America’s Protein of Choice

Odds are, your family eats a lot of chicken (broilers, in industry parlance). In fact, the amount consumed annually by the average American has increased considerably over the last 25 years, from 53 pounds in 1985 to 84 pounds in 2011.¹ Americans consume more chicken than any other people in the world, and it has become our number one protein source.²

At least as significant as this growth is the fact that, unlike other commodities, the absolute price of chicken has remained basically unchanged during this period. And, when adjusted for inflation, chicken in today’s dollars actually costs about 8 times less than it did 50 years ago³.

It is widely agreed that this unique situation -- in which broiler prices remained absolutely stable, despite inflation -- resulted from advancements in breeding, nutrition, and disease control, as well as centralized processing and superior supply chain management. These last two improvements have been largely enabled by packaging.

The Value of Packaging

According to Professor Scott Russell of the University of Georgia’s Department of Poultry Science, “Packaging advances have improved the safety and quality of poultry products.” Here are the benefits resulting from those advances:

Improvements in Shelf Life

Through the 1940s, chicken was usually purchased at a butcher store. Customers would walk up to the case, pick out a whole bird that was chilled on ice, and have it wrapped in brown paper. Because refrigerators and freezers were relatively new and inefficient, it was generally not safe to keep chicken uncooked for more than a day or two.⁴ This led to spoilage if the chicken was not cooked and eaten quickly.

Today, the chicken industry supply chain has advanced through packaging technology, temperature control and improved hygiene so that refrigerated whole broilers have up to 14 days of shelf life compared with “only a few days” in the past.⁵ In addition, chicken parts are now packaged to have sufficient shelf life for distribution, retail display and consumer storage. This increase in shelf life brings tremendous benefits in sourcing and distributing fresh, wholesome products across the United States.
Reduced Contamination Levels

Improved packaging protection also means avoiding contamination from the outside as well as preventing “leakers” which could contaminate other foodstuffs and surfaces. Besides the food safety benefit, fewer leakers reduce spoilage, helping to keep consumer costs down.

These benefits are the direct result of advances in heat sealable materials, package design, and packaging equipment to produce leak-proof seals that ensure product integrity from the point of packaging to use. Today, chicken has the lowest level of consumer loss (spoilage, waste) when compared to beef, veal, lamb, turkey, and fish.6

Variety & Convenience

In 1962, 83% of chickens were purchased whole. By 2012, only about 12% were purchased whole, the remainder being packaged and distributed as parts or prepared portions, confirming the shift to consumer-convenient products and packaging.7

Packaging innovations help meet consumer needs for variety and convenience. Pre-portioned packaging for fresh chicken allows consumers to use only what they need now and to store the rest for use later. Ready to eat and ready to cook products save time while reducing waste.

Central processing facilities now ship fresh product in forms that consumers prefer. These facilities also make use of unwanted parts (bones, skin, fat), rather than generating retail, foodservice or consumer waste, which ends up in landfills.

Reduced Food Waste = Enhanced Sustainability

All of the above factors have led to significant food waste reductions. The USDA estimates that there is approximately 4% waste in the domestic poultry supply chain. This low figure is due in large part to modern packaging and distribution. In less developed countries, the comparable waste figure is 10-15%. Assuming modern packaging and supply chains have decreased pre-consumer waste from 12% down to 4%, at today’s U.S. market volume of 30 billion lb., the net waste savings associated with efficient supply chains is estimated to be over $4 billion annually.

Besides leading to a three-fold reduction in food waste, packaging optimization has reduced the amount of packaging required to protect the product. For example, one five-pound broiler can be packaged today with only 10 grams (less than .5 ounce) of flexible packaging.8 Thus, a very small amount of packaging helps to deliver and ensure the freshness of a very large amount of chicken!
Throughout the supply chain, many types of packaging forms (primary, secondary, transport) and materials (plastic, paperboard, corrugated, metal) are used to drive efficiencies within the poultry industry. The overall environmental impact of that packaging is estimated to be less than 4% of the total environmental impact related to chicken production, processing, distribution packaging, refrigeration and preparation.  

**Fueling the Economic Engine**

The economic, environmental, and social gains enabled by packaging have led to a poultry processing industry that employs 230,000 people in the U.S. today, with an annual economic value in excess of $50 billion. These numbers have nearly doubled since 1980. Further, poultry exports have risen from 1.5 billion pounds in 1990 to 8 billion pounds in 2011. Exports are expected to hit 12 billion pounds by 2020, continuing to add favorably to our international balance of trade.

When you consider that packaging has enabled significant increases in production, processing and preparation efficiency while also leading to significant decreases in waste, it is easy to understand why chicken has become increasingly affordable.

**There’s Still More to Do!**

- Industry continues to develop new types of packaging that can further improve the effectiveness and efficiency of the poultry supply chain. These efforts can deliver enormous benefits for domestic and export markets as well as global disaster relief.

- AMERIPEN believes that food packaging is part of a much bigger picture – creating a sustainable long-term food supply. As such, future packaging decisions should consider a variety of facets that help minimize overall environmental impacts related to food packaging and food waste. These include packaging material choice and sourcing, packaging that facilitates reuse or recycling, and innovative packaging designs that optimize amount of packaging while ensuring consumers of fresh, safe and convenient food products.

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1. USDA, Agricultural Projections to 2022, February 2013, p. 83.
11. USDA, op. cit., p. 40.