



CONTEXT

Thinking in Context. . .

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Dear Friends and Colleagues,

Leadership – it is one of those words we hear frequently. Leadership is defined as the ability to motivate a group of people toward a common

goal. The word itself has only been around for roughly 200 years, but during that time, the business world has tested, pushed and advanced what is expected and what is required to lead effectively. As executives, the pressures to lead well, lead amidst challenging economics and global politics have recently intensified to new levels.

In this issue, we look at some of the critical issues impacting how we will lead - including sustaining and growing a population with limited resources. The leaders of tomorrow's agriculture will lead by understanding the driving forces impacting new technologies, new innovations and new alliances. Leaders of tomorrow's agriculture will be prepared with both "bio" and computer-based technologies that will be required for effective competition.

Today's emerging markets offer unique opportunities – how we understand them allows us to determine how to develop business opportunities successfully from here forward.

In this business, we compete, we position, and we strive for unique and individual goals. As we face the issues of advancing our industry through the next several decades, we must each remember to lead with integrity, for the task is large and the challenges many.

We look forward to providing you with leadership, vision and strategic support to advance your goals for the decades ahead.

Tray Thomas
Founding Partner
The Context Network



Context
Sr.
Associate,
Jim Billings

Technology and "IT"

When we think about the dramatic changes in agriculture that we have witnessed over the last decade or so, we focus on plant biotechnology and its impact on row crops.

And indeed, we should. Although the technological advances have not been adopted by all countries, their impact is being felt globally. Of lesser note has been the impact of other technological improvements. Many of these computer-driven changes have been felt on the production side of agriculture. Precision farming and animal specific feeding regimes are just two examples. In each case we see the cycle of invention, early adoption and then mass acceptance.

Less attention has been paid to the impact of technology on the **marketing** of crops. A good example is turf grass. Not so many years ago, the primary driver of volume and market share was price. The varieties within the various species were merely commodities.

Over time, extensive breeding programs were developed and product attributes became the market driver. Some of these were owned and operated by individual companies, but the major thrust was in the public sector. The USDA experiment station in Tifton, GA, Penn State, the University of Rhode Island and Texas A&M have all made, and are making, important contributions. At Rutgers University for example, improvements in perennial ryegrass have been followed by improvements in turf-type tall fescue.

The new varieties being produced, marketed and used today bear little resemblance to their predecessors. Strangely enough, on the marketing side

we have come full circle. Because all the new material is good (and essentially, statistically equivalent) the "new and improved" varieties have become commodities. In essence, the market is dealing with distinctions without any material differences.

If not genetic superiority and/or agronomic performance, what then is driving market share? Once again it is technology. Not biotechnology, but business to business software. By far, the vast majority of the turf grass volume is being done through the big box stores. Not so many years ago their business was done on a price-only basis. To quote, or misquote, a famous movie line, the buyers would simply say "Show me the money!" The lowest price won.

In time, the relative importance of price was mitigated by the introduction and availability of new genetics. The new requirement was the ability to supply "What's hot!" Today you need not only a competitive price and acceptable genetics, but also a relatively high level of computer competence to meet the customers' IT requirements. The supplier is responsible to monitor stocks at individual stores and do this on a daily basis. Making certain that the shelves are stocked and properly displayed is a supplier must.

The narrow selling margins that prevailed when price was the primary differentiator have been replaced by significantly higher margins today. That is the good news. The not-so-good news is that the costs associated with maintaining a big box account are dramatically higher. To stay in the game, you must retain access to competitive genetics, but more importantly, you must be utilizing a 21st century technology and up-to-date business practices. For more, contact jim.billings@contextnet.com

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“How does a planet sustain a growing population with limited resources? We’re finding out here and now. Tomorrow’s agriculture is evolving and unfolding to reveal businesses that deliver new innovations, new technologies, and new alliances. It is critically important to understand what drives these forces to best prepare and participate.”



Context
Sr. Associate,
Thomas B.
Klevorn, PhD

Thinking in Context. . . Tomorrow’s Agriculture Evolves

In the fifty years from 1980 to 2030, the earth’s population will nearly double to nearly 8.2 billion people. By 2050, earth’s population is expected to reach 9.3 billion. Feeding this expanded population is agriculture’s greatest challenge and opportunity. Besides more people, per person demand for calories is expected to continue to increase as well. According to FAOSTAT data, demand for dietary energy measured in kilocalories (kcal) per capita per day is projected to increase globally from 2358 kcal/capita/day during the period 1964-66 to 3050 kcal/capita/day in 2030.

In addition to simply being larger and in search of more kilocalories of energy per person, this expanded world population will have greater available financial resources. As more people upgrade their economic status, demand for higher quality fibers, more nutritious food and feed products and energy and energy-based products (e.g., fertilizers) will grow.

Critical to all agricultural production is water. At present, nearly 70-80 % of fresh water use is allocated to agricultural crop and animal production. A larger population is expected to directly compete with agriculture for water use through increased demand for fresh water for drinking, sanitation and industrial purposes.

Preserving available arable land resources is essential to meeting the food, feed and fiber needs that will accompany long-term population growth. With more people relying on relatively fewer hectares, maintaining soil fertility, maximizing use of soil-derived nutrients and avoiding degradation of arable hectares (e.g., soil erosion) are key objectives globally.

Effective use of land and water resources to capture and transform solar energy into food, feed and fiber products requires access to energy. Currently much of the energy used in food, feed and fiber production is derived from fossil fuels. Projections are that costs of this energy, as a percentage of agricultural production, will increase with time.

Globally, the most critical sustainability issues will be soil fertility and access to clean fresh water. However, as the world moves toward the future, it seems probable that the developing world will fully embrace sustainable agricultural practices only after its population is adequately fed and clothed.

The VALUE of Innovation

As it has in the past, technological innovation will be essential to meeting the agricultural challenges of producing enough food, feed and fiber for 2030’s 8.2 billion people. Increases in yield per unit of arable land will continue to be the main objective. From a crop and livestock production point of view, technological innovation in genetics and biotechnology will be especially important. These innovations will not result in immediate and complete switching from existing to new

technologies; however, speed of innovation will increase and will be critical to enhancing agricultural production.

Producers will focus on, and demand, plant and animal genetics that provide increased yields, higher quality end products and more efficient use of soil, water and solar energy resources. Expect technological innovations and advancements to continue to shift crop and livestock production inputs (e.g., water use, fertilizer) and needs into base genetics and away from traditional sources. In crop production, producer decisions regarding genetics will grow in importance and will significantly influence later crop production decisions including those involving soil fertility, water use and crop protection inputs and practices. Improved livestock and crop genetics will serve as the core for enhanced agricultural production.

Given these trends, it seems likely that the business currently referred to as “seeds and traits” will increase in importance from a business and financial point of view. Value capture systems and programs that continue to develop and evolve will underpin future investment in innovation and advancement in this business. In some instances, value capture will be built on basic intellectual property instruments like patents and trademarks. Elsewhere, value capture will depend more on business collaborations involving business partners and customers. Future success in delivering technological innovation to customers will require development of a mix of partnering, patenting and go-to-market strategies and tactics that is flexible and can be adapted to a world of agriculture that will certainly continue to experience unprecedented periods of change.

“Value capture systems and programs that continue to develop and evolve will underpin future investment in innovation and advancement in this business.”

The Agribusiness Evolution

While current participants will continue to consolidate and innovate, it is not unreasonable to imagine that advances in the science of genetics, combined with growing business opportunities in agriculture, might attract new participants onto the playing field.

Business success will require delivering against customer and investor expectations and will involve development of product offerings that expand into new areas of use and potential value capture. The ability of individuals and organizations to look outside of traditional discovery and development pathways, consider market channel and value capture model alternatives and investigate new partnering/collaboration options will be key to meeting the challenges facing agriculture and benefiting from the opportunities they provide.



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CONTEXT Leadership

Context sponsors student entrepreneurship course

The Context Network has partnered with Iowa State University (ISU) College of Agriculture and Life Sciences' Agricultural Entrepreneurship Initiative. In a new course offering called Semester Inc., Context is sponsoring a class in which four agriculture students will conduct a market research report on Animal Biotechnology.



Context Founding Partner, Tray Thomas said, "We're very pleased to be participating in

this unique learning experience. During the semester, students will work between 12-20 hours per week on the project. They will work independently, as a group, and with Context personnel in creating a comprehensive report. It will include an analysis of technologies, the competitive landscape and the driving forces arising from animal biotechnologies that will shape the future for agri-food companies."

Center Director and Rastetter Endowed Chair in Agricultural Entrepreneurship in the ISU Department of Economics, Kevin Kimle said, "Having worked with Context in the past, I'm well aware of the high caliber of professional exposure these students are experiencing. This is a great opportunity for these students to work with Context. They are actively engaged in real-time market evaluation. They are learning from some of the industry's finest in conducting this relevant and cutting-edge research."

Thomas added, "Our business model has long fostered innovation and entrepreneurship. By participating in Semester Inc., students gain real-life experience and skills that will benefit the industry in the near future."

Leadership excellence: doing what's easy not to do

Leadership Excellence is more about "doing what is easy not to do", than doing something extraordinary!"

The longer I have been involved in management and worked with others via consulting, the more I've observed, and been convinced, that leadership excellence, and very often business results, are more the result of doing what is easy not to do – than doing anything extraordinary.

Most of the outstanding leaders I know are truly exceptional people who inspire and enable their teams to accomplish extraordinary results – but what they do that differentiates them is not particularly extraordinary or hard to do – rather they do things that are simply very easy not to do! This is very much like some skeet shooting instruction I received – "They are not hard to hit, and they are awfully easy to miss!". For a list of behaviors that I have observed, that make a difference, but are altogether too often not done, visit our website story at: http://www.contextnet.com/pdf/Leadership_Mike_Borel.pdf.



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Context Reads: A book on worker perspectives...



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It's not brand new, but a book that provides unique sets of perspectives on how people view their jobs is entitled "*Gig – Americans talk about Their Jobs*", by John Bove (Random House). Rather than "straight" business advice, the book provides fascinating, short, first-person narratives of people describing their jobs – why and how, when and what they love – and what they hate. Some vignettes are humorous, some sad; some you will identify with and others – you couldn't care less.

Together, I found the insights very instructive. They allowed me to think about what motivates us as we go to work every day. In this industry alone, we as employers and employees possess hugely varied talents. In reading "*Gig*", we are offered an opportunity to consider how some people, with what many would consider tough, thankless jobs, perform their work with a sense of mission. At the time I first read it, I forwarded several "capsules" to friends or colleagues just starting out in the workplace because I could see them in the descriptions.

Critical to sound management, we must understand the business. Central to effective leadership, we must both recognize and appreciate the people involved in each endeavor. For information about the book, visit: <http://www.amazon.com/Gig-Americans-Talk-About-Their/dp/0609807072>.

What is the single most important characteristic of successful business leaders?

In working with individuals and companies around the world, and through the years, we agree: those who know when to ask for help are those who sustain, prevail and profit.

When it comes down to it, you need to make decisions that satisfy both goals and people on multiple levels. Those willing to seek support, ask advice or engage expertise minimize risk and optimize opportunities.



Whether you are working to develop a new strategy or to deploy specific tactics for operational efficiency, Context executives are uniquely prepared to support your consulting efforts across a range of food, fuel, and agribusiness initiatives.

No matter who develops the strategy, Context is positioned to help deploy it. Let us help you lead.

The Context Network provides business management and strategy consulting services to the world's leading agriculture, biotechnology and food companies, government agencies and institutions. Major areas of expertise include strategy, strategic decision support, merger and acquisition support, valuation of new technologies, formation of alliances, and market research. The Des Moines-based firm is composed of a core of professional consultants that is complemented by a network of hundreds of industry and subject-area experts.

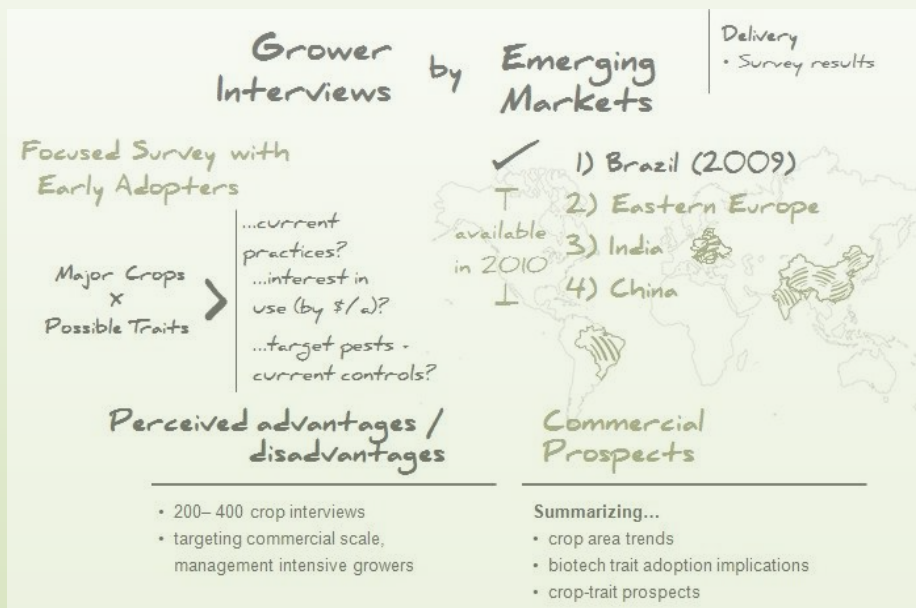
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Context Emerging Market Outlooks

The global value of field crops in 2020 is projected to approach 40b USD. In our many and thorough analyses of seed and biotech industries and market segments, Context has noted that the U.S. – Canada region is expected to remain the largest seed and trait market through the forecast period. Seed markets in the EU, China and the rest of the world are expected to realize more modest growth reflective of the expected, more limited trait market expansion. However, emerging markets, Brazil, Argentina and India are expected to realize the highest compound annual growth rate among the major market regions.

Context appreciates that strategic discussions on the future of plant biotechnology are more robust when rooted in conversations with growers. Grower preferences and prospects on biotechnology are most revealing when placed in the context of regional crop production trends and productivity differences.

The 2009 edition of Plant Biotech Traits Commercialized, (BTC) dedicated a segment of the research to a 'deep-dive' focus describing biotech trait trends in a key emerging market, Brazil. In 2010, Context offers similar 'deep dives' in China, India, and Eastern Europe.



Context has deep, relevant and significant bodies of research available in our multi-client reports including:

Global Seed Market Database
Major Vegetable Crops Outlook
Major Field Crops Outlook
Biotech Traits Commercialized
Emerging Market Outlooks

Visit our website at www.contextnet.com for more information.


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