August 2011

AMR 11-06

Agricultural Marketing Report

Colorado State University Extension

Department of Agricultural and Resource Economics, Fort Collins, CO 80523-1172
http://dare.colostate.edu/pubs

CHALLENGES TO STIMULATING FRESH POTATO CONSUMPTION: A SUMMARY OF MARKET RESEARCH

Chris Huber and Jennifer Keeling Bond [1]

Introduction

In 2010, Colorado growers harvested 59,200 acres of potatoes with production valued at $293 million (USDA-NASS, 2011b). Additionally, Colorado was ranked 4th nationally in summer potato yields, 5th in fall yields, and had an estimated average of 390 cwt. per acre (USDA-NASS, 2011a). In the San Luis Valley of Southwestern Colorado alone, where the bulk of the state's potatoes have historically been grown, 55,500 acres and 100 different varieties were planted for the 2010 fall crop (USDA-NASS, 2010).

Despite providing an abundance and diversity of market offerings, Colorado and U.S. producers face significant market challenges. Most profound among those challenges is that per capita potato consumption has been in decline for much of the past twenty-five years (NPD Group-National Eating Trends, 2008). According to the 2008 NPD Group National Eating Trends study, annual in-home potato servings per capita declined 33% between 1985 and 2007, from 105.2 annual servings to just 70.8 servings per year. Driving this decline was a significant reduction in fresh potato consumption; the instances where fresh potatoes were eaten at home declined by 23.7 occasions on average between 1993 and 2009 (NPD Group-National Eating Trends, 2010). Interestingly, during a period of significantly declining consumption, the total number of potato purchasers remained relatively constant. Roughly the same numbers of shoppers were buying potatoes for home preparation in 1985 as were in 2007; however, these folks were buying fewer potatoes and preparing them less frequently.

Despite retaining its ranking as the top side dish to serve with protein, potatoes have encountered increasing competition on the dinner plate. Reasons for the potato's loss of favor with consumers are potentially numerous though researchers have narrowed the field down to a handful of significant factors including perceived lack of nutritional quality, lack of variety, and lack of convenience. Specifically, the United States Potato Board (USPB) has identified three factors as the primary reasons for the observed decline of per capita consumption: concerns about the healthfulness of potatoes, changing consumer preferences, and the increased availability and appeal of potato substitutes (NPD Group-National Eating Trends, 2010).

1 Graduate Research Assistant and Assistant Professor, respectively, in the Department of Agricultural and Resource Economics at Colorado State University, Fort Collins, CO 80523-1172. Contact: Dr. Jennifer Keeling Bond; jennifer.bond@colostate.edu; (970) 491-3299.

In this fact sheet, we explore these factors in depth and pair discussions with findings from several recent marketplace studies. An overview of the availability and appeal of potato substitutes is discussed in the fourth section. Finally, we conclude this fact sheet with a review of recent USPB activities aimed at enhancing demand for fresh or table potatoes with implication for Colorado specialty and premium potato producers.

Health Perception

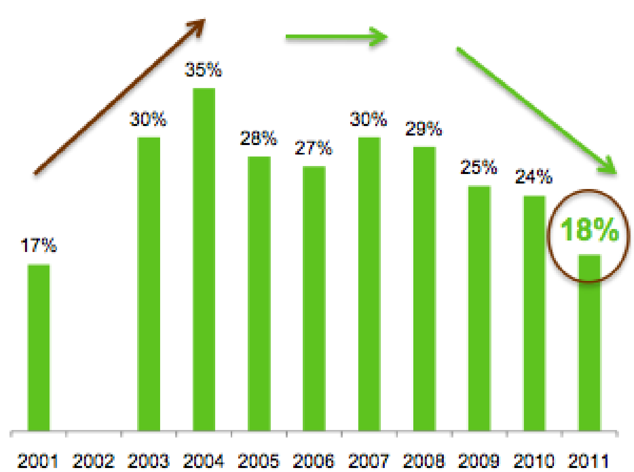
In an era where national obesity rates and associated health risks (e.g., heart disease, cancer, stroke, and more) have steadily increased for 25 years, many consumers are altering their diets in hopes enhancing their health (Flegal et al., 2010). Low-carb diets, the most famous being the Atkins Diet, peaked in popularity in 2004 after years of momentum beginning in the 1990s (Atkins, 1992; Nielsen, 2004). Most recently, the whole-food and functional foods movement has been identified as a leading diet trend, and is predicted to remain strong for the next ten years (Hasler-Lewis, 2010; Sloan, 2009).

At the height of the low-carb diet movement in 2004, survey findings from the A.C. Nielsen Company showed that more than 17% of Americans were on the Atkins diets or some other variant of the "low-carb" diet (Nielsen, 2004). The 2011 USPB Attitudes and usage report has tracked the "net negative score" (percentage of survey respondents who had at least one negative health perception in general about potatoes) as well as the percentage of consumers who agreed with the statement "potatoes are fattening" over at the least the past ten years (Sterling-Rice Group & Synovate, 2011).

The USPB report shows that during the peak of low-carb dieting in 2004, 35% of survey respondents had at least one negative perception about potatoes, while in 2011, this percentage declined to 18% (see Figure 1 below). Similarly, 22% of respondents perceived potatoes as fattening in 2005, while 14.6% had this opinion in 2011. Much of the reduced frequency of negative health perception in 2011 has been attributed to the significant reduction of the perception that potatoes were fattening (Sterling-Rice Group & Synovate, 2011; Fairbourn, 2011).

Despite the evidence of a decline in consumer perception that potatoes are unhealthy, the most significant negative perception about potato consumption remains health concerns. In 2010, The USPB Potato Attitudes and Usage report, 55% of negative attitudes about potatoes was related to negative health perception (Sterling-Rice & Synovate, 2010). However, this was an improvement from years previous; the same survey used three years earlier in 2007 showed 64% of negative responses were concerns related to negative

Figure 1 – Percent of survey respondents with one or more negative health perception about potato consumption



From: Fairboum 2011 for the U.S. Potato Board health perception of potatoes. Interestingly, the same study showed that 31% of consumer respondents viewed the health benefits as the one of the best things about potatoes, possibly indicating differing levels of education about the true nutritional value of potatoes among the survey respondents.

As low-carb diets have decreased in popularity a new diet trend has increasingly captured the attention of consumers, and is predicted to remain popular well into the future. According to *Trends, Innovation and the Future of Food Product Development* (Hasler-Lewis, 2010), a leading diet trend among consumers is moving way from highly processed foods in favor of "whole health eating" and "functional foods" (Hasler and Brown, 2009; Hasler-Lewis, 2010), and predicted to continue in popularity for the next ten years (2010; Sloan 2009). Whole-food nutrition and functional foods is defined as "foods and food components that provide a health benefit beyond basic nutrition" (IFT, 2005). According to Hasler and Brown (2009), referenced by Hasler-Lewis (2010), wellness-focused consumers, pervasiveness of chronic diseases, and consumer awareness linking diet to health and wellness are driving forces behind the whole food nutritional movement. A *2009 Food & Health Survey* from the International Food Information Council also found that 71% of adults were actively trying the change amounts and types of foods consumed to maintain or lose weight (IFIC, 2009); a 2010 report found that 66% of consumers managed specific health issues through their diet (Sloan, 2010).

Regardless of the fast growing whole-food nutrition and functional foods movement, evidence suggests that consumers generally appear to lack awareness of nutritional needs and specific nutritional qualities of foods. In the IFIC 2009 report, only 20% of survey respondents were counting calories, 11% were able to correctly estimate their daily caloric intake, and 47% overestimated their daily energy needs. Research on the knowledge of consumer awareness of specific nutritional content of potatoes has yielded similar results. Recent preliminary experimental data showed that consumers were least knowledgeable about the specific nutritional qualities about potatoes relative to other qualities such as price and preparation method (Bond et al., 2011). In another survey, only 44% of respondents strongly agreed that potatoes are high in vitamin C and potassium (Sterling-Rice & Synovate, 2010).

In spite of evidence of general lack of consumer knowledge of specific potato nutritional quality, there are indications that the general perception of the healthfulness of potatoes is improving; fewer people are actively avoiding potatoes, fewer consumers perceive potatoes to be fattening, and health related concern is less frequently cited as the a negative potato attribute (USBP, 2011).

Changing Consumer Preferences

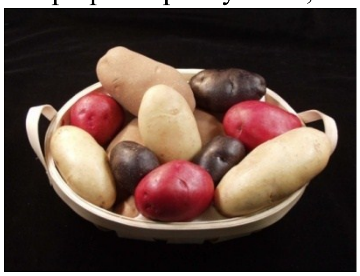
Multiple studies have shown that American consumer preferences are constant; not only are Americans considering the health attributes of food as a means to overall health quality (as described in the previous section), but they are also increasingly considering cost (due to the weak economy), convenience, and flavor variety as important factors.

The weak economy has caused consumers to reevaluate their food purchases and change consumption behavior in attempt to cut costs. Americans are eating at home more frequently in part because of the affordability home-cooked meals (FMI, 2009). According to Tanner (2009), more than half of consumers in 2009 purchased more frozen foods than in previous years simply as a way to save money. It is not surprising that in 2008, frozen foods purchases were projected to increase 25% by 2013 (Packaged Facts 2009). General gains in the frozen food sector have not translated to increases in frozen potato sales: consumption declined by 2 occasions per year from 2007-2009 (NPD Group-National Eating Trends 2010). However this decrease is often attributed to reductions in the number of meals outside the home, where french fries and other frozen potato products are popular sides.

In addition to searching for ways to save money on food, consumers have expanded their pallets and demonstrated a growing affinity for to ethnic cuisine and bold flavors. For example, during an average week in 2009, Mexican food was prepared in roughly 25% of all U.S. homes (MSI 2009). Similarly, the NPD Group reported that ethnic cuisine was eaten 50 times per person on average in 2007, including Italian, Mexican, Pizza, and Asian (NPD Group-National Eating Trends 2008). Potatoes figure prominently in many Mexican dishes, however potatoes are less often found to be ingredients in Asian and Italian dishes, potentially indicating reduced demand as these styles of cuisine gain prominence at the dinner table.

Consumers are also increasingly attracted to convenient and easy to prepare foods. Meal planning may be difficult for consumers due to perceived lack of time and inspiration. Multiple study have shown that today's consumers feels relatively more constrained, and with less time for rest and relaxation, than previous generations (Daly, 1996; Jacobs & Gerson, 2004; Robinson & Godbey, 1999; Schor, 1991).

In addition to feeling time constrained, many consumers perceive that they do not have the proper cooking skills necessary to prepare quality food; in 2008, 43% of all consumers claimed that they could not cook well (GFK Roper, 2008). In the face of these challenges, a 2010 report showed that 72% of consumers were in agreement that potatoes were easy to prepare (Sterling-Rice Group & Synovate 2010); good news for the beleaguered potato industry. However, convenience of potato preparation was cited less frequently as the one of the best things about potatoes relative to other attributes such as versatility and taste. Furthermore, 13% of consumers reported that the hassle of preparation was one of the worst things about potatoes in 2010; up from 6% in 2006. This finding may possibly be influenced by the increasing popularity of quick-prep starch dishes including instant and quick-cook rice and various pastas.



Demand for specialty and gourmet foods are also on the rise; the percent of adults who purchased gourmet foods increased from 46% in 2009 to 63% in 2010 (Tanner, 2010). Young Americans, ages 16 to 33, have been found to be the most interested in gourmet and ethnic foods, and are also much more likely to purchase organic, functional, and whole-food nutrition (Technomic, 2010). Specialty potatoes have correspondingly gained acceptance with consumers (Bond & Richards, 2008; Naegely, 2002; Olsen et al. 2003). In fact, the American Culinary Federation (AFC) cited specialty potatoes as one of the trendy produce picks for 2010 alongside locally grown and organic produce (NRA, 2009). Bond & Richards (2008) found that Russet potato sales nationally continue to remain higher than all non-Russet varieties aggregated. However, regional sales data indicates that a shift away from the commodity potato may be underway, collectively non-Russet varieties comprised a larger proportion of total sales in both the New England and South Atlantic regions than traditional Russet sales.

Potato Substitutes

On any typical weekday, 43% of meals prepared at home included a rice, potato, stuffing, or pasta side dish (MSI 2009). In 2007, of all of the carbohydrate side dish options, potatoes were the number one most frequently served side dish for protein based meals (NPD Group-National Eating Trends 2008). Despite the frequency of potatoes used as a side dish, other carbohydrate side dishes have experienced tremendous growth in popularity since 1992 while fresh potato sales stagnated and fell. From 1992 to 2007, flavored rice packages saw increases in frequency of use across all types of protein meals including beef, fish, poultry, and pork (NPD Group-National Eating Trends 2008). Recently, pasta has also seen an increase in popularity. In 2009, 54% of households had at least one pasta dinner during a typical week; a 20% increase from 2007 (MSI 2009). As of 2009, Rennell (2009) reported that annual dry pasta sales reached a record level of $2 billion per year. Strong competition from substitute products that deliver many desirable attributes (convenience, low-cost, diversity of flavor) will continue to present challenges to potato marketing efforts into the foreseeable future. In recognition of the formidable challenges present in the marketplace, the USPB has intensified efforts to promote fresh potatoes and potato products in grocery stores. Several of these programs are described below.

USPB Activities

In order to better understand the changing consumer and competitive marketplace, the USPB has invested in numerous market studies aimed to guide promotional efforts. The findings of several such studies are cited herein and reinforce the notion that growth in potato demand faces three primary impediments, namely: negative perceptions about the overall healthfulness of potatoes, changing consumer taste and preferences that do not favor increased fresh potato consumption, and the strength of substitutes to fill these existing and emerging needs on the dinner plate. Unlike the larger food manufacturing firms that produce popular varieties of pasta and rice products, the USPB has a relatively limited promotion budget. Thus promotion programs that must be budget-friendly and effective in terms of their ability to increase demand among supply chain partners.

Towards that end, the USPB has invested in promotion programs that separately target grocery store managers and end consumers. The first program, known as Best in Class, provides significant education and resources to produce section managers who enter into a mutually beneficial partnership to promote conventional and specialty potatoes. Through their work with produce section managers, USPB indirectly educates consumers about new varieties and the relative healthfulness and convenience of potatoes. The effectiveness of this program has been documented in Richards, Padera, and Bond (2009) and early results indicate that the limited roll out of the program has indeed been beneficial and warrants ongoing support.

One of the most prominent end-consumer promotion efforts is USPB's "Goodness Unearthed" campaign. Components of the program include on-line advertising, select TV and print advertising, sponsorships (Macy's Day Parade), and additional public relations and grassroots-style marketing activities. Messages associated with this program stress the overall healthfulness of the potato and the numerous varieties of spuds commonly available in the market. This multi-faceted promotion program has been characterized as a measure to "defend the nutrition profile of the potato" (Fairbourn, 2011). As a result of USPB's efforts to re-introduce consumers to the "healthful potato," recent research shows that consumers perceived the potato as healthier, natural, and fresher (USPB, 2011).

Summary

While the evolution of consumer preferences has not always had favorable implications for overall potato consumption, recent efforts to educate both consumers and supply chain partners have assisted to enhance demand. Colorado potato growers are poised to supply a growing market for specialty and premium potato varieties by virtue of the tremendous variety of visually and nutritionally superior cultivars that are produced locally. Knowledge of both consumer research findings and USPB efforts may assist to craft Producer-level production and marketing plans and possibly inform the direction of promotion efforts of other marketing intermediaries including fresh pack houses and distributors.

References

Atkins R.C. (1992). Dr. Atkins' New Diet Revolution. New York: M. Evans and Company Inc.

Bond, C.A., Iverson, D., Bond, J.K., Kroll, S. (2011). Importance and Consumer Knowledge of Potato Attributes: A Best-Worst Analysis. Presented to the Western Agricultural Economics Association on June 30, 2011, at Banff, Alberta, Canada.

Bond, J.K. & Richards, T. (2008). "An Empirical Investigation of United States Potato Board Promotion on Non-Russet Potato Demand." NICPRE Quarterly, Vol. 14(3).

Daly, K.J. (1996). *Families & time: Keeping pace in a hurried culture*. Thousand Oaks, CA: Sage.

Fairbourn, David. (2011). Potatoes Are Back! USPB Press Release on 3-10-2011. Accessed on May 19,2011. < http://www.uspotatoes.com/pressRoom/pr.php?id=163>

Flegal, K.M. et al. (2010) Prevalence and trends in obesity among US Adults, 1999-2008. *Journal of the American Medical Association* 303(3) 235-241.

Food Marketing Institute (FMI). (2009). *The Power of Meat*. Accessible at: www.fapc.biz/files/Sloan_PowerofMeat.pdf

GFK Roper. (2008) Food and diet. GFK Roper Reports U.S. Monthly Client Teleconference. GFK Custom Research North America, New York, N.Y.

The Hartman Group Inc. (2009). Consumer Perceptions and Usage of Fresh Potatoes for Dinner Occasions. Produced for the U.S. Potato Board. 1-59.

Hasler, C.M. & Brown A. (2009) Position of the American Dietetic Association: Functional foods. *Journal of the American Dietetic Association* 109 735-746.

Hasler-Lewis C.M. (2010). Trends, Innovation and the Future of Food-Product Development. National Agricultural Biotechnology Council Report 22: *Promoting Health by Linking Agriculture, Food, and Nutrition* pp: 31-40.

Institute of Food Technologists (IFT). (2005). Functional Foods: Opportunities and Challenges. Institute of Food Technologists Expert Reports. http://www.ift.org.

International Food Information Council (IFIC). (2009). 2009 Food & Health Survey: Consumer Attitudes Toward Food, Nutrition and Health.

Jacobs, J.A., & Gerson, K. (2004). *The time divide: Work, family, and gender inequality*. Cambridge, MA: Harvard University Press.

Multi-sponsor Surveys Inc. (MSI). (2009). Gallup 2009 Dinner Study.

Naegely, S. (2002). "An Innovative Approach to Potato Marketing." *American Vegetable Grower.* On-line newsletter, article posted Jun, 2002. Available online at: <http://www.allbusiness.com/management/1081472-1.html.

Nielsen, A. C. Company. (2004). Survey data on American diets. Online at http://www.acnielsen.com/news/american/us/2004/20040209.htm.

NPD Group-National Eating Trends. (2008). The Potato Market In-Home vs. Restaurant Consumption. Presentation prepared for USPB.

NPD Group. (2009) 24th Annual Report on eating patterns in America. www.npd.com.

NPD Group-National Eating Trends. (2010). In-Home Potato Market (NPD): Topline. Produced for the U.S. Potato Board. pp. 1-34.

National Restaurant Association (NRA). (2009). *What's hot in 2010?* Accessible at: www.restaurant.org

Olsen, N., J. Robbins, T. Brandt, R. Lanting, J. Parr, C. Jayo, and C. Falen. (2003). "Specialty Potato Production and Marketing in Southern Idaho." Idaho Experiment Station: University of Idaho Extension CIS 1110.

Packaged Facts. (2009). Frozen foods in the U.S. Accessible at: www.packagedfacts.com/Frozen-Foods-1119492/

Rennell, D. (2009). Pasta potential. *Grocery Headquarters* 75(11): 42.

Richards, T., B. Padera, and J. Bond. (2009). "Category Management in Fresh Produce: The United States Potato Board." Working Paper.

Robinson, J.P., & Godbey, G. (1999). *Time for life: The surprising ways Americans use their time*. University Park, PA: Pennsylvania State University Press.

Schor, J. (1991). *The overworked American: The unexpected decline of leisure*. New York: Basic Books.

Sloan A.E. (2009). Top 10 food trends. *Food Technology Magazine.* 63(4) 22-42.

Sloan, A.E. (2010). What, when and where America eats. *Food Technology Magazine* 64(1) 18-27.

Sterling-Rice Group & Synovate. (2010). "Potato Attitudes and Usage 2010." Produced for the U.S. Potato Board. 1-34.

Sterling-Rice Group & Synovate (2011). "Attitudes and Usage 2011." Produced for the U.S. Potato Board. 1-47.

Tanner, R. (2009). Today's specialty food consumer. Specialty Foods Association. www.specialty-food.com.

Tanner, R. (2010). Today's specialty food consumer. *Specialty Foods Magazine* 40(8): C2-C16.

Technomic. (2010). 2010 Generational consumer trend report. Technomic Inc. www.technomic.com.

USPB (2011) State of the Potato Category. USPB Retail Update for March 2011. 1-8

U.S. Department of Agriculture, National Agricultural Statistics Service, Colorado Field Office. (2010). Colorado, Fall Potato Varieties - 2010 Crop.

U.S. Department of Agriculture, National Agricultural Statistics Service, Colorado Field Office. (2011a). Colorado Agriculture, A Profile.

U.S. Department of Agriculture, National Agriculture Statistics Service, Colorado Field Office. (2011b). 2010 State Agriculture Overview.