Weight Loss	-19.3
% Lost	-4.3%