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Making Sustainability Tangible: Land O'Lakes and the Dairy Supply Chain
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Invited Case Study

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Land O'Lakes, Inc. is a U.S.-based agricultural cooperative organized into three main lines of business: Dairy Foods, Purina Animal Nutrition, and Winfield (crop inputs).

Exhibit 1 shows their portfolio of businesses. Its portfolio is unlike that of its competitors in that it supplies producers with seed, crop inputs and services, and animal nutrition and services. It buys their fluid milk and creates various processed products from that milk.

As a food company, Land O'Lakes faces issues related to sustainability from its stakeholders. Sustainability is a broad topic that applies to all firms operating in the dairy industry and not just Land O'Lakes. A unique problem for Land O'Lakes and other dairy cooperatives is that its ownership structure includes farmers, producers and ranchers, as well as other cooperatives. Ross, Pandey, and Ross (2015) studied the Corporate Sustainability Reports of 14 leading food economy firms between 2009 and 2011 and report that most firms appear to be more intrinsically motivated to pursue sustainability than extrinsically motivated. They report that many of the firms looked inward with regard to sustainability efforts rather than outward, suggesting that sustainability efforts are more an expression of the firm's values than a strategic response or action. Rangan, Chase, and Karim (2015) note that many Corporate Social Responsibility programs are not necessarily done for strategic reasons. None of these studies include examples of closely-held firms or cooperatives like Land O'Lakes.

This research case study discusses the evolution of sustainability, describes different approaches large organizations can take in pursuing sustainability initiatives, and looks at how Land O'Lakes has chosen to apply this concept within their Dairy Foods business unit. The case is organized with an introductory section on stakeholder

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theory and its linkages with sustainability, followed by an overview of sustainability efforts in the dairy industry, and finally a discussion about Land O'Lakes.

Theoretical Foundations of Sustainability

Sustainability means different things to different audiences. The concept of sustainability has its roots in stakeholder theory. The Stanford Research Institute established the concept of a stakeholder in 1963, defining stakeholders as “those groups without whose support the organization would cease to exist” (Freeman 1984). Stakeholder theory helps describe why sustainability efforts have become an important issue for firms as stakeholders are driving the firms to address the issue of sustainability. Donaldson and Preston (1985) note, “Stakeholder theory is managerial in the broad sense of that term. It does not simply describe existing situations or predict cause-effect relationships; it also recommends attitudes, structures, and practices that, taken together, constitute stakeholder management.

Stakeholder management requires simultaneous attention to the legitimate interests of all appropriate stakeholders, both in the establishment of organizational structures and general policies and also in case-by-case decision-making. Stakeholder theory does not presume that managers are the only rightful locus of corporate control and governance. In other words, the main point behind stakeholder theory is to actively include the input and opinions of everyone who has a stake in the outcomes of the organization and to ensure that as many stakeholders as possible support the decisions of management.

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The second source of theory behind sustainability efforts is the Global Reporting Initiative (GRI), an attempt to standardize and publicize corporate sustainability activities by publishing guidelines against which corporations are invited to report their activities and progress. According to GRI, over 5,000 corporations apply these guidelines in more than 90 countries (Global Reporting Initiative 2015). The three industry sectors that most commonly pursue sustainability efforts are financial services, energy, and food and beverage products. As the generally accepted standard for sustainability reporting across industries, including the food economy, the GRI also publishes industry supplements where it summarizes and recommends specific areas on which organizations in the industry should both act and report.

Sustainability within the Food Processing Sector

Sourcing and supply chain issues are the most active sustainability theme in the food processing sector. This is reflected in the 2011 supplement, which states “sourcing has been identified by the Working Group for this Supplement and other contributors as a new issue of critical importance to the sustainability of the food processing sector.” These activities are similar to information externalities as noted by Hennessy (1996).

Broadly speaking, supply chain sustainability considerations may include topics such as transportation, food safety, and packaging. In this context, however, supply chain sustainability means monitoring and directing the sourcing of inputs and managing supplier relationships. The GRI suggests that any organization seeking to implement sustainable practices address the following topic areas in relation to their sourcing and

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supplier relationships: (1) Economic; (2) Environment; (3) Labor; (4) Human Rights; (5) Society; and (6) Product Responsibility.

An organization pursuing sustainability should adopt the following principles in conducting its business: (1) Protecting Natural Resources; (2) Minimizing Toxicity; (3) Fair Trade; (4) Fair Compensation for Labor; (5) Traceability; (6) Genetically Modified Organisms; (7) Animal Welfare; and (8) Biofuels. Finally, in determining the riskiness of a given sustainability effort, the GRI supplement further considers whether raw materials are produced or sourced in an area of (1) resource constraint; (2) high conservation value; or (3) social, political, or economic vulnerability.

Organizations may use tools such as supplier surveys, codes of conduct, or supplier audits to ensure sustainability performance by suppliers. In effect, unless the organization has fully vertically integrated the sourcing of raw materials, sourcing and supply chain sustainability activities are passed backwards to suppliers and are not necessarily engaged in by the organization itself. A number of articles written by agricultural economists have noted the changing industrial organization of the food economy and how retailers and other buyers are increasingly differentiating products. Sexton's (2013) Presidential Address to the Agricultural and Applied Economics Association is one of the more comprehensive examples of this trend.

Gereffi et al. (2005) places sustainability efforts into four distinct categories: (1) initiatives pursued, (2) certification schemes, (3) audits, and (4) codes of conduct or other tangible and intangible actions. At a high level, these efforts differ on the amount of autonomy the corporation retains and the amount of credibility that the strategy supplies. Taken together, they represent an organization's sustainability strategy.

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First-Party Strategies: Initiatives Pursued

In a first-party strategy, the company goes it alone or works with one outside stakeholder partner. The methods by which a company pursues sustainability are: guidelines, internal audits, self-reporting, or other company-specific measures. While this strategy may engage stakeholders for input on various initiatives, ultimate accountability and regulation is with the company itself. There are no external mechanisms for compliance, except whistleblowing from outside stakeholders if the company's efforts are found to lack transparency, accountability, or efficacy in relation to its objectives or external standards.

Because they are motivated by the organization itself, first-party programs can be high risk and high reward. When firms market their pursuit of sustainability above and beyond their demonstrable actions, they may be accused of "greenwashing." Evidence suggests that poor sustainability ratings combined with high levels of marketing about its sustainability efforts contribute to a perception of the company that it is greenwashing (Parguel et al. 2009). However, the ability to mislead stakeholders through greenwashing is becoming more difficult. Various sustainability rating agencies and the Global Reporting Initiative (GRI) can independently verify the effectiveness of a company's sustainability efforts.

One first-party method is to establish supplier codes of conduct, which can govern either specific supplier choice decisions or more general company decisions. Besides the time and effort dedicated to idea generation, codes of conduct take few resources to implement and are the most visible element in a corporation's sustainability approach.

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Codes of conduct were widely implemented in the 1990s, and they state the standards suppliers are expected to meet (Andersen and Skjoett-Larsen 2009). It can be argued they act only as public relations mechanisms at best and do not lead to accountability on the part of the company, but some authors contend they are as legitimate as laws, only without a government enforcement mechanism (Sethi 2002; Sobczak 2006). All in all, codes of conduct do not go much beyond mandating that suppliers must be legally compliant wherever they operate.

Another novel first-party approach that goes beyond supplier codes of conduct is the “supplier scorecard”, as most prominently implemented by Walmart in 2006. Supplier scorecards were first used in regards to packaging and later expanded to other elements of supplier sustainability. As part of supply chain management efforts, sourcing companies previously used scorecards to monitor suppliers’ performance in the areas of risk, on-time delivery, price, inventory, etc. In a sustainability context, this internal control mechanism is turned outward and pushed onto suppliers. As part of the Walmart Sustainability Supplier Assessment developed in 2008, the company asks suppliers to respond to 15 questions, shown in table 1. The answers are evaluated to identify the supplier as “Below Target,” “On Target,” or “Above Target” in sustainability (Walmart, 2012).

Walmart further extended this program to a worldwide Sustainability Index, which transparently rates over 60,000 suppliers against one another. While Walmart’s initiative was the most ambitious, arguably because they had enough buyer power to compel supplier participation, some food corporations have adopted the scorecard approach. Notably, Procter & Gamble deployed a scorecard to an initial group of 400 suppliers in 2010. The company listed three goals: (1) enhancing supply chain

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collaboration, (2) improving key environmental indicators, and (3) encouraging the sharing of ideas and capabilities to deliver more sustainable products and services to consumers. The challenge, as with many sustainability reporting initiatives, is standardization to decrease the reporting burden on suppliers.

Other first-party approaches include proactively communicating with individual suppliers or farmers in the company's supply chain to assist in their sustainability efforts or to improve their financial well-being. One popular initiative has been investing in "farmer field schools." These programs can supplement sustainable product certification processes while also reducing the burden on suppliers in meeting certification standards. Ironically, providing more training for suppliers of certified products will increase the availability and supply of these products, consequently lowering their prices and making certification a somewhat useless tool, at least from the grower's economic perspective.

Second-Party Strategies: Certification Schemes

In second-party strategies, an industry association or corporate partnership implements initiatives, sets guidelines, or provides certification schemes. The participating companies may "outsource" sustainability to the association, although they will more likely retain control of operations themselves with the promise of complying. Again, the association may receive input from multi-stakeholder groups, but its members are industry participants. The enforcement mechanisms are often unknown or unclear — the associations emphasize collaboration rather than compliance.

Moving from first-party to second-party strategies, the primary exchange is autonomy for credibility. Because multiple corporations are involved, a company is less

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likely to “cheat” on marketing sustainability successes. This strategy also implies that if greenwashing or unsustainable practices are found, the negative consequences will be felt industry-wide, lessening the damage experienced by the firm in relation to its competition. As with many first-party strategies, a large part of establishing credibility is communication and achieving stakeholder support without the participation of governments and NGOs.

One weakness of second-party strategies is that they may have to incorporate other external stakeholders to gain credibility. For example, the Sustainable Forestry Initiative (SFI) was originally developed by the American Forest and Paper Association (industry members). The SFI certified forest management groups as logging sustainably, yet the audits could be made by any one of a number of groups (first-party, second-party, or third-party), and a tremendous amount of flexibility as to which standards and indicators were used. This led to the result that certification was primarily process-oriented rather than outcome-oriented (National Wildlife Foundation 2001). In other words, companies could become certified SFI-sustainable if they merely stated some form of responsible forest management policy. The Forest Stewardship Council (FSC), a multi-stakeholder (fourth-party) entity that applied more stringent certification standards, upstaged the SFI, which was so heavily criticized for its soft standards that it ultimately incorporated third-party entities into its organization in 2007.

Third-Party Strategies: Audits

Third-party strategies involve an independent, outside entity certifying that the company is sustainable, however the outside entity defines sustainability. While firms may have

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input into the creation of guidelines or certification procedures, the evaluation and compliance mechanism is independent. Third-party strategies may be forced upon companies when governments impose regulations. If this is not the case, companies generally have to be proactive in pursuing the certification or complying with the entity's guidelines. While adhering to outside standards signifies a complete loss of autonomy with potentially high levels of credibility, companies may be able to choose from multiple certification schemes in some industries such as coffee, forestry, and seafood.

This approach has the dual benefit of signaling sustainability to stakeholders while serving as a marketing tool to consumers that factor sustainability into purchasing decisions. The certifications can be issue- or product-based. The Fair Trade Alliance and Rainforest Alliance are two examples of organizations that certify based on certain economic or environmental sustainability issues of production across many products such as "fair" prices. The Roundtable on Sustainable Soy, Roundtable on Sustainable Palm Oil, and Marine Stewardship Council offer certifications for soy, palm oil, and seafood sourcing, respectively, which mostly reflect the methods of production, such as not clearing rainforests for new palm oil production.

The GRI can be viewed as a third-party entity that certifies a company is adequately reporting its sustainability efforts in relation to the guidelines it establishes. Product seals, gained by third-party certification, can command a price premium as well. They also may induce the highest level of competitive behavior. Furthermore, the published percentage of sourced products that are certified sustainable is powerful, purely because it is a straightforward, comparable, numerical measure in a field plagued with few such metrics. Without explaining the intricacies of company-specific sustainability

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policies, stakeholders can point to the percentage (current or goal-oriented) to evaluate competitive sustainability outcomes.

Fourth-Party Strategies: Codes of Conduct

In a fourth-party strategy, a multi-stakeholder sustainability alliance (MSSA) implements initiatives or sets guidelines similar to second-party strategies. The primary difference from second-party strategies is the composition of the alliance, specifically fourth-party strategies must encompass multiple stakeholder types. Depending on the alliance, the types may be trade associations, consumer interest groups, NGOs, supply chain partners, governments, etc. The alliance must contain non-industry entities. Also similar to second-party strategies, the alliance may solicit input from all groups, and it emphasizes collaboration over compliance. Different groups of non-industry stakeholders presumably lend more credibility to results and established principles or codes. Moreover, credibility falls somewhere between second- and third-party approaches, as does autonomy level.

According to Dentoni and Peterson (2011), 22 out of the world's 50 largest multinational corporations (MNCs) in the food and beverage industry were members or founders of MSSAs. They suggest four propositions about MSSAs and their impact on participating corporations' credibility and strategy formation.

First, the authors note, "If it develops weak ties (or 'bridges') with multiple stakeholders through sustainability alliances, the MNC increases its partners' beliefs that the MNC has an effective sustainability strategy and the alliance partners will ultimately act favorably toward this strategy." This proposition indicates fourth-party strategies are generally effective in communicating sustainability by partnering, even if the ties are

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“weak”. These ties also persist outside the issue of sustainability. If an NGO and a corporation are aligned on one issue, it implies acceptance on other issues or at the very least makes it more difficult for NGOs to distance themselves and apply outside pressure to the firm.

Second, Dentoni and Peterson note, “The higher the status of the alliance partners, the stronger is the impact of the multi-stakeholder alliance on other alliance partners’ subjective norms for acting favorably to the MNC’s sustainability strategy.” The concept of “status” substitutes for credibility. Returning to the example of forestry, Greenpeace, which in this context was seen as the higher status organization because it had higher standards, did not endorse SFI-certification even when the organization integrated with entities external. Because the FSC was supported by “higher status” partners like Greenpeace, companies that pursue FSC-certification are generally viewed as more credibly sustainable (Christmann and Taylor 2002).

The third proposition is that “The interaction between sustainability alliance high-status partners’ attitudes and subjective norms is positively associated with their behavior of acting favorably to the MNC’s strategies.” In other words, if one credible (high-status) NGO joins another credible NGO in aligning with a corporation, they reinforce each other’s implicit beliefs that the corporation is acting sustainably.

Finally, the authors note, “Sustainability alliance partners’ behavior of acting favorably to a MNC’s sustainability strategy is positively associated with other external stakeholders’ (1) beliefs that the MNC has sustainability focus, (2) their attitudes towards acting favorably to the MNC and (3) their actual behavior of acting favorably to the MNC’s sustainability strategy.” This proposition indicates that fourth-party strategies are

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generally effective in signaling sustainability to outside stakeholders, which takes proposition (1) a step further. The status of partners, as in (2) and (3), play a large role in the degree of effectiveness.

Background on Land O'Lakes

Land O'Lakes has been widely studied by academics (Rodriguez-Alcala and Cook 2001; Boland and Katz, 2003; Boland, Amanor-Boadu, and Barton, 2004; Boland and Bosse, 2010;). Three company histories have been written by Ruble (1947, 1973) and El-Hai (1996). It is a cooperative with a large number of links to land grant universities. For example, its foundation has an endowment called the John Brandt Scholarships, which are given annually to graduate students at select universities specializing in dairy research. Its foundation also has a matching program with its co-op members, and several cooperative endowed chairs and centers in departments of agricultural and applied economics receive funds from that matching program. Several of its employees have been long-standing members of USDA regional research projects. It has established named endowed chairs at several universities including two in food economy-related topics, and it has supported other endowments in departments of agricultural and applied economics. Within its Dairy Foods unit, it processes fluid milk from its members into manufactured dairy products. Because of its retail focus, and the large presence Land O'Lakes has in this industry, this business unit was the focus of efforts to develop a sustainability program.

Between 2010 and 2014, Land O'Lakes had record years with regard to sales, sales volumes, net earnings, and cash patronage returned to members. This is also

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reflected in their return on invested capital and return on equity, which had an upward trend during this time period. Its crop inputs segment, Winfield Solutions LLC, had the greatest volume of sales revenue and income during this time. Winfield supplies member cooperatives and producers with crop protection products such as adjuvants, fungicides, herbicides, and pesticides and alfalfa, corn, and soybean seed marketed through its Croplan trademarked brand. Purina Animal Nutrition LLC is its feed segment which develops proprietary products and markets and distributes animal feed and services in lifestyle and livestock markets. Dairy Foods, which includes the Land O'Lakes branded products, procures about 13 billion pounds of milk annually from its members and manufactures and markets premium butter, cheese, refrigerated desserts (including Kozy Shack brand), spreads and other dairy products. Land O'Lakes spends about \$200 million annually in advertising and promotion and research and development. It is gradually exiting the layer hen and egg business.

Its 2014 annual report indicated that Land O'Lakes, as a cooperative, is owned by 2,333 dairy producers, 1,241 agricultural producers, and 823 co-op members. Its ownership structure is similar to other dairy firms organized as cooperatives, although Land O'Lakes is much larger than most of these other firms. It is governed by a 24-member board of directors. The board determines policies and business objectives, controls financial policy, and hires the CEO. The dairy members nominate 12 directors from among themselves, and the agriculture members nominate 12 directors from among themselves. The nomination of directors is conducted within each group by region. The number of directors nominated from each region is based on the total amount of business conducted with the cooperative by that region's members.

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Directors are elected to four-year terms at the company's annual meeting by voting members in a manner similar to a typical corporation. The board governs the company's affairs in the same manner as the boards of typical corporations that are not organized as cooperatives.

Land O'Lakes's dairy foods competitors are (1) other domestic and global dairy processors such as DFA in products such as butter, cheese, and other dairy ingredients; and (2) multi-national firms with dairy portfolios such as General Mills. Its animal nutrition competitors are Cargill, a multi-national firm with an animal nutrition unit in its portfolio; independent retailers who have their own feed mills; and vertically integrated livestock and poultry producers. Its crop input competitors include crop nutrient and chemical firms such as Agrium and Helena; and seed firms such as Monsanto, Pioneer, and Syngenta.

In designing a sustainability program, Land O'Lakes has to take into account its portfolio of enterprises. It must also take into account its ownership structure. Finally, it must consider its supply chain. The four categories of sustainability strategies cannot be applied uniformly across its businesses because some are food products and some are inputs into crops or livestock that make up a processed food product or beverage. For example, the retail focus of Dairy Foods imposes different requirements and standards on Land O'Lakes than the business-to-business markets of Winfield.

Sustainability issues affect every firm in the dairy industry, although each firm may choose to embrace sustainability at differing levels of commitment. Specifically, any sustainability strategy developed by Land O'Lakes must take into account the producers

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who own Land O'Lakes. The same issues impact other firms. This has led to the formation of a broad dairy industry initiative.

Innovation Center for U.S. Dairy's Sustainability Council

The dairy industry has a long history of working together collaboratively in many activities through USDairy.com, which was developed by the dairy industry to be a leading source for the dairy industry. Its focus is on dairy health and wellness, sustainability, trends and initiatives, and science and research. The objective of the Sustainability Council is to develop tools to measure, improve, and communicate sustainability performance. This effort began in 2007 and in the following year, a Sustainability Summit was held to develop a vision, goals, and projects to reduce greenhouse gases (GHG). The dairy industry participants commit to a voluntary program to reduce GHG emissions from fluid milk production by 25 percent by 2020, increase business value across the value chain and begin work on the innovation projects. In 2010, the first national GHG life cycle assessment of fluid milk established, in conjunction with additional secondary research, that the U.S. dairy industry contributes approximately 2 percent of total U.S. GHG emissions.

In 2011, projects included (1) efforts to measure, improve and communicate dairy sustainability with the launch of the SaveEnergy, Dairy Plant Smart™ and Dairy Fleet Smart™ tools; (2) the U.S. Dairy Sustainability Awards; and (3) the start of the Stewardship and Sustainability Guide for U.S. Dairy, a framework to measure dairy sustainability. The following year, the Farm Smart™ tool was piloted on farms accounting for a total of 60,000 acres with 60,000 cows producing the equivalent of 150

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million gallons of milk. The Stewardship and Sustainability Guide completed industry and stakeholder review and is piloted by dozens of farms, processors and retailers.

By 2015, more than 800 industry firms were involved in this sustainability effort including all the main participants in the dairy industry. Partners included individual dairy producers, cooperatives such as Land O'Lakes, firms involved in crop production (e.g., BASF, Syngenta, etc.), dairy manufacturing suppliers (e.g., DeLaval, Elanco), dairy processors (e.g., Chobani, General Mills), retailers (e.g., Kroger, Safeway), state and trade associations (e.g., Global Dairy Platform, EPA), and community organizations (e.g., American Farmland Trust, Environmental defense Fund).

The Center for U.S. Dairy participated in initiatives focused on sustainable agriculture and dairy production through: Field to Market, the Keystone Alliance for Sustainable Agriculture, Global Reporting Initiative™ Organizational Stakeholder Program, International Dairy Federation, National Initiative for Sustainable Agriculture, Sustainable Agriculture Initiative, Sustainable Food Lab, and The Sustainability Consortium. All of these organizations help establish codes of conduct, a key part of the fourth sustainability strategy described by Gereffi et al. (2005).

Land O'Lakes Corporate Sustainability Report

Land O'Lakes's sustainability strategy had as its starting point the GRI guidelines for supply chain management within the food processing industry. Land O'Lakes chose to report in six different areas: Resource Management, Animal Care, Sustainability, Product Quality and Safety, Supply Chain Integrity, and Workplace Environment. In each of these six areas, Land O'Lakes had different partners, and it used all four categories of

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sustainability strategies across these areas. The fourth-party strategy involving multiple stakeholders was the most common strategy being used by Land O'Lakes.

Sixty of Land O'Lakes' members partnered with the Sustainability Council to pilot the Farm Smart™ tool for measuring GHG and a farm-level environmental footprint. These producers also tracked integrated pest management programs, soil quality, irrigation practices and use of renewable energy technologies. All of this data was compared to regional and national averages. It also partnered with Field to Market: The Alliance for Sustainable Agriculture to help define and measure continuous improvement across its agricultural supply chains. Winfield invested in crop protection innovation to minimize driftable spray volume from crop chemicals, and it has used Answer Plot programs to provide information to farmers on tailoring agronomic practices to optimize yields and reduce environmental impacts.

Land O'Lakes also utilized the National Milk Producers Federation's FARM (Farmers Assuring Responsible Management) Program. Over 99 percent of its members' milk supply came from FARM-verified producers whose requirements can be found at www.nationaldairyfarm.com. All members of Land O'Lakes were required to participate in the FARM program. This is an example of a third-party strategy as a third party certified each farm.

Land O'Lakes looked inward, like many firms, to obtain efficiencies in manufacturing, logistics, and manufacturing. Software used by United Parcel Service was used to develop better time windows to pick up and deliver milk, using only right hand turns in its truck fleet, and the software uses a number of measurements collected in its trucks to monitor miles traveled, fuel usage, and other variables. Land O'Lakes

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participated in the U.S. Environmental Protection Agency's Smartway program to reduce GHG, improve air quality, and enhance fuel efficiency. Dairy Foods had embarked on efforts to reduce energy usage and hoped to have a 25 percent reduction in energy intensity by 2018. A number of efforts have been used to recover waste heat and reduce natural gas and electricity use. Land O'Lakes has also been working to reduce water usage by 25 percent from its 2008 baseline assessment. Finally, Land O'Lakes has decreased the material used in its packaging by 10 percent since 2008.

Conclusion

Stakeholder theory provides a foundational link for understanding sustainability insofar as the perspectives of non-management groups, who have a stake in the company, need to be included in management decisions. Land O'Lakes worked with many different stakeholder groups in communicating its efforts about sustainability. These multiple stakeholders were an integral part of its programs. Supplier codes of conduct were an important strategy for Land O'Lakes, integrating both first- and fourth party strategies. Its sustainability program includes activities looking outward in its supply chain and activities inward to becoming more efficient in its manufacturing, logistics, and distribution activities.

Discussion Questions

1. Why does Land O'Lakes need to develop a sustainability program? Why can't it ignore the advocacy groups pushing for a sustainability program?

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2. How are sustainability efforts particularly conducive to a stakeholder theory approach? Do you think the dairy industry is more conducive or less conducive to organized sustainability efforts? Why?
3. What are the respective positions of each stakeholder group within Land O'Lakes? To what extent are they compatible with each other? To what extent are they not compatible? Which stakeholder groups hold more power in the context of implementing a sustainability program? Who can compel the organization to act in a certain way?
4. Do you agree with Land O'Lake's fourth-party strategy approach? Why/why not?
5. What principles of sustainability are consistent with Land O'Lakes organizational goals? How does its membership structure as a cooperative influence its sustainability program?
6. How can Land O'Lakes measure their progress against the objectives they set for a sustainability program? Who will determine whether Land O'Lakes has actually implemented their sustainability program effectively?
7. What skills and competencies would be necessary to successfully implement a sustainability initiative?

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Other information in this paper came from public sources such as Land O'Lakes' Corporate Sustainability Reports and U.S. Dairy's Sustainability Council.

Making Sustainability Tangible: Land O'Lakes and the Dairy Supply Chain

Instructor's Note

1. Intended Courses and Learning Objectives

This case would likely best be used in an upper-level undergraduate or Masters-level course in agribusiness firm management or a business policy course. Teaching objectives and outcomes include:

- Examine and analyze the challenges in implementing a sustainability program in the context of a large agricultural enterprise
- Discuss the principles of stakeholder theory and how they impact an initiative such as a sustainability program
- Analyze the elements of a dairy supply chain and the challenges each level of producer would face in implementing a sustainability program
- Analyze the challenges that a cooperative structure places on senior management in implementing a controversial initiative
- Develop a response to the groups advocating for a sustainability program that incorporates the input and support of the largest number of stakeholders possible

2. Theoretical Linkages

The case incorporates a number of theoretical linkages, the first of which is stakeholder theory. The elements of stakeholder theory that should be emphasized are: the importance of including the input of all stakeholders and the consequences of not doing so, the need to actively solicit the input of all stakeholders, and the challenges in crafting a solution that balances the needs of non-aligned stakeholders.

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An example of the application of stakeholder theory is in the Innovation Center for U.S. Dairy's framework for organizing sustainability efforts in the dairy industry (see exhibit 2 below). Note the number of groups whose input and contribution are included in the effort. The measure of success of a sustainability effort, as defined in this context, is the number of groups whose interests and needs are included in the sustainability effort. The full report (which can be accessed at <http://www.usdairy.com/sustainability/reporting/us-dairy-sustainability-report>) details the specific considerations associated with each group. More importantly, it has objectives and benchmarks.

The second theoretical link is to negotiating skills. If crafting a solution across multiple stakeholder groups is challenging, then the next question is obviously how this can be done. Fisher and Ury (1981), in *Getting to Yes*, present a framework for negotiations that involves identifying the need behind a negotiating position. Frequently the need is different than the position would indicate, and the space between them gives the negotiator an opportunity to craft a creative, win-win solution. In the Land O'Lakes situation, this type of negotiating skill will be crucial in reconciling the different needs of different stakeholder groups.

Third, the specific needs and requirements of cooperatives as management structures is an important consideration in this case. A traditional corporate structure gives management more discretion in considering the perspectives of different stakeholders than cooperative managers enjoy. Because Land O'Lakes is owned by its members, the pressure to forge a consensus approach is greater than in other organizational structures.

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Fourth, Michael Porter's value chain analysis describes how organizations can create additional value. It emphasizes how the different parts of an organization must work together to promote superior performance. To the extent that Land O'Lakes is seeking a competitive advantage in its marketplace, this discussion provides an overarching framework organizations can use to analyze its activities and generate ideas for improvement. Exhibit 3 highlights the approach: the primary activities (across the bottom) work in conjunction with the support activities (in the top rows of the diagram, arching across the primary activities) to determine whether an organization creates a higher level of value for the company and its customers. The goal of this framework is to help organizations create a level of value higher than the cost of its inputs and greater than its competitors. The primary activities are as followed:

- Inbound Logistics: managing input supplier relationships (purchase and control)
- Operations: changing inputs to outputs (production processes)
- Outbound Logistics: distributing the product from the production facility to end users
- Marketing & Sales: persuading customers to buy your products vs. competitors'
- Service: maintaining the value of your products and customer relationships

Sustainability efforts can impact all of these activities but are especially focused on the first three. The discussion of greenwashing can be used as an example of the role of marketing and sales in communicating the sustainability effort to the organization's stakeholders.

The secondary activities, as defined in this framework, follow established definitions of the objectives and activities of these parts of the organization, with the following clarifications: first, technology development refers as much to the management

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of information (information technology) as to any research and development activities; and, second, infrastructure refers both to general management and also corporate functions such as finance and legal.

The methodology to create additional value consists of analyzing each of the “cubes” in the grid above and identifying both links between parts of the organization and the opportunities for competitive advantage that result from a deeper understanding of the organization’s core competencies, customer needs and competitors.

Four references for this discussion are:

- Freeman, R. Edward (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.
- Fisher, Roger and William Ury (2011). *Getting to Yes: Negotiating Agreement without Giving In*. New York: Penguin, updated revised edition.
- Innovation Center for U.S. Dairy. About the 2013 Dairy Sustainability Report, Online Executive Summary
- Porter, Michael E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Simon and Schuster.

3. Teaching Strategies/Teaching Plan

The case is structured to have as an output a design of a sustainability program, which can include some or all of the following components:

- A list of all appropriate stakeholder groups
- Specific objectives

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- Action plans for implementing the program
- Measurements to evaluate progress against objectives
- Implementation plans to successfully execute the program
- Contingency plans if implementation does not proceed as planned.

This provides a natural avenue for teaching the case: working in small groups, each team could address one or two portions of such a program (or at least an outline of such an answer) that addresses the questions in the case or the additional questions below.

It may be helpful to give the groups (especially undergraduates) some assistance in organizing their activities by developing the list of stakeholder groups and objectives as a large group. Next, let the groups focus on action plans and measurements and, finally, reconvene to discuss implementation and contingency plans, using the following questions to structure the conversation:

- What characteristics of each stakeholder group could make implementing your action plans challenging?
- What messages should be communicated to each stakeholder group? Do the different messages contradict each other? If so, how should the company manage this?
- What could go wrong as the company tries to implement its sustainability program?

How can they reduce the negative impact of those events?

If the students do not have specific expertise in dairy supply chains, Land O'Lake's 2014 Corporate Responsibility Report (which can be found at

<http://www.landolakesinc.com/company/corporateresponsibility/sustainability/default.aspx>) can

be used to provide a list of detailed activities the company included in its sustainability program. See exhibit 5 for excerpts from this report.

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One alternative approach would be for different groups to present competing visions of what elements of a sustainability program they would include. After each group presents their plan, the instructor could lead a general discussion of the strengths and weaknesses of each approach and the specific challenges management would face in proceeding with that plan. The instructor could provide the feedback or facilitate a student-led conversation.

Within this context, the problem of the case is to develop a strategy that addresses the needs of as many stakeholder groups as possible and to blunt the objections of those groups whose input is not part of the solution. Can those latter groups be put in a position of not opposing the sustainability program, even if they do not support it?

Moreover, the concept of continuous improvement should be a part of the discussion of the student plans. Sustainability is as much a journey as a destination. This is not an issue that can be addressed with one concentrated burst of activity but must become part of the organization's culture to be maintained over time. Exhibit 4, taken from the Innovation Center for U.S. Dairy report referenced above) highlights the elements of a successful plan. It also shows the need for sustainability considerations to be shared by all stakeholders and the practical need to implement a program over time.

4. Discussion and Assignment Questions

An instructor could assign these questions as homework to be done prior to the class so students are prepared to develop a sustainability program for Land O'Lakes.

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One useful activity is to have each student choose a food economy firm's sustainability report and describe its activities looking inward or outward in the supply chain. As part of that assignment, students should diagram the supply chain and discuss where sustainability efforts make sense. A good place to start is the Rodd, Pandey, and Ross study. However, it should be noted that the authors did not look at Consumer Packaged Goods firms such as General Mills, Kellogg's, and Heinz Foods. Instructors should encourage a broad spectrum of firms in order to generate better discussion in class.

A second homework question might be to assign Rangan, Chase, and Karim. The authors provide a convincing argument that firms need to understand the difference between giving to philanthropic efforts (scholarship programs, community needs, etc.), improving operational effectiveness (saving costs by adopting LED light bulbs, etc.), or transforming the business model (building a Green platform, using so-called 'transparent ingredients in product formulations, etc.). Students could be asked to evaluate the CSR report for the company by identifying the sources of the three arguments above and see if, in fact, firms CSR programs are aimed primarily at operational effectiveness and philanthropy rather than business transformation.

For graduate students, AgEcon Search has 43 papers that have CSR in their title or abstract and some application to food. Many of these are written from a European perspective. One assignment could be to have a student choose one of these papers and discuss it with the class. These assignments should help motivate a classroom discussion about the case.

The following are suggested answers to the discussion questions listed in the case.

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Question 1: Why does Land O'Lakes need to develop a sustainability program? Why can't it ignore the advocacy groups pushing for a sustainability program?

Suggestions For an Answer: Increasingly, firms are being asked by their stakeholders about what they are doing with regard to sustainability. Going back to the discussion of stakeholder theory, the idea here is that the firm cannot ignore its stakeholders, even if the link between the stakeholder and the management team is indirect. As a stakeholder is any group that can effectively shut down a firm by withholding its support or compliance, these must be actively sought and solicited by management. A firm that ignores its stakeholders both has a harder time achieving its goals, and it may ultimately fail. This discussion could also be linked to the need to forge consensus. Many younger students like to think of management roles as a chance to "be in charge". This question could be used to inform the role of a leader as someone who can bring others along to accomplish the goals of all stakeholder groups.

Question 2: How are sustainability efforts particularly conducive to a stakeholder theory approach? Do you think the dairy industry is more conducive or less conducive to organized sustainability efforts? Why?

Suggestions For an Answer: Sustainability is a multi-faceted concept, and, as such, it is particularly open to involving and including many different groups in its implementation. Furthermore, particularly if the objectives and measurements are outcome-based, as opposed to process-based, it will require the input of many groups. In a process-based environment, each group could claim it had done its part by adhering to a narrowly defined range of activities, with no group assuming accountability for outcomes. Given

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the expectations that many stakeholders would have around achieving outcomes, it would be hard for sustainability initiatives to be limited to one group. As such, it would require the involvement and collaboration of many groups, and hence is conducive to a stakeholder theory approach. Within the dairy industry in particular, the complexity of the supply chain and the involvement of many different groups in producing dairy products make dairy an industry conducive to a stakeholder analysis approach.

Question 3: What are the respective positions of each stakeholder group within Land O'Lakes? To what extent are they compatible with each other? To what extent are they not compatible? Which stakeholder groups hold more power in the context of implementing a sustainability program? Who can compel the organization to act in a certain way?

Suggestions For an Answer: It is important that time be spent understanding exhibit 1 and exhibit 6. This can be diagrammed on a white board or blackboard before class. Walk the class through this diagram and discuss where Land O'Lakes has their business units. Then start listing the various stakeholders of Land O'Lakes' sustainability programs and use arrows to point to where they influence Land O'Lakes in that diagram. One example of this is exhibit 6.

Exhibit 6 demonstrates the dynamics and implications of stakeholder theory for the executive manager. First, how are stakeholder groups identified and organized? Careful thought needs to go into this part of the exercise, as it can significantly influence the subsequent analysis. Second, clearly stating and implementing a position will not please everyone, and the manager needs to balance both the direction and the scope of

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each stakeholder group's involvement in this decision. Third, the manager needs to evaluate the consequences of inaction: will the disappointment of those groups advocating action be greater or less than the negative reaction of those groups opposing action if Land O'Lakes pursues a sustainability program? Next, this diagram does not show the relative power of each group. Which groups have the greatest ability to create negative consequences for Land O'Lakes if it does not like the actions of the managers? Finally, which groups have the most informal influence? Stakeholder analyses can be thwarted if they do not recognize the role of politics and bureaucratic behaviors.

Question 4: Do you agree with Land O'Lake's fourth-party strategy approach? Why/why not?

Suggestions For an Answer: While this is a subjective answer, the considerations that would influence an answer include:

- As discussed in Question 2, sustainability efforts in Land O'Lake's case naturally involve many groups, each of whose actions would need to be coordinated.
- At the time of the case, clear standards and definitions of what sustainability entails were still being defined. As a result, it would benefit Land O'Lakes to be part of a larger group action to reduce its exposure and risk.
- Because Land O'Lakes has a heavy retail presence in its Dairy Foods unit, the inclusion of external, high status groups would be critical to its success.
- The complexity of a dairy supply chain, both in the coordination of multiple participants and the sensitivity of some of the issues, suggests that including more people in the effort would benefit Land O'Lakes

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Question 5: What principles of sustainability are consistent with Land O'Lakes organizational goals? How does its membership structure as a cooperative influence its sustainability program?

Suggestions For an Answer: One way to start this discussion is to ask the class how its members think about sustainability and their willingness to adopt practices linked with sustainability. It is likely that students will discuss broad things like a desire to make sure dairy cows have clean drinking water, access to pasture or exercise, ability to move around, be safe from extreme heat or cold weather, be fed adequately, be treated humanely, be given antibiotics if they are sick, have adequate bedding, etc.

The instructor can put this list on the board and say, "Can we all agree that these are sustainable practices? Why wouldn't a farmer want to do these things?" Two hot-button topics could then be introduced. These are dehorning or removing the horns on a cow and docking their tail. Dehorning is pretty straight forward. Horns can hurt other animals or humans. Removing them should be done humanely and carefully. Docking the tail is another matter. Tails get clogged with dirt and manure and can be a safety hazard (anyone who has ever been hit by a cow's tail felt it for a long time). Tails rub up against the udder can cause a food safety issue. Farmers dock tails to prevent these things. Other say that tails should be kept on an animal but shaved to prevent these things. This is an emotional hot button topic that members would say there are very good reasons to dock a cow's tail and others would say no, that this is cruelty to animals.

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Question 6: How can Land O'Lakes measure their progress against the objectives they set for a sustainability program? Who will determine whether Land O'Lakes has actually implemented their sustainability program effectively?

Suggestions For an Answer: This question has a number of different elements that make it both a fruitful topic but also can become a frustrating one as students try to demonstrate definitively that the firm has successfully implemented a sustainability program. Any suggested path can be shown to be inadequate. As a result, using the following questions to structure the conversation can help students select an approach:

- What are the specific objectives of a sustainability program? (Being as detailed here as possible helps motivate this conversation)
- What are ideal, realistic and baseline standards for success with this type of program?
- Should the measures be process-oriented or outcome-oriented? In other words, should Land O'Lakes hold itself accountable for completing certain actions or achieving certain results?
- How will the measures be used: to evaluate managers, to communicate with the public, etc.?

Two additional aspects of the conversation can also be explored: first, because there is no one perfect approach to performance measurement in an area such as sustainability, it becomes extremely important to build consensus across all stakeholder groups. Land O'Lake's efforts will be wasted if an important stakeholder group reject the company's efforts as inadequate or unproven. Second, because the performance measurement effort has an element of subjectivity, it will be important to discuss how, to whom and how

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often the results are communicated. Again, the measurement effort could be ineffective if it is not communicated well.

Question 7: What skills and competencies would be necessary to successfully implement a sustainability initiative?

Suggestions For an Answer: We recommend using two frameworks to discuss how to analyze and approach this topic. First, the importance of negotiations and the ability to forge consensus across a number of different groups (see the reference to *Getting to Yes*) is a critical component to managing stakeholder groups. Second, the ability to analyze the different parts of an organization and the interrelationships between them is an essential part of developing specific action plans. The combination of these two skill sets and methodologies can help a company develop a sustainability initiative.

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Exhibit 1. Overview of Land O'Lakes

LAND O'LAKES, INC.

We are a farmer-owned food and agricultural cooperative with a 93-year history of sustainability. As a Fortune 200 company, we operate some of the nation's most respected brands: LAND O LAKES® Dairy Foods, Purina Animal Nutrition and WinField Solutions.

FARMER-OWNED

Seed | Crop Inputs & Insights | Animal Nutrition | Milk Quality | Primary Processing | R&D/Manufacturing | B2B/Industrial Marketing & Sales | Branded Goods Marketing & Sales

Production Consumer

Since 2012...

PURINA **LAND O LAKES** **WINFIELD**

2 | 2014 CR Report

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Table 1. Walmart Sustainability Assessment Questions

Energy & Climate	<ol style="list-style-type: none"> 1. Have you measured your corporate greenhouse gas emissions? 2. Have you opted to report your greenhouse gas emissions to the Carbon Disclosure Product (CDP)? 3. What is your total annual greenhouse gas emissions reported in the most recent year measured? 4. Have you set publicly available greenhouse gas reduction targets? If yes, what are those targets?
Material Efficiency	<ol style="list-style-type: none"> 1. If measured, please report the total amount of solid waste generated from the facilities that produce your product(s) for Walmart for the most recent year measured? 2. Have you set publicly available solid waste reduction targets? If yes, what are those targets? 3. If measured, please report total water use from facilities that produce your product(s) for Walmart for the most recent year measured? 4. Have you set publicly available water use reduction targets? If yes, what are those targets?
Natural Resources	<ol style="list-style-type: none"> 1. Have you established publicly available sustainability purchasing guidelines for your direct suppliers that address issues such as environmental compliance, employment practices and product/ingredient safety? 2. Have you obtained 3rd party certifications for any of the products that you sell to Walmart?
People and Community	<ol style="list-style-type: none"> 1. Do you know the location of 100 percent of the facilities that produce your product(s)? 2. Before beginning a business relationship with a manufacturing facility, do you evaluate the quality of, and capacity for, production? 3. Do you have a process for managing social compliance at the manufacturing level? 4. Do you work with your supply base to resolve issues found during social compliance evaluations and also document specific corrections and improvements?

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Exhibit 2. Stakeholders in Dairy Sustainability

COMMITTED TO ACTION

SUSTAINABILITY VISION We commit to being leaders in sustainability, ensuring the health and well-being of our planet, communities, consumers and the industry.

THE GUIDING PRINCIPLES OF THE U.S. DAIRY SUSTAINABILITY COMMITMENT

The U.S. dairy industry supports socially responsible, economically viable and environmentally sound dairy food systems that promote the current and future health and well-being of:

OUR CONSUMERS
through access to safe, nutritious, high-quality products.

OUR COMMUNITIES
through contributing, participating and investing where we live and operate.

OUR COWS
through animal stewardship.

OUR EMPLOYEES
through ensuring a safe and respectful workplace.

OUR PLANET
through the stewardship and responsible use of natural resources.

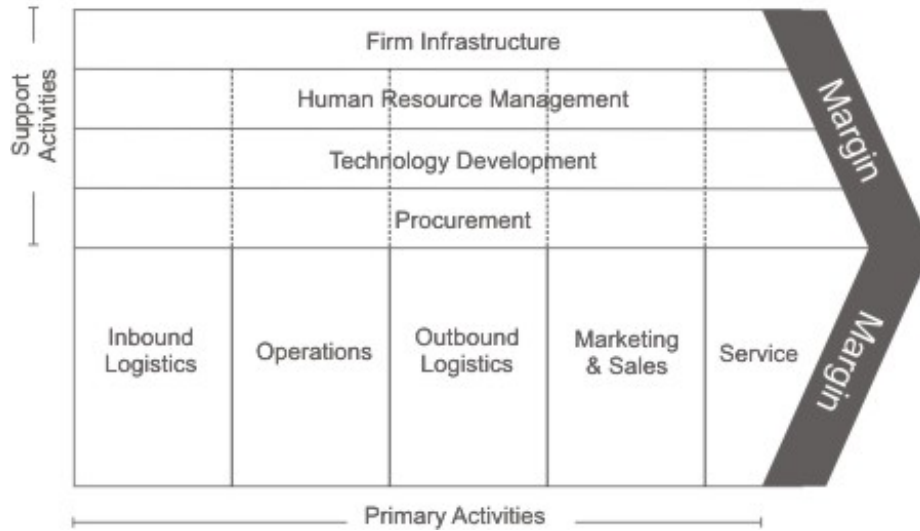
OUR BUSINESSES
through a focus on long-term economic vitality.

We apply leadership, measurement, science, education, innovation and continuous improvement to enhance our stewardship of sustainable food and agricultural systems.

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Exhibit 3. Porter's Value Chain Analysis

Figure 1: Porter's Generic Value Chain



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Exhibit 4. Dairy Sustainability Methodology and Considerations

We've invested several years of working across the dairy value chain to develop and test the science-based tools and resources we need to understand, measure and improve the dairy industry's sustainability impacts.



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Exhibit 5: Excerpts from Land O'Lakes 2014 Corporate Responsibility Report

Sustainable Innovation

Driving resource efficiency, productivity and conservation

Environmental footprint assessment

As a member of the Innovation Center for U.S. Dairy's Sustainability Council, Land O'Lakes, Inc. is helping support the development of tools to measure, improve and communicate sustainability performance across the dairy value chain. In 2013, Land O'Lakes partnered with the Sustainability Council and 30 of our member-owned farms to pilot the council's new Farm Smart™ tool for measuring a farm's environmental profile, including its greenhouse gas (GHG) footprint. This online assessment tool was developed from benchmarks compiled by the U.S. dairy industry's Comprehensive Life Cycle Assessment for Fluid Milk. It enables farmers to compare their farm's performance with regional and national averages for energy use, GHG emissions and water use.

As part of a comprehensive Land O'Lakes assessment program, participating members also tracked integrated pest management, soil quality, irrigation practices and use of renewable energy technologies. These assessments also measured use of cover crops, conservation tillage and soil sampling. This baseline data help us improve our sustainability strategies. We continued to expand our pilot with an additional 30 members participating as of August 2014. Along with our work with the Innovation Center for U.S. Dairy, Land O'Lakes also is partnering with Field to Market: The Alliance for Sustainable Agriculture to help define, measure and promote continuous improvement across agricultural supply chains.

"As an actively engaged member in Field to Market, Land O'Lakes provides a valuable perspective on the complete farm-to-market supply chain," said Rod Synder, president of Field to Market. "With a history of engaging growers at the farm level, Land O'Lakes is helping to drive continuous improvements to reduce the environmental footprint of U.S. commodity crop production."

Responsible animal care

A lifelong commitment to humane and responsible animal care is at the core of our dairy members' businesses. Cows that are treated well contribute to higher milk production, bringing more milk to market with less environmental impact.

Our customers and consumers are increasingly interested in the welfare of animals involved in food production. Land O'Lakes, Inc. has worked with our member-owners and industry organizations to support the National Milk Producers Federation's FARM[®] Program: Farmers Assuring Responsible Management. FARM[®] is a nationally recognized program that provides consistency and best practices in responsible animal care and quality assurance across the dairy industry. Today, more than 99 percent of our member milk supply comes from FARM[®]-verified producers, and in 2014 our Corporate Board of Directors voted to make participation in the FARM[®] program a mandatory condition of Land O'Lakes, Inc. dairy membership.

Transportation, logistics and manufacturing efficiencies

Land O'Lakes, Inc. uses a combination of truck and rail transport to deliver our dairy, crop and

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feed products in the most energy efficient and cost-effective ways. We also save time and reduce fuel use by upgrading our trucks and leveraging the efficiencies of rail transport. Improving productivity while decreasing waste and energy consumption allow us to generate valuable cost savings and reinvest in our strategic growth initiatives.

Route optimization and fuel efficiency improvements

Our Northwest Food Products Transportation (NFPT) logistics team optimizes routes and territories using software developed by United Parcel Service for increasing route efficiency. Routes are created with the most cost-effective full load being delivered to the closest plant in two ways:

1. Consideration of time windows for milk pick-up and delivery and
2. Specifying only right turns, which also increases safety as a majority of accidents involve left turns.

Land O'Lakes, Inc. also electronically monitors miles traveled, miles per gallon of fuel used, hard stops, speed and other factors. NFPT uses onboard computers and collision avoidance systems to monitor all aspects of transportation. This data reduces the carbon footprint of our transportation operations, improving fleet efficiency by 13 percent. Our transportation business participates in the U.S. Environmental Protection Agency's Smartway program to enhance fuel efficiency, reduce greenhouse gas emissions and improve air quality as we move products across our supply chain.

Rail transportation savings

We transport products by rail instead of truck when possible to reduce greenhouse gas (GHG) emissions. For example, from 2012-2013 our Dairy Foods business shipped 95,752 tons of product by rail in 1,191 carloads. Shipping dairy products by rail has saved 575,000 gallons of diesel fuel, 6,440 tons of carbon dioxide emissions and has removed 2,240 trucks from the road.

Energy conservation

Energy reduction is very important for Land O'Lakes' manufacturing operations. Our Dairy Foods manufacturing teams have been working toward an aggressive 10-year goal. By 2018, we would like to see a 25 percent reduction in energy intensity (energy input per pound of product). In 2013, we continued our focus on the energy-intensive manufacturing processes of our Dairy Foods business. These locations account for 12 percent of our manufacturing sites yet they are responsible for more than 60 percent of Land O'Lakes' total natural gas and electricity use. By the end of 2013, we achieved 7 percent energy improvement, and we continue to search for ways to increase that percentage.

Natural gas consumption and electricity use at Dairy Foods sites

Reducing our natural gas and electricity consumption has been a key contributor to improvements in energy intensity. We have:

- » Installed several systems to recover waste heat from boilers and other combustion systems, allowing us to preheat and process air and water for sanitation
- » Added systems to recover heat from boiler blow-down streams and from oil coolers on refrigeration compressors
- » Improved insulation on steam and process piping to reduce energy losses
- » Upgraded lighting at all sites

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- » Implemented programs to reduce and minimize air leaks
- » Utilized steam turbines in place of electrical motors to generate compressed air and pump water for boilers

Water savings

We are making progress toward our commitment to reduce water use in our Dairy Foods business by 25 percent from our 2008 baseline:

- » We reduced effluent water by 10.5 percent per pound of product by the end of 2013
- » Our Orland, California, plant location recovers 100 percent of its wastewater and uses it to irrigate agricultural lands for crop growth
- » Our Tulare, California, plant discharges wastewater to the city, where 100 percent of it is used to irrigate local agricultural fields

Deeper insights

While energy intensity is a good measure of energy conservation, our dairy products—especially dry powders, cheese and butter—can complicate our actual progress in this area. The Department of Energy's Better Buildings, Better Plants Program modeling technique is one way to help us better account for key influencing factors such as product mix, ambient temperatures and other manufacturing parameters. We also recognize the need to routinely revisit our goals and strategies to ensure they align with our current manufacturing demands and business strategies. With this in mind, our Dairy Foods team is focusing on more near-term goals that will help generate and drive energy conservation efforts while adapting to business changes.

Resource conservation

Targeting energy and water savings

Our Melrose, Minnesota, dairy facility is working to improve energy and water savings in a number of ways.

Electricity and natural gas

Estimated 2013 savings: 211,000 kilowatts of electricity and 9.3 million British thermal units of natural gas ⁽¹⁾

- » The facility installed equipment to capture and use heat from the refrigeration system's ammonia compressor rather than letting the heat evaporate
- » After water used for cooling the compressor absorbs heat, it's used to clean equipment; no additional energy is needed to heat the water, saving both electricity and natural gas

Water Total daily savings on average: 90,000 gallons

- » Melrose received Category 1 approval for its reclaimed water system. This means the recovered water is equivalent to potable water, allowing the facility to reuse the water for processes that previously required water from the city's drinking water system
- » Using reclaimed heated water for washing 80 milk transport trucks daily saves 3,319 million BTUs of energy
- » Blending reclaimed water with city water in one of our milk filtration processes saves 20 minutes in processing time since the already-heated reclaimed water is readily available

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Nutrition

Healthful options for healthy bodies

Land O'Lakes, Inc. cares about the health of our consumers. Our research and development division constantly reviews formulas to identify better-for-you dairy options that don't sacrifice flavor. In recent years, we've developed cheese products with 25 to 30 percent lower sodium and prepackaged slices of cheese with 25 percent less fat. Our flagship butter product now comes in varieties that include olive oil, olive oil and sea salt and light butter with canola oil. Our company also offers reduced fat cheeses through its Alpine Lace[®] brand, and our Kozy Shack Simply Well[®] products have no added sugar and are only 90 calories per cup.

Delivering nutritious options to our schools

Land O'Lakes, Inc. is a proactive leader in developing foodservice products that meet USDA nutritional guidelines for schools. We continue to introduce new products that are lower in sodium and fat and have recently launched three macaroni and cheese products that feature 51 percent whole grain noodles. These better-for-you options are delicious, maintaining the flavor children crave and the quality foodservice directors expect.

The Grab-N-Go market in schools has expanded, with about 50 percent of school districts offering Grab-N-Go options through hallway kiosks, classroom delivery or vending machines⁽²⁾. Staying in touch with our customers' needs while also providing products to meet consumers' requests is of utmost importance to us. That is why we were proud to introduce three Kozy Shack[®] pudding products to the Grab-N-Go line. Additionally, we offer two new reduced fat cheese cube options. These products not only meet the stringent K-12 USDA Smart Snack nutritional requirements, but are also very popular options for children.

In Our Workplace

Sustainability starts with us

One year, one half-million pounds

Recycling moves outside the box

Like many companies, Land O'Lakes, Inc. began its sustainable corporate office efforts with basic recycling— reducing office paper use and ensuring soda cans landed in the right containers. However, the company's commitment to sustainability has grown exponentially from the early days. From leftover cafeteria food to office furniture to battery recycling, the company's corporate offices recycled or repurposed **nearly a half-million pounds** of material in a year.

In 2012, Land O'Lakes continued its food waste recycling program with the help of the Growing Green Team, an Employee Resource Group that focuses on corporate sustainability efforts. Every day, uneaten food from employee cafeteria plates and from trials in the pilot plant is sent to a local farm, which transforms the food into animal feed. In 2013 alone, 215,025 pounds of food waste went to the farm.

This program is just one of the inventive ways Land O'Lakes reduces its environmental footprint. The effort led to a partnership with ANEW, a national nonprofit that extends the lifecycle of surplus office furniture for reuse by charities, public agencies and underserved

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communities. Furniture that doesn't find a second home is recycled or considered for energy-from-waste so it doesn't end up in a landfill. In 2013, Land O'Lakes repurposed or recycled 137,700 pounds of furniture and other items. That year, the company won a Certificate of Social Sustainability from ANEW for our Milk Run 8, which took place from October 2013 to January 2014. For that event, we repurposed or recycled 37,640 pounds of office furniture. "We remain committed to finding new ways to bring the culture of sustainability into action across our enterprise," said Rebecca Kenow, director of sustainability for Land O'Lakes.

Creating a culture of safety

Shifting from compliance to a core value

In the last few years, Land O'Lakes, Inc. has seen a consistent decline in the number of on-the-job injuries. In fact, the company reported the fewest number of injuries in its history in 2013. In the last 18 months, the company's own Environmental Health and Safety Team has trained more than 800 supply chain employees and managers, and they've socialized the development of five new safety standards that they launched in 2014.

Still, the focus of this internal team is not on numbers but on embedding safety into the culture. "We are working to identify risks, categorize them and then tackle those issues by moving safety from a task people must do to a core value that supports their lives at work and outside of work," said Chuck Kendall, Corporate Safety Manager for Land O'Lakes. The goal, Kendall said, is to create a safety culture in which people know the safety rules and follow them because it's the right thing to do.

The new approach also includes novel practices at plants. In October 2013, the entire company conducted a safety "stand-down." All work at every plant stopped, and employees attended a mandatory session about safety in the workplace. Employees could raise concerns and develop action plans to address any issues. Some plants voluntarily held additional stand-downs to fully embrace a safety culture.

(1) *Estimated 2013 savings based on actual 2010 hours run*

(2) *Source: School Nutrition Association Report "New Ways to Deliver Breakfast to Students On-the-Go" & School Nutrition Association "Little Big Fact Book" 2013 Edition*

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Exhibit 6. Land O'Lake's Stakeholder Groups and Their Support of Sustainability

