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The China Dairy Farming Institute: New Frontiers in Innovative Collaborations

As Hans Jöhr, Corporate Head of Agriculture at Nestlé, and Robert Erhard, General Manager, Nestlé Dairy Farming Institute prepared for the meeting on March 4–5, 2015 of all the firms, government, and not-for-profit entities involved in collaborating in the creation of the China Dairy Farming Institute, he wondered how best to get their perspectives as to what they have accomplished so far; how to measure short-term and long-term success; and how to reexamine their short- and long-term plans of action to help modernize Chinese dairy farming practices. The vision of DFI is to be recognized as China's leading center of competence for dairy farming. The mission of DFI is to develop the future farm managers and professionals for the dairy industry.

Hans Jöhr gained the support of Nestlé Executive Board and local Chinese government officials for the Dairy Food Institute when he explained to them the importance of not relying on only very large-scale dairy enterprises for the future of the Chinese dairy system, because over 50% of the milk production currently came from small-scale producers with from one to four cows (see **Exhibit 1**) and that the small and mid-size scale farmers have not succeeded because they have lacked both training and the best inputs and the best quality animals and the best ways to manage the welfare of the animal and the environment and never given a chance to grow their dairy business and become a professional milk producer by choice.

Nestlé's core value from the beginnings of the company was to work directly with farmers and develop a long-term partnership. "If you want freshness, safety, and quality control, you have to have a strong presence in local sourcing," said Hans. With this close relationship you can develop traceability programs that answer the consumer's questions: (1) where does the product come from?; and (2) who produced it? The melamine crisis in China in 2008 made this "farmer connect program" even more critical than ever. Hans, in his case interview, indicated that "we not only have to know the farmer, we have to be able to provide training to constantly provide new and critical knowledge to that farmer to produce quality and safe products, but also help him or her take advantage of new breeding and feeding programs." Nestlé has trained in 2014 over 375,000 farmers out of the 700,000 farmers it currently works with in over 50 countries. Because of the lack of trained farmers in China and the lack of regulation of local dairy production, Nestlé felt that a special Dairy Training Institute needed to be created.

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Hans Jöhr realized that the most critical problem facing the food system of China was that neither the domestic consumers, nor the global consumers, trusted it. Even though the melamine crisis occurred in 2008, by 2015 the lack of consumer trust had not been overcome. Trust in a food system begins with the farmer and how that food is produced and who produces it. With this in mind, Hans Jöhr decided that based on the success with the cooperation he received in co-founding and creating the Sustainable Agriculture Initiative (SAI) www.saiplatform.org that he needed that similar kind of collaboration to provide the training of Chinese farmers so that credibility of the Chinese dairy system could be restored.

Through its SAI, Nestlé has trained over the last years hundreds of thousands of its 700,000 suppliers-producers. Given this experience, Nestlé felt that, in collaboration with others, it would be best positioned to work directly with small and mid-size farmers in China that accounted for over 50% of the nation's milk production (IATP 2014). For Hans, a focus on this farmer group was crucial for addressing one of the issues at the heart of the melamine crisis: an inability for farmers to make a viable living in a profession they wanted to be in. For the dairy industry to succeed in China and overcome consumer fears Nestlé knew that any viable efforts would have to create a shared value for Chinese society in which farmers, consumers and companies alike all benefitted.

The key question of course was how to achieve this and who could help achieve this? Hans knew that scaling up is a valuable option and perhaps one that his competitors and others within China would promote. But if Nestlé scaled up its own operations this would cut out many of the smallholder farmers they had worked with closely for several decades. More farmers would leave the country and fewer economic opportunities would exist in Nestlé's established milk districts. Through his work in the SAI, Hans knew the value of training farmers and reflected on the current milk production system in China. Few opportunities existed for farmers to receive technical training, learn about modern technologies and animal genetics, and to learn by doing. At its core this meant that farmers were risk averse, afraid to make mistakes, and working with little technical knowledge or access to modern technologies.

It was clear to Nestlé that a training center for the Chinese dairy industry was a necessary need. But Nestlé was the world's largest food company; they are not an agriculture training and development company. Nestlé knew that the only way such a training institute would be possible was with a collaborative effort—a new type of collaboration that had never been implemented in a commodity system. It would require all aspects of the dairy supply chain to come together and work collaboratively irrespective of their competing interests. In fact, it would even involve competitors to cooperate and put aside their economic competition to create shared value for the Chinese dairy industry. Nestlé had the vision for this Institute; making it happen was the next challenge.

Government statements indicate their desire to help make this new institution become a viable training program for the dairy producer so that they can be assured of the quality control at the farmer level, including the model you have developed to get the small farmers to place their cows together so that they have a critical mass to improve the quality and safety of the milk, the genetics and health of the animals, and that all this will take place in an ecological manner and that the cows will be treated in a humane manner, and that the manure will be used for energy as well as for fertilizer for the crop land.

By driving quality and being compensated for their improvements through their training, the farmers having better education will begin to look upon farming as an opportunity and a good profession rather than leave for the city where they feel there is more opportunity.

They will begin to look at the development of these new dairy economically feasible farm models as a way of bringing development to the rural areas.

The development of the Dairy Farm Institute by Nestlé enabled a new form of enterprise to take place with leaders in genetics, nutrition, feed, animal health, forage, food security, and academic leaders all coming together to develop this common cause of improving this viability and trust of the dairy farmer and the private, academic, and governmental agencies that serve him or her. The resultant profitability of this endeavor enabled and provided a way of life that could develop the professional nature of the “new” dairy producer. It also then provided trust by the consumer of the dairy industry and the consumer products it produced.

Nestlé did not provide the leadership of the Dairy Farm Institute of China as a short-term profitable operation, but rather as a means of restoring trust in the Dairy System of China and trust in the private, public, and not-for-profit institutions that were creating the Institute in a collaborative manner.

Nestlé looked upon this project not as a profit-making venture, but rather as a means of building long-term trust in an industry that had lost its credibility vis a vis the consumer.

Is it possible to find a trustworthy third party that has the respect of all concerned to evaluate this Institute and its impact on the dairy system of China and the improvements this Institute has created?

New Pathways Forward

The first question was who is going to run the farms – they said that you can bring in who you want. Hans said, ‘I don’t want to bring in anyone – I want to work with Chinese farmers.’ And the second question was who owns and runs the farms? We are of the opinion that owner-operated farms are probably the most sustainable way forward. . . . It was clear that these 10,000 head farms would not be operated by the owners. . . . We want to make Chinese farmers to become really dairy farmers by choice and not by default as they were in the past. . . . Hans’s concern was about keeping the young, talented, competent and skilled people in the dairy business and develop them into commercial milk farmers by choice. But then the choice was- how can we make that happen if we can’t train them? Due to the fact that we say “owner-operated” is a good thing in China, let’s give these people the possibility to achieve that.”

As Nestlé considered how to improve the economic livelihoods of farmers to prevent milk adulteration and ensure food safety and milk quality for the future, while simultaneously scaling up an industry in a sustainable manner they reflected on their track record in China. “We know we have to maintain a competitive price towards the farmer, but it doesn’t mean that the farmers shouldn’t have a cost-competitive production cost, because the gap between those is their profit. That is the basis of a healthy dairy industry. If the farmer has a negative margin, farmers will have to close their farms in places where they have no alternative to dairy farming. They might be highly tempted to adulterate their milk and that is the reason that China had the problem in the first place. A healthy industry is also a safe food industry. . . . Nestlé had been training farmers on all major topics related to dairy farming and had an established training team . . . but the question was how you bring this to a new professional level and the answer was that we have to build a dairy farming institute” (Robert Erhard).

Within Nestlé, the decision to build the Institute was met with the expected questions. Hans remembers, “People asked is it necessary? Should we do something else? And we said no, if we do we fall back into the situation where they want us to build the farms, and in fact I didn’t want to manage farms. . . . I want owner farmers because they are the most reliable . . . it’s not good for Nestlé to run farms. You have to see where you have a competitive advantage and where you don’t. Furthermore, the DFIs’ purpose follows and aligns completely with our Creating Shared Value and Nestlé in Society strategy and its implementation on upstream supply chains sourcing agricultural materials and interacting with rural communities”

Executive Vice President Christian Schmid, Technical Director for Nestlé China, had just taken on his position in China at the peak of implementation of the DFI. He recalls, “We put together a vision as such for this DFI that we wanted to be China’s leading center of competence for dairy farming . . . to develop the future managers and operators of dairy farms. For that, we Nestlé, we are not an academic company, which is not our core competency nor our reason for being. Neither do we want to engage ourselves in the upstream of the supply chain, we don’t want to own dairy farms. And we are no experts, but we know experts and we want to and we need to have the highest level of professionals. To deliver to us the best quality milk, quantity and cost as well.”

Forming New Partnerships

Nestlé is the world’s largest food company, with an impeccable reputation of being a company that has a focus on the well-being of people, animals, and plants; strong interest in water management and in economic development which, in many ways, provided Nestlé with a unique opportunity to forge partnerships. “We realized that within our own company we wouldn’t have the resources to provide the level of training that we wanted to achieve. So it was logical to get other people and companies and universities on board who had the resources, the R & D, and had training as part of their strategy. We didn’t want to just teach, we wanted to show how it was done properly and live by an example approach. In our definition of the dairy farming institute, we don’t want to import a dairy farming model, but to help and fine tune a Chinese specific model. This doesn’t mean that we try to reinvent the wheel, but it takes cultural, ecological, and political aspects about how to manage and run a farm, such as the land does not belong to you.” (Robert)

Nestlé admits that not everyone was sold on the concept of a collaborative partnership to build a training institute- and potentially with their competitors in the marketplace. But, Nestlé was clear on its mission- to develop the next generation of farmers and dairy industry professionals, which inevitably would create a safer food supply but also a key marketplace advantage for those companies that were training these farmers and industry professionals. Nestlé recognized that to achieve this vision would require a unique and diverse set of collaborators, with skills not often sought in a business partnership. The governance system of the emerging collaboration would be crucial—it had to have the right composition of people attuned to a similar value set and not looking for their own individual benefit, but for society’s benefit.

Nestlé also looked for capable and highly respected companies. “In looking at what companies to get involved in the Institute, we didn’t want to bring someone fresh into the market. We wanted relevant companies in the market, and a leader that was able to offer products and services that were relevant to the actual farm. We were also looking at what their competitive advantage was and a company’s commitment to the market and their commitment to China. Technical capabilities, not just products and services, but willingness to train farmers and developing or bringing technical abilities to China is the purpose. Another factor was to a certain degree was the maturity of the products. Quality and food safety is something that experienced companies have developed and it’s worth it to

pay the additional amount to ensure that you can do the job on the farm properly and safely.” (Hans Jöhr)

As Nestlé considered its original vision they knew that it was critical to get the best academic partners as well. Christian Schmid recalls, “We made it clear from the beginning, as part of our commitment—the DFI was never to be a profit center—it’s a commitment to China and the dairy industry. It was never going to be for exclusive use for any farmers that are directly linked to Nestlé, but always going to be a publicly accessible institution. From that point of view, to enable the credibility with the Chinese farming community as well as the relevant government policies, we decided that we need two academic partners, one of which is recognized worldwide—which is University of Wisconsin–Madison—and on the other side a local recognized university—which is Northeast Agricultural University.” The academic partners would be crucial to develop the training and curriculum for the Institute and to work with the other companies to ensure that the trainings would reflect relevant practices, policies, and technologies for the Chinese market.

Of the total 15 partners now affiliated with the DFI, not a single one refused the opportunity to join the collaboration, even though this required both economic and personnel contributions. Furthermore, some companies actually chose to approach Nestlé once they heard about the potential collaboration because they were so excited about the opportunity and the potential to add value to the institute. While Nestlé was careful to choose its partners in a conscious way, they were nevertheless surprised by the enthusiastic response of the partners in their agreement to join the DFI collaboration. “I didn’t realize that we had such a good reputation and a good name. It’s nice when people tell you that they are proud to be part of a Nestlé team,” remembers Hans. Christian reflects on a similar experience. “There was a very immediate positive resounding feedback, and there was no hesitation to join this adventure and endeavor. This obviously gave us a lot of positive feelings to develop and to really push them forward to get the green light for the DFI.”

One of the clear benefits Nestlé was able to demonstrate at the early stages of the project was the shared value it would bring to the partners. While it may involve working with some potential competitors, Nestlé’s vision would create an Institute that would help all the partners achieve new economic pursuits, while providing training at a time when no one else had really put bricks and mortar on the ground. Other companies had said they would build similar institutes in the past, but they never did. Many of the potential collaborators were conducting trainings with their employees and farmers in hotel rooms in disparate places. The appeal of an actual institute dedicated to training for the next generation of Chinese dairy professionals had a diversity of potential benefits for the partners. To move forward quickly and collaboratively Nestlé embodied an approach that enabled all partners input from the beginning of the Institute on everything from farm design plans to the communication plans.

Caroline Li, head of the Chinese company Goke remembers, “At the beginning I thought, ok it’s the same story all the big groups come to us and say they want to do a training center. Just like everyone else. I thought it was just the same story. And then, about 2 months later we were called from Nestlé to see the farm design and then we began to understand every 2–3 months that they really started this job. And then we had all of the best companies in each sector to input and review the design and if the construction was ok and in organizing the courses if they were ok. . . . So from the beginning we were very involved and we were proud to be chosen as a partner because only the top company in each sector can be involved.”

The selectivity of the partners went a long way to help foster shared value and partnership, which was vital for the quick timeline of the DFI development. “Part of this whole thing is how can we work together . . . the key elements of success is about transparency and trust. It’s not about business to

business it's about people. He's (Robert) involved us in nearly all key decisions that could have impacted us in our decisions and more." Being involved from the beginning of the design of the DFI continued to carry this spirit of shared value forward throughout the building of the Institute. "We've really been involved in the whole process – and it hasn't just been with the feed – we've sat in from the whole process design meetings from day 1. Everything in terms of flows, how to put this stuff together. Sometimes they would come to us after a speed hump and we could help them with our network . . . and we've worked really well together. And it's been amazing." (Grant and Tim, Land O'Lakes).

The Dairy Farming Institute Becomes a Reality

Through quick efforts and government collaboration, Nestlé and its collaborators financed over \$31 million by October 2014 to create a training center. Equally important to providing the financial resources, the occasion marked the first time in any country's dairy system, a new type of collaboration, which facilitates the best combination of technical and applied training, modern farming practices, access to improved animal genetics, and feedback mechanisms for continual improvement in both the training of the farmer and their access to improved feed and animals.

Nestlé inaugurated the DFI as one of the company's largest dairy investments ever with a goal to help modernize the Chinese dairy industry to better enable farmers to meet the fast growing milk demand of China in a sustainable pathway for the years ahead. The Institute, located in Shuangcheng in Heilongjiang Province, is a component of Nestlé's long-term efforts to partner with stakeholders, government and universities to share technical knowledge, and advance training and responsible practices for dairy farm improvement globally. With dairy operations in China for over 25 years, Nestlé had already established three key milk districts in China, and the Institute is an extension of this long-term commitment coupled with a company ethos to create shared value for society.

The DFI will train the next generation of farmers and milk industry professionals based on the principles and practices within the Sustainable Agriculture Initiative Platform- sustainable dairy farming practices and principles - that Nestlé established more than a decade ago. These principles and practices provide guidance for production of safe, quality-assured dairy products and embody a diversity of dairy management concepts including animal health and welfare, milking hygiene, animal nutrition, environmental protection, and socio-economic development. The training is a unique design of classroom teaching and hands-on training. The coursework was developed at the leadership of The University of Wisconsin, but with strong participation from the Northeast Agricultural University as well as the many partner organizations. As a result, the courses are designed to be holistic and incorporate many aspects of the dairy supply chain rather than one individual company's expertise and products as previous trainings had done.

The Institute's facilities include classrooms, laboratories, dormitories, and two model farms to facilitate top-quality, hands-on training. These model farms are of different size to better enable a range of farmers within the Chinese context to apply their particular farm context and goals in an applied setting. The small farm, designed for a future professional family farm will have between 200–400 milking cows, the medium farm from 600–1,200 milking cows, and training on a large farm for up to 3,600 milking cows will be provided on a third party partner dairy outside the DFI. For Nestlé, the aesthetics of the facility were important to convey professionalism. "The image of the farmer has to change from being a peasant into a dairy professional. So, we paid attention to how we built the DFI to convey a message of "we are professionals." We are developing professionals and we want people to behave as professionals. If you treat them as professionals, they will behave and produce that way. Respect towards the farmer is very important." (Robert)

The DFI has been met with overwhelming support from not only the collaborative partners but also many local and regional government officials. At the inauguration of the DFI, local Shuangcheng party secretary Lu Jinglong noted, “Today is such a great delight to see a world-class Dairy Farming Institute standing in front of us . . . we’ll guarantee our service as we always did and create the best environment for Nestlé’s development.”

Determining and Measuring Success

With the DFI built and operating, Hans reflected back on the enthusiastic reception of the DFI in anticipation of a meeting on March 4–6, 2015. He was overwhelmed by the reality of the DFI and its embrace by the Chinese government and their partners. Numerous government officials, mayors and international ambassadors had visited the DFI since its inauguration just six short months earlier. Classes had been up and running since literally the day after the inauguration—in effect while the paint was still drying on the walls.

Nevertheless, he knew that one key piece for ensuring the viability of the DFI was missing. “We don’t yet know how we will measure success—the 4th and 6th of March they will have a partner meeting at the DFI and I will ask them to come up with this question to everybody . . . we have to listen first . . . if you want to be respectful of your partners you have to listen first.”

Critiques of the DFI have been minimal so far. But Hans knows that this could change. “If we aren’t taking care of what is the expectation of partners, of audiences out there we may not know, and not matching their expectations then yes we may have problems. It’s so extremely important to ask everyone to put together the Key Performance Indicators (KPIs) to see what are we lagging and the key KPIs to get to a kind of success by the end of the day.”

For Nestlé and its partners there are many potential ways to measure success and potential debate over who will measure this success. For the DFI, success may mean something different than success for individual companies. To what extent do these different measures of success align? Who should be considered in determining how to measure success? What is the scope of people and places that should be considered in this measurement? What may be some of the criticisms of the DFI and how will they be overcome?

Collaborative Models for Other Sectors

The enthusiasm for the DFI began at its inception with a diversity of dairy supply chain partners and academic collaborators. While the immediate end goal was the creation of the DFI, the reality is that the essence of the collaboration itself has already spurred interest among the partners in forging similar partnerships in other business ventures globally. These spillover ventures may be changing the way business partnerships form around global commodity systems.

In seeing already how powerful the collaboration was to achieving the goal of building the DFI, Christian is confident that the model can be applied elsewhere. “This can really spread like a virus and it can make a change in the behavior and how to collaborate . . . but, all in all, it’s about credibility and trust. A long-term journey of a trust building exercise.”

“We have to inspire, implement, test and improve our assumptions and then share and further engage with others to replicate such initiatives,” said Hans.

If the DFI is successful, then its mark of fame may not only be a new training institute for the dairy industry in China, but an entirely new way of collaborating for achieving shared value among our global commodity systems.

Key Background

Demand for milk in China has been growing constantly at a rate of 12% since 2000 and is expected to increase 38% by 2022 as income levels have risen and the government promotes the nutritional benefits of milk (IATP 2014; Ortega et al., 2012). Simultaneously, China cannot satiate its appetite for milk and milk products. In 2013, China imported 16.6% of all milk consumed within the country.¹ The majority of this milk comes from New Zealand, Australia, and Europe. As China's milk demands continue to grow, it is important for the nation to assess its capacity to produce milk domestically that can meet these demands. These challenges are compounded by reduced consumer confidence in domestically produced milk following a series of food safety incidents in the late 2000s.

Through the past decade, the Chinese dairy industry grew steadily while being largely unregulated (Pei et al., 2011). Small farmers still provided the bulk of China's milk, even though consolidation of processing companies was increasing. Even in 2006, 81% of all milk produced in China came from small farmers with fewer than 5 cows (IATP 2014). Milk was collected through common milk collection centers or through middlemen. Yet, despite rising demand, prices were low and farm inputs and feed were increasing. This series of events made for challenging economic viability and led to conditions in which farmers and middlemen within the system were economically desperate to a point where milk adulteration became a strategy in which to attempt to break even or make a profit.

In September 2008, Chinese media reported that milk for infant formula had been adulterated with melamine in an effort to increase its protein content, likely at milk collection centers or through middlemen (Gossner et al., 2009). Other scandals suggested that water had been added to milk to increase volumes previously (IATP 2014). A number of large scale companies, though not Nestlé, were implicated in the scandal, which sickened in total 300,000 Chinese infants and young children with kidney and urinary tract issues and resulted in six deaths. Not surprisingly, consumer confidence in Chinese milk was deeply shaken and demands for change were imminent following the incident (Ortega et al., 2012).

As a result of these events, the Chinese government has reviewed nearly 500 dairy standards since 2008 and implemented a number of regulatory measures (Hong et al. 2014). Robert Erhard, head of the DFI reflected:

All milk had to be chilled, lorries had to be certified by the government, farmers needed to be registered, milk collection centers had to be audited by the central body and licensed. From 2008 the collection centers had to be linked to an actual processor and a wave of new, large farms started to be built. One of the new policies drafted encouraged dairy companies to vertically integrate the dairy farming into its operation so as to control the milk from farm to fork or chopstick. This meant that either dairy companies had to have long term supply contracts, be co-owners or investors, or be the sole owner and operator of a dairy farm. Infant formula was also newly categorized as a pharmaceutical product and has to be tested to one of the highest standards globally.

¹ Food and Agricultural Organization.

Most recently in 2013, the State Food and Drug Administration, the Ministry of Industry and Information Technology and nine other ministries jointly released new standards for strengthening the quality and safety control for infant milk formula by requiring that all infant formula milk powder production facilities must be self-built and self-controlled. These policies led to a government demand for larger, and more centrally controlled dairy farming systems in which milk supply can be consistently monitored.

Exhibit 1 Number of Chinese Dairy Farms at Different Herd Sizes (2007–2010)

Annual Inventory (head)	2007 Farms	2008 Farms	2009 Farms	2010 Farms	% change 09/08 Farms	% change 10/09 Farms
1–4	2,159,701	1,970,755	1,816,359	1,750,895	-7.32	-3.60
5–9	295,789	398,744	374,541	345,667	-6.07	-7.70
10–19	149,106	143,358	138,265	138,246	-3.55	0.00
20–49	42,079	51,804	49,490	49,450	-4.47	-0.10
50–99	14,175	13,842	13,685	14,758	-1.13	7.80
100–199	4,421	4,425	4,324	4,640	-2.28	7.30
200–499	2,336	2,679	3,341	3,579	24.71	7.10
500–999	768	1,026	1,773	2,061	72.81	16.20
1,000 and above	339	454	706	898	55.51	27.20

Source: Reproduced from Foreign Agricultural Service, USDA 2012 Semi-Annual (P6) and 2011 Annual (P3).

References

- Gossner, C.M.E., Schlundt, J., Embarek, P.B., Hird, S., Lo-Fo-Wong, D., Beltrans, J.J.O., Teoh, K.N., Tritscher, A. 2009. The melamine incident: Implications for international food and feed safety. *Environmental Health Perspectives*. 117: 1803-1808.
- Hong, M., Xia, C., Pan, Z., Yongning, W. 2014. "What have we learnt from the melamine-tainted milk incidents in China?" in *Practical Food Safety: Contemporary Issues and Future Directions*. Eds: R Baht and V.M. Gomez-Lopez. John Wiley & Sons.
- Ji, A.L., Wong, Y.I., Cai, T.J., Liu, J. 2014. Infant formula safety concerns and consequences in China. *World Journal of Pediatrics*. 10: 7-9.
- Ortega, D.L., Wang, H.H., Olynk, N.J., Wu, L., Bai, J. 2012. Chinese consumers' demand for food safety attributes: A push for government and industry regulation. *American Journal of Economics*. 94: 489-495.
- Pei, X., Randon, A., Alldrick, A., Giorgi, L. Huang, W., Yang, R. 2011. The China melamine milk scandal and its implications for food safety regulation. *Food Policy*. 36: 412-420.
- Sharma, S. and Z. Rou. 2014. China's dairy dilemma: The evolution and future trends of China's dairy industry. Institute for Agriculture and Trade Policy.
http://www.iatp.org/files/2014_02_25_DairyReport_f_web.pdf

Appendix A: Nestlé Dairy Farming Institute Partners

Alta Genetics:

Alta Genetics aims to consistently deliver high impact sires whose influence extends for generations. We provide services to improve and maximize reproductive performance.

Alltech:

At Alltech, our mission is to improve the health and performance of people, animals and plants through natural nutrition and scientific innovation. Alltech improves health and performance by adding nutritional value to food and feed through its innovative use of yeast fermentation, enzyme technology, algae and nutrigenomics.

Avery Weigh-Tronix:

Avery Weigh-Tronix is one of the world's leading suppliers of weighing solutions. With over 250 years of experience, the company designs, manufactures, markets and services a broad range of high quality industrial products and weighing systems. Avery Weigh-Tronix operates worldwide through a network of wholly owned companies and international dealers and distributors, allowing us to provide a fast response and locally tailored solutions in more than 100 countries.

Boehringer Ingelheim:

Boehringer Ingelheim is one of the world's twenty leading research-driven pharmaceutical companies with more than 125 years of experience. Get to know the values that drive us: Care, Independence, Responsibility and Innovation.

Eastrock:

Farm Design Services.

Elanco:

Elanco is a world leader in developing products and services that enhance animal health, wellness and performance. Elanco has a comprehensive portfolio of nearly 300 brands encompassing therapeutics, vaccines, parasiticides, antimicrobials, surgical, enzymes, food safety and more. It also was a feedback mechanism that measures the productivity and health of each animal and how to improve each animal over time.

Foester Technik:

Förster-Technik plays a crucial role in shaping the future of modern agriculture. What began in 1971 with a pioneering spirit and the first automated feeder is now the award-winning and world-renowned innovator in calf rearing. Förster-Technik is used in more than 50 countries worldwide, more than 50 patents impressingly prove the strong performance. Unless the calf is fed properly, the animal will never become a healthy producer of milk in an environmentally sound manner.

GEA:

GEA provides the world with innovative solutions for smart food processing and for a more efficient use of energy resources. GEA is a global engineering group recognized for its excellent technologies, its dedication to provide best solutions to its customers, and its management principles.

Goke:

Goke is dedicated in providing unique solution for zootechnology sector to meet demands of large-middle sized cattle farms, goats and sheep farms, livestock processing enterprises and feeding centers. The company provide total solution from cultivate, roughage harvesting, storage, transportation, TMR mixer wagon, accurate feeding analysis system, calves feeding, forage machinery and equipment, manure treatment equipment, etc.

Land O' Lakes:

Land O'Lakes, Inc. is one of America's premiere member-owned cooperatives. We offer local cooperatives and agricultural producers across the nation, an extensive line of agricultural supplies, as well as state-of-the-art production and business services. We also are a leading marketer of dairy-based food products for consumers, foodservice professionals and food manufacturers. It also has extensive overseas experience in developing milk food systems from appropriate genetically improved cows and feed improvements for young calves to mature animals. It also has extensive overseas experience in working in the forward stream markets to the end consumer and, in many cases, is the category manager of major global supermarkets

Nestle:

Nestle is the world's leading Nutrition, Health and Wellness company. Our mission of "Good Food, Good Life" is to provide consumers with the best tasting, most nutritious choices in a wide range of food and beverage categories and eating occasions, from morning to night.

Northeast Agricultural University:

Northeast Agricultural University, founded in Harbin in 1948 and originally named Northeast Agricultural College, is a key university directly under Heilongjiang province. NEAU comprises 18 colleges and 1 Education Department, covering the disciplines of Agronomy, Engineering, Science, Economics and Management.

SCR:

SCR strives to be the global leader in Cow Intelligence SCR empowers farmers with the insights and analytics needed to optimize the productivity of every cow. We facilitate growth, drive efficiency, and deliver peace of mind. We strive to secure dairy farming's future by monitoring every cow - enabling smarter production, more sustainable practices, and more successful farmers.

University of Wisconsin, Madison:

UW-Madison is a public research university in Madison Wisconsin with a well-known, world class, dairy research facility.

Zoetis:

Zoetis is a global animal health company dedicated to supporting customers and their businesses in ever better ways. Building on 60 years of experience, we deliver quality medicines and vaccines, complemented by diagnostic product and genetics tests and supported by a range of services.

Source: Casewriter.