University of Mississippi

Feeding the 10 Billion

Taylor Welch

10 billion. That’s how many mouths will need to be fed by the year 2050 (TysonVentures). With Earth’s population growing exponentially, new technologies are being introduced into the food processing and packaging industry constantly in order to form a more sustainable source of food for the coming generations. However, this new generation of consumers brings a new challenge along with it for producers. Customers want transparency. Knowing how food is grown, processed, and packaged are all quintessential pieces of information required to obtain the loyalty and favor of the growing number of health-conscious consumers (Myler). The new customer market is composed of a diverse population with different desires and needs regarding food options. Developing technology like plant based meats, No Antibiotics Ever policies, and the implementation of Blockchain technology are just a few of the discoveries being made in this new era of the food industry to meet the needs and wants of this new breed of consumers while maintaining sustainable standards.

Being one of the world’s leading producers in poultry, beef, and pork, Tyson Foods has been expected to create innovative products that not only satisfy the growing population but also institute some type of positive impact on the environment as well as the consumer (The 2017 Top 100 Meat and Poultry Processors). That means animals are anticipated to be treated with fewer chemicals such as steroids and antibiotics while also being treated humanely within their living conditions. This expectation from consumers has spurred research into creating quality, high-protein meats. NAE campaign has become the solution to the producers’ and consumers’ desires. Tyson’s commitment to growing a healthier product has resulted in technologies being introduced to replace the customary additives used in the life cycle of an animal. For example, Tyson chicken farmers have begun to feed their flocks more natural foods like essential oils, botanicals, and probiotics to promote growth (Antibiotics, Hormones & Steroids). This advancement not only increases the desirability of the product but also promotes sustainability through its positive impact on the animals and customers.

Another technology developed has been plant-based meats. According to President and CEO of Tyson Tom Hayes, 60 percent of customers are looking to add more protein to their diet yet still maintain health and sustainability standards (Hayes). The solution Tyson has engineered is “meats” formed from vegetables such as peas, beets, potato starch, and coconut oil (Beyond Meat). Researchers designed the line of meats to meet the protein needs of the consumer without the substantial amount of cholesterol or fats associated with each product by altering the inherent structure of the macromolecules within the vegetables to mimic that of meat. This product development significantly impacts human and animal well-being and also has a positive impact on the climate and natural resources (Beyond Meat). By reducing pollutants accumulated through farming industries, Tyson is helping insure that when 2050 arrives, the next billion people on Earth will be able to capitalize on the natural resources that are available now.

Food waste and food safety have become major issues for large producers seeking to practice responsible resource management, which is why steps have been taken to guarantee the security of the food produced for this new breed of customers. One of the most prevalent technologies developed within the last decade has been the program known as Blockchain. Blockchain technology acts as a massive filing system in which information can be shared securely, yet in a reasonable amount of time. How does this impact the food industry for the better? It allows companies like Tyson to track their products and the dates they were produced, shipped, and purchased by the consumer in a short time span. The technology allows producers to find the source of contaminated foods and trace them back to their origin. Not only does Blockchain technology help with locating products but also reduces the costs of tracking those certain products. According to Forbes, using RFID technology costs producers an average of $3.50; whereas, QR codes associated with Blockchain technology cost less than $1 to place on a product (Elliott).

10 billion. With this figure in mind, new developments in sustainability such as NAE policies, plant-based meats, and Blockchain technology will all be essential within the next 50 years. Each of these technologies designed for the consumer packaging and food processing industry has been developed within the last 15 years with the next 100 years in mind. Growing knowledge of the customers’ needs and wants as well as a growing knowledge of how the Earth’s environment functions have been indications of where scientific research needs to go in this field. Industry leaders such as Tyson are blazing the path for innovative products that will allow themselves and other producers to reduce greenhouse gases, reduce water use, and increase sustainability within the coming years (Sustaining Our World). Tyson’s mission statement says that their goal is to continually be “Raising the expectations for how much good food can do”. If technologies such as these continue to flood the market, then there will be much more good that food can do in the foreseeable future.

Works Cited

“The 2017 Top 100 Meat & Poultry Processors.” *National Provisioner RSS*, The National Provisioner, www.provisioneronline.com/2017-top-100-meat-and-poultry-processors.

“Antibiotics, Hormones & Steroids.” *Tyson*, www.tysonfoods.com/sustainability/animal- well-being/antibiotics-hormones-steroids.

“Beyond Meat.” *About Beyond Meat | Beyond Meat - The Future of Protein™*, beyondmeat.com/about.

“Beyond Meat.” *About Beyond Meat | Beyond Meat - The Future of Protein™*, beyondmeat.com/faqs.

Elliott, Clayton, et al. “What Is Blockchain Technology? A Step-by-Step Guide For Beginners.” *Blockgeeks*, 1 Jan. 1968, blockgeeks.com/guides/what-is-blockchain-technology/.

Hayes, Tom. “Why We Are Investing in Alternative Proteins.” *Tyson*, 2018, www.tysonfoods.com/who-we-are/the-feed/why-we-are-investing-alternative-proteins.

Myler, Larry. “Farm-To-Table: How Blockchain Tech Will Change The Way You Eat.” *Forbes*, Forbes Magazine, 16 Feb. 2018, www.forbes.com/sites/larrymyler/2018/02/16/farm-to-table-how-blockchain-tech-will-change-the-way-you-eat/.

*“Purpose and Values.”* Tyson, www.tysonfoods.com/who-we-are/our-story/purpose-values.

*Sustaining Our World*. 2017, www.tysonsustainability.com/\_pdf/tyson\_2017\_csr.pdf.

“Tyson Ventures.” *Tyson*, www.tysonfoods.com/innovation/food-innovation/tyson-ventures.