

Purchasing Decisions in Grocery Stores

The Effect of Expiration Date on
Purchasing Decisions in Grocery Stores

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UNIVERSITY OF WISCONSIN
WHITEWATER

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Report Take Aways

1. 81 percent of grocery shoppers check expiration dates on perishable food products to some reoccurring extent.
2. General expectation of the public is that perishable food products will not last more than 7 days at most.
3. Expiration dates are easier found and more relevant to perishable goods than non-perishable goods when buying.
4. It is observed that individuals feel it is harder to find expiration dates on non-perishable food products.
5. The expectation of how long food will last after purchase decreases in the public eye when product is discounted.
6. One third of individuals surveyed stated that they were inclined to shop at the grocery store due to the Food Waste Program, creating a positive factor onto stores with them.
7. This information is best used to help grocers organize the store in a more shopper friendly manner to allow for more efficient product movement and relevance to what shoppers are looking for.

Introduction

The development of grocery stores in recent years allows consumers more variety in their choice of where to shop. Two of the many things that may influence their decision-making include discounting and expiration dates. Throughout the fall of 2017, the Fiscal and Economic Research Center (FERC), from the University of Wisconsin- Whitewater, conducted surveying at grocery stores throughout the state of Wisconsin to determine individual's perception of store quality based on these factors.

The survey focused on individual's perception of expiration dates on perishable and non-perishable goods, realistic and idealistic expectations for how long a product would last at its original price against the discounted price and the Food Waste Program. In total 596 surveys were completed and collected over the course of two months and these results are based on the responses in those surveys.



Table I (%) - Estimated Quantities of Monthly Purchases					
Products	None	1	2	3	4 or More
Gallon of Milk	15	20	23	11	31
8 oz. Container of Yogurt	17	17	12	8	47
Baby Food	92	2	3	1	2
Cheese	5	14	28	16	36
Cereal	20	29	21	9	20
Salad Dressing	22	49	18	5	7
Lunch Meat	20	24	26	13	18
Canned Corn	62	24	10	2	3
Pasta	25	36	22	9	8
Spaghetti Sauce	25	36	22	9	8

Quantity Data

A section of the survey was dedicated to illustrate the purchasing tendencies of the individuals surveyed. The results are shown in the table below.

Table 1 depicts the estimated quantity of each item purchased monthly by individuals surveyed. The individuals chose between “none, one, two, three, and for or more”. The percentages given in each column corresponds to the portion of individuals who responded to the corresponding criteria.

For the purposes of this report, food products are separated into two categories, perishable and non-perishable food products. Perishable food products as determined for this study are: lunchmeat, milk, yogurt and cheese. Non-perishable food products for the purposes of this study are: salad dressing, cereal, baby food, canned corn, pasta, and spaghetti sauce. The main differentiation between these categories is based on whether the food expires in the short term (a few days to weeks), or the long run (a few weeks to months).

Of the individuals who purchase each of the goods, we asked participants to estimate how often they check the expiration date of the goods while in the grocery store, with Figures 1 and 2 (display on pg. 5) showing the respondents results to this question.

How frequently do you check the expiration date of perishable goods when you shop?

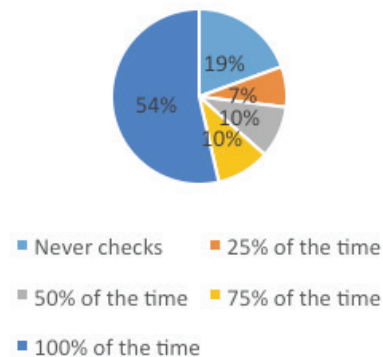


Figure 1

How frequently do you check the expiration date of non-perishable goods when you shop?

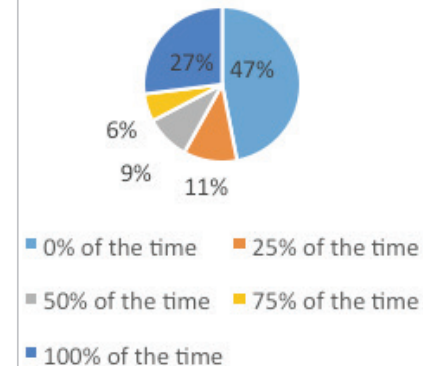


Figure 2

The survey form is titled "University of Wisconsin Whitewater Grocery Store Survey 2017". It contains several sections for data collection:

- Demographics:** Questions about gender (Male/Female), marital status (Married/Not Married), and age (18-24, 25-34, 35-44, 45-54, 55-64, 65+).
- Product Categories:** Lists of products categorized as perishable (Gallon of milk, 8 oz. container of yogurt, Baby Food, Cheese) and non-perishable (Cereal, Salad Dressing, Lunch Meat, Canned Corn, Pasta, Spaghetti Sauce).
- Expiration Date Checks:** Two grids for recording the frequency of checking expiration dates for each product category. The grid for perishable goods has columns for "0%", "25%", "50%", "75%", and "100%". The grid for non-perishable goods has columns for "0", "1", "2", "3", and "4+".

The respondents responded one of five ways, that they never check the expiration date, they check it 25 percent of the time, 50 percent of the time, 75 percent of the time, or Always.

The data for perishable food products shows that 54 percent of individuals check the expiration date 100 percent of the time they buy perishable food products. Only 19 percent of individuals do not check the expiration date for perishable food products, with over 81 percent checking the expiration date at least 25 percent of the time, indicating a general concern about when the food in question will expire. We also notice that a larger than expected amount of respondents never check expiration dates when grocery shopping, this may indicate that most respondents either very cautious with expiration dates for

their perishable foods or show little concern for expiration dates at all, as consumers may be using the food item in question immediately, thus having little concern for when the item expires.

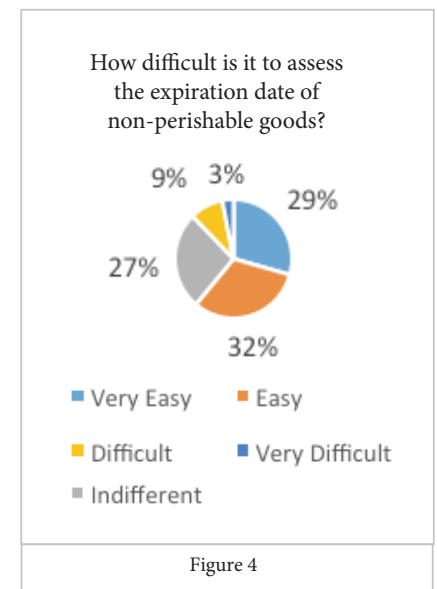
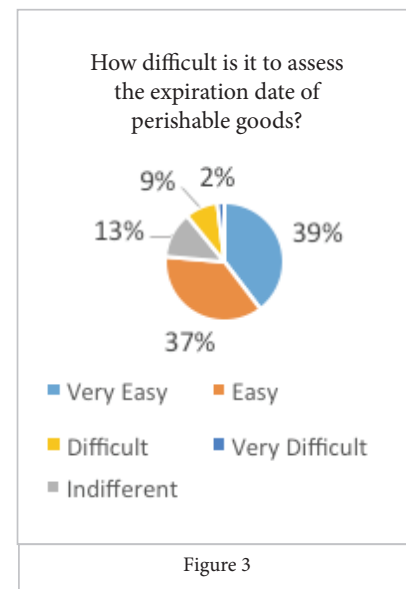
In comparison for non-perishable food products, 53 percent of individuals check the expiration date at least 25 percent of the time they buy perishable food products, with a large percentage, 47 percent, of individuals do not check the expiration date for non-perishable food products. The difference could be explained by the time sensitive nature of the products, as non-perishable food products generally have longer expiration dates, and may be used far before the expiration date is reached.

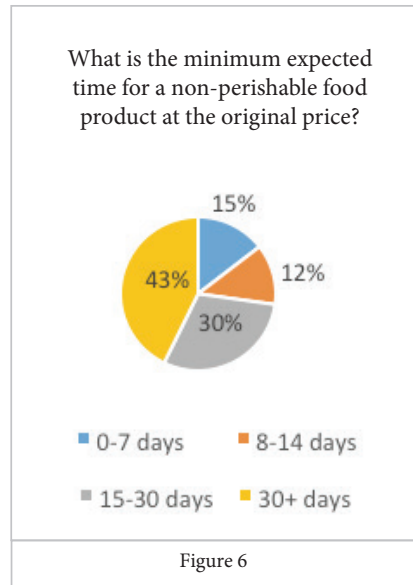


Data from Product Expiration Dates Questions

Another section of the survey assessed the difficulty of determining the expiration date of the same food products as covered in the previous section. The respondents were asked to assess the difficulty of determining the expiration dates of food products on the following scale: Very Easy, Easy, Indifferent, Difficult, and Very Difficult. The responses for each question are illustrated in Figures 3 and 4.

When comparing the two results for both non-perishable and perishable, 11 percent assessed that determine the expiration dates for non-perishable foods were “difficult” or “very difficult”, with 12 percent of the individuals answered claiming that assessing expiration dates was “difficult” or “very difficult” or perishable goods. The results also indicate that for the ease of assessing goods, as determined by the category falling into the “easy” or “very easy” category, the assessed ease of determining expiration dates for perishable goods was greater by 19.73 percent than non-perishable goods.

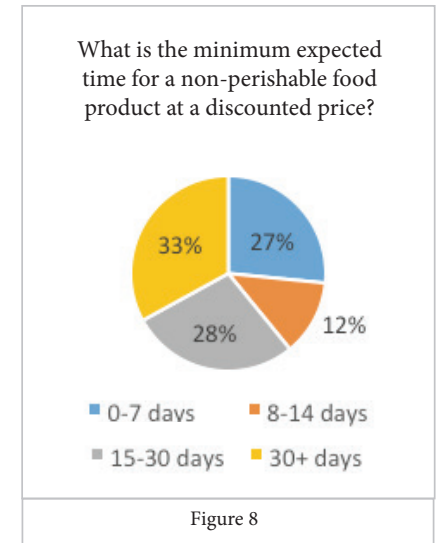
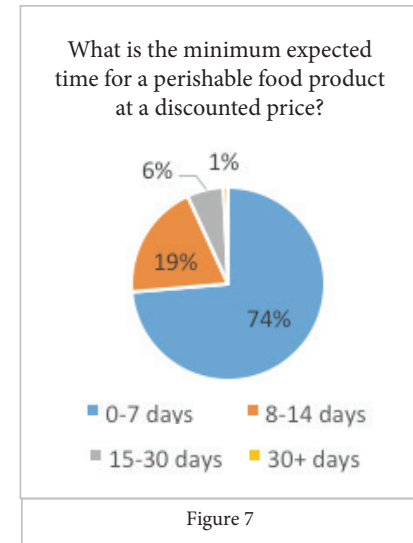




The reason for the results may occur due to a few different factors such as: a better labelling system by the manufacturers of perishable food products or the bias caused by the frequency of how often individuals check for expiration dates. The more an individual checks for an expiration date, the greater chance they are able to assess the date with greater ease. The frequency for checking expiration dates is greater in perishable than non-perishable food products hence this could be a reason.

Respondents were also asked questions to determine their expectations for the minimum time that a food product would last once bought at the original price of the product in days. The data from these questions are illustrated in Figures 5 and 6.

When comparing the two results, 43 percent of the individuals expect non-perishable goods to last more than 30 days compared to 2 percent who



expect perishable food products to last more than 30 days. Furthermore 49 percent of the individuals expect perishable goods to last at most 7 days, with 15 percent of respondents expecting their non-perishable food products to last for at most 7 days.

Once again the difference in these could be attributed to the nature of these two categories of products. Individuals often expect non-perishable food products to last for a longer period of time than perishable goods as these products have a longer shelf life, and thus expectations would be that non-perishable goods should last longer than 7 days.

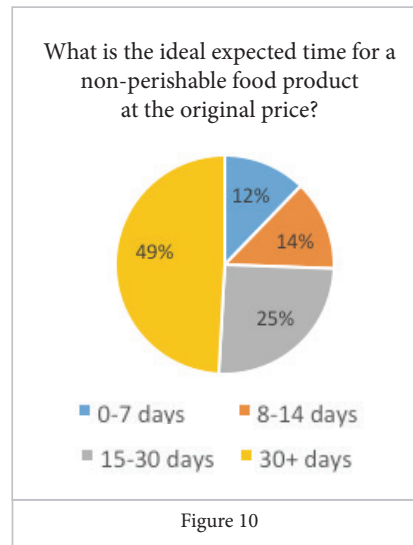
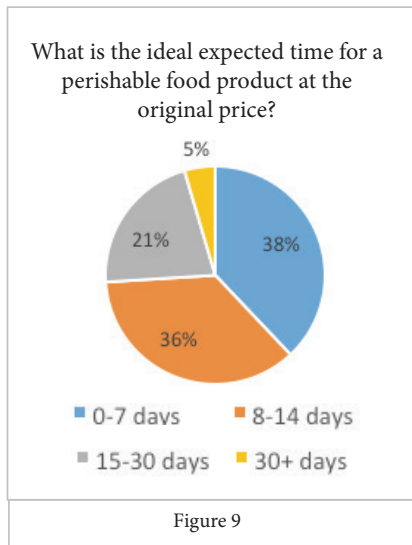
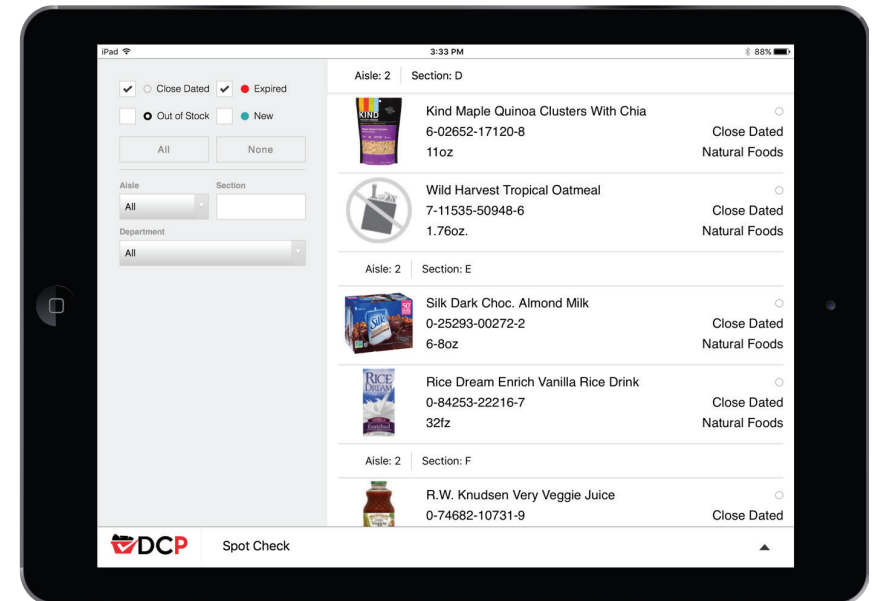
Another group of questions individuals were asked to respond to a series of questions based on their perception of the minimum time that a food product would last once bought at a discounted price for the product in days. The data from these questions are represented in Figures 7 and 8 on page six.

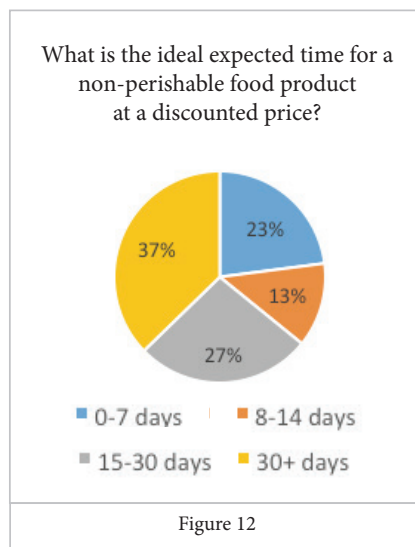
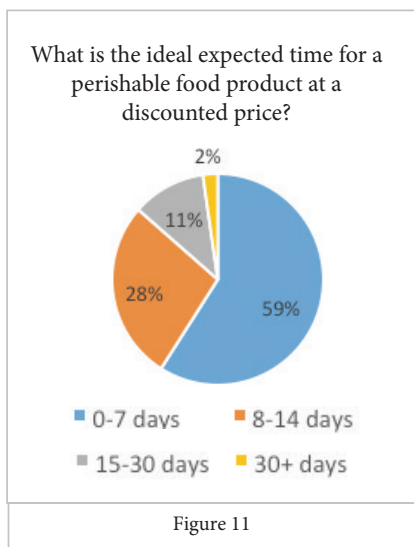
Upon observing the results for perishable food products, 74 percent of individuals state that they expect products to last at least 0-7 days. And in comparison to the data illustrated with Figure 5, this a 25 percentage point increase for respondents from the previous responses.

For non-perishable food products, in comparison with figure 6, there is a 10 percentage point decrease for people expecting products to last longer than 30 days and an increase of 12 percentage point for people expecting the product to last between 0-7 days at least.

The reason for the observed changes could be caused by individuals perceiving that food products, be it perishable or non-perishable, when sold at a discount are closer to the expiration date stated on the item.

Another group of questions posed to the respondents had the respondents determining their ideal time that a food product should last once bought at the original price of the product in days. The data from these questions are represented in Figures 9 and 10, found below.





When comparing the two results, 49 percent of the respondents believe the ideal time for non-perishable goods to last is more than 30 days, while only 5 percent expect perishable food products to last more than 30 days. Furthermore, 38 percent of the individuals expect perishable goods to last for at most 7 days, while that number is 12 percent for non-perishable food products. This indicates that the ideal amount of time for perishable products for the other 62 percent of respondents is longer than 7 days, while the only 26 percent expect that the minimum expected time till expiration will be longer than 7 days.

In comparison with figures 5 with figure 9, there is a decrease of 11 percentage point for those who state products last between 0-7 days while every other category has seen an

increase. When comparing figures 6 and 10, there is a 6 percentage point increase for individuals stating that they expect non-perishable food products to last more than 30 days.

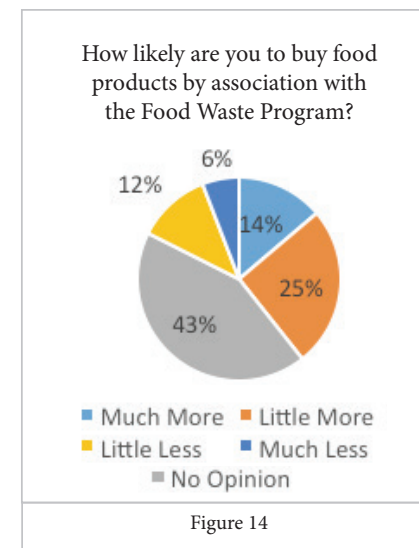
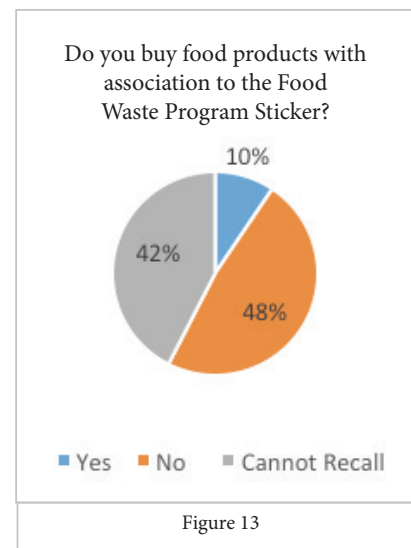
Once again the difference in these could be attributed to the nature of these two categories of products.

Individuals often expect non-perishable food products to last for a longer period of time that the other as these products have a longer shelf life.

Furthermore by comparing the minimum time expected to last at an original price to the ideal time, it is observable that individuals clearly would like to see their products overall lasting a longer time post purchase.

Upon observing the results for discounted perishable food products, 59 percent of respondents state that they expect products to last at least 0-7 days. In comparison with figure 7, this a 15 percentage point decrease respondents from the previous results of products in the same category.

For discounted non-perishable food products, in comparison with the data illustrated in Figure 8, there is a 4 percentage point increase for people expecting products to last longer than 30 days and a decrease of 4 percentage point for people expecting the product to last between 0-7 days at least. In comparison to the perishable food products, the variation between discounted non-perishable products does not have as large of a magnitude in change, however the movement between categories is similar.



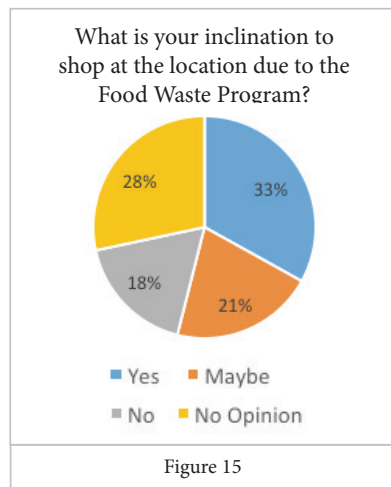
Data from the Food Waste Program

In some questions, individuals were asked about a 'Food Waste Program' done by the grocery store. The results are illustrated in Figures 13- 15

Only 10 percent of the individuals responded "Yes" to whether they have utilized the Food Waste Program stickers. This may have been due to the lack of enthusiasm for the program or that individuals are not aware of the existence of the said program.

39 percent of the individuals stated that they are "Much More" or "Little More" likely to purchase a food product with the Food Waste Program sticker, while those who stated "Little Less" or "Much Less" likely to purchase a food product of the program constituted only a total of 18 percent of the total respondents. One third of the individuals state that they are inclined to shop at the grocery store due to the Food Waste Program while only 18 percent say otherwise.

One of the more obvious statistics in all three figures is that there is roughly a 40 percent-45 percent of individuals who stated "no opinion". This may have occurred to the lack of knowledge of the Food Waste Program or that these individuals have never utilized this program.



Conclusion

Through the completion of this study, we have found that for the majority of individuals expiration dates are more important for perishable goods than non-perishable goods either when buying their groceries or when consuming them. Furthermore the results also show the perception of individuals of food products priced at their original price against food products being sold at a discounted price; across the two types of products the expected time to last after the product is bought declines. The disparity of time is a lot larger for perishable products than on non-perishable products.

Based on the results for ideal expectations for how long both types of products should last, there is a clear increase in individuals perceiving that they should last longer.

This information is valuable to grocers when deciding where to focus their attention in organization of expiring goods within their store. This makes the grocery shopping process easier for both them and their customers. The 'Food Waste Program' appears to have been a more positive factor which attracts individuals to not only purchase a product in the program, but also makes individuals more inclined at the grocery store, if they had heard of it or had a opinion on it.



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