Keio University Business School

Akikawa Bokuen Co., Ltd.

In early summer 1999, President Minoru Akikawa of Akikawa Bokuen, Co., Ltd. turned his thoughts to expansion into new areas as he cast his mind over the past 25-odd years since he set out on his own. Having broken new ground in November 1997 as the first person in Japan to publicly list a dairy farming, poultry and agriculture company, Akikawa was considering an action plan to propel the company forward in the midst of Japan's prolonged economic slump.

Company Profile

Akikawa Bokuen is a livestock company that produces and markets poultry, eggs, milk and processed foods, located in the outskirts of Yamaguchi City. In the March 1999 quarter, sales by the company totals ¥3.83 billion, ordinary profit is ¥193 million, and net profit is ¥88 million (Exhibit 1). A breakdown of sales figures shows that the company's own products, such as eggs, chicken, pork, beef, and processed foods including chicken cutlets, *yakitori* sets, chicken soup, chicken nuggets, and yogurt, accounted for 79.5%, while the remaining 20.5% are made up of sales of various goods purchased externally, and sales of feed, fertilizer, and merchandise used in livestock and agricultural production to cooperative farms (Exhibit. 2). The company sells its products through diverse marketing routes that consist of consumer cooperatives, supermarket chains, general wholesalers and retailers, food producers, and direct sales to consumers (Exhibit. 3).

In early summer 1999 Akikawa Bokuen has 177 employees (64 part-time), of whom 70% are women. The company is organized into a headquarters, six departments, and one corporate staff office (Exhibit. 4). As of 1999, the company is linked to about 100 cooperative farmers (six egg, 23 chicken, and 11 milk producers and one pig farmer, while the remainder are mainly farmers producing organic vegetables). Functioning as the core

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around which these cooperative farms operate, the company undertakes a broad range of business activities including technological guidance, feed supplies, R&D, quality control, food processing, distribution, and planning and marketing.

Origins in China

President Minoru Akikawa was born in Dalian, China in 1932, and spent his kindergarten years there. His father went to China in the mid 1920s, and ran farms in Dalian and Lushun until the end of the Second World War. Here lies the roots of Minoru Akikawa – "I used to like sitting with my brother watching the water seep into the ground in the tomato fields." His father was the first son of a sake brewer in Niho-gun Ehime Prefecture, but after graduating from commercial high school, he followed his childhood dream of farming and went to China.

In China he drifted from farm to farm, but after writing an article entitled "My love of farming" for the Manchuria Railways Newspaper, he was granted a lease over a 40 ha area of land in Dalian owned by the Manchuria Railways (this was later increased to 250ha). Having finally achieved success after much hardship in trying to sink wells to draw water for the parched farmland, in 1927 he at last started his long-cherished dream of the Akikawa Farm. He grazed cattle and poultry, planted tens of thousands of apple trees, and also cultivated grapes and vegetables over a large area. Interested in brewing, he produced wine, cider, and also beer with assistance from German experts he invited to his farm, and cultivated an export market in Singapore for his locally produced Chinese food stuff. Overlooking the blue waters of the nearby ocean, the farm on the weekends was a hive of activity with as many as 3,000 visitors from the train that stopped during the summer months at the temporary "Tsukigaura" Station established by Manchuria Railways within the farm area. Raised in such an environment, the young Minoru Akikawa was greatly influenced by his father, who often said "farming is a divine calling," and his innovative approach to farm management.

Minoru Akikawa returned to Japan just before the end of the war to sit for his middle school entrance exams. After the war he lived with his maternal grandmother in Yamaguchi city. In addition to his schoolwork, during this period he kept chickens to help with his grandmother's family budget. This started when his grandmother bought him six chickens when he was in sixth grade in primary school. "I was totally fascinated by

those chickens. I can still clearly remember each of their names and faces. During summer holidays in my first year at middle school, I went to the local library every day and read all 83books they had on raising chickens. I summarized the information in all of these into my own book, *Knowledge of Poultry Farming*. The things I learned then are still of great use to me even today," he recalled.

About two and a half years after the end of the war, Akikawa's father unexpectedly returned to Japan in a terribly emaciated condition. He was drafted in the final stages of the war and was sent to the north, but was captured near Siberia. He escaped, but was recaptured, and was forced to work in the snow tearing up and removing the railway line toward Siberia. Every day he had to crack through the frozen ground to dig graves to bury his dead comrades. He planned yet another escape, but no one would join him, so he escaped alone. From there, he walked most of the 3,000km back to Dalian.

Later, Akikawa and his father experienced a period of hardship and poverty when clearing uncultivated land for farming. One day while he was in his second year at middle school, Akikawa was told by his father "You're the first son, so the family becomes your responsibility." From that day, he was placed in charge of the household budget, and was taught double-entry bookkeeping.

Chicken breeding and collapse of the cooperative association

Expressing what he has felt from that time, Akikawa explained, "Compared to farming in China before the war, Japanese agriculture is quite poor. Farms are small, and because rice is the central crop, farmland has to be flat, so in cost terms, it's no match for agriculture overseas." So he thought about improving chicken breeds, and selling the chicks of laying birds. He was very interested in studies on breeding techniques from his primary school days. From before the war, there was a contest called the chicken flock certification system in which prefectural or national breeding stations would look after flocks of ten chickens from poultry breeders, and keep count of the number of eggs laid in one year. The breeder with the most eggs was featured in the monthly poultry farming magazine, and the overall winner for the year was awarded the Minister of Agriculture and Forestry Prize. In 1955, while Akikawa was in his fourth year of science at Yamaguchi University, one of his chickens laid 365 eggs in the year, and for this Akikawa was awarded the "Fiscal 1954 Egg Production Capability Certificate Record" by

Agriculture and Forestry Minister Ichiro Kono. That year, throughout the world only two birds laid 365 eggs, so it was an outstanding achievement indeed. The following year, Akikawa had the honor of explaining the poultry farming process to the Emperor and Empress when they visited Yamaguchi Prefecture.

Backed by these breeding techniques and achievements, Akikawa put forward a business proposition centering on chicken breeding to the local poultry farmers cooperative. In 1956 he was appointed director of the Niho Poultry Farmers Cooperative, and embarked on an incubation and chicken breeding program on a full scale. He threw himself into the research, often sleeping in the poultry shed.

His efforts bore fruit, but just as the cooperative's operations were finally starting to get on track, in 1962 import liberalization opened the market doors to a rush of inexpensive and high-producing hybrid chicken breeds from the U.S. With the flood of these hybrid chickens, in a mere two years, most of Japan's 1,400 chicken breeders either had to close down their operations or went bankrupt. Akikawa's cooperative suffered the same fate. It plunged into ¥700 million debt that took ten years to clear (1967～77). He described his experience at that time.

> After declaring that this was not the way it would end, and wondering what we could do to protect and nurture farming in Japan, I came up with the idea of a network for producing health foods. If I hadn't have gone broke back then, I doubt whether I'd be doing my present work of "supplying healthy and safe foods." My father talked about the risk of agrochemicals from before the war, and was committed to organic farming. At first, I disagreed with my father, telling him "ideal and reality are two different things," but after my business collapsed, my eyes were opened as if by some divine revelation. Until then, my sole aim was high production at the lowest possible cost. If a bird became ill, I gave it antibiotics. But humans need good food to be healthy. Food is the source of life. It doesn't matter how much money you have, you can't have a happy life without good health. And producing good food is the mission and responsibility of farmers.

In 1972, the mid point of his efforts to clear his debt, Akikawa decided to make a

fresh start in poultry farming, this time without using any agrochemicals whatsoever with a view to producing safe food that can promote human health. At that time, he had ¥50,000 in cash, and ¥127,500 from surrendering his welfare annuity. He was also able to obtain a ¥200,000 loan from the People's Finance Corporation. In July 1972 he found an old run-down poultry farm to lease, and with this the Akikawa Poultry Breeding Farm was born.

From incorporation to OTC listing

In May 1979 Akikawa established Akikawa Foods Co., Ltd. capitalized at ¥3 million. With the aim of producing and selling natural foods free from any agrochemicals, the company continued and expanded the poultry farming operations Akikawa had run until then on an individual basis. In 1980 the company further expanded its business operations as it began selling milk and eggs at a commercial level.

Following the establishment of the Japan Organic Farming Society in 1971, organic farming societies appeared one after the other in all prefectures. The Yamaguchi Organic Farming Society was established in 1974, and over the next three years, its membership grew to about 200. This was the time the producers-consumers campaign declaring "producers protect the safety of consumers, and consumers protect the livelihoods of producers" gained momentum. Akikawa took an active part in this association from the beginning, and it was through his participation that he became acquainted with the egg and vegetable farmers who shared his views and would eventually form the Akikawa farm network.

Akikawa began research into organic farming, and along with his own business, he was running an educational campaign (study group) on producing health foods. As of 1999, this is still continuing, mainly at the request of co-ops, at about 150 locations a year, each attracting about 200 participants. The normal format for the study group is a slide presentation for about two hours in the morning, followed by general discussions, including lunch. The core themes of the slide presentation are food safety, organic cultivation, and breeding without chemicals. Akikawa said the following about this campaign.

The amount of information consumers have on safe foods would rate

about 40 out of 100 for zealous consumers, and probably not much more than about 10 out of 100 for ordinary consumers. In contrast, I take great pride in the fact that the information we have at Akikawa Bokuen would rate about 90. We are always explaining the kinds of problems that associate with agriculture and food, and how we're dealing with these problems. Very few farmers take the initiative to get out and speak with consumers, so what we're doing is quite unique. We always try to look at things through consumers' eyes. Co-op meetings attract consumers who are knowledgeable about the issues, but they are only a very small minority. Forming the vast majority are the general consumers. But when the time comes, I believe those general consumers will undoubtedly change their perceptions. There are also two kinds of producers - those that place credit in consumers, and those that don't. It's the former type of producer that will succeed and grow from now on.

Business with the current Federation of Green Co-ops began in 1974, and this was a major support in the company's early days. Akikawa succeeded in developing the techniques for raising poultry without chemicals in 1981 (discussed later), and began producing and marketing beef and pork in 1982. In 1985 the company moved into food processing on a full scale, and established and expanded facilities for producing processed frozen foods and chicken soup. On the marketing side, in 1988 the company secured a major customer in the Federation of Seikatsu Club Cooperative Associations (head office in Tokyo), and also began selling products to supermarkets in Japan's western districts. With this, the company's sales figures soared.

In 1993 as a part of a brand strategy for nation-wide expansion, Akikawa changed his company's name to Akikawa Bokuen, and set about building a new image. In 1995 he opened the antenna shop Bokuen Club (sales area of 16.2 m^2) selling his company's health foods in the Yume Town Supermarket in Higashi-Hiroshima. The role of this shop was to spread the Akikawa brand image of producing healthy, safe and quality foods, and collect consumer-related information. Two years later in 1997 the company set up a Tokyo sales office (floor space of 7.92 m^2) to establish a presence in the Tokyo market, and began

targeting department stores and supermarkets in the Kanto region. Using its highly distinctive product line as its key selling point, the company very quickly built up its customer base.

On November 19, 1997 Akikawa achieved his long-held desire when the company became publicly listed with its registration on the OTC (over-the-counter) market. Of the ¥399 million obtained from the share offering, the company used ¥320 million for production facility, and ¥67 million for loans to assist cooperative farms in their capital investment.

The Akikawa production philosophy and the production network structure

Akikawa's father, who pursued the ideal form of agriculture from his days as a farmer in China, often used to say that farming and a company structure are incompatible. Carrying on his father's views, Akikawa had the following to say about this.

> Essentially, farming is best carried out as a family business. That's because work involving living things requires meticulous care and devotion. Farming doesn't lend itself to the conveyor-belt production methods seen in major corporations. For example, the key to raising dairy cattle effectively is reproduction management, that is, knowing the mating cycle of individual cows, and when to mate which cows. Pigs are the same. Chicks have their own suitable temperature zone, and if the environment isn't right, they keep squeaking when roosting. So at night it's crucial to go around and check. Even when I come home after having a drink, I'll always check to make sure everything is all right.
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> I believe family management is the basis of agricultural production. But family management alone does have its limitations in technical development and marketing. I felt we had to build a system that kept all the advantages of family management, i.e. independence and self-reliance, but at the same time, had scale merit through voluntary and independent participation by individual producers.
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> The idea of exploiting the advantages of family management while overcoming the scale handicap by collaborating in the post-production stages is also followed by agricultural cooperatives. But while

agricultural cooperatives can apportion functions that maximize individual strengths and capabilities, they do have their negative side in that exactly where responsibilities lie can be vague, and this tends to lead to a loss of a sense of accountability. This in turn can lead to a deterioration in farm management efficiency, and in farm profitability. This is one of the lessons humankind learned in the 20th century. Agricultural cooperatives deduct costs from sales and hand the remainder over to the producers. Only farmers can be members; staff working in these organizations are not allowed to join. General meetings ramble on endlessly with criticisms of the executives and officials. The organization side makes its funding claims to keep the cooperative running, while the members do what they can to maximize their returns from the cooperative. Under the agricultural cooperative organization, innovative and insightful ideas are rarely given the chance to bear fruit. This is the main reason I chose to form a joint-stock company rather than a cooperative association. In this way, I felt I could resolve both the deficiencies of the agricultural cooperative structure and the limitations of the family management structure. With a joint-stock company, not just the farmers, but the employees as well can buy into the company. And this allows all those with an interest to build a closely interwoven democratic relationship.

As shown in Exhibit 6, the production division of Akikawa Bokuen is a collective of family-run farms in a collaborative relationship with the company. At the center of this collective, the company functions as a cooperative management body. Production is contracted to cooperative farmers under a strict regime of quality control. For its part, the company carries out general functions of technological development, technological guidance, purchase of raw materials, materials and feed supplies, quality control, production plans, food processing, distribution, planning and marketing, and consumer PR campaigns. The scale of cooperative farms in the production division is reasonably small, so the large items of equipment needed for cultivating crops such as vegetables and rice are shared among the farmers. Akikawa spoke about this production structure as follows.

We tend to think that mechanizing and increasing the scale of farming will immediately make it more efficient, but this is not always the case. The only type of farming where expanding the scale has achieved high productivity is probably poultry farming. For other types, the optimum size is that which can be managed by a family. That said, though, there are various things that farmers operating as individuals would have difficulty in doing. For example, Akikawa Bokuen invested a few hundred million yen to develop its own feed mix. It's impossible for farmers to do this by themselves. It was possible for us because the development costs were shared among many farmers. Intensifying the scale was necessary to have U.S. farmers cultivate their crops using minimal chemicals so as to keep the concentration of residual chlorine to below 0.001 ppm, and transport the crops to Japan without post-harvest chemical treatment. We currently import 3,500 tons of corn at a time (corn constitutes about 65% of the feed). Agriculture is life-based and complex management, and network-based production structures, rather than mass-production, are most effective. If we were to run the current production structure by ourselves in an integrated format, we would need to find an extra ¥10 billion. When we started in 1972, we didn't even have a zero balance; we were in negative territory. It's highly unlikely that any bank would have even considered lending us that ¥10 billion, and even if one did, the weight of that loan probably would have put us out of business a long time ago. Agriculture in Japan is said to be a structurally depressed industry, and I believe our mission is to reorganize and revitalize farming through the creation of new values of food health and safety. We're reinforcing our network links not with money, but with values. As we head into the 21st century, we are facing the advent of a network society revolving around independence and solidarity in all fields. So if we look at it in this way, our network management and operations in farming goes beyond just farming. We believe this is linked to how we will all live our lives in the 21st

century, so we are quite excited about it.

To date, Akikawa Bokuen has not canceled the membership of any farmers participating in the network, and has purchased all contracted products for the contracted prices, regardless of any subsequent changes in demand. The company supplies cow manure to the compost center owned by the local agricultural cooperative. The center ferments this to make organic fertilizer, which is then supplied to member farmers (the fermentation process for poultry manure is quite simple, so in principle, farmers do this themselves). As for sales, the company had no connection with agricultural cooperatives, but from this year, business ties will begin in the egg division. Separate from the poultry farmers cooperative which Akikawa had been involved in until 1977 to clear the cooperative's debt, he served as the auditor to the local Niho Agricultural Cooperative until 1992. This cooperative later heavily promoted organic farming.

Management system

Akikawa believed that unless the participating farmers and the employees felt the same passion for the company that he himself felt, structuring agriculture into a corporate network could never succeed, so he asked them to invest in the company. Each participating farmer's share quota was determined through discussions at the producers' subcommittees for each product category, and was based on the farm scale, such as the number of animals, and the field size of the farm. As of 1999, the average investment per person, including company executives, employees and part-time workers, is about ¥2.9 million. They and the participating farmers form stable shareholders (specified shareholders), and account for 69.9% of all the shares issued. Akikawa and his family members hold 40% of these shares, but a memorandum is signed stating that these shares are handled as a fund to sustain the company's philosophy of "providing healthy and safe food." Akikawa said the following about this point.

> Our employees have a strong feeling that the company belongs to them, so they work hard without any supervision. For quite some time after the company was established, I was very busy with the organic farming campaign, my official duties with the local council, and my auditing duties with the cooperative, so I was often away from the

company. But even at these times, the employees worked just as hard. The ideal is to have the participating farmers and employees invest a lump-sum amount large enough so that they feel a sense of responsibility to the company and its performance. If one producer underhandedly uses chemicals, the entire system we have built up will collapse.

Akikawa believes that "profit is a reward from the customers: one third should go to the workers (employees) in the form of bonuses, one third to the shareholders, and the remaining one third retained as internal reserves." Employees are shareholders as well as workers, and they are also managers. The company has encouraged a system in which employees pool one third of their bonus as a "share reserve fund" for use when the company allots new shares for purchase by its shareholders. One problem Akikawa faced in such a full-scale employee shareholder system was the taking back of shares from employees who were retiring or otherwise leaving the company. In such cases, the person leaving indicated a minimum sales price, and the share were offered for sale within the company. Fortunately, these sales always went smoothly, and sellers received a higher price than they had hoped for. When he looked at the long-term future, though, he realized that a much more formal system was necessary, and started to think seriously about listing the company on the stock market. Akikawa explained the new remuneration and human resources development systems.

We aim at having all executives hold at least 35,000 company shares as evidence of their commitment to the company. We're also thinking about stock options in the future. The greater the executive's responsibility, the larger the number of shares to be held. They manage the company on the basis of frank and open discussion. It's simple to take responsibility and quit when things get tough. What I want is for executives to feel they have an obligation to the company, and instead of quitting in the face of difficulty, continue working to turn the results around. Last year the company introduced a system in which bonuses are linked to the share price. This covers part-time staff as well. Traditional bonuses are connected to length of service and

company results, but we have added the extra element of linkage to share prices.

Twice a month Akikawa Bokuen holds an executives meeting where division directors and above engage in frank and open discussions on any issue for five or six hours. Important decisions are made at the monthly director's meetings (departmental heads and above are all directors) on the basis of these discussions. The company also holds employee meetings for all employees several times a year, where discussions cover such items as annual budget, accounts settlement, and pay rises. Akikawa's policy is to tell all employees both good news and bad news.

It's easy to tell people good things, but we tend to be reluctant to pass on anything bad. This is partly because of concerns that if employees are told any bad news they may quit, or if the banks hear about it, funds may dry up. Even so, I'm an optimist when it comes to human nature, and I believe that if I'm honest with the employees even about bad news, they'll want to do what they can to help the company recover. Now that we are a listed company, there is a need to hold back on some matters because of the insider regulation law, but I still try to pass on as much as I can to all employees. This is because I believe that dreams cannot be realized without the sharing of information. Within the home, if all members discuss the family's dreams with each other, in other words, share information, and if the mother has to go out to work, then the children will also help to realize those dreams by helping the mother around the home. This applies equally to managing a company. Our company places great value on ideals, so this policy will not change.

Akikawa wants to eliminate management by orders or directives from the top down as much as possible, and adhere to a management style that values participation and initiatives.

Production plans are determined through discussions at producers' meetings organized for each category of produce. This is also the case when there is a need to

adjust production. When increasing production capacity following an expansion of sales routes etc., the company will often take in new member farmers rather than build up the capacity of individual members. Producers' meetings are held every two or three months, also with the aim of technical training.

Supermarkets generally place their orders on a weekly basis; daily orders covering a week are placed two days before the weekend for the following week. For co-ops, orders covering a week are placed five days before the week starts. While reasonably accurate forecasts of demand are possible based on past data and trends, it is still necessary to include some latitude in the forecasts. For example, in the case of milk, the company adds a 10% supply leeway to forecasts to cope with any increase in demand.

At, say, the field crop producers' meetings, members generally raise their hands to work out who supplies which crops in what amounts. Standard yields for each crop are set beforehand, and if, for example, 1,200 meters are needed for 13,000 bunches of spinach, the meeting determines who will be responsible for how many meters of planting by a show of hands. Meetings by vegetable producers are normally held in the evenings, and previously Akikawa did the necessary coordination, but the system is now functioning smoothly, and planting plans can be finalized quite quickly without him.

Production of safe and tasty eggs and chickens

Akikawa explained the following about egg production in Japan, which has for a long time been a model of low prices for consumers.

> Immediately after the war, each producer raised on average about 50 chickens. Since then, the industry has been seeking to increase the number each farmer can manage as much as possible to raise mass-production efficiency, and these days farmers are able to keep up to 30,000～50,000 birds. First, trading companies led the way to develop the feed industry. Then, agricultural cooperatives and the trading companies lent money to farmers so they could build new facilities and expand their scale of operations. To repay these loans, farmers expanded and tried to increase their sales. This resulted in excess production and even more intense price competition, and so the cycle continued. Over the years, egg prices remained constant because of

this. This was great for consumers strictly in a price sense, but keeping large numbers of birds in narrow confined cages in poultry sheds promotes the spread of disease, so antibiotics and other drugs and chemicals have to be used. Consumers therefore are supplied with eggs from birds that have been exposed to all these chemicals. No one would ever dream of doing this if they were producing eggs purely for their own consumption. They would make sure the quality was much better.

Akikawa Bokuen has developed more than 80 kinds of feed technologies. Especially since 1990, the company has poured great effort into technological development from the perspective of how best to produce healthy and safe foods, becoming an industry pioneer in adopting a completely chemical-free breeding structure. Akikawa gives his reasons for pursuing such technological development.

Pharmaceutical, agrochemical or chemical companies have generally developed drugs and chemicals that "sell well" or "work well," but they are sadly lacking when it comes to the consumers' standpoint and developing technologies for producing healthy food. Food sustains life, so we've sought to produce vegetables without using chemicals, and raise poultry without using antibiotics. We particularly wanted to eliminate chemicals containing organic chlorine compounds that can cause cancer and deformities. We must think very seriously about the dangers of chemicals that accumulate in the body. The responsibility of livestock farmers is especially heavy. A reduction in residual agrochemicals has resulted in a reduction of dioxin, which has become a major social issue, and we are quite encouraged by these developments.

In 1981, not long after Akikawa Bokuen was established, Akikawa successfully developed technology for raising young chickens without chemicals, a challenge he had been tackling for quite some time. One effective element was what he named the "one farm, one lot, single age" method (Exhibit 7). In this, they place all chicks hatched at the

same time in the one poultry shed, and also ship them at the same time. The poultry shed is then left empty for about a month after the birds were shipped, during which time the shed is cleaned and the floor fumigated with fire. Through this it is possible to prevent disease or infection without using antibiotics. In terms of quality, Akikawa Bokuen keeps the chickens for 60 days rather than the normal 40～55, and this improves the taste of the chicken meat considerably.

The company has set its own specifications for feed based on its own detailed studies. Reflecting its serious stance on the issue of residual chemicals and the potential risks they pose in causing cancer, the company uses surveys on soil pollution levels throughout the world to designate production centers in safe regions. For example, for feed corn, it only uses that produced by American farmers with which it has established business ties. It has signed contracts with these farmers for them to use only seeds that have not been genetically modified, keep agrochemical use to an absolute minimum, and to ship corn that has not been subject to any post-harvest chemical treatment for preventing blight or insect pests. The first step the company took was to make up an agrochemical pollutants distribution map. This was a major undertaking in which the company had material sent from all over the world to survey hazardous areas, but it continued the survey with the utmost care, initially with subsidies from the local government. It is only because of this survey that the company was able to perfect breeding techniques free from concerns about residual chemicals and hormones.

The company has also succeeded in developing its own plant feed without residual chemicals. Commercial mixed feeds contain animal fat to promote laying or fatten broilers. Adding fats can raise the efficiency of feed for laying hens by about 25% and for broilers by about 22%. Much of the fat used in the feed is from cattle and pigs (tallow) slaughtered at abattoirs. The problem with this is that residual chemicals accumulate in body fat. If inappropriate feed is used for the cattle or pigs, the chemicals accumulate in the fat, and if this fat is then added to the chicken feed, the residual chemicals are then passed on to the chickens. To overcome this problem, Akikawa Bokuen took up the challenge of producing feed without any animal component, such as fish meal, meat and bone meal, and chicken meal, whatsoever, and perfected complete plant feed that uses pressed soybean meal or soybean flour as a fat and protein substitute.

The company has also adopted standards of quality control that are much tougher

than national standards. For example, concentrations of residual organic chlorine compounds must be less than 0.001 ppm. It has also set detailed standards for work procedures and quality in its manual on raising methods so that all cooperating farmers produce the same variety with the same feed using the same chemical-free methods.

Developing the company's own brands

Of the Akikawa Bokuen products, the company's own milk brand Akikawa Milk is a unique product with a rapidly expanding market. It is sold through the uncommon membership sales system. The company is steadily expanding its sales range centering on Yamaguchi Prefecture but extending through to the Kinki region, and as of 1999, there are a total of about 700 shops, including Co-op Kobe, supermarkets and natural food stores, selling Akikawa Milk. The milk has also started appearing in some stores in the Metropolitan Tokyo Area, including Inageya, Seibu, and Sotetsu Rosen (Exhibit 6). The retail price for non-members is ¥400～500 for a 900ml bottle (price varies according to area), which is about double the price of normal milk. Members receive a ¥50 discount, and there is no membership fee. For members, special 900ml milk bottles tagged with the member's name is placed in the shop refrigerator according to a predetermined schedule, and if the member fails to collect the milk on the set day three times in a row without giving advance notice, membership is cancelled. The glass bottles are recycled, and the ¥100 bottle deposit is refunded when the bottle is handed in for recycling.

Akikawa Milk comes from naturally grazing Jersey and Holstein cows raised on feed that has been checked for residual chemicals, e.g. PHF (post-harvest free) corn organically cultivated using seeds that have not been genetically modified. Akikawa Milk is produced by Mutsumi Farm, Akikawa Milk, and ten dairy farms mainly in Yamaguchi Prefecture.

In June 1988 the company started selling 200 ml bottles of Akikawa Milk (retail price of ¥180～200) through convenience stores to cultivate the youth market. Hanging around the neck of these bottles were product tags (5 cm square folded card) containing details of the producing farm and topics concerning the safety of fresh food. These tags are changed every month. Tags are used in this way because it was judged that simply inscribing the product name, ingredients, and seller's name on the set space was not giving consumers enough information. The information includes details that housewives are very concerned about, such as dioxins and environmental hormones contained in the

milk, and the risks posed by genetically modified foods, and general items of interest, such as information about dairy cows born on the company's contracted farms. These bottles are also recycled, and the ¥10 deposit is refunded when the bottle is returned for recycling. The bottle recycle rate is about 80%. Akikawa gave the following reasons why he prefers glass bottles.

> Even though there are additional costs involved in recycling, such as distribution control and cleaning, I prefer using glass bottles because they are better for the environment, safer, and do not spoil the taste of the milk. We ask consumers to wash the milk bottles after use to reduce cleaning costs. Paper cartons are certainly convenient, but bleaching during their manufacture causes environmental problems. Because the inside of the cartons are coated with a chemical compound film, there are also concerns about the safety of the milk, and it can spoil the flavor and aroma of the milk. While the paper part of the cartons is recycled into toilet paper etc., the peeled off plastic film is burned, and this pollutes the environment.

Other Akikawa brand products include Green Meadow eggs and Bokuen-dori health chickens. As in the case with Akikawa Milk, the main feature of these products is that the chickens have been fed on PHF corn that has not been genetically modified. For eggs in particular, in 1998 the company introduced its own testing technology－said to be an agricultural version of HACCP (Hazard Analysis and Critical Control Point)－that increases the precision of tests for Salmonella enteritidis, a common cause of gastroenteritis. The eggs cost ¥260 for a pack of six.

Aiming at further growth

Akikawa's son, Tadashi, joined the company in 1989 after graduating from the Department of Social Engineering at Tsukuba University. Tadashi holds the positions of managing director, Manager of Corporate Planning Office and Manager of Sales Division, and runs the company jointly with his father. Seen as a talented successor for the next generation, Tadashi is the major shareholder with 1,132,000 shares, or 27.1% of issued shares as of 1998, of which about half were acquired by exercising his rights to the first

unsecured debentures with stock rights (issued on October 22, 1991; total of ¥360 million; interest − long-term prime rate +1.25%) (Exhibit. 5).

Since Akikawa Bokuen's foundation, no participating farmer has left the company network, and in the decade or so that the company's farming methods have been set, the number of farmers wanting to join the network is continuing to increase, and especially after the company was listed. So the company has a certain capability to expand production, provided of course it maintains its markets. It has also been involved in the joint establishment of the Green Network Japan company (head office in Tokyo) in 1996 with vegetable producers' associations and other farming bodies. A marketing company aimed at promotion and product sales in the Tokyo Metropolitan Area, Green Network Japan is the first national network organization for organic farm products in Japan.

Minoru Akikawa's basic theory is that "a revolution happens in the food industry once every hundred years." He states that "the era of price slashing has come to an end; we're now entering a period in which consumers are choosing safety and quality," and wants to develop his hometown of Yamaguchi into an "farming Silicon Valley." He does, however, foresee more imports of healthy and safe foods from overseas. He also sees more local players, such as egg marketing companies, taking a greater interest in this market.

> I forsee imports of farm products including healthy foods from overseas to accelerate, and this will probably place even greater pressure on local farmers. We must nurture farming in Japan also from the viewpoint of environmental preservation. Fortunately in our small islands of Japan, farming producers and consumers are reasonably close to each other, so it's fairly easy for them to build up a relationship of trust through exchanges and the like. This I believe can become a competitive strength of Japanese agriculture against imported products when aiming at healthy foods. Much still needs to be done to ensure affluent human life, for instance, tackling environmental problems. If we do something that is really worthwhile, I've no doubt that it will be acknowledged by consumers and society. In this sense, I think we are in an ideal period. The collapse of the mass-production structure is leading us into a new era, and I feel the trends we are seeing in

agriculture will flow on to other areas as well.

I enjoy achieving the impossible. The image I see within me is the Akikawa Farm in China. I inherited the genes of my father, who made water flow where previously there had been no water. Agriculture underpins life, and I feel pride and responsibility that I am a part of it.

I´m driven by the desire to improve Japanese agriculture, an industry said to be almost beyond help. I intend to carry on my father's spirit of tackling challenges head-on, even when pushed to the absolute limit. I want to taste the fulfillment of doing every within my power to meet a community need, and contribute to the betterment of humankind. Life is indeed empty if one only pursues money.

I'm often told that Akikawa Milk is delicious. When I look at the faces of people making such comments, I sense not just a simple compliment, but a kind of respect as well. At these times, I really feel a sense of oneness with the consumers. To produce something, to get paid for it, and on top of all this, to be respected for it; nothing can make a producer happier.

After recording growth for ten quarters in a row, in the March 1999 fiscal year, the company experienced its first drop in sales and profit. Akikawa explained as follows.

Last fiscal year, consumption cooled as the long recession continued, resulting in a drop in sales not just at department stores, but at supermarkets as well. This also impacted on food other than vegetables. In the first half of the year in particular, sales of eggs and chicken meat fell throughout Japan, and the commodities market plunged. Eggs had just entered an oversupply cycle, pushing the egg market to its lowest levels since the end of the war. Coupled with this, supermarkets, our major outlets, reduced their special sales with an eye to their own profits, and this in turn reduced the quantity of our sales. This had a major impact on the company's revenue, as the company guaranteed producers that it would purchase the planned amount at the contracted price. Fortunately, though, both demand and

the market price picked up from the latter half of the fiscal year, so the outlook for this fiscal year's figures is fairly bright.

In early summer 1999 Akikawa has one thought on his mind. That was in what form should his company move into Japan's biggest market－Tokyo. His goal is to grow the company five times as large as its present size before he stepped down as president. Demand in the Tokyo Metropolitan Area at times accounts for as much as one quarter the national demand in Akikawa Bokuen main product areas of eggs, chicken, and vegetables, so he had been considering an appropriately timed full-scale assault on the Tokyo Metropolitan market for quite some time. The company had already tested the Tokyo market through the sale of milk and eggs at some stores, including York-Benimaru, Inageya, Seibu, Odakyu OX, and Sotetsu Rosen about two years earlier, so it had a reasonable idea of its prospective sales outlets. The problem was deciding on what production and supply structure the company should adopt (see Exhibit 8 and 9).

The first option is to build a new production and supply structure in Tokyo (and surrounding areas in the Kanto region) similar to the one around Yamaguchi. In this case, the process would simply be a repeat of what was done in Yamaguchi: the company would recruit farmers in the Kanto region who share the same views as Akikawa, establish a new company with those farmers and employees as shareholders, then have the farmers convert to the Akikawa production system.

The second option is an offshoot of the first. Akikawa Bokuen would establish a Kanto branch in the Tokyo Metropolitan Area, and have merely a production and supply relationship with Kanto farmers that conform to the requirements of the Akikawa production system.

The third is to build business or capital ties with existing suppliers, such as agricultural cooperatives, Co-op, major supermarkets, and relatively large egg and poultry producers, and have them adopt the Akikawa production system for the Akikawa brand products.

There is also the option of supplying products to the metropolitan area from Yamaguchi, but considering distribution costs and the problem of maintaining freshness, in addition to the need to expand five times the current scale, it is thought the company would very quickly reach its limits.

Exhibit1 Financial report

(Unit: Million yen)

	Mar.'94	Mar.'95	Mar.'96	Mar.'97	Mar.'98	Mar'99
Balance sheet						
Current assets	**1,110**	**1,402**	**1,356**	**1,728**	**1,636**	**1,888**
Cash on hand and in banks	259	591	353	641	525	682
Notes and accounts receivable	401	418	487	486	479	476
Inventories	256	207	190	249	256	226
Others	194	186	323	352	376	504
Fixed assets	**684**	**71**	**64**	**1,006**	**1,504**	**1,665**
Tangible fixed assets	555	550	526	761	1,012	968
Investments etc.	131	16	136	245	492	697
Total assets	**1,794**	**2,115**	**1,999**	**2,734**	**3,140**	**3,552**
Current liabilities	**868**	**802**	**616**	**868**	**867**	**1,323**
Notes and accounts payable	363	346	410	394	376	381
Short-term borrowings	327	283	51	294	373	803
Others	178	173	155	180	118	139
Fixed liabilities	**283**	**126**	**88**	**25**	**203**	**168**
Corporate debentures and convertible bonds	127	4	0	0	0	0
Long-term borrowings	81	78	52	220	157	105
Others	75	44	36	39	46	63
Total liabilities	**1,150**	**928**	**704**	**1,126**	**1,070**	**1,491**
Paid in capital	211	431	431	536	714	714
Capital reserve	136	356	356	461	681	681
Others	803	141	831	29	325	96
Total equities	**644**	**1,187**	**1,296**	**1,608**	**2,070**	**2,061**
Income statement						
Sales	**3,353**	**3,683**	**3,911**	**3,976**	**4,085**	**3,829**
Cost of goods sold	2,658	2,930	3,112	3,079	3,216	3,084
Sales and administration costs	431	466	524	575	594	562
Operating profit	**265**	**287**	**275**	**322**	**274**	**182**
Non-operating revenues	17	17	20	15	19	25
Non-operating costs	25	25	9	5	39	14
Ordinary profit	**256**	**279**	**286**	**332**	**254**	**193**
Profit before tax	**254**	**280**	**288**	**329**	**250**	**189**
Net profit	**124**	**147**	**153**	**171**	**142**	**89**
Others						
Dividends	33	33	56	65	84	84
Directors' bonuses	12	12	12	14	14	9
Dividend /Net profit (%)	26.2	22.2	36.3	37.9	58.9	94.1
Number of shares issued (thousand shares)	1,628	2,783	2,783	3,479	4,179	4,179
Number of employees at term end	77	90	101	104	106	113

Exhibit 2 Business operations and sales composition

Classification	Major products	Sales composition 18th term (Apr. 1, '96 ~ Mar. 31,'97)	Sales composition 19th term (Apr. 1, '97 ~ Mar. 31, '98)
Items produced		%	%
Health foods	health chicken, health pork, health beef	41.4	39.3
Processed health foods	chicken cutlets, *yakitori* sets, chicken soup, chicken nuggets, yogurt	12.3	12.6
Health eggs	red eggs, pink eggs	21.4	21.8
Ordinary eggs	white eggs	—	5.8
Product total		75.1	79.5
Items produced			
Health milk	health milk	6.2	5.8
Ordinary eggs	white eggs	15.4	11.2
General health foods	organic farm produce, foods without additives, organic fertilizer	3.3	3.5
Goods total		24.9	20.5
Total		100.0	100.0

Exhibit 3 Distribution channels

Distribution channel	Sales composition (19th term)
	%
Akikawa Bokuen → Co-op → Consumers	57.8
Akikawa Bokuen → Wholesalers → Retailers → Consumers	21.1
Akikawa Bokuen → Retailers → Consumers	14.3
Akikawa Bokuen → Manufacturers → Retailers → Consumers	1.6
Akikawa Bokuen → Consumers	5.2
Total	100.0

Exhibit 4 Organization

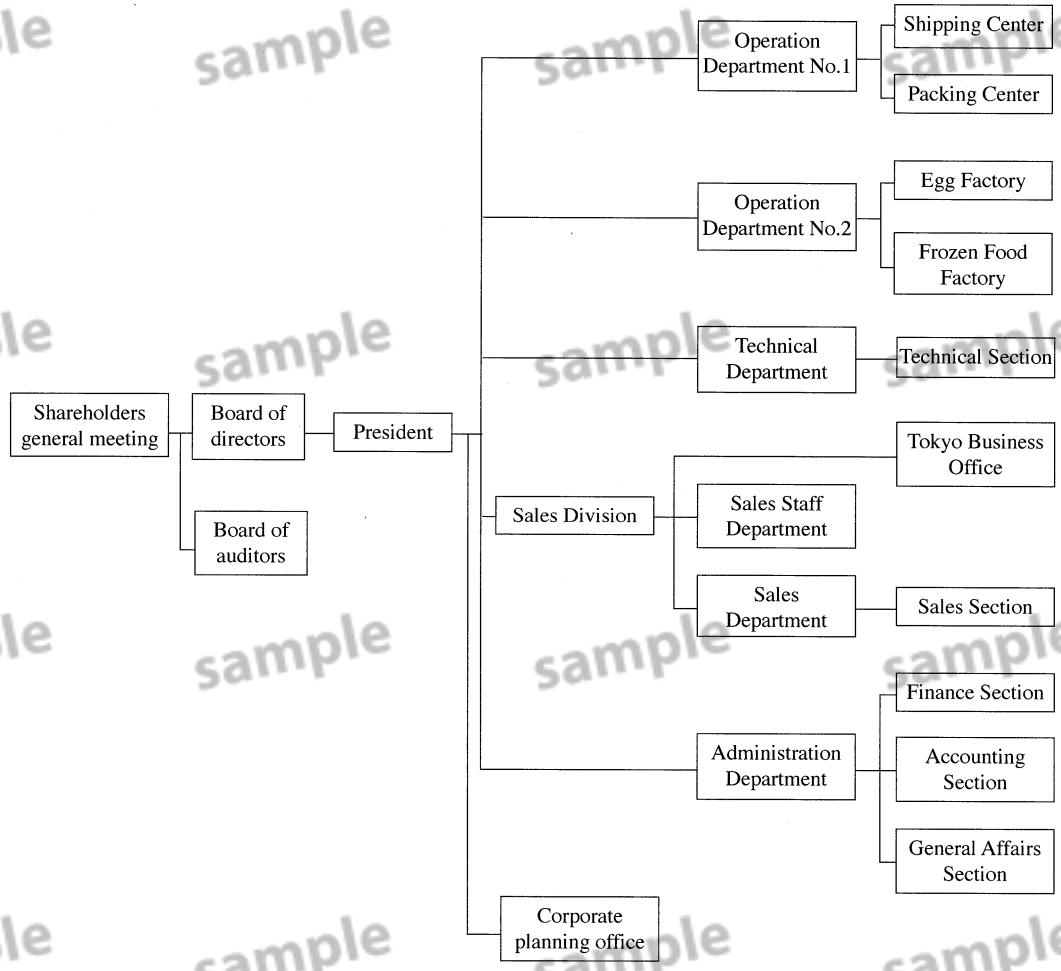


Exhibit 5 Major shareholders

Shareholder	Address	Shares held (thousand shares)	Percentage shares held to total shares issued (%)
Tadashi Akikawa	320-1 Oaza Nihoshimogo, Yamaguchi City, Yamaguchi Pref.	1,132	27.10
Akikawa Bokuen Staff Shareholders Association	317 Oaza Nihoshimogo, Yamaguchi City, Yamaguchi Pref.	476	11.40
Minoru Akikawa	320-1 Oaza Nihoshimogo, Yamaguchi City, Yamaguchi Pref.	424	10.16
JAFCO-G No.5 Investment Association	1-8-2 Marunouchi, Chiyoda-ku, Tokyo	188	4.50
JAFCO	1-8-2 Marunouchi, Chiyoda-ku, Tokyo	156	3.73
Kiyoko Akikawa	320-1 Oaza Nihoshimogo, Yamaguchi City, Yamaguchi Pref.	113	2.71
C. Itoh Feed	2-35-13 Kameido, Koto-ku, Tokyo	106	2.54
Yamaguchi Bank	4-2-36 Takezaki-cho, Shimonoseki City, Yamaguchi Pref.	100	2.39
Toshiko Akikawa	1844-10 Iwato, Inba-mura, Inba-gun, Chiba Pref.	96	2.30
JAFCO-R No.1 Investment Association	1-8-2 Marunouchi, Chiyoda-ku, Tokyo	82	1.96
JAFCO-R No.1a Investment Association	1-8-2 Marunouchi, Chiyoda-ku, Tokyo	82	1.96
JAFCO-R No.1b Investment Association	1-8-2 Marunouchi, Chiyoda-ku, Tokyo	82	1.96
Total		3,039	72.73

Exhibit 6 Network organization

Akikawa Bokuen network team

IR June30,1999

The 21st century
— the era of agriculture

- Japanese consumers choose quality
- Being particular about health and safety is a firm trend of the time

Top brand for healthy, safe and delicious food!

Tokyo office

Involved in the establishment of Green Network Japan

Established a full-scale organic farm produce supply structure

Networking with producers throughout Japan

Network center

Akikawa Bokuen Co., Ltd.

* Technological guidance
* Supply of health feed
* R&D
* Quality control
* Food processing
* Distribution
* Planning and sales

Business outline of Akikawa Bokuen

Capital:	¥714.15 million
Employees:	About 170
Sales:	¥4 billion
Sales including feed:	¥7 billion
Shares issued:	4.179 million shares
Equity ratio:	58%
Dividend:	¥20 per share (seven consecutive terms)

Operating through investment by producers and managers

Current customers

700 stores including Izumi, Heiwado, Sato, Sunny Mart, York-Benimaru, Inageya, Seibu, Odakyu OX, Sotetsu Rosen, and Co-op Kobe, Seikatsu Club Co-op, Green Co-op, etc.

From direct farm sales to stock market listing

Business operations	Registered farms	Characteristics
Health eggs 270 tons/month	Egg farms: 6	• Free from residual chemicals • Super PHF corn that has not been genetically modified • Salmonella inspection system
Health chickens, 1.5 million birds/year	Chicken farms : 23 Primary processing farms: 3	• Raised entirely without the use of chemicals • Plant feed • Free from residual chemicals • Super PHF corn that has not been genetically modified • Open poultry sheds campaign
Membership bottle recycling; Health milk	Agricultural producer: Akikawa Milk Dairy farms: 10 Agricultural producer: Mutsumi Farm	• Holstein and Jersey cows • Glass bottle recycling • Super PHF corn that has not been genetically modified • Supply through a membership system • Free from residual chemicals
Frozen health foods; Soup, daily dishes	Frozen food factory	Processed products from healthy and safe ingredients Fried chicken, chicken nuggets, chicken soup, fried cutlets on a skewer, chicken cutlets, roast chicken
Health beef and pork	Producing farms: 7	
Organic farm products without agrochemicals	Producing farms: 35	

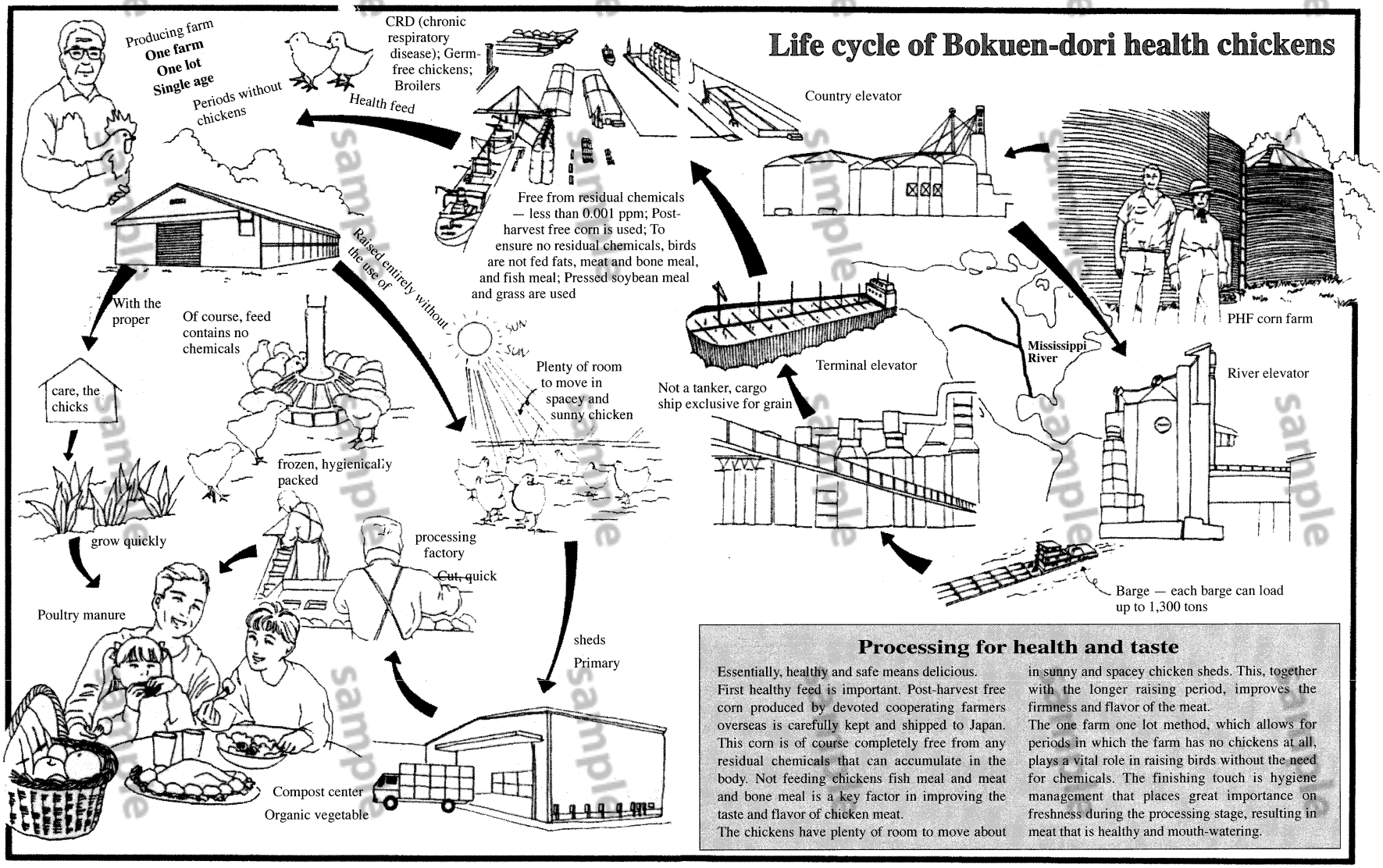
Direct link between producers and consumers

Healthy and delicious

Super PHF
(post-harvest free) corn is corn that has not been exposed to any post-harvest chemicals and has not been genetically modified

Tells all about the production facilities — the producers, raising methods, and what is in the feed

Exhibit 7



Processing for health and taste

Essentially, healthy and safe means delicious.
First healthy feed is important. Post-harvest free corn produced by devoted cooperating farmers overseas is carefully kept and shipped to Japan. This corn is of course completely free from any residual chemicals that can accumulate in the body. Not feeding chickens fish meal and meat and bone meal is a key factor in improving the taste and flavor of chicken meat.
The chickens have plenty of room to move about in sunny and spacey chicken sheds. This, together with the longer raising period, improves the firmness and flavor of the meat.
The one farm one lot method, which allows for periods in which the farm has no chickens at all, plays a vital role in raising birds without the need for chemicals. The finishing touch is hygiene management that places great importance on freshness during the processing stage, resulting in meat that is healthy and mouth-watering.

Exhibit 8 Number of farms by farm type in Kanto and Chugoku regions

(Unit: farms)

	Commercial farmers	Open-field vegetables	Greenhouse vegetables	Dairy	Poultry
National total	2,483,319	89,424	44,472	29,462	6,160
Ibaraki	108,032	4,796	2,629	888	189
Tochigi	67,037	580	1,272	1,064	75
Gunma	50,173	5,373	2,242	1,163	169
Saitama	62,013	7,179	1,391	719	159
Chiba	82,731	7,163	1,571	1,553	163
Tokyo	9,317	2,756	148	144	34
Kanagawa	19,081	4,520	372	601	115
Tottori	31,289	1,668	131	227	59
Shimane	39,841	353	244	222	54
Okayama	67,142	1,476	390	784	129
Hiroshima	55,041	1,211	490	343	70
Yamaguchi	43,513	904	274	124	86

Data: Ministry of Agriculture Forestry and Fisheries, Summary of the 1995 Agricultural Census, November 1996

* Commercial farmers are farmers with 30 are or more under cultivation, or annual sales of at least ¥500,000

Exhibit 9 Agricultural production in Kanto and Chugoku regions

(Unit: billion yen)

	Vegetables	Dairy cattle		Chicken	
			Raw milk		Eggs
National total	2,300.4	802.7	707.6	777.9	444.4
Ibaraki	155.3	18.0	15.6	33.7	29.8
Tochigi	63.7	29.6	27.3	14.1	10.3
Gunma	93.4	28.8	25.9	17.8	11.7
Saitama	97.9	14.5	13.2	12.7	12.3
Chiba	184.0	32.8	29.6	30.5	25.2
Tokyo	19.2	1.8	1.7	0.4	0.4
Kanagawa	39.7	11.5	10.5	5.5	5.3
Tottori	20.2	6.8	5.7	8.0	2.2
Shimane	10.5	6.7	6.2	3.8	3.1
Okayama	23.1	16.9	15.4	21.8	15.7
Hiroshima	20.5	8.1	7.4	21.4	18.6
Yamaguchi	18.5	3.3	3.0	12.5	8.4

Data: Ministry of Agriculture Forestry and Fisheries, 1997 Agricultural Income Statistics, March 1999

President Minoru Akikawa

Akikawa Bokuen head office

External view of an Akikawa Bokuen group poultry shed

Internal view

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