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Our analysis of 50 companies worldwide reveals that the agribusiness industry achieved an average annual total shareholder return of only 2%—well below the S&P 500 median of 7%—for the five years from January 2014 through December 2018.

SAILING INTO THE WIND
Conditions across the sector were tough. But processed-protein producers outperformed, generally because of low raw-material and high finished-goods prices, and a handful of individual companies also outperformed, mostly by managing debt load, margins, and capital allocation.

LITTLE RELIEF IN SIGHT
Little improvement is in sight, and conditions could well worsen as trade issues continue to be a thorn, commodity prices fall, and replacement cycles lengthen. The impact of climate change adds yet another element of variability.

THE NEXT FEW YEARS
The companies that succeed in the near term will continue to focus on the fundamentals and exercise financial discipline. We expect that those with outsized exposure to select growth geographies will perform even better.
It's a tough time to be a farmer. And when farming's in a trough, agribusinesses doesn't fare much better. Little surprise, then, that according to our analysis of 50 large agribusiness companies worldwide, the industry turned in an average annual total shareholder return (TSR) of only 2%, well below the S&P 500 average of 7%, for the five years from January 2014 through December 2018. (See Exhibit 1.)

TSR was hurt by poor farm economics, trade disputes and their impact on commodity prices, and rising company debt loads. But among the industry’s subsectors, processed-protein producers outperformed, generally because of low raw-material and high finished-goods prices in their major markets. And across the industry, a handful of individual companies substantially outperformed, mostly by focusing on the fundamentals: maintaining margins, pursuing geographic diversification, and keeping debt down. A few benefited from organic growth and M&A, which added revenues and increased scale, serving up opportunities for further cost reduction.

A number of companies have invested significantly in agtech—the use of data to make site-specific decisions on farming inputs or practices with the intention of increasing value for the grower—as the industry’s innovation frontier. Agtech investments have a particular focus on precision agriculture, which leverages data to provide better insights, helping growers gain more output with less input. Few doubt that this represents a big part of the future, and investors are enthusiastic; but it is too early to see either differentiated sales growth or margin impact.

In this report, we examine the drivers of TSR performance in agribusiness and its subsectors over the past five years and consider the outlook for the future. In the near term, lower commodity prices, exacerbated by trade wars, present difficult and volatile circumstances for farmers and their suppliers. Agribusinesses need to maintain tight controls on margins, use debt judiciously, and deploy capital in geographies where they can generate the highest returns. In the longer run, there are reasons for more optimism: growing global calorie consumption (both per capita and overall) and the impact of technology should bolster demand and enhance the industry’s capability to meet it. Companies that focus on the fundamentals and invest wisely will be well positioned in this evolving landscape.

Into the Wind

Our sample of companies for this report is larger than for our previous study, in 2017. (See the sidebar “Understanding the Sample” and the Appendix.) The impact of fundamental headwinds was evident then, and they have only strengthened
since. Rising trade tensions aggravated falling commodity prices across the sector. Corporate debt has further strained many companies, although some lightened their debt load slightly during the period. The annual TSR of 2% placed agribusiness near the bottom in our 2019 rankings of value creation in all industries, but performance across the industry’s subsectors varied significantly. (See Exhibit 2.)

Processed-Protein Producers. Falling commodity prices and strong demand for protein, especially in North America, benefited protein producers, which returned an average annual TSR of 8%. Sales growth, widening margins, and rising dividends all contributed. Beef and chicken producers in particular benefited from high price-to-feed ratios, which rose 22% and 37%, respectively, from 2014 to 2018. Companies with higher exposure in North America, where producers have gained the most from reduced input pricing, returned 10% per year to shareholders while companies with high exposure in other markets returned 4%. Some companies leveraged aggressive margin management and strong debt reduction into higher-than-average TSRs. Tyson is a leading example, with an improvement in margins of 13% and a TSR of 11%.

Agricultural-Chemical and Seed Producers. This subsector generated an average TSR of 2%. Overall, expanded margins and increased dividends negated contracting multiples and rising debt. Sales growth had only a modest impact.

Regulatory constraints are tightening as concerns over human health and the environmental impact of pesticides rise. For example, in the European Union, the list of approved active substances has dropped from about 1,000 prior to the issuance of directive 91/414/EEC in 1991 to fewer than 500 at the end of 2018. (This directive
was repealed in 2009, but plant protection products and their residues are regulated by follow-up regulations and directives.) The list of approved chemicals in the EU, including both basic substances and pheromones, has increased at an annual rate of only 2% since 2011. More recently, several key substances—such as neonicotinoids, glyphosate, and chlorpyrifos—have come under scrutiny, and some have been banned in various jurisdictions.

Agricultural-Equipment Manufacturers. In the past five years, shareholders in agricultural-equipment manufacturers did not lose money, at least in nominal terms—but they did not make any either. AGCO and Kubota returned 0%, albeit with very different return profiles. Deere & Company delivered an impressive 13% per year, almost twice the average return for the S&P 500, proving that TSR is a relative—as well as an absolute—metric and that, regardless of whether an indus-
Focusing on the Fundamentals in Agribusiness

Deere management maintained a sound focus on deploying capital effectively by controlling debt, increasing the dividend payout, and buying back shares. Strategic acquisitions both added scale and boosted the company’s capabilities in precision agriculture, perhaps sparking investors to increase the company’s enterprise value (EV) to earnings before interest, taxes, depreciation, and amortization (EBITDA) ratio. The company’s focus on the longer term, investment in R&D, and progress in precision earned praise from Wall Street.

Plant Processors. Geography played a big role in the performance of plant processors, whose input and output prices experienced significant volatility. For example, margins for soybean crush were mostly positive in the US (if also mostly modest) while margins in China traveled through multiple peaks and valleys, ending 2018 about $75 per ton lower than at the start of 2014. As a result, investors bid down the valuation multiples (by about 8 percentage points) of companies with higher exposure outside North America. For example, China Agri-Industries’ overall TSR of –4% was depressed by a –14 percentage point change in its EV to EBITDA multiple. Plant processors with higher exposure outside North America returned negative annual TSR (–3.5%) while plant processors with more North American sales had a positive annual TSR (3%), thanks primarily to falling input or commodity prices. TSR for the group as a whole was 0% as the contracting multiples, along with an increased debt burden, canceled out slightly higher profits and dividends.

**EXHIBIT 2 | The Performance Across Subgroups Varied Significantly**

<table>
<thead>
<tr>
<th>Contribution to average annual TSR (percentage points)</th>
<th>Profit growth</th>
<th>Multiple change</th>
<th>Cash flow contribution</th>
<th>TSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processed-protein producers</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>–3</td>
</tr>
<tr>
<td>Agricultural-chemical and seed producers</td>
<td>1</td>
<td>3</td>
<td>–1</td>
<td>–2</td>
</tr>
<tr>
<td>Plant processors</td>
<td>1</td>
<td>3</td>
<td>–2</td>
<td>–2</td>
</tr>
<tr>
<td>Agricultural-equipment manufacturers</td>
<td>–1</td>
<td>–4</td>
<td>5</td>
<td>–3</td>
</tr>
<tr>
<td>Fertilizer producers</td>
<td>0</td>
<td>–2</td>
<td>–2</td>
<td>3</td>
</tr>
<tr>
<td>Agribusiness sample median</td>
<td>2</td>
<td>1</td>
<td>–1</td>
<td>–2</td>
</tr>
</tbody>
</table>

**Sources:** S&P Capital IQ; BCG ValueScience Center.

**Note:** Data in currency reported by company. TSRs are from January 2014 through December 2018. Fundamentals represent the last 12 months as of December 31, 2013 and December 31, 2018. Dividend contribution includes investment of dividends and special dividends, compounded monthly.

try is under pressure or accelerating, every company has the opportunity to outperform its peers. Deere management maintained a sound focus on deploying capital effectively by controlling debt, increasing the dividend payout, and buying back shares. Strategic acquisitions both added scale and boosted the company’s capabilities in precision agriculture, perhaps sparking investors to increase the company’s enterprise value (EV) to earnings before interest, taxes, depreciation, and amortization (EBITDA) ratio. The company’s focus on the longer term, investment in R&D, and progress in precision earned praise from Wall Street.
Fertilizer Producers. Despite a modest recovery in recent years, prices remain well below the heights of 2014, partly because of significant excess production capacity, which rose at least 30% from 2014 to 2018. High debt levels and expectations of low single-digit growth in fertilizer shipments continue to hurt TSR, which was –3% for the subsector. Declines were driven by margin and multiple contraction, as well as debt.

Little Relief in Sight

Not much improvement is in sight for the next few years. In fact, industry conditions could well worsen before they improve (even before taking into account the possibility of a recession). The impact of climate change adds another element of variability for growers.

Grower Economics and Consolidation. Farming continues to be a tough way to make a living. Commodity prices dropped by 10% to 40% from 2014 through 2018 (corn, 11%; rice, 20%; soybeans, 23%, for example). According to the USDA, the median US farmer lost $1,575 from so-called on-farm activity in 2018 and was projected to lose $1,450 in 2019. Results in China tell a similar story—rice is under pressure, while soybeans and corn are under water, according to the China Agricultural Statistics Yearbook. For example, net income of rice farms in China dropped 35% from 2014 through 2017; results are similar for Chinese corn farms. These decreases are starting to materialize in farm balance sheets. For example, US Chapter 12 bankruptcies increased by about 25% from 2014 to 2018. Tight finances for US and Chinese farmers may also have downstream impacts on global food supply, given that the two countries produced about 45% of corn worldwide in 2017 and are major contributors to global wheat, rice, and soy production.

Little surprise, then, that farms are consolidating. In 2017, more than 70% of US cropland was operated by farms of more than 1,000 acres each, up from about 55% in 1997. Continued low income and weak balance sheets should fuel a continuing trend toward consolidation, which will mean fewer, bigger, and generally more sophisticated customers for agricultural-equipment makers and suppliers.

Trade. In the near term, agriculture overall will likely experience continued volatility, primarily as a result of trade disruptions. The trade wars could have longer-term effects as well.

The combination of continued uncertainty surrounding US policy and the increasing willingness of the Trump administration to impose new trade barriers is causing companies and countries to diversify their supply chains away from US agricultural producers. Certain crops and relationships are being hit hard. For instance, US soy prices, which were about $12 a bushel in 2014, fell to about $9 a bushel at the end of 2018—near its ten-year low—as Brazil ramped up its exports and tariffs undercut Chinese demand. When the dust settled, almost $9 billion of soy exports to China were lost or shipped elsewhere in 2018. (See the sidebar “Trading Uncertainties.”)

There is also reason to be concerned for the longer term. As we observed recently, the growing risk now is that much of the market share abroad that US agribusiness is losing to foreign competitors will be hard, if not impossible, to win back—even if
current trade conflicts are resolved to the US government’s satisfaction. In a number of past cases involving other commodities, such as beef and sorghum, US market share failed to rebound to predisruption levels once trade barriers were lifted. At the same time, the US’s withdrawal from previous trade treaties—together with the difficulty of concluding new, comprehensive agreements—has put the nation’s agribusinesses at a big competitive disadvantage in key markets.

Decreased US production is likely to have follow-on effects for providers of farm inputs, plant-processing supply chains, and downstream food producers. The longer these trade wars drag on and future policy remains unpredictable, the more likely it becomes that uncertainty will be a fact of economic life. It is time for all players across the US agricultural supply chain to develop strategies for adapting to the new normal.

**Climate Change.** Further exacerbating volatility for farmers, climate change is expected to affect local weather patterns, including precipitation levels and the frequency and intensity of high temperatures. Shifting precipitation patterns will create droughts in some regions, while fluctuations in temperature, moisture, and rainfall will create gains and losses in agricultural productivity across regions. Increased frequency and intensity of high-temperature extremes will contribute to heat stress in livestock, resulting in large economic losses for some producers.

**One Bright Spot: Data and Technology**

Data and technology are already having an impact on agriculture, and we expect them to play an even greater role. (See the sidebar “How Big Will the Agtech Revolution Be?”) Data platforms are putting a wealth of useful information in farmers’ hands with the intent of helping them make better decisions, which will ultimately lead to higher yields at lower cost. Precision agriculture is attracting serious capital (nearly $7 billion in 2018, according to AgFunder) and is blurring traditional boundaries of competition. It is still early in the agtech revolution, however, and companies have not been able to directly monetize these investments.
Agriculture has benefited from numerous major technological innovations over the past century, including the development of tractors, combines, sprayers, inexpensive fertilizers, high-yield crops, and more effective pesticides. (See the exhibit.) Each of these has furthered crop yields, and many have also reduced farm costs. Agtech promises to be the latest major advance. But how big will it be?

The question gains urgency because traditional investments in agribusiness are not sustaining historical rates of improvement. From 2014 through 2018, median R&D spending rose by 30 basis points as a percentage of revenue for equipment and 150 basis points for agricultural-chemicals and seeds. Over the 15 years from 2004 to 2018, R&D increases were 160 and 180 basis points, respectively. Despite significantly higher annual spending, yield growth is decelerating. For farms across major regions, yield growth rates of 2% to 3% (from 1930 to 1980) have declined to 1% to 2% (from 1981 to 2018).

There’s no question that agtech is the next frontier of agribusiness investment, but companies have yet to see either material sales growth or margin impact. According to AgFunder, private investments in agtech R&D among the companies in our

Sample innovations
- Mechanized tractors
- Crop breeding & sterile varietals
- Selective herbicides
- Scaled synthetic nitrogen fertilizers
- Improved irrigation
- Tractor-drawn combines
- Sprayers
- GPS guidance
- UAV / Sat
- CRISPR
- Biological pesticides
- Precision agriculture
- HT & BT traits
- Increases in chemical pesticide introduction
- Concentrated phosphate
- No-till
- Cover crops
- Digital farm management

Increases in Yield Have Relyed on Continuous Agricultural Innovation

End of second agricultural revolution
Genetic revolution
Green revolution
Precision agriculture
Yield of corn, soy, and wheat (metric ton per acre)
Increase in yield (%)

Sources: FAO; Phillips McDougall; US Department of Agriculture; BCG analysis.

Note: Countries represent ~60% of global production of corn, soy, and wheat. Innovations noted at point of more mainstream adoption, not introduction. CRISPR = clusters of regularly interspaced short palindromic repeats; UAV = unmanned aerial vehicle.

1The number of ingredients available globally rose from about 100 in 1960 to about 500 in 2000.

2HT and BT are types of genetically modified organisms.
Agribusiness leaders, such as Monsanto, clearly see a future in using data harvested from the Internet of Things (IoT) to open new lines of business. Monsanto’s Climate FieldView, for example, integrates multiple data sources into a precision agriculture platform. Monsanto’s IoT platform overcomes several barriers for farmers, including the lack of ability to develop IoT solutions themselves, a limited capacity to integrate existing data, and insufficient analytical tools to help synthesize data.

Startups are also active, some with the open intent of disrupting existing farmer-agribusiness relationships. Founded in 2014, Farmer’s Business Network helps farmer members manage costs and improve yields with up-to-date information on supplier prices, among other things. The organization now has thousands of members farming more than 8 million acres. It has attracted substantial venture capital, including from GV (formerly Google Ventures), and in 2017, Forbes estimated its value at almost $400 million.

Precision agriculture is receiving much of the attention from large incumbents, which increasingly view their investments as table stakes that will eventually deliver a payback—although the actual monetization could be indirect, such as creating stickier relationships or improving product competitiveness. Two business models have emerged, each posing its own challenges and opportunities. A number of companies are offering point solutions, which are new or augmented products and services that are provided in direct exchange for money. A few leaders, including Monsanto and Deere, are building platforms and ecosystems of customers and suppliers—a multi-entity system linked by flows of data and services, often leveraging indirect monetization methods, such as lower R&D costs, cross-selling, and stickier customer relationships.

In both models, companies will need to take into account the very different needs of growers globally. For smaller growers in China and India (who often do not own large, mechanized equipment) success comes from point solutions requiring low investment—an app that requires only a smartphone interface, for example. For larger farms—for example, in Brazil and North America—the winners will likely be large equipment players and suppliers that can articulate clear value creation from their solutions and have, or can gain, access to the type of data that drives superior outcomes.

HOW BIG WILL THE AGTECH REVOLUTION BE? (Continued)

The jury is out, however, on the results that agtech companies will produce and how those results will affect the market. Incumbents need to follow developments closely, and many will likely want to make selective investments in agtech innovators to keep pace with their peers.

Survey totaled more than $7 billion, representing a growth rate of nearly 30% per year since 2014. Three startups have achieved “unicorn” status (valuations of $1 billion or more): Indigo Ag, Ginko Bioworks, and Climate FieldView (now owned by Monsanto).

In both models, companies will need to take into account the very different needs of growers globally. For smaller growers in China and India (who often do not own large, mechanized equipment) success comes from point solutions requiring low investment—an app that requires only a smartphone interface, for example. For larger farms—for example, in Brazil and North America—the winners will likely be large equipment players and suppliers that can articulate clear value creation from their solutions and have, or can gain, access to the type of data that drives superior outcomes.
The Next Few Years

Businesses that succeed in the near term will continue to focus on the fundamentals and exercise financial discipline. In the past five years, companies in the highest performance quartile for debt management and margin expansion produced TSRs of 6% and 8.5%, respectively, while the respective TSRs for the remaining companies were 1.4% and 0.6%.

Geography will also continue to be an important denominator, a factor that is again complicated by trade. Companies competing in attractive locales in the past five years received a boost in TSR. Multinationals will want to pay careful attention to the outlook for various regions and commodities as they assess capital allocation internationally.

There is room for further consolidation as larger and stronger companies seek further scale. M&A activity has slowed recently after a period of considerable activity: some $220 billion in deals closed in 2017 and 2018, and only $36 billion of new transactions have been announced recently. But several major mergers in the sector (Bayer-Monsanto, PotashCorp-Agrium, and ChemChina-Syngenta, for example) sought recently to push returns for acquirers by increasing scale.

What’s more, attractive deals in agribusiness may still be had. (See Exhibit 3.) For example, while the fertilizer industry has undergone significant recent consolidation, global concentration of share is still low enough (10% to 20% for the top players worldwide) to allow for cross-border acquisitions by leaders. Processed-protein producers

<table>
<thead>
<tr>
<th>EXHIBIT 3</th>
<th>Fertilizer and Protein Producers Could Be Hotbeds of Future M&amp;A Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top Players</strong></td>
<td><strong>Concentration (%)</strong></td>
</tr>
<tr>
<td>Fertilizer producers</td>
<td>Nutrien Mosaic Yara International</td>
</tr>
<tr>
<td>Agricultural-equipment manufacturers</td>
<td>Deere &amp; Company CNH Industrial Kubota AGCO</td>
</tr>
<tr>
<td>Plant processors</td>
<td>Cargill Archer Daniels Midland Bunge Louis Dreyfus</td>
</tr>
</tbody>
</table>

Sources: Market reports; BCG analysis.
companies may also have room to consolidate operations and improve scale given that the current global share of top players is only in the 30% range. By contrast, 60% to 70% of pesticide and seed sales are already controlled by companies involved in recent industry megadeals. Leading companies in most subsectors still have room to expand, and even those with substantial share in some markets can consider deploying capital effectively in other economies.

In the longer run, agribusinesses have fundamental reasons for optimism, especially if they use the time now to position themselves for an eventual upturn. The global population is increasing at a rate of 1% per year, and daily caloric consumption per capita rose by about 0.3% per year from 2000 through 2015, a rate that WHO expects to continue.

These modest increases turn into meaningful demands on food supply over time. The UN projects that the global population will grow by another 500 million to 1 billion people by 2030. To meet increasing per capita consumption and growing demand, emerging markets will need to adopt the more advanced technologies used in more developed markets (as they have done historically).

To capitalize on these opportunities, agribusinesses will need to weather volatile and tough times ahead, managing fundamentals and making smart bets on technology and building scale.
APPENDIX

The expanded sample of 50 agribusiness companies for 2019 includes a mix of developed- and developing-market companies. The first exhibit below lists the companies and highlights the differences between our 2017 and 2019 samples. Subsequent exhibits illustrate the breakdown by geography and subsector, the mix of market caps, and TSR disaggregation for the top ten companies.

The 2019 Value Creators Agribusinesses Have Some $350 Billion in Market Cap and Constitute a Broader Set Than That of 2017

**2019 VCR company set (50)**

- AGCO
- Archer Daniels Midland
- Astra Agro Lestari
- BRF
- Bunge
- CF Industries
- Charoen Pokphand
- China Agri-Industries
- China Mengniu Dairy
- Deere and Company
- FMC
- Gianbia
- Golden Agri-Resources
- Ingredion
- ICI
- Incitec Pivot
- Israel Chemicals
- JBS
- K+S
- Kuala Lumpur Kepang
- Kubota
- Mosaic
- Mwat (formerly Marine Harvest)
- New Hope Liuhe
- NH Foods
- PhosAgro
- Qinghai Salt Lake Potash
- Sociedad Química y Minera de Chile
- Sibdach
- Taiwon Fertilizer
- Tate & Lyle
- Tyson Foods
- Wilmar International
- Yara
- Beijing Dabeinong Technology Group
- Calavo Growers
- C.P. Pokphand
- Chambal Fertilisers and Chemicals
- Heilongjiang Agriculture
- Jiangsu Yangnong Chemical Group
- Jiangxi Zhenbang Technology
- Kernel Holding
- KWS Saat SE
- Nufern
- Nutrien
- Olam International
- Orient Group
- QL Resources
- Vilmorin & Cie
- Yuan Longping High-Tech Agriculture

16 new companies added to 2019 company set

**Geographic and Subsector Breakdown**

**2019 company set (n=50)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Fertilizer producers</th>
<th>Processed-protein producers</th>
<th>Agricultural-equipment manufacturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>14</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>25</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Europe</td>
<td>10</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Middle East and Africa</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** S&P Capital IQ; BCG analysis.
Market Cap Breakdown

Market cap, end of year 2018 ($billions)

<table>
<thead>
<tr>
<th>Industry subgroup</th>
<th>Location</th>
<th>Market Cap Breakdown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural-chemical and seed producers</td>
<td>Middle East and Africa: 115</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Europe: 39</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asia-Pacific: 66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Americas: 10</td>
<td></td>
</tr>
<tr>
<td>Plant processors</td>
<td>Middle East and Africa: 83</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Europe: 37</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asia-Pacific: 19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Americas: 27</td>
<td></td>
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<tr>
<td>Processed protein producers</td>
<td>Middle East and Africa: 73</td>
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</tr>
<tr>
<td></td>
<td>Europe: 20</td>
<td></td>
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<tr>
<td></td>
<td>Asia-Pacific: 19</td>
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<tr>
<td></td>
<td>Americas: 56</td>
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<tr>
<td>Fertilizer producers</td>
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<td></td>
<td>Europe: 20</td>
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<td></td>
<td>Asia-Pacific: 16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Americas: 5</td>
<td></td>
</tr>
<tr>
<td>Agricultural-equipment manufacturers</td>
<td>Middle East and Africa: 28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Europe: 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asia-Pacific: 21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Americas: 2</td>
<td></td>
</tr>
</tbody>
</table>

Sources: S&P Capital IQ; BCG analysis.

The Agribusiness Top Ten, 2014–2018

TSR disaggregation (percentage point contributions)

<table>
<thead>
<tr>
<th>Industry subgroup</th>
<th>Location</th>
<th>Average annual TSR (%)</th>
<th>Sales growth</th>
<th>Margin change</th>
<th>Multiple change</th>
<th>Dividend yield¹</th>
<th>Share change</th>
<th>Net debt change</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Chambal Fertilisers and Chemicals</td>
<td>India</td>
<td>33</td>
<td>-2</td>
<td>2</td>
<td>13</td>
<td>3</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>2 PhosAgro</td>
<td>Russia</td>
<td>28</td>
<td>17</td>
<td>8</td>
<td>-3</td>
<td>7</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>3 QL Resources</td>
<td>Malaysia</td>
<td>27</td>
<td>8</td>
<td>1</td>
<td>15</td>
<td>4</td>
<td>-4</td>
<td>3</td>
</tr>
<tr>
<td>4 Mowi</td>
<td>Norway</td>
<td>25</td>
<td>13</td>
<td>3</td>
<td>2</td>
<td>9</td>
<td>-5</td>
<td>3</td>
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<tr>
<td>5 Calavo Growers</td>
<td>United States</td>
<td>21</td>
<td>10</td>
<td>6</td>
<td>4</td>
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<td>2</td>
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<tr>
<td>6 Jiangxi Zhengbang Technology</td>
<td>China</td>
<td>16</td>
<td>10</td>
<td>28</td>
<td>-11</td>
<td>1</td>
<td>-15</td>
<td>3</td>
</tr>
<tr>
<td>7 Jiangsu Yangnong Chemical</td>
<td>China</td>
<td>15</td>
<td>16</td>
<td>7</td>
<td>-1</td>
<td>1</td>
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<td>-8</td>
</tr>
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<td>8 Deere &amp; Company</td>
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<td>-2</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>9 Sociedad Química y Minera de Chile</td>
<td>Chile</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
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</tr>
<tr>
<td>10 Tyson Foods</td>
<td>United States</td>
<td>11</td>
<td>3</td>
<td>13</td>
<td>4</td>
<td>1</td>
<td>-1</td>
<td>-9</td>
</tr>
</tbody>
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Sources: S&P Capital IQ; BCG ValueScience Center.
Note: Data (except market value) is in currency reported by company.
¹TSRs are from January 2014 through December 2018. Fundamentals represent trailing 12 months as of December 31, 2013, and December 31, 2018.
¹¹Dividend contribution includes investment of dividends and special dividends, compounded monthly.
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If you would like to discuss this report, please contact one of the authors.