



CONTEXT

Thinking in Context. . .

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Dear Friends and Colleagues,

Two years ago, the Context Network took a new approach to meet the growing needs of a

clientele existing in an exciting and challenging business environment. As a result, we've seen amazing and encouraging growth.

We've built upon our roots and further extended the breadth and scope of our Context keystone offerings including Biotech Traits Commercialized, Global Seed Market Database, and others. We have extended our depth of expertise in these areas taking on the next set of questions and probing for new answers and ideas in biofuels and vegetable seed markets. Our work in areas such as strategic business consulting and market valuation continues while we grow and explore new levels of understanding in animal biotech, precision ag, and others. Our analyses are employed beyond North and South America and Europe, and now further extend to China, Japan, and the Pacific Rim.

This edition of Thinking in Context provides a snapshot of some of the many exciting endeavor-areas in which we are engaged. We know that new market conditions require fresh perspective and renewed vantage points. As always, Context is here to provide you with the support you need – whether it is for business consulting, for information on any of these study areas or perhaps to undertake a specific area of study for your market. We hope you'll allow us to help you when it comes to Thinking in Context!

Sincerely,

Tray Thomas
Founding Partner
The Context Network

GSMD Projects Increased Seed Sector Valuation

2007 saw continued expansion in the global seed market sector's valuation. The global proprietary seed marketplace exceeded \$22B USD in 2007, and by Context's estimates, delivered 10% growth over 2006. Context Network's now-available 2008 Global Seed Market Database Report tells the full story, identifying mega-trends for 2007.

Context Consultant Mark Nelson is principle analyst on the project. "Our process allows identification of mega-trends within the seed industry marketplace that, at this level, previously were not possible. With each year, our analysis describes dynamics by illustrating changes within key aspects affecting the sector's evolution."

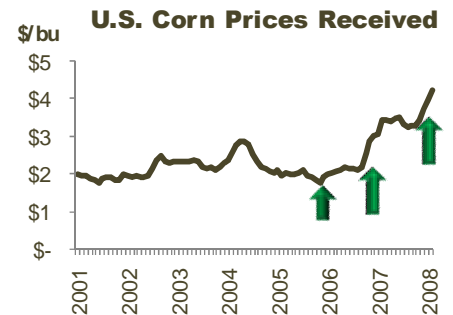
This newest GSMD Report explores changes in key factors influencing the seed market including crop acreage, seed sector fundamentals and technology penetration. It also benchmarks past and current seed market values around the world

During 2007, market expansion drivers identified included high commodity prices, stacked traits in the U.S., hybrid use in Asia, and a weakening dollar in the U.S. In general terms, continued commodity price gains early this year are expected to support significant seed price increases through 2008, as will Latin American corn acreage expansion.

Context Network launched its Global Seed Market Database in 2006. GSMD 2008 expands upon previous issues, covering three additional content perspectives. "We have designed and implemented GSMD to provide an insightful inspection of past market activity, and have applied that as a window into mega-trends and critical upcoming market activity. This information is proving a weighty tool

among seed industry executives and leaders," Nelson concluded.

The impact of high commodity prices is just one of the market expansion drivers accounted for in this most recent annual evaluation for the global seed sector. Increased use of stacked trait in the U.S. and hybrids in Asia as well as the weakening U.S. dollar, are all major drivers of the market expansion realized in 2007.



Source: USDA/NASS Feb 29, 2008

Nelson said, "The impact of those factors will strongly influence continued market growth in the year ahead as well."

An additional major source of top-line sector expansion will be biotechnology trait penetration advances. The biotech trait portion of global industry value has grown by \$1.8B USD between 2001 and 2007, growing by an average annual rate of 20%. Major global field crops accounted for \$17.3B USD (76%) of the global proprietary seed market value in 2007, an increase of \$6.7B USD over an estimated \$10.6B USD in 2001. Vegetable and flower seed markets account for 17% of the global proprietary seed market value, \$3.8B USD in 2007.

Subscribers can access the 2008 GSMD Report at www.contextnet.com, under Products and Services, Multi-Client Studies.

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"Our discussion with these experts, as well as the analysis that followed led to the discovery of important consensus points within the global vegetable seed industry. Impact will be felt through 2020 and beyond."

Global Vegetable Seed Industry Database Previews 2020

Context Consultants project increased vegetable consumption, higher vegetable seed prices, and forecast much more via the first-ever vegetable seed industry market database. With its **Vegetable Seed Industry Vision for 2020 Report**, Context Network has synthesized vegetable seed marketplace data as never before.

The study forms the basis for the Global Vegetable Seed Industry Database, from which periodic updates and reports will be available to subscribers. Contributing to the report are data from 100-plus in-depth interviews conducted worldwide, tapping the myriad expertise from multi-national seed industry personnel to regional seed trade personnel, distributors, government officials and seed trade associations.

"Our discussion with these experts, as well as the analysis that followed, led to the discovery of important consensus points within the global vegetable seed industry. Impact of these findings will be felt in the industry through 2020 and beyond," said Mark Nelson, Context Consultant.

Among the 2020 Report's projections is a look at the impact of national and regional shifts between open-pollinated crops and hybrids. Analyses include forecasts of growth in protected culture production, including heated glass houses, plastic houses, tunnels and shaded production. The study gauges the influences of global competition for land on grower seed prices, and assesses the potential role of vegetable crop limiting factors such as crop disease.

In collaboration with NextLegacy, Context tapped the expertise of 40-year vegetable seed industry expert Tom McBride.

McBride said these interviews were revealing. "Worldwide per capita consumption of vegetables is projected to grow by a 3-5% CAGR. As this growth occurs and Asian seed markets transition to hybrids, many other market influences—including land competition influenced by biofuel production, and bioengineered traits—will provide additional opportunity for lift in seed prices."

The 2020 Report explores the influence of food safety concerns, along with changing views of retail sales channels, their future roles and size. Market value growth is projected, influential drivers are established, and critical industry benchmarks are set, Nelson said. "Industry stakeholders will find this study and, ultimately, a subscription to the Global Vegetable Seed Industry Database to be a fundamental and powerful tool in managing planning, allocating resources, and contributing to inventory and marketing considerations," Nelson said.

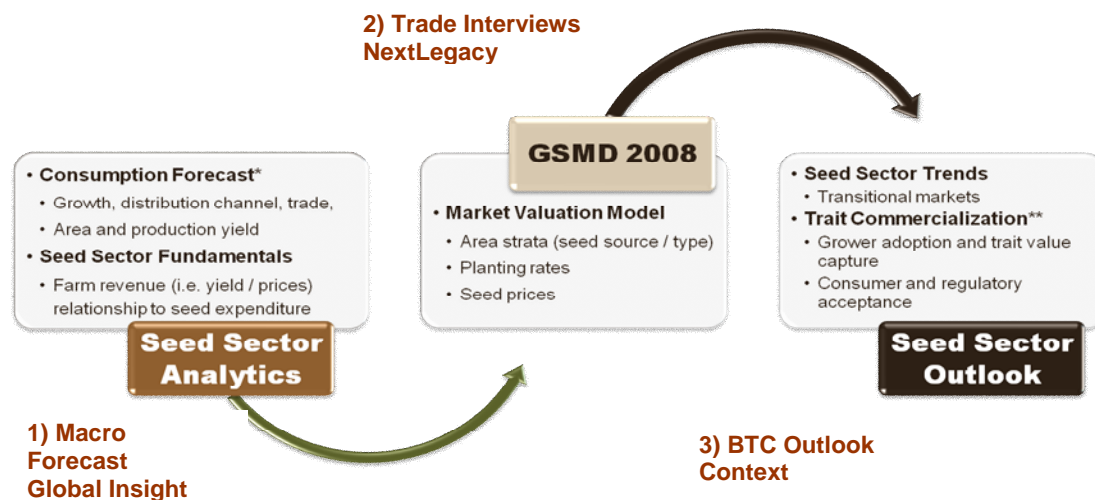
To purchase the 2020 study and the supporting 2007 Global Vegetable Seed Industry Database contact: Mark Nelson: mark.nelson@contextnet.com or visit www.contextnet.com, then Products and Services, Multi-Client Reports.

Broad View of GSS 2020 Outlook: Major Vegetable Crops Study Elements

- Three elements - GSMD 2008, Vegetable Consumption Forecast and NextLegacy's Trade Interviews - provide the cornerstones the Global Seed Sector (GSS) Outlook.
- GSS 2020 Outlook incorporates forecast analytics on seed expenditures, market transitions of commercialization and/or hybridization, and grower adoption and sector value creation of enhanced seed traits.



Context Consultant, Mark Nelson





Precision Ag on the Rise

All the pieces are in place. Broad acre crop commodity prices are at record highs. Seed has dramatically increased its role in value. Fertilizer prices have doubled and tripled with strong global demand and tight supplies. Context Partner Mike Borel said

Context Partner, Mike Borel

combined, these factors point to an imminent and considerable rise in the adoption and use of precision agriculture technologies. "We're already seeing a significant vault in the number people investing in precision technologies as they are advancing to the point where they show a return."

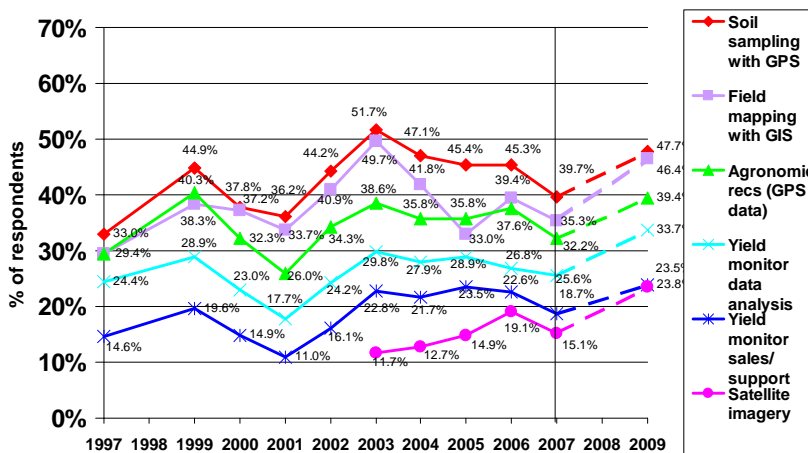
Most noteworthy of late is Monsanto's purchase of a Colorado-based company, EarthMap Solutions, a remote sensing company that has unique capabilities for processing satellite and aerial imagery into geo-referenced, color-coded maps showing and measuring crop conditions. "Monsanto – a seed biotech company was an EarthMap customer, but they obviously saw significant value in further investing in a remote sensing interpretation company." Borel said.

"Throughout the channel, growers, seed companies, crop protection interests, machinery manufacturers, all the way through to value-added processors are showing heightened interest, use of and investment in precision ag."

Adding to the value of precision technologies is the real-time information growers and companies can use to understand, measure and monitor the crop. "Essentially, we're at an economic point where it pays to accurately and carefully conduct this type of live assessment of our biological investment."

The Context Network has a wealth of experience and continues ongoing project work in precision ag – a term that encompasses multiple technologies that use global positioning (GPS) or geo-referenced information. Borel explained that the primary segments of precision ag include Auto Steering/GPS Guidance systems, GPS, Remote Sensing, Variable Rate delivery systems, Direct Sensing applications (yield monitors, boom height, green seekers, etc.) and Geographic Information Systems (GIS).

Precision Ag Use Over Time
2007 Purdue University CropLife
12th Annual Precision Ag Survey



2007 Weighted Base: 374

Note: No data for 1998; 2009 is predicted use

"At this point, the technologies have been around long enough to get the kinks out of the hardware. Growers have become confident implementing and applying some technologies and software providers have worked with web and desktop applications well enough and long enough to allow a steeper adoption curve to occur. Fueled by current market conditions, we foresee greater implementation of and investment in these technologies."

For more information on precision agriculture technologies and applications, contact Mike Borel at mike.borel@contextnet.com.

Remembering Karen Coaldrake

The Context Network fondly remembers Karen Coaldrake who passed away unexpectedly March 23, 2008. Karen was a Context contractor for many years and served as a key contributor to many projects over the years. Context's Tray Thomas said, "Karen brought enthusiasm and passion to every project. She made some great contributions to the ag industry through her career. She will be missed."

Context Multi Client Reports Available

- Benchmark Study for Crop Protection Manufacturers
- Plant Biotech Traits Commercialized: Outlook 2015
- Future of the North American Biofuels Industry
- Global Seed Market Database 2008
- Global Seed Sector 2020 Outlook: Major Field Crops
- Global Seed Sector 2020 Outlook: Major Vegetable Crops

Visit www.contextnet.com to learn how to access these insightful reports

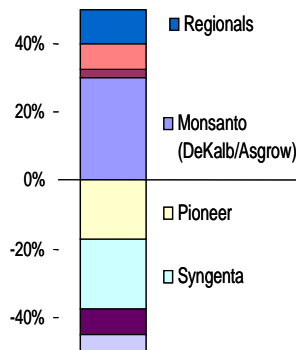
“One thing is for certain. The seed industry will change and evolve at an intense pace in the next few years.”

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Consolidation Direction – Where and Why the Seed Industry is Headed

Significant consolidation has occurred in the seed industry in the last decade. But several market influencers have combined in recent months to heighten interest and attention on this important sector of the agriculture industry.

“One thing is certain. The seed industry will change and evolve at an intense pace in the next few years.” Context Partner Blake Sieker said, “There are several reasons for this heightened level of interest in the seed business.” But Sieker added,



“It’s critical to understand where we are and how we got here to fully appreciate the direction the seed industry is headed.”

Understanding the Past Decade

Context Network research shows how dramatically the

consolidation in the U.S. corn and soybean market has changed. Sieker says, “Several significant reasons drove change to date. They explain not only the dynamics of history, but also suggest future changes.”

Acquisitions, divestures and sales drove much of the change since 1999. Sieker said, “Nearly all the purchases of seed companies were by multinational companies owning their own germplasm and who are now evolving to owning their own technology.”

Buyer Motivation, Seller Motivation

Sieker stated, “Market share has significant value for those with owned technology – with which they are able to capture premiums associated with that technology.” In addition, it’s important for larger companies to have a large enough *owned* footprint to be significant – both for economies of scale, and for recognition of their products/technologies.”

On the other side of the coin, Context’s research shows there have also been acquisitions by large companies that appear to be defensive moves – purchases made by companies needing to own share so as not to be deprived of that share by technology competitors.

Sieker says seed company sales primarily have been made for one of three reasons. First, companies have been sold because the offer is too good to refuse. “Significant premiums have been paid for companies during the past decade – prices paid that defy normal financial measures – in some

cases exceeding three times gross sales. These moves are clearly made for strategic purposes.”

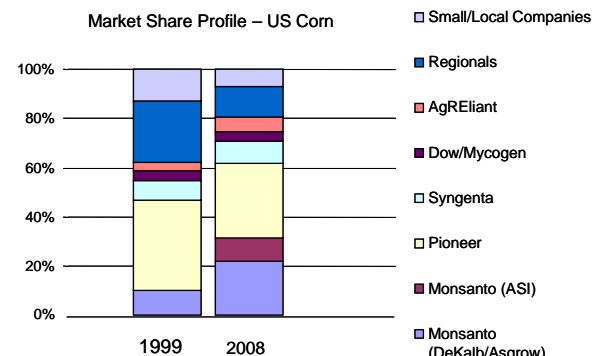
Secondly, he says fear of the future has been a motivating factor. “Some seed companies feel they’ve ‘seen the writing on the wall’ – that they are increasingly captive or semi-captive technology distributors and that they are competing in the retail marketplace with their technology suppliers who have an obviously lower ‘cost’ point.”

The third motivator, according to Context, is financial strain. “Some transactions have occurred because the companies are in financial duress. “This has occurred almost exclusively with smaller companies,” Sieker said.

Market Share Loss/Gain

A huge contributor to the shift in the seed industry market share profile has been market share gain or loss. “Companies gain or lose market share for several reasons including availability of technology, product performance, sales force and distribution systems, and pricing and programs.

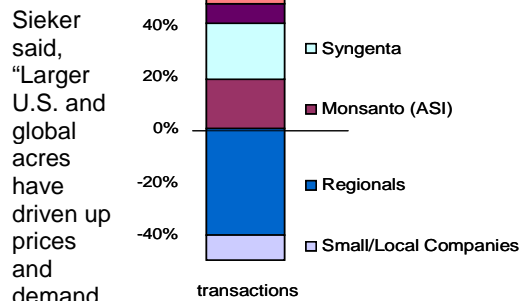
“This graphical representation shows market share



movement from 1999 -2008 of attributable gain/loss in owned share excluding transaction impact.”

Acres and Tech Drive Future Change

Recent market conditions including the global acreage status and that of technologies have heightened interest in the seed business.



Sieker said, “Larger U.S. and global acres have driven up prices and demand for ag products. With a larger market in which to operate, the value of the market presence increases.”

(Continued...)



Context Partner, Blake Sieker

(...Continued)

He noted technology delivery systems - technology implanted into the seed - are increasingly substituting for herbicides and insecticides. "This dynamic causes major crop protection companies, many of whom are largely the significant seed industry players as well) to invest heavily in this area as the value streams undergo substitution." During this same time, key chemicals have come off patent and others are not far behind. "This has forced companies to seek better chemistries and modes of action to maintain their value in the marketplace while competing with generics and others with their conventional products."

Furthermore, he insists biotechnology will be a strong market influencer in the years ahead. "Even though biotechnology is extremely expensive to develop, the 'cost of goods' once developed is near zero, unlike chemicals that require large facilities and logistics as well as fixed costs."

Small Seed Companies Fit in Future

As the seed business has evolved from a production/niche product marketplace to a technology distribution marketplace, the role of the smaller seed company has changed significantly. Sieker said, "Unlike a decade ago, seed companies are reliant on technology suppliers (both their willingness to supply and the price at which they supply it). This creates a very challenging paradigm in the long term for the smaller companies. They do not have the economies of scale of the larger companies, they generally have significantly higher production costs, and they are increasingly competing in the marketplace with their technology suppliers."

Sieker concludes, "Our research and ongoing focus on the seed industry tell us that significant seed industry consolidation should and will occur over the next few years - especially as the more innovative of the smaller companies look into the future and strategically think through whether and how they fit in this marketplace."

For more information on Context's recent seed industry consolidation study, contact blake.sieker@contextnet.com.

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PIMS Database – Manager's Decision Support Tool



Context
Partner,
Steve
Hawkins

On many senior managers' wish list the same item appears - a knowledge bank, a grand pool of wisdom learned from thousands of companies that could help guide their own company's decisions. Context has tapped a resource that helps provide companies that very information along with the consultative support to help managers proficiently and economically solve their challenges and explore opportunities.

The Profit Impact of Marketing Strategies (PIMS) is a long-term study involving thousands of companies and their many strategic business units in all major industries. Continuously renewed by the Strategic Planning Institute, it provides statistically documented information in a database drawn from thousands of businesses over time.

Since the 1960's, the PIMS database has helped companies understand and value business strategies in various business environments. Context provides companies with the expertise to analyze data and apply findings specific to agro, bio, forestry and fuel industries as they consider strategic tasks including business performance evaluation, new business exploration, assessment and reality testing of new strategies and screening business unit portfolios.

Context Partners Mike Borel and Steve Hawkins have leveraged the power of the PIMS database for numerous companies over the years. Hawkins said, "The PIMS database is an important tool that allows managers to clearly express the relationship between a key strategic decision and its results. Our experience in using this valuable tool has helped many companies advance with positive strategies and reduce ineffective factors impacting the bottom line."

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The PIMS database is a familiar resource to many executives. However, Hawkins pointed out "Context provides companies with the advantage of having developed, implemented and advised companies in and across the ag industry with detailed analysis and practical, executable strategic business consulting based on PIMS data."

Mike Borel added, "The analysis derived from the database reveals a number of business truths - some are common sense, others are counter-intuitive! A recent analysis in the crop protection industry showed participating companies some surprising results." He shared these examples:

Selling prices tend to inflate more when volume is growing rapidly.

False *The reverse is true. Prices correlate very strongly with costs. Both costs and prices tend to increase faster when volume growth is low or negative.*

High market share businesses have significantly lower fixed costs per dollar of sales revenue than low share businesses.

False *Fixed costs tend to be more variable in the longer run than might be expected. High share businesses tend to benefit more from higher price premiums and lower cost of purchases than from "spreading fixed costs across larger volumes."*

Borel concluded, "Using PIMS, along with other recommended tools and techniques, Context provides companies an additional and exceptional tool to evaluate specifics on financials, quality, price, new products, market share and competitive tactics. One of the greatest values is that the information helps companies see how their strategies might play in the marketplace by comparing their experiences to other similar businesses profiled in the PIMS database." For more information on this valuable strategic business tool, contact: steve.hawkins@contextnet.com or mike.borel@contextnet.com



CONTEXT

Putting It All In Context

Leadership and vision are critical to navigating today's management issues and challenges. But with a core group of more than a dozen senior executive management professionals and a network of nearly one hundred subject matter experts across the globe, Context helps clients effectively put those challenges into the proper strategic, competitive "context". With a clear commercial strategy focus, Context has proven its unique consulting methodology and process across ag, bio, and food industry channels.

Context consultants are thoughtful, insightful and competent. They are ready to provide thorough and actionable solutions to help your business unit and/or your company best achieve your business goals while setting the course for your desired future.

Contact us today for a visit. We'll look forward to serving you.

Tray.thomas@contextnet.com



Energy Act Analysis Finds Significant Surprises for Ag, Biofuels Industries



Context
Senior
Consultant,
Jim Murphy

A recently released Context White Paper exposes some potential surprises for agriculture and biofuels industries. In evaluating the government's Energy Independence and Security Act (EISA) of 2007, Context analysts considered the bill's impact on agriculture during three specific time periods during the next 14 years.

Principle author, Context Senior Consultant Jim Murphy said, "Rather than assuming all the provisions of the bill would be met, Context estimated what the actual volumes of biofuels will be, then projected impact in terms of a percentage of harvest required, acres planted, crop prices and net returns per acre. The report also looked at what cellulosic feedstocks will be utilized the most."

Murphy said the analysis showed some significant departures from conventional expectations. "We found that corn starch based ethanol has more potential than some may think, but that biodiesel and cellulosic ethanol face considerable economic challenges." In addition, he said, "We also noted some specific challenges facing cellulosic ethanol's future."

For more information or for a complimentary copy of the Executive Summary contact jim.murphy@contextnet.com.

Biotech's Role in Animal Ag – New Study Advances

Progress continues on the Context Network's newest multi client report, *The Future of Biotechnology in Animal Agriculture*. Dr. Thomas Klevorn heads up the initiative that will explore the role biotechnology will play in the future of the industry, identify key drivers and investigate the business model of the industry's key players over time. "We're pleased to have identified three foci for the study – marker-assisted breeding, biotechnology including trans-genes and cloning, and the competitive landscape of the industry."

He added, "This comprehensive and one-of-its-kind report will provide a solid reference for the animal industry as Context's Biotech Traits Commercialized (BTC) has for the seed world."

Klevorn noted that just 2-3 decades ago, the seed biotech industry was at a similar point in its evolution. "It's become extremely important for all players in the food and agriculture channels to understand this emerging force. Critical to our understanding is to assemble this relevant and significant body of data from each of the players in the channel. From there, the information provided in the *Future of Biotechnology in Animal Agriculture* can provide channel players with perspective, relevance and insight allowing them to be best prepared for the business decisions they will face in the years ahead."

To learn more about *The Future of Biotechnology in Animal Agriculture*, contact Dr. Thomas Klevorn at Thomas.klevorn@contextnet.com.

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 more than 100 industry and subject-area experts.