



Kiwi Retail Test

October 2011



PERISHABLES GROUP[®]
Keeping Your Business Fresh[®]

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objectives and approach

Background

California Kiwi Commission (CKC) was concerned that existing retail pricing practices may have discouraged consumer purchases. Kiwis are one of the few fresh fruit items in the produce department that are currently sold in “eaches.” Almost all fruits are commonly sold by the pound. CKC has anecdotal evidence that a pricing approach that reflects a per-pound price will be more familiar to consumers and lead to increased kiwi sales.

Objectives

The Perishables Group (PG) conducted a test of kiwi pricing on behalf of CKC. The goal of this study was to quantify the impact of per-pound pricing on the overall kiwi category.

The test was conducted in Lunds stores during a nine-week period from the week of July 2, 2011, through the week of August 27, 2011. The test involved one test panel and one control panel; the test panel changed kiwi pricing to a per-pound price while the control panel did not.

The control stores were selected via panel matching methodology. The control and test panel stores had similar sales trends prior to the test, making them a good comparison for the test period.

Analysis

Store-level performance sales data was compiled by item for kiwi items for the nine-week test period. Results were determined by calculating the statistical differences between control and test stores during the test period, year-ago (YAGO) period and pre-test period.

The analysis examined the effect of the per-pound pricing on the performance of the kiwi category in both volume and dollar sales.

Categories and Item Groups Included in the Analysis

- Kiwi Category
 - Bulk Kiwi
 - Packaged Kiwi

Panels Included in the Analysis

- Test Stores: Lunds (per-pound pricing for kiwi)
- Control Stores: Lunds rest of market (ROM) (“each” pricing for kiwi)

POS data included in the analysis

- Test dates: July 2—August 27, 2011
- YAGO dates: July 3—August 28, 2010
- Pre-test dates: April 23—June 18, 2011

results summary

Summary

Per-pound pricing of kiwi shows indicators of strengthening kiwi volume sales. Per-pound pricing of kiwi does not appear to have a positive impact on kiwi dollar sales.

The performance of kiwi in test stores with the introduction of per-pound pricing indicates that test stores increased 23.7% while control stores decreased 7.4% in terms of covariate-adjusted volume compared to the pre-test period. Volume sales increased 19.5% in test stores and decreased 36.8% in control stores compared to the year-ago period.

Pricing Summary

During the test period, test stores had a much lower converted average retail price per “each” compared to both the pre-test and year-ago periods, which may have positively impacted kiwi volume sales as well.

While the lower average retail price of kiwi in test stores may have positively impacted volume sales, it most likely contributed to the decrease in dollar sales as well.

Additionally, the average retail price of kiwi was similar (when converted to “each” pricing) to the control stores during the test period, whereas kiwi was priced approximately \$0.20 to \$0.30 higher per each in test stores compared to control stores during the pre-test and year-ago periods. Therefore, the similar pricing during the test period potentially shifted sales from control stores to test stores, irrespective of kiwi per-pound pricing in test stores.

See sidebar for observed (non-adjusted) average retail prices.

Recommendations

Since the change to per-pound pricing on kiwi had a positive impact on kiwi volume sales in test stores, but the decrease in kiwi pricing (when converted to “each” pricing) in test stores may also have had a positive impact on kiwi volume sales, further testing is recommended.

PG recommends further testing to quantify the impact of per-pound pricing on kiwi sales when the average retail price of kiwi (when converted to “each” pricing) is held constant (or similar) compared to pre-test and year-ago periods.

Observed (Non-Adjusted) Average Retail Prices

Test Stores

Test Period: \$0.48

(\$2.42/lb)

Pre-Test Period: \$0.68

YAGO Period: \$0.64

Control Stores

Test Period: \$0.51

Pre-Test Period: \$0.47

YAGO Period: \$0.32

Lunds performance analysis



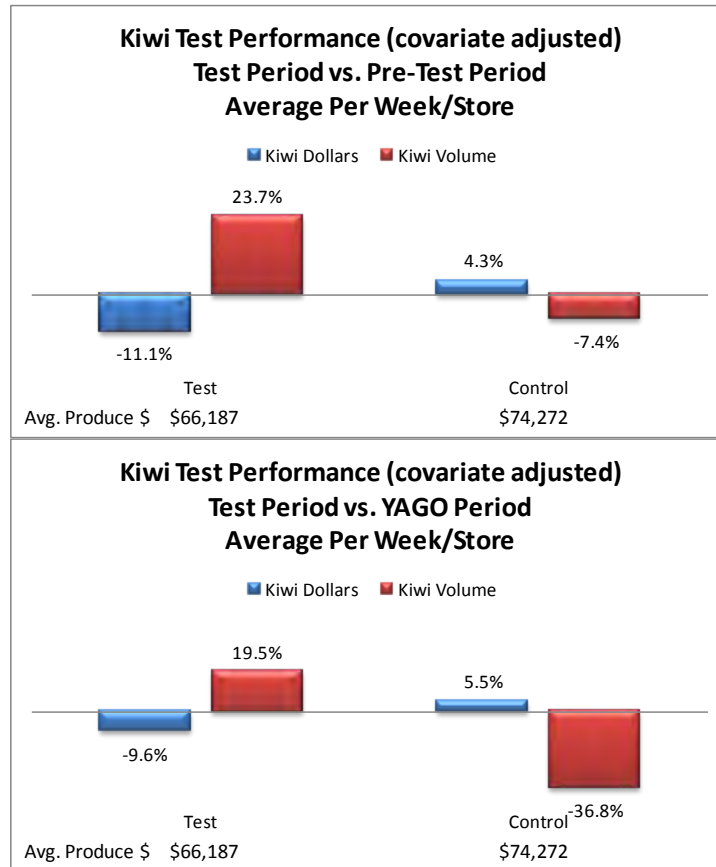
kiwi: growth versus prior periods

Results indicate that the per-pound pricing had a positive impact on kiwi volume sales during the nine-week test period in Lunds stores.

Kiwi Test Period Difference

The performance of kiwi at Lunds stores with the introduction of per-pound pricing indicates that test stores outperformed control stores in terms of covariate-adjusted average kiwi volume growth.

However, during the test period, test stores had a much lower converted average retail price per “each” compared to both the pre-test and year-ago periods, which may have positively impacted kiwi volume sales as well.



Observed (Non-Adjusted) Average Retail Prices

Test Stores

Test Period: \$0.48 (\$2.42/lb)
 Pre-Test Period: \$0.68
 YAGO Period: \$0.64

Control Stores

Test Period: \$0.51
 Pre-Test Period: \$0.47
 YAGO Period: \$0.32

Source: Perishables Group FreshFacts® Powered by Nielsen

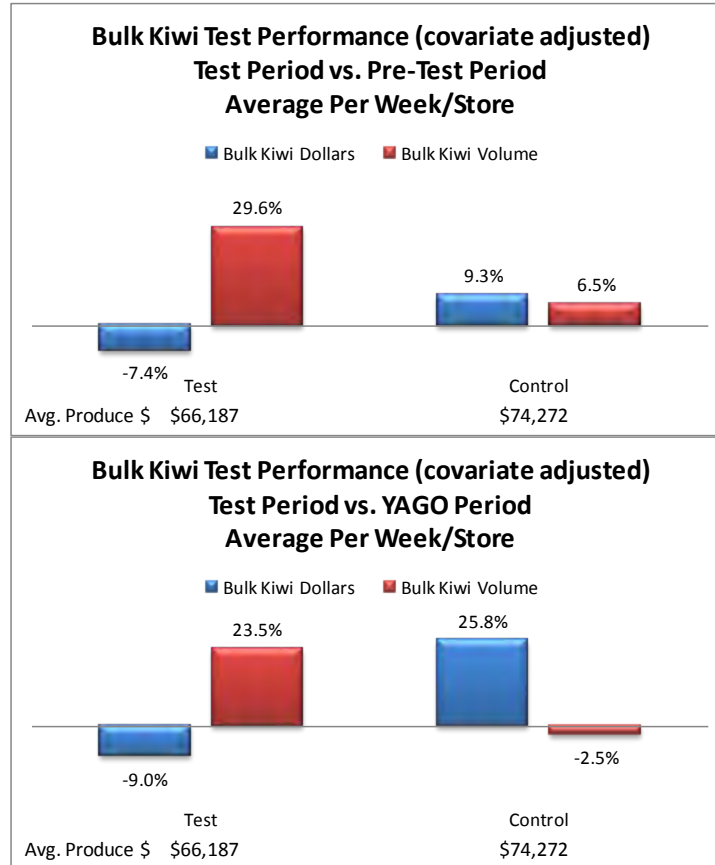
bulk kiwi: growth versus prior periods

Results indicate that the per-pound pricing had a positive impact on bulk kiwi volume sales during the nine-week test period in Lunds stores.

Bulk Kiwi Test Period Difference

Similar to total kiwi, the performance of bulk kiwi at Lunds stores with the introduction of per-pound pricing indicates that test stores outperformed control stores in terms of covariate-adjusted average bulk kiwi volume growth.

However, during the test period, test stores had a much lower converted average retail price per “each” compared to both the pre-test and year-ago periods, which may have positively impacted bulk kiwi volume sales as well.



Observed (Non-Adjusted) Average Retail Prices

Test Stores

Test Period: \$0.48 (\$2.42/lb)
 Pre-Test Period: \$0.69
 YAGO Period: \$0.64

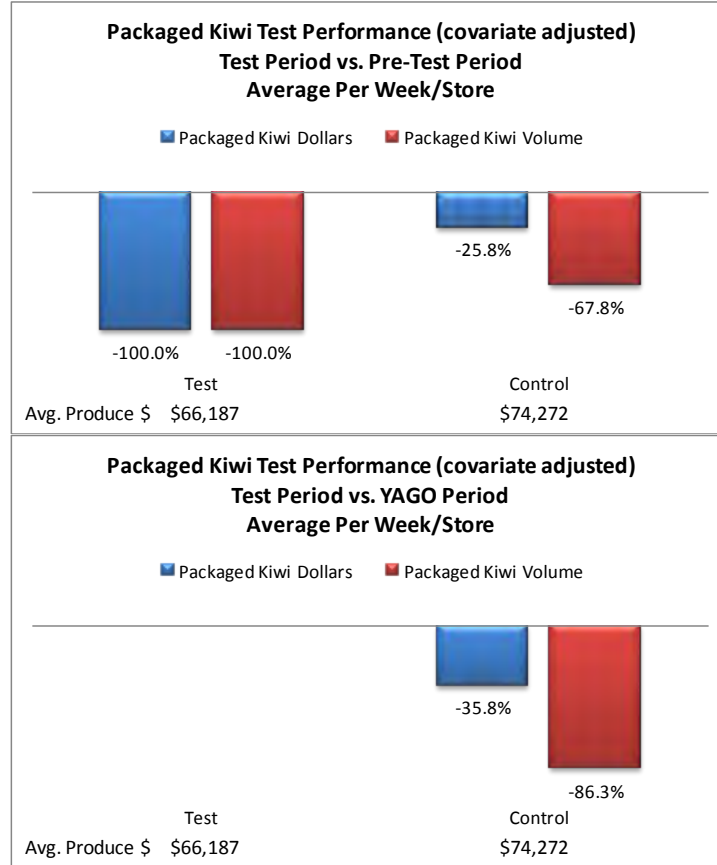
Control Stores

Test Period: \$0.48
 Pre-Test Period: \$0.47
 YAGO Period: \$0.38

Source: Perishables Group FreshFacts® Powered by Nielsen

packaged kiwi: growth versus prior periods

Packaged kiwi was not carried during the per-pound kiwi pricing test at Lunds.



Observed (Non-Adjusted) Average Retail Prices

Test Stores
 Pre-Test Period: \$0.47

Control Stores
 Test Period: \$1.03
 Pre-Test Period: \$0.45
 YAGO Period: \$0.22

Source: Perishables Group FreshFacts® Powered by Nielsen

kiwi test results: Lunds vs. ROM control stores

Results indicate that the per-pound pricing had no impact on kiwi dollar sales and little impact on kiwi volume sales during the nine-week test period in Lunds stores.

Kiwi Weekly Dollar Sales

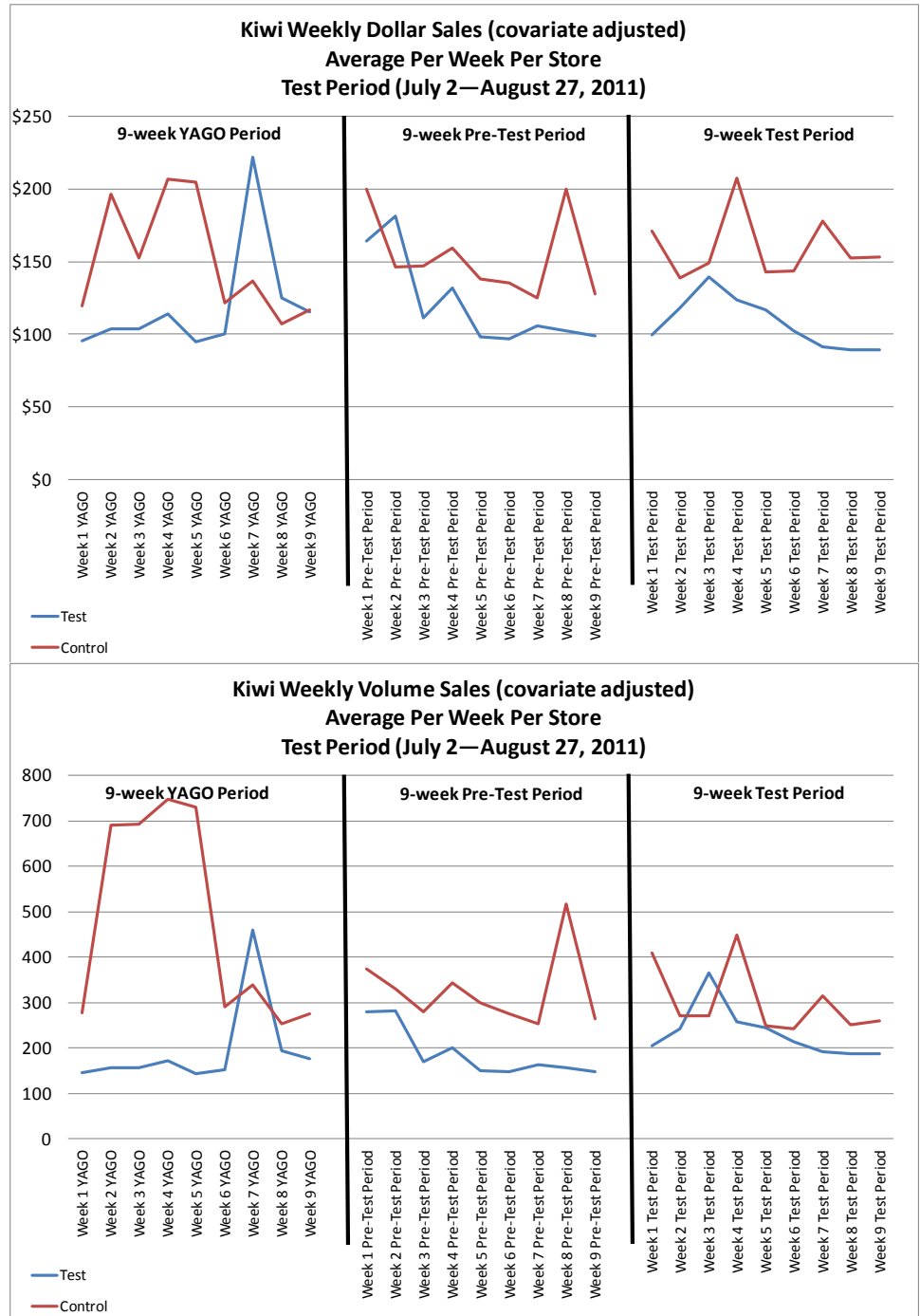
Control stores appeared to outperform test stores in kiwi average dollar sales in nine weeks during the test period, compared to seven weeks during the year-ago period and eight weeks during pre-test period.

Kiwi Weekly Volume Sales

Control stores appeared to outperform test stores in kiwi average volume sales in eight weeks during the test period, compared to eight weeks during the year-ago period and all nine weeks during pre-test period.

Model Methodology

The Perishables Group utilized an ANCOVA (Analysis of Covariance) framework to test the impact of the per-pound pricing on kiwi volume and dollar sales in Lunds stores. Covariate-adjusted means were calculated taking account of variables including kiwi dollar and volume sales and produce department sales.



Source: Perishables Group FreshFacts® Powered by Nielsen

kiwi: Lunds vs. ROM control stores

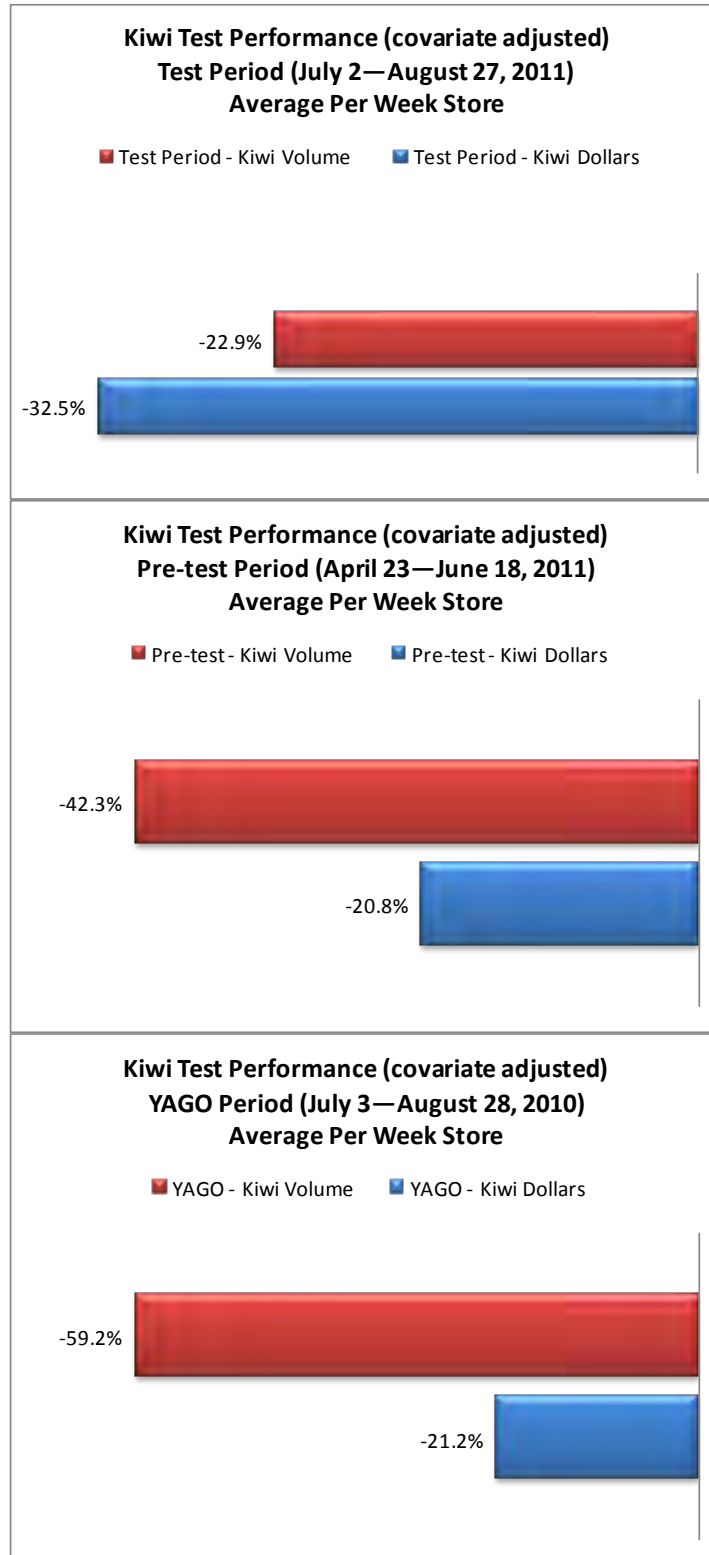
Results indicate that the per-pound pricing had a small positive impact on kiwi volume sales during the nine-week test period in Lunds stores.

Kiwi Test Period Difference

The performance of kiwi at Lunds stores with the introduction of per-pound pricing indicates that control stores outperformed test stores in terms of covariate-adjusted average kiwi volume and dollar sales for all time periods.

However, during the test period, the control stores did not outperform the test stores by as large of a percentage compared to the pre-test and the year-ago period.

This may have been due to the per-pound pricing, but also may have been impacted by the decrease in kiwi average retail price in test stores during the test compared to the pre-test and year-ago periods.



Observed (Non-Adjusted) Average Retail Prices

Test Period
 Test Stores: \$0.48 (\$2.42/lb)
 Control Stores: \$0.51

Pre-test Period
 Test Stores: \$0.68
 Control Stores: \$0.47

YAGO Period
 Test Stores: \$0.64
 Control Stores: \$0.32

Source: Perishables Group FreshFacts® Powered by Nielsen

bulk kiwi test results: Lunds vs. ROM control stores

Results indicate that the per-pound pricing had no impact on bulk kiwi dollar sales and little impact on bulk kiwi volume sales during the nine-week test period in Lunds stores.

Bulk Kiwi Weekly Dollar Sales

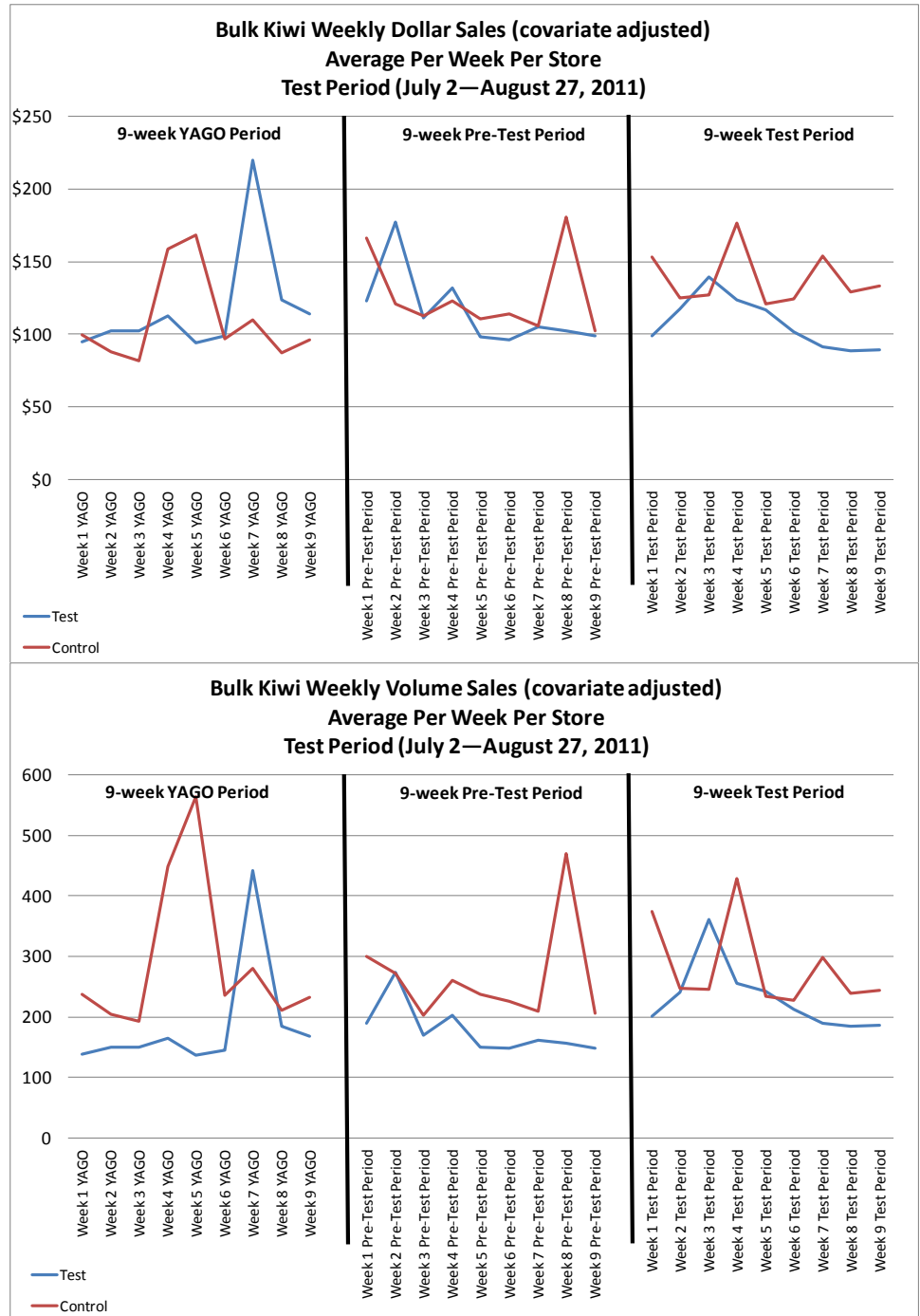
Control stores appeared to outperform test stores in bulk kiwi average dollar sales in eight weeks during the test period, compared to three weeks during the YAGO period and seven weeks during pre-test period.

Bulk Kiwi Weekly Volume Sales

Control stores appeared to outperform test stores in bulk kiwi average volume sales in seven weeks during the test period, compared to eight weeks during the YAGO period and eight weeks during pre-test period.

Model Methodology

The Perishables Group utilized an ANCOVA (Analysis of Covariance) framework to test the impact of the per-pound pricing on kiwi volume and dollar sales in Lunds stores. Covariate-adjusted means were calculated taking account of variables including kiwi dollar and volume sales and produce department sales.



Source: Perishables Group FreshFacts® Powered by Nielsen

bulk kiwi: Lunds vs. ROM control stores

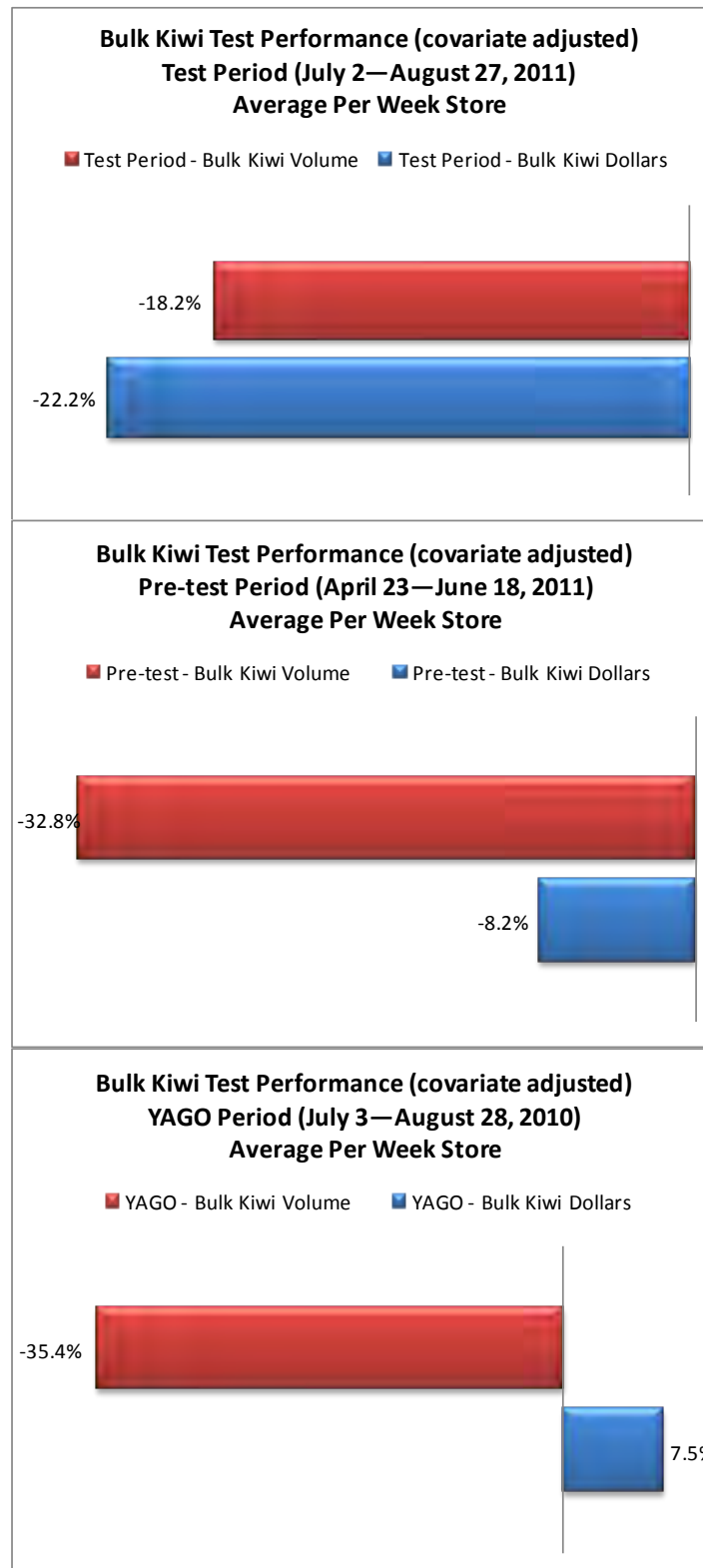
Results indicate that the per-pound pricing had a small positive impact on bulk kiwi volume sales during the nine-week test period in Lunds stores.

Bulk Kiwi Test Period Difference

The performance of bulk kiwi at Lunds stores with the introduction of per-pound pricing indicates that control stores outperformed test stores in terms of covariate-adjusted average bulk kiwi volume and dollar sales during both the test period and the pre-test period.

However, during the test period, the control stores did not outperform the test stores by as large of a percentage compared to the pre-test and the year-ago period.

This may have been due to the per-pound pricing, but also may have been impacted by the decrease in bulk kiwi average retail price in test stores during the test compared to the pre-test and year-ago periods.



Observed (Non-Adjusted) Average Retail Prices

Test Period
 Test Stores: \$0.48 (\$2.42/lb)
 Control Stores: \$0.48

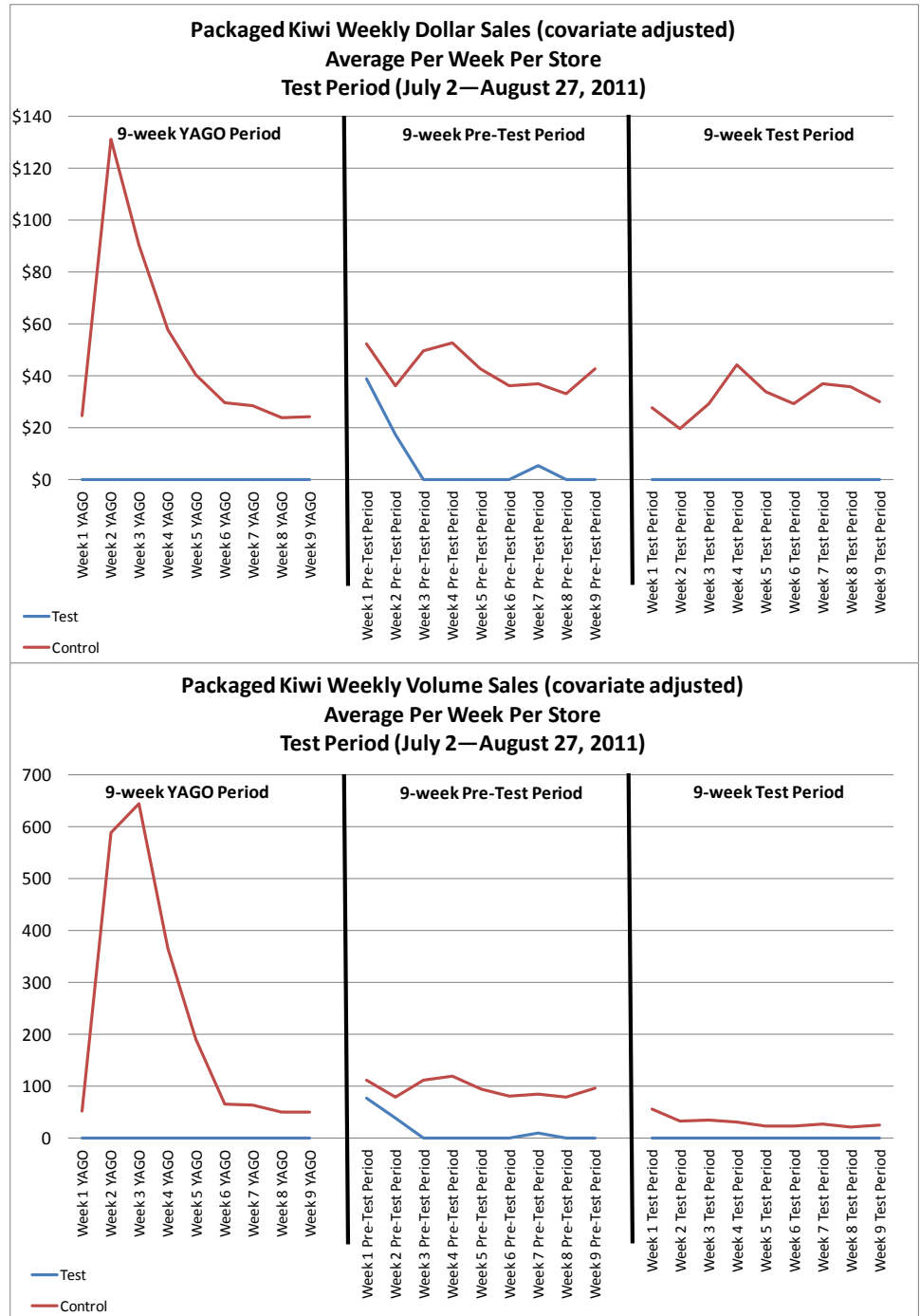
Pre-test Period
 Test Stores: \$0.69
 Control Stores: \$0.47

YAGO Period
 Test Stores: \$0.64
 Control Stores: \$0.38

Source: Perishables Group FreshFacts® Powered by Nielsen

packaged kiwi test results: Lunds vs. ROM control stores

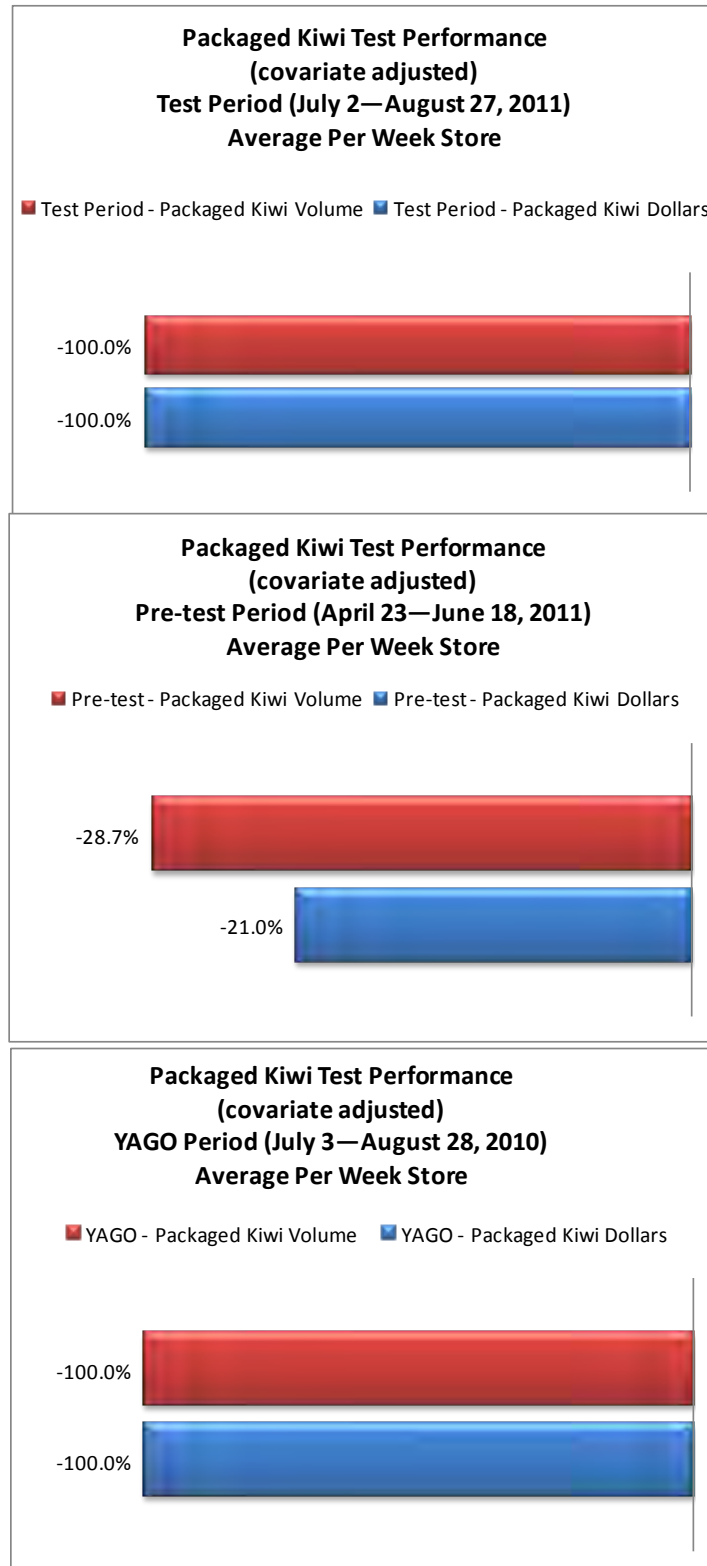
Packaged kiwi was not carried during the per-pound kiwi pricing test at Lunds.



Source: Perishables Group FreshFacts® Powered by Nielsen

packaged kiwi: Lunds vs. ROM control stores

Packaged kiwi was not carried during the per-pound kiwi pricing test at Lunds.



Observed (Non-Adjusted) Average Retail Prices

Test Period
 Control Stores: \$1.03

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 Test Stores: \$0.47
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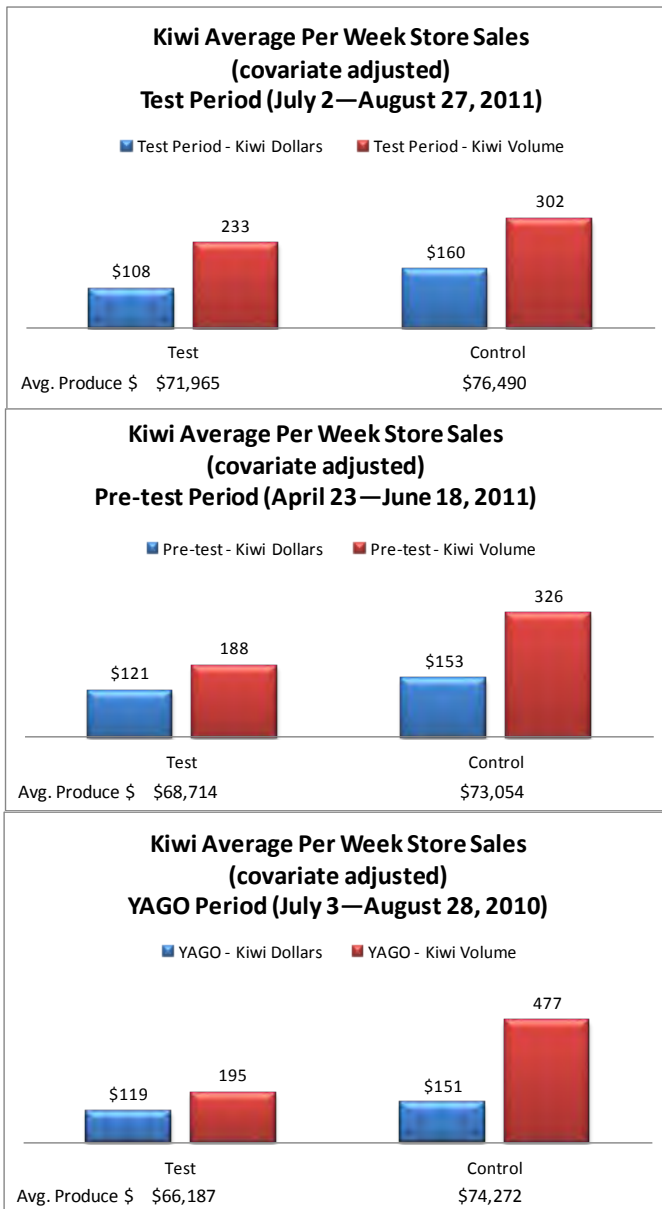
Source: Perishables Group FreshFacts® Powered by Nielsen

kiwi: weekly test period averages

Kiwi Period Differences

Control stores outperformed test stores during test, pre-test and year-ago periods in terms of covariate-adjusted average kiwi volume and dollar sales.

However, during the test period, the control stores did not outperform the test stores by as large of a volume gap compared to the pre-test and the year-ago periods.



Observed (Non-Adjusted) Average Retail Prices

Test Period

Test Stores: \$0.48
(\$2.42/lb)

Control Stores: \$0.51

Pre-test Period

Test Stores: \$0.68

Control Stores: \$0.47

YAGO Period

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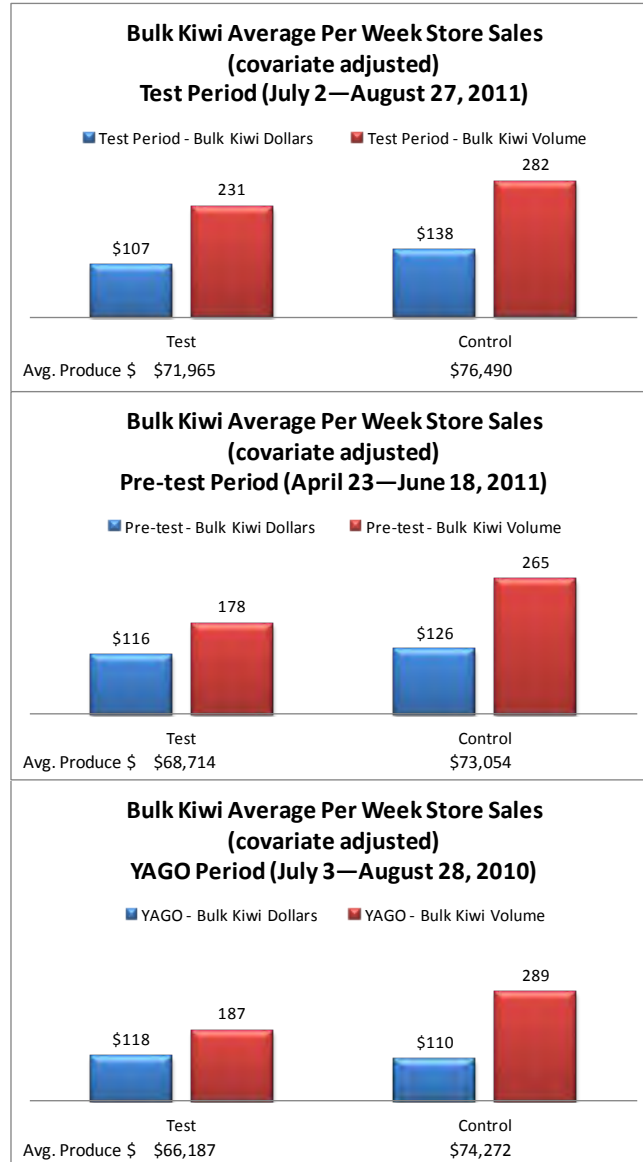
Source: Perishables Group FreshFacts® Powered by Nielsen

bulk kiwi: weekly test period averages

Kiwi Period Differences

Control stores outperformed test stores during test, pre-test and year-ago periods in terms of covariate-adjusted average bulk kiwi volume and dollar sales.

However, during the test period, the control stores did not outperform the test stores by as large of a volume gap compared to the pre-test and the year-ago periods.



Observed (Non-Adjusted) Average Retail Prices

Test Period

Test Stores: \$0.48
(\$2.42/lb)

Control Stores: \$0.48

Pre-test Period

Test Stores: \$0.69

Control Stores: \$0.47

YAGO Period

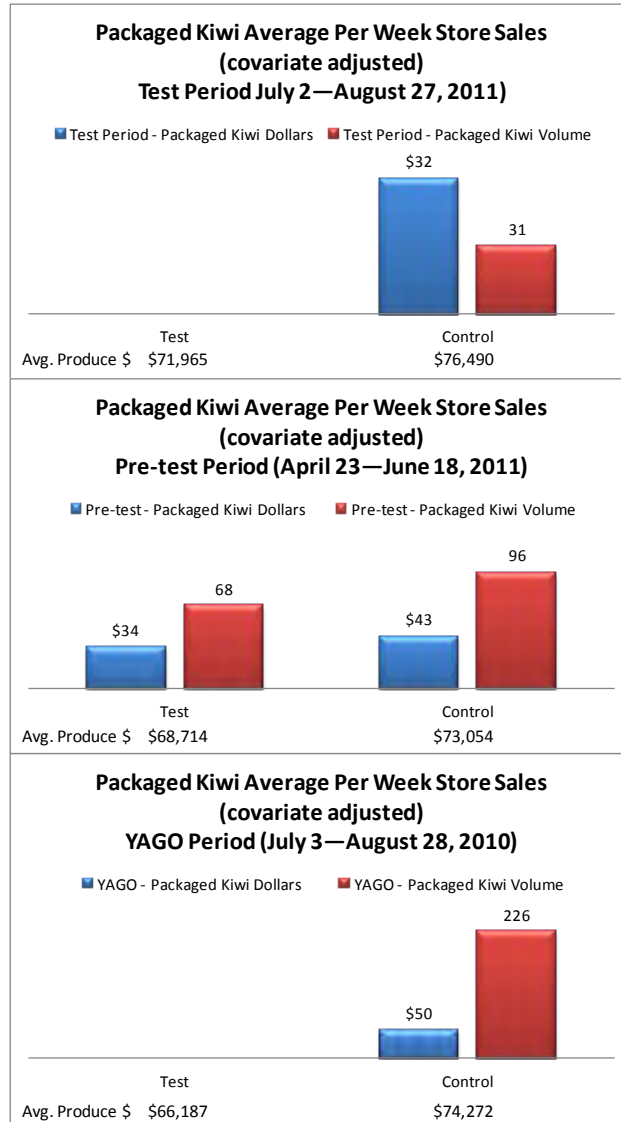
Test Stores: \$0.64

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packaged kiwi: weekly test period averages

Packaged kiwi was not carried during the per-pound kiwi pricing test at Lunds.



Observed (Non-Adjusted) Average Retail Prices

Test Period
Control Stores: \$1.03

Pre-test Period
Test Stores: \$0.47
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YAGO Period
Control Stores: \$0.22

Source: Perishables Group FreshFacts® Powered by Nielsen

appendix A: store panel matching



store panel matching

Control Panel

All 21 Lunds stores participated in the kiwi test from July 2, 2011, through August 27, 2011. A control panel consisting of 21 ROM stores were matched using the statistical methodology Analysis of Covariance (ANCOVA). This method ensured both panels had similar kiwi sales trends for the 26 weeks prior to the test, and the effect of the kiwi pricing test could be best measured.

Panel	Store Number	Retailer	Address
Lunds ROM Control	1604	Cub Foods	15350 Cedar Ave, Saint Paul, MN 551247021
Lunds ROM Control	1629	Cub Foods	3930 Silver Lake Rd Ne, Minneapolis, MN 554214351
Lunds ROM Control	1636	Cub Foods	23800 Highway 7, Excelsior, MN 553313152
Lunds ROM Control	1640	Cub Foods	14075 Highway 13, Savage, MN 553783100
Lunds ROM Control	1641	Cub Foods	3717 Lexington Ave N, Saint Paul, MN 551263081
Lunds ROM Control	1645	Cub Foods	100 Opportunity Blvd N, Cambridge, MN 550085822
Lunds ROM Control	6343	Pick 'n Save	2643 Eastern Ave, Plymouth, WI 530734270
Lunds ROM Control	6364	Pick 'n Save	10202 W Silver Spring Dr, Milwaukee, WI 532253265
Lunds ROM Control	6370	Pick 'n Save	4145 N Oakland Ave, Milwaukee, WI 532112027
Lunds ROM Control	6384	Pick 'n Save	1010 N Rochester St, Mukwonago, WI 531498738
Lunds ROM Control	6388	Pick 'n Save	1300 Pabst Farms Cir, Oconomowoc, WI 530664854
Lunds ROM Control	6880	Pick 'n Save	1735 W Silver Spring Dr, Milwaukee, WI 532094400
Lunds ROM Control	8802	Rainbow Grocery	1201 Larpenteur Ave W, Saint Paul, MN 551136318
Lunds ROM Control	8812	Rainbow Grocery	1566 University Ave W, Saint Paul, MN 551043908
Lunds ROM Control	8815	Rainbow Grocery	1276 Town Centre Dr, Saint Paul, MN 551231064
Lunds ROM Control	8828	Rainbow Grocery	15125 Cedar Ave, Saint Paul, MN 551247111
Lunds ROM Control	8862	Rainbow Grocery	289 12th St Sw, Forest Lake, MN 550251483
Lunds ROM Control	8870	Rainbow Grocery	200 Pioneer Trl, Chaska, MN 553181169
Lunds ROM Control	8874	Rainbow Grocery	2600 American Blvd W, Minneapolis, MN 554311201
Lunds ROM Control	6301	Roundys-Metro Market	17630 W Bluemound Rd, Brookfield, WI 530452908
Lunds ROM Control	6371	Roundys-Metro Market	1123 N Van Buren St, Milwaukee, WI 532023269

store panel matching

Store Panel Matching Methodology

Step 1

Assembled the latest 52 weeks of kiwi performance data for Lunds and competitive stores (ROM).

- Lunds had 21 stores that participated in the test.

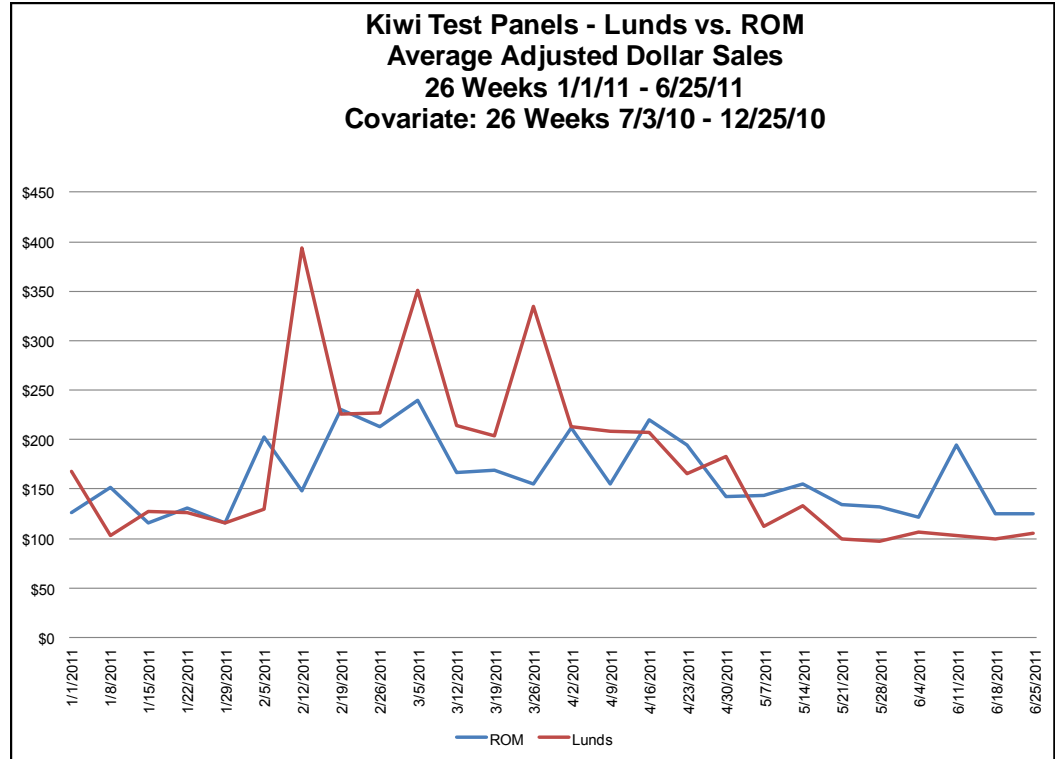
Step 2

Selected 21 control stores to match 21 Lunds stores, by minimizing covariate-adjusted dollar differences between the first cluster (control) and the test cluster using an evolutionary optimization model for a 26-week period versus the 26-week year-ago period.

- Constraint was set at covariate-adjusted dollar difference of less than 5% between control and test panel for kiwi sales; however, the best match found was 8%.

Step 3

Reported ANCOVA analysis on selected panels, and ensured model fit and statistical significance (f-stat greater than 1, p-stat less than 0.05).



26 Week PreTest vs. 26 Weeks PostTest						
Lunds Kiwi						
One-Way ANCOVA: Results Page						
ANCOVA Results (k=4)						
	Source	SS	df	MS	F	P
	adjusted means	41646.24	1.00	41646.24	3.97	0.05
	adjusted error	11419262.87	1089.00	10486.01		
	adjusted total	11460909.11	1090.00			
Test for Homogeneity of Regressions						
	Source	SS	df	MS	F	P
	between regressions	732102.76	1.00	732102.76	74.60	0.00
	remainder	10687160.11	1089.00	9813.74		
Dollar Means						
	PreTest	Test	Test			
	Observed	Observed	Adjusted			
Control	\$147	\$175	\$162			
Test	\$103	\$162	\$175			
Differences Control Panel vs. Test Panels						
	Unadjusted Base Period	Unadjusted Test Period	Covariate Adjusted Test Period			
Test	-30.5%	-7.5%	8.0%			

Average weekly cherry dollar sales (in season) per store by panel

Difference more than 5%

appendix B: Lunds unadjusted results

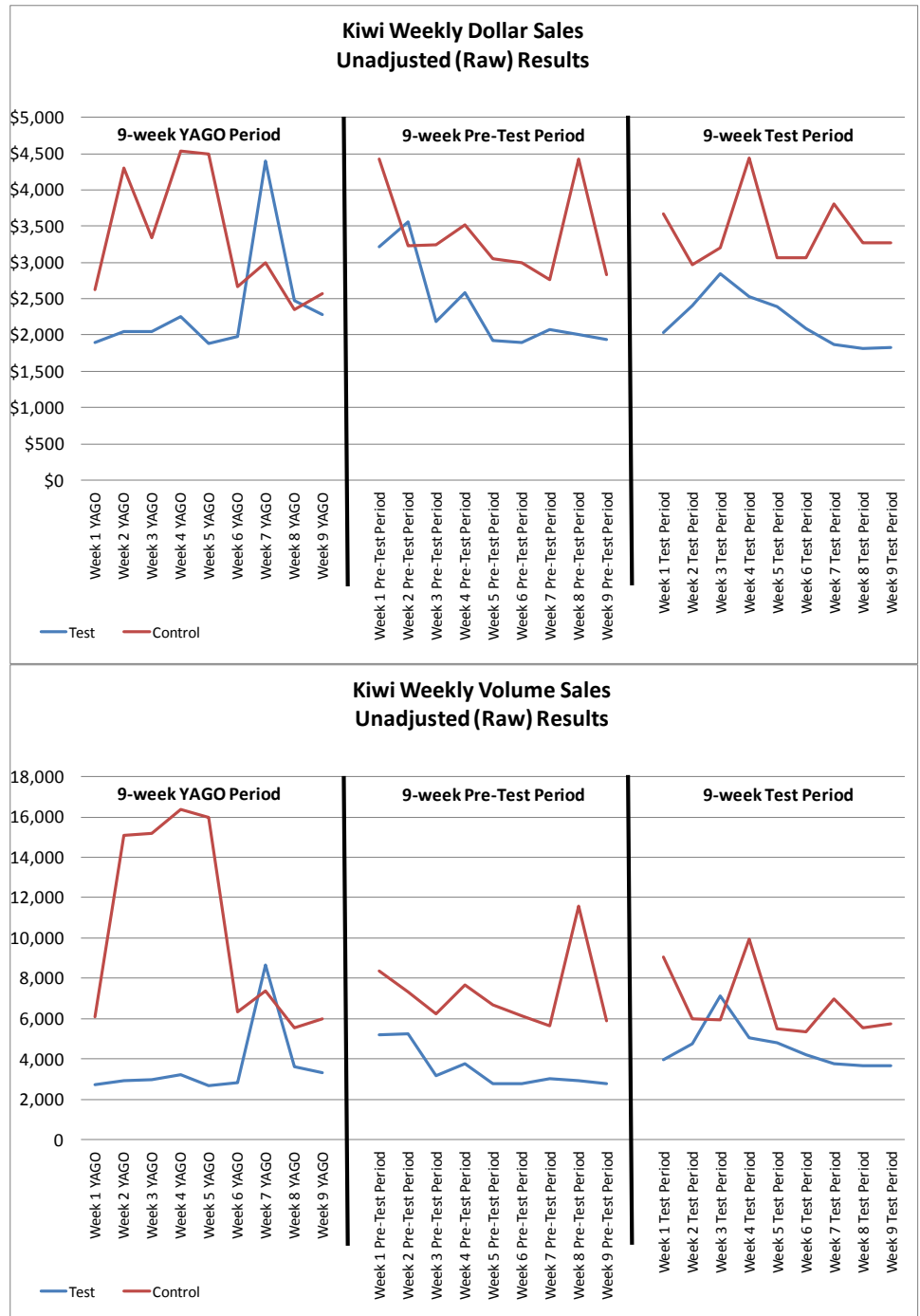


unadjusted results

Kiwi Sales

Kiwi dollar sales (unadjusted) in Lunds stores did not appear to increase when kiwis were priced per pound.

However, kiwi volume sales (unadjusted) in Lunds stores did appear to increase when kiwis were priced per pound.



Source: Perishables Group FreshFacts® Powered by Nielsen

appendix C: kiwi audit summary



kiwi audit summary

Overview

The California Kiwifruit Commission (CKC) recently implemented in-store testing to study the impact of per pound pricing on kiwi performance. To measure store compliance, the Perishables Group (PG) conducted two audits in each of 21 Lunds / Byerly's stores during the test period.

Store Visits

Stores were divided into two groups, and visits were staggered:

- Auditors visited stores 1001, 1002, 1003, 1004, 1010, 1011, 1013, 51001, 51007 and 51010 the weeks of July 4 and August 8.
- Auditors visited stores 1007, 1008, 1012, 15014, 51002, 51003, 51004, 51006, 51008, 51009, 51011 the weeks of July 18 and August 15

Pricing

Everyday pricing for green kiwi was \$2.49 per pound at all stores during all visits. During the week of July 4, green kiwi was on promotion at all stores visited for \$1.99 per pound. Also, during the July 18 visits, store 51008 promoted green kiwi for \$1.99 per pound.

Additionally, several stores, 1004, 1011, 51007, 51002, 51003 and 51006, sold gold kiwi during the July store visits for a price of \$3.49 per pound.

Signage

Pricing signage was with the kiwi display in all stores during all visits. The variety name was also on the signage during the July store visits.



Week of July 4: Store 51010



Week of July 4: Store 1004



kiwi audit summary



Week of July 18: Store 51002



Week of July 18: Store 1004



Week of August 8: Store 1011



Week of August 8: Store 1010



Week of August 15: Store 51006



Week of August 15: Store 1007

about PG

The Perishables Group is an independent consulting firm focused on creating innovation and value for clients in the fresh food industry. Expertise includes category development, supply chain management, activity-based costing, research and marketing services.

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