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Megatrends 2020 to 2030

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The next decade is just around the corner and it will be defined as very transformative in business, industry and our personal lives. The convergence of biotechnology along with big data and a term called blockchain will alter strategies. Compound this with continual shifts in consumer demand and habits driven by the Millennials, Generation Z, and Generation A (the kids that are in elementary school) who will be key influencers of strategic change. Let's turn on the high beam headlights and envision the changes coming to agriculture and the industry's stakeholders. This article is designed to stimulate one to critically think about the challenges, but also opportunities, around the bend coming to agriculture at an accelerated pace.

Dietary Trends

According to reports in *The Wall Street Journal* and *The Economist* magazine, a large amount of venture capital is being invested in the life sciences and food industries. These investors envision the future of customers in the United States and abroad who desire transparency, customization and personalization that will be driven by experiences. When Amazon purchased Whole Foods, it was only the beginning of the disruption in the food, fiber, fuel, and energy industries.

For example, trends toward non-dairy beverages and other products made from oats, soy, or almonds have reduced the consumption of milk. This has been one of the reasons for suppressed milk prices. To counter this trend, regulators have placed stricter control on the definition of milk and what constitutes real dairy products. However, consumers seem to welcome more choices in food products.

The growth in the amount of vegan consumers and individuals moving in that direction in Europe and the U.S. with an agenda of animal welfare, health benefits, and environmental friendliness have accelerated in recent years. Beyond Meat slider burgers and cultured beef developed in test tubes are only in stage one of development.



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Millennials, Generation Z, and the yet to be defined Generation A along with the aging Baby Boomers will be the drivers of change for consumer trends that will shape agriculture.

Tech Transformation

The decade of the 2020s will see the rise of technology, innovation, robotics, and precision agriculture that will drive agricultural production and efficiency. Big data as a result of this technology will be used by blockchains and will cause market disruption in the wholesale and retail sectors. The links between consumers' desires and demands to crops and livestock throughout the production process will multiply in the next decade.

Technology and Production

The convergence of biotechnology with engineering and information technology will result in transparency from production to consumption of agricultural products. The ability to serve a splintered marketplace, ranging from commodity to niche markets, will emerge. One only has to reflect on how the beer and wine industries have transformed in the past decade to envision the future of agriculture. The "craft" specialized beverages that are designed to sell an experience will infiltrate the overall agricultural industry as well.

NGOs

Non-government organizations (NGOs) will change the agriculture industry more than government rules and regulations. Recent lawsuits filed against Smithfield Foods and Monsanto are prime examples of trends in the future. Open pens, antibiotic-free, transparency in biosecurity, and animal welfare practices will be on many agricultural strategic plans from production to consumption. Will the economics of these changes sustain through all economic cycles?

Global Competitiveness

Technology and innovation are very apparent worldwide creating supply and demand imbalances that are reflected in prices, costs, and international trade negotiations. One only has to observe the crop sector as an illustration of how technology change in land use patterns, weather, and climate must be considered in planning. Research conducted by the University of Missouri found the following changes in corn and soybean production based upon the aforementioned factors. While the U.S. has had a 21 percent increase in corn production measured in million metric tons over the past decade, it pales in comparison to 85 percent, 174 percent, 48 percent, and 36 percent increases in Brazil, Argentina, China and Canada. Turning to soybeans, the U.S. has had a 55 percent increase in production, while Brazil, Argentina and Canada have had 108 percent, 73 percent, and 125 percent increases, respectively. The point concerning these numbers is that global competition will intensify and will impact profits, cash flow, and eventually land values in regions around the U.S. By 2050, the globe will need considerably more production of food, fiber, and fuel, but the key will be



to produce it with only 70 percent of the resources we use today. The old principle of becoming efficient before expanding will be a high priority in the agribusiness world.

Natural Resources

Natural resource management will play a high-end role in the decade of the 2020s. Diversified sources of energy, such as solar, wind, and electric, along with cost efficiencies in oil and natural gas extraction in North America will have positive impacts on cash flow and profits to American farmers, ranchers, and consumers in general. On the demand side, the use of electric vehicles and technology to reduce energy use will be more commonplace. However, one has to be aware that the more we use technology, the more our daily conveniences could be disrupted by a black swan event.

Water and soil health will be high on the radar screen for many producers. Other countries, such as China, have issues concerning soil health, which is a strategic advantage for U.S. producers. Healthy soils lead to healthy plants and animals, which lead eventually to healthy human beings.

Extremes in weather and more issues impacting the western states and coastal areas with large populations may alter population and agricultural migration patterns. For example, farms and ranches are moving out of California into other areas of the country. Weather applications layered upon precision agriculture and technology will be the differentiators that will distinguish the top and the bottom 20 percent of producers by profitability.

Finally, people's education and development will be altered. The college degree will be replaced by educational certificates as students conduct an internal cost-benefit analysis on education. Vocational and technical programs working side-by-side with partners in agribusiness and industry, both domestically and abroad, will be a wave of the future. Internships, lifelong learning experiences, and producer sabbaticals will become more commonplace. The decade of the 2020s will be defined by more women in agriculture working in all facets of the industry, from agricultural production to agribusiness and ag lending. Also the boomeranger, or person who has worked away and then comes back to agriculture, will provide new energy to the industry.

The decade of the 2020s, while appearing distant, is just around the corner. The decade will be one of major transition. Reflecting on the perspectives and issues discussed, how will the decade of the 2020s impact your business, family, and personal life?

