

U.S. DAIRY STEWARDSHIP COMMITMENT



About this Resource

The U.S Dairy Stewardship Commitment (Stewardship Commitment) was developed by the Innovation Center for U.S. Dairy® (Innovation Center) to support dairy farmers, cooperatives and processors who voluntarily choose to work across the industry to advance sustainability leadership and transparently report progress.

Retailers and other dairy customers can use the Stewardship Commitment to track their suppliers' sustainability and continuous improvement efforts and are encouraged to share this story with consumers.

To maintain relevance and value, the Stewardship Commitment is updated annually. It is the user's responsibility to refer to the most updated version.

Legal Note

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Download the most up-to-date
Stewardship Commitment at
www.usdairy.com/commitment.

Table of Contents

1	Chapter 1 About the Stewardship Commitment Stewardship Commitment Defined Stewardship Commitment Benefits Dairy Sustainability Alliance® Stewardship Commitment Metrics Stewardship Commitment Metrics at a Glance Stewardship Commitment Alignment U.S. Dairy and United Nations Sustainable Development Goals Global Alignment
7	Chapter 2 Alignment with Recognized Programs Harmonization with Recognized Standards U.S. Dairy and United Nations Sustainable Development Goals Global Alignment
11	Chapter 3 Stewardship Commitment Adoption Terms of Adoption Industry Adoption
13	Chapter 4 Field Metrics Field Impact
14	Dairy Farm Metrics Energy Use Greenhouse Gas Emissions Water Quantity Nutrient Management Animal Care
19	Dairy Processor Metrics Energy Use Greenhouse Gas Emissions Water Quantity and Quality Resource Recovery Workforce Development Community Contributions Food Safety Traceability
27	Acknowledgements
28	Innovation Center Board Companies

Chapter 1 | About the Stewardship Commitment

Stewardship Commitment Defined

The U.S. Dairy Stewardship Commitment (Stewardship Commitment) is a voluntary, stakeholder-aligned initiative to advance sustainability leadership across the dairy community. It aligns and quantifies industry action on important areas like the environment and animal care to affirm and illustrate U.S. dairy's longstanding values of responsible production, nourishing communities and continuous improvement. Cooperatives and processors that adopt the Stewardship Commitment agree to work collaboratively with diverse stakeholders and follow a rigorous set of standards to demonstrate positive impact. On a broader scale, adopting companies will support and contribute to U.S. dairy's ability to track, aggregate and report on national progress.

A Consistent and Credible Voice

By defining sustainability metrics based on globally-recognized standards, the Stewardship Commitment empowers the dairy community to demonstrate impact in a transparent and meaningful way. These metrics are underpinned with voluntary, industry-aligned resources and reporting tools to advance continuous improvement and are developed through an open and collaborative multi-stakeholder process. The Dairy Sustainability Alliance® facilitates this approach as the national forum through which dairy farmers, cooperatives and processors converse with customers, non-profits and other key stakeholders to advance the Stewardship Commitment. The result is a consistent voice to enhance consumer trust and communicate progress both within U.S. dairy companies and at national and global levels.

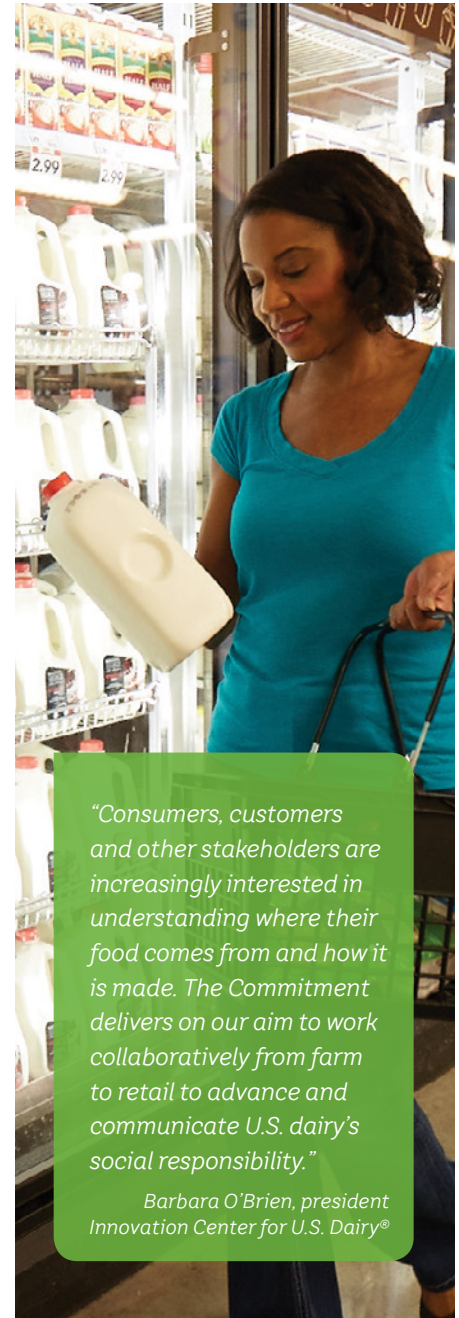
The Stewardship Commitment reflects a shared belief that social responsibility is larger than any single organization or supply chain. Rather, it requires a transparent, collaborative and ongoing effort to work toward the benefit of all. To

reflect these values, dairy companies are encouraged to formally adopt the Stewardship Commitment, while dairy farmers, retailers, community partners and others are encouraged to contribute to and support this effort.

About the Innovation Center for U.S. Dairy® (Innovation Center)

The Innovation Center was established in 2008 under the leadership of America's dairy farmers through Dairy Management Inc.™ (DMI), the non-profit organization that manages the national checkoff program. Led by dairy company CEOs and industry leaders representing over 60 percent of the U.S. milk supply, the Innovation Center provides a pre-competitive forum for the dairy community to identify category-wide priorities and develop recognized industry-aligned tools and resources to advance U.S. dairy's commitment to social responsibility and positive impact. It affirms these values through the U.S. Dairy Stewardship Commitment.

To ensure an inclusive and mutually beneficial approach, the Stewardship Commitment is developed with voices spanning the value chain



"Consumers, customers and other stakeholders are increasingly interested in understanding where their food comes from and how it is made. The Commitment delivers on our aim to work collaboratively from farm to retail to advance and communicate U.S. dairy's social responsibility."

*Barbara O'Brien, president
Innovation Center for U.S. Dairy®*

(acknowledgements on Page 27). This collaborative process provides shared value and a common understanding of sustainable dairy. From farm to table everyone benefits – food companies, the dairy community and, most importantly, the millions of people who enjoy dairy every day.

Learn more at www.usdairy.com or contact the Innovation Center at innovationcenter@usdairy.com

Chapter 1 | About the Stewardship Commitment

Stewardship Commitment Benefits

The U.S. Dairy Stewardship Commitment provides a voluntary, stakeholder-aligned platform to define and exhibit sustainability progress. To ensure long-term relevancy and value, it is updated annually to reflect the latest science, insights and priorities. Through these efforts, the Stewardship Commitment provides a collaborative and consistent voice that benefits the entire supply chain from “grass to glass.”

BENEFIT TO ALL

Advances and demonstrates U.S. dairy's positive social, environmental and economic impact through collaboration across the value chain

BENEFITS TO DAIRY FARMERS, COOPERATIVES & PROCESSORS

Expands business development opportunities

Substantiates U.S. dairy's leadership in the increasingly competitive global marketplace by aggregating and reporting on important social responsibility* metrics

Simplifies measurement and reporting

- Reduces demands of multiple and overlapping external surveys and reporting requirements
- Employs tools and metrics developed with direct input from U.S. dairy farmers, cooperatives and processors

Saves time and money

Reduces need to invest in developing individual programs and protocols

Validates the combined work of U.S. dairy farmers, cooperatives and companies

Earns recognition for the dairy community's commitment to nourish communities, continuously improve and be socially responsible

Ensures dairy's voices are heard and reflected in discussions with key stakeholders

Provides ongoing interaction with customers, nonprofits, government, and other key stakeholders through Dairy Sustainability Alliance® involvement

BENEFITS TO CUSTOMERS & CONSTITUENTS

Builds confidence that U.S. dairy farmers and companies advance key aspects of social responsibility by employing consistent, credible and recognized reporting mechanisms

- Reduces need to develop costly internal assurance programs and validation processes
- Aligns with globally recognized programs and protocols
- Provides measurement and reporting consistency in dairy supply chains
- Offers opportunity for direct input on dairy's social responsibility priorities and metrics to contribute to the future of U.S. dairy sustainability



Chapter 1 | About the Stewardship Commitment

Dairy Sustainability Alliance®

The Innovation Center's Dairy Sustainability Alliance® (Sustainability Alliance) facilitates the collaborative, open and transparent process through which the U.S. Dairy Stewardship Commitment is developed. Comprised of over 100 member organizations and more than 350 professionals, Sustainability Alliance members convene to share knowledge and collaborate on issues and opportunities to accelerate progress and contribute to the long-term viability of the industry. Sustainability Alliance members include industry suppliers, cooperatives, processors, retailers, government, dairy checkoff and civil society.

The Sustainability Alliance includes 40 dairy farmer representatives from across the country who provide essential on-farm perspectives and expertise. This dialogue provides the dairy chain with insights from U.S. farmers, who serve as the lynchpin of a truly sustainable dairy industry, and allows farmers to hear firsthand about downstream opportunities and challenges. All efforts and outcomes of the Dairy Sustainability Alliance's work are voluntary, precompetitive, technology-neutral and made available to the entire industry.

Dairy Sustainability Alliance Involvement

All Dairy Sustainability Alliance members commit to advance socially responsible, economically viable and environmentally sound dairy food systems. The diverse nature of Sustainability Alliance membership and the unique insights each member brings are key to ensuring the Stewardship Commitment reflects the voices of all involved. This is core to the Stewardship Commitment and dairy company membership in the Sustainability Alliance is a key term of adoption. (Page 11)

The Dairy Sustainability Alliance meets in-person twice each year to facilitate information exchange and interaction. Workshops and side meetings regularly surround these meetings to inform continuous improvement across an array of sustainability priorities, including animal care, environmental stewardship and processing operations.

The Dairy Sustainability Forum occurs in the spring and convenes more than 200 Sustainability Alliance members. In 2019, they provided feedback on a variety of proposed Stewardship Commitment metrics through a series of discussion and input sessions.

Sustainability Alliance members also meet for a fall meeting and the Sustainable Agriculture Summit, which attracts more than 500 professionals from national



The U.S. Dairy Sustainability Awards

Launched in 2011, the annual U.S. Dairy Sustainability Awards program serves to recognize and honor outstanding dairy farms, businesses and partnerships for socially responsible, economically viable and environmentally sound practices. These practices, along with countless others throughout the nation, illustrate continuous improvement efforts across the industry that demonstrate U.S. dairy is truly committed to a more sustainable world.

Learn more about the program and past winners at www.usdairy.com/awards.

organizations representing dairy, row crops, specialty crops, pork, beef and poultry. Co-hosted by the Innovation Center and Field to Market® (Page 7), the Summit aims to strengthen the supply chain network of producers, agribusinesses, retailers and influencers who drive continuous improvement in agricultural sustainability and deliver food, fiber and fuel to a growing world.

Chapter 1 | About the Stewardship Commitment

Dairy Sustainability Alliance®

To maintain a Sustainability Alliance membership, organizations annually commit to: support socially responsible, economically viable and environmentally sound dairy food systems; ensure appropriate staff are involved; attend at least one meeting annually; actively engage in the dairy community's social responsibility efforts; support dairy communication efforts; and complete an annual member engagement survey.

Dairy Sustainability Alliance Membership



Chapter 1 | About the Stewardship Commitment

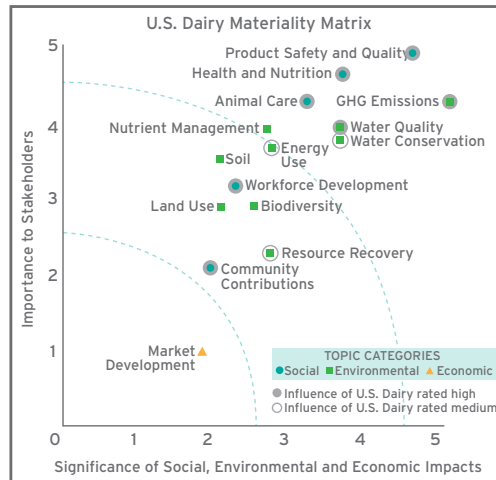
Stewardship Commitment Metrics

The Stewardship Commitment Metrics are common, stakeholder-aligned measures that empower the dairy community to quantifiably demonstrate social responsibility and continuous improvement. They provide voluntary, credible and science-based measures to track, measure and communicate sustainability progress – at the farm, cooperative and processor level and from individual company to aggregate national reporting. In doing so, the Stewardship Commitment Metrics provide the proof points to illustrate U.S. dairy lives up to its long-standing values.

Metric Development and Oversight

The Innovation Center's Board of Directors (Board), comprised of dairy company CEOs and industry leaders, represents more than 60 percent of the U.S. milk production and sets metric development priorities based on extensive stakeholder input. These priorities are further substantiated through an industry and third-party reviewed materialist assessment completed in 2019.

The Executive Operating Committee (EOC), a subgroup of the Board, oversees the efforts of seven industry-led committees that develop additions and refinements to Stewardship Commitment Metrics for stakeholder review. The EOC also oversees a Stewardship Task Force (Task Force) of 16 dairy cooperative and farmer sustainability leaders – including three Innovation Center Board CEOs – tasked with advancing the adoption,



Complete Materiality Assessment available at usdairy.com/commitment

reporting and credibility of the U.S. Dairy Stewardship Commitment.

A formalized process for metric development and approval is essential to advance credibility and support for the Stewardship Commitment. The metric development and approval process

Dairy Sustainability Measurement Terms

Indicator: An indicator provides a relevant measure to assess sustainability; for example, energy intensity.

Metric: A metric defines how the indicator is measured; for example, total energy use per lb. of production output.

Intensity: Intensity metrics provide a normalization factor; for example, total energy use divided by lb. of production. By dividing absolute impacts by unit of output, intensity metrics can measure progress regardless of changes to the production volume.

includes industry leadership, as well as cross-sector, multi-stakeholder input through the Dairy Sustainability Alliance® and a 60-day publicly available comment and review period. This process is based on the ISEAL principles, which provide widely-recognized guidance for credible sustainability reporting. Through the Stewardship Commitment Metric development review and approval process, the Innovation Center aims to advance industry-wide adoption and maintain the endorsement and advocacy of dairy customers and third-party stakeholders.

Stewardship Commitment Metric Development: ISEAL Codes of Good Practice



- ✓ 60 days for submission of comments
- ✓ Interested parties have equal opportunity to participate
- ✓ Parties directly affected (e.g. dairy farmers and processors) will be adequately represented
- ✓ All comments will be considered but not necessarily incorporated
- ✓ A written summary of how issues were addressed will be made publicly available
- ✓ Procedures will be established and documented to guide decision making
- ✓ All approved metrics will be published promptly

Chapter 1 | About the Stewardship Commitment

Stewardship Commitment Metrics at a Glance

FIELD		
Priority	Indicator	Metric
Feed Impact	Field to Market® indicators for water, soil, land use and biodiversity	• The Innovation Center for U.S. Dairy® (Innovation Center) continues to work with Field to Market to ensure the indicators and metrics are useful and relevant to dairy.
	Innovation Center indicators for greenhouse gas (GHG) and energy intensity	• U.S. dairy's Comprehensive LCA for U.S. Milk is used to measure the GHG and energy intensity of feed production. These metrics mirror those used at the dairy farm and are reported in aggregate.
DAIRY FARM		
Priority	Indicator	Metric
Energy Use	Energy intensity	• Total energy use (converted to MMBTU)/lb. of milk (FPCM)
GHG Emissions	GHG intensity	• Total GHG emissions (tonnes CO ₂ e)/lb. of milk (FPCM)
Water Quantity	Water use (on-farm)	• Gallons of water withdrawn (for lactating cows)/lb. of milk (FPCM)
Nutrient Management	Nutrient Management Plan	• Do you implement and maintain a written Nutrient Management Plan? (Y/N)
Animal Care	Farm animal care	• Do you participate in the FARM Animal Care program? (Y/N)
PROCESSOR / MANUFACTURER		
Priority	Indicator	Metric
Energy Use	Energy intensity	• Total energy use (converted to MMBTU)/lb. of production output
GHG Emissions	GHG intensity	• Total GHG emissions (tonnes CO ₂ e, Scope 1 and 2)/lb. of production output
Water Quantity	Water withdrawal	• Gallons of water withdrawn by source of water supply/lb. of production output
	Water efficiency	• Gallons of water withdrawn/lb. of production output
	Water recycling and reuse	• [Gallons of water supplied that are captured for reuse within the facility + milk water captured for use]/lb. of production output
	Milk water use	• Gallons of water captured from milk for use within facility/lb. of production output
	Surplus Water	• [Discharge volume - water withdrawn]/lb. of production output
Water Quality	Water discharge and quality	• Do you have a policy, program or monitoring system that ensures routine compliance with industrial or storm water permit parameters? (Y/N)
Resource Recovery	Waste diversion	• Percent by weight total waste stream (lbs.) diverted from landfill or incineration without recapturing energy
	Throughput efficiency	• Total waste stream/lb. of production output
	Resource utilization	• Food donated or repurposed as animal feed and non-food recycled or composted (lbs.)/total waste stream (lbs.) • Food repurposed for industrial uses or compost and non-food repurposed for energy recovery (lbs.)/total waste stream (lbs.) • Waste sent to landfill or incineration without recapturing energy (lbs.)/total waste stream (lbs.)
Workforce Development	Human resources	• Total number of jobs supplied (includes full- and part-time employees and consultants) • Indirect and non-monetary benefits available to employees • Total number employed during the past year and percentage of employees who have been employed for 5, 10 and 20 years
	Worker safety	• Do you have leading indicators to measure/encourage safe worker behavior? Describe measurement systems employed, and how this has led to a safer workforce • Days of restricted work activity or job transfer (DART) rate ▪ Explain why this has changed over time.
Community Contributions	Community volunteering	• Volunteer activities performed by employees
	Monetary & product donations	• Monetary and product donation activities
	Educational opportunities	• Describe community educational events per year and the total number of participants.
	Product contributions	• Servings of dairy donated or consistently supplied to a non-profit organization to feed food insecure people. (For Stewardship Commitment reporting, companies report in lbs.)
Product Safety & Quality	Food safety	• Do you have validated, verifiable food safety programs and management systems in place? (Y/N) • Do you frequently reassess your food safety programs to ensure efficacy and to reflect new food safety tools/practices and ensure continuous improvement? (Y/N)
	Traceability	• Commitment to voluntary U.S. Dairy Traceability Guidelines (Y/N)

Chapter 2 | Alignment with Recognized Programs

Harmonization with Recognized Standards

To streamline reporting and maintain credibility, the Stewardship Commitment draws upon globally recognized best practices and guidance in sustainability standards and reports development. When possible and practical, Stewardship Commitment Metrics align with measures developed by others to ensure harmonization and prevent duplication.



Dairy Sustainability Framework

Dairy Sustainability Framework (DSF)

Provides a global platform to map sustainability programs, identifies priority topics applicable to dairy worldwide and measures progress across the global dairy value chain (Page 10).

The Innovation Center is an aggregating member of the DSF and submits national progress for DSF global reporting. The Dairy Sustainability Alliance® serves as the convening body for U.S. stakeholders and the Stewardship Commitment Metrics (Page 5) provide the measurement and reporting platform for all DSF-recognized dairy companies in the U.S. market.



Field to Market®

Field to Market®: The Alliance for Sustainable Agriculture

Convenes a diverse group of stakeholders – including more than 140 grower organizations, leading companies, academia, conservation groups and public sector partners – to define, measure and advance the sustainability of U.S. crop production.

The Innovation Center has a formal partnership with Field to Market to harmonize on-farm sustainability metrics, and is engaged in joint efforts to help dairy farmers answer supply chain questions related to certain aspects of feed production (Page 13).



Greenhouse Gas Protocol

Provides the world's most widely used GHG accounting and reporting standards.

The GHG Protocol underpins the Innovation Center's Life Cycle Assessment (LCA) and provides the methodology for FARM Environmental Stewardship (Page 15) and the Dairy Processor Handbook (Page 20) GHG reporting.

Supply chain GHG reporting guidance for the Stewardship Commitment was released in 2019. The World Resources Institute (WRI) formally endorsed this guidance with the "Built on GHG Protocol" mark, making dairy the first agricultural sector guidance to obtain this mark.



International Organization for Standardization

Develops international standards for products, services and systems to ensure quality, safety and efficiency.

The Farmers Assuring Responsible Management™ (FARM) Animal Care program (Page 18) is the world's first ISO-compliant livestock animal care program.

The Stewardship Commitment's animal care metric is focused on FARM, which covers 98 percent of the U.S. fluid milk supply.



Global Reporting Initiative™ (GRI)

Provides the most widely used cross-industry sustainability reporting standards for organizational reporting worldwide.

A GRI-aligned materiality assessment provides a basis for Stewardship Commitment priorities. When used with Stewardship Commitment metrics, this can help cooperatives, processors and manufacturers with the development of a GRI report.

The Innovation Center encourages use of the GRI Standards to guide reporting practices.



CDP

Oversees the global disclosure system and provides reporting tools and guidance for reporting on environmental risk.

Participants disclose data around climate change, supply chains, water and forests to provide information to customers, investors and other stakeholders.

The Stewardship Commitment can help dairy cooperatives and processors prepare a portion of their submission to the CDP, or respond to downstream requests for CDP-aligned measures in customer reporting.

Chapter 2 | Alignment with Recognized Programs

Harmonization with Recognized Standards

The Stewardship Commitment Metrics support other sustainability measurement platforms to facilitate corporate reporting and investor disclosure requests. The table below illustrates where Stewardship Commitment Metrics link with global reporting protocols, standards, peer initiatives and the United Nations Sustainable Development Goals (SDGs).

Priority	DSF Criteria (Page 10)	GRI Topic (Page 7)	UN SDGs (Page 9)	Other Linkages
Field				
• Feed Impact	• Soil, Water, Soil Nutrients, Biodiversity	• 303 Water and Effluents • 306 Effluents and Waste • 304 Biodiversity	• 6. Clean Water and Sanitation • 15. Life on Land	• Field to Market®
Field Dairy Farm Processor – Manufacturer				
• Energy Use		• 302 Energy	• 7. Affordable and Clean Energy	
• GHG Emissions	• GHG Emissions	• 305 Emissions	• 13. Climate Action	• GHG Protocol • CDP Climate
• Water Quantity and Quality	• Water	• 303 Water and Effluents	• 6. Clean Water and Sanitation • 12. Responsible Consumption and Production	• CDP Water
Dairy Farm				
• Animal Care	• Animal Care	• Animal Welfare ¹	• 12. Responsible Consumption and Production	• ISO-compliant Livestock Animal Care Program
• Nutrient Management	• Soil Nutrients	• 303 Water and Effluents • 306 Effluents and Waste	• 12. Responsible Consumption and Production	
Processor / Manufacturer				
• Resource Recovery	• Waste	• 306 Effluents and Waste	• 12. Responsible Consumption and Production	• U.S. EPA Resource Recovery Hierarchies
• Product Safety and Quality	• Product Safety and Quality	• 416 Customer Health and Safety • Procurement/Sourcing Practices ²	• 12. Responsible Consumption and Production	• FDA Pasteurized Milk Ordinance • Food Safety Modernization Act (FSMA) Requirements
• Workforce Development	• Working Conditions	• 401 Employment • 403 Occupational Health and Safety	• 8. Decent Work and Economic Growth	
• Community Contributions	• Rural Economies	• Not applicable in GRI	• 2. Zero Hunger	

Note: GRI topics reflect the most current version of the GRI Standards for each (2018 for 303 Water and Effluents and 403 Occupational Health and Safety, with all others 2016); Animal Welfare and Procurement/Sourcing Practices are covered in the GRI G4 Food Processing Sector Disclosures.







¹GRI Food Processing sector-specific topic (GRI G4).

²GRI Food Processing sector guidance (GRI G4).

Chapter 2 | Alignment with Recognized Programs

U.S. Dairy and United Nations Sustainable Development Goals

To transform the world – benefitting all people and the planet we live on – the United Nations launched 17 Sustainable Development Goals (SDGs) in September 2015. The goals aim to drastically decrease poverty, hunger, climate change and inequality by 2030. Food and agriculture has the opportunity to be key levers of action to drive success, and the dairy community is dedicated to being part of the solution. While the work of the dairy community directly or indirectly connects to all 17 goals, the U.S. dairy community is uniquely qualified to contribute significantly to helping achieve the following SDGs.

Goals		Dairy's Contribution
People	ZERO HUNGER 	<ul style="list-style-type: none"> U.S. dairy helps play a leading role alleviating hunger and food insecurity by providing hundreds of millions globally with access to safe, affordable and nutritious dairy foods and ingredients. Alongside partners including Feeding America, the Academy of Nutrition and Dietetics, the School Nutrition Association and the Urban Schools Food Alliance, the dairy community is making strides to end hunger and provide a sustainable source of nutrition to youth and vulnerable populations. This includes childhood nutrition through the National School Lunch and Breakfast Programs, reaching over 30 million students, many of whom are in underserved communities, as well as through product donations and charitable giving to food banks and pantries nationwide.
	GOOD HEALTH AND WELL-BEING 	<ul style="list-style-type: none"> Dairy foods like milk, cheese and yogurt contribute a unique nutrient package that sets them apart from other foods, which is why they are in their own food group. They provide essential nutrients such as high-quality protein, calcium, phosphorus, B vitamins and more that help promote growth, development and overall health. Dairy foods are the top food source for calcium, vitamin D and potassium, based on what the average American eats (NHANES data); therefore, dairy provides three of the four nutrients of public health concern identified by the <i>U.S. Dietary Guidelines for Americans</i>.
	DECENT WORK AND ECONOMIC GROWTH 	<ul style="list-style-type: none"> The dairy community plays an essential role in sustained economic growth and reduced unemployment. In the U.S. market, the dairy community directly provides nearly one million jobs³ and contributes \$628 billion annually to the U.S. economy – more than one percent of U.S. gross domestic product (GDP).⁴ Much of the milk production and dairy product manufacturing occurs in rural communities.
Environment	CLIMATE ACTION 	<ul style="list-style-type: none"> U.S. dairy cows generate the fewest greenhouse gas (GHG) emissions per gallon of milk in the world,⁵ and the dairy community is committed to continuous improvement when it comes to environmental stewardship. This includes a GHG reporting tool and improvement guidance available to all dairy farmers, guidelines to credibly report GHG intensity and reductions for dairy processing, and a voluntary industry-wide goal of 25 percent GHG emissions reduction from 2007 to 2020.
Community	RESPONSIBLE CONSUMPTION AND PRODUCTION 	<ul style="list-style-type: none"> The U.S. Dairy Stewardship Commitment provides a stakeholder-aligned, national platform where the dairy community can work collectively on efforts that balance food production with societal impact and environmental stewardship. Through the use of Stewardship Commitment Metrics, U.S. dairy can establish metrics and reporting to transparently demonstrate the responsible use of resources in local communities and throughout the world.
	PARTNERSHIPS FOR THE GOALS 	<ul style="list-style-type: none"> It takes everyone working together to define and achieve the ambitions set by the Stewardship Commitment. To ensure an inclusive and mutually beneficial approach, the Innovation Center forges valuable third-party partnerships with organizations such as the World Wildlife Fund, Feeding America and the USDA; and leads the multi-stakeholder Dairy Sustainability Alliance® to unify the dairy community and advance a shared vision of achieving resilient, sustainable food systems.

³<https://www.idfa.org/resource-center/dairy-delivers>.

⁴<https://bit.ly/2P3TAIT>

⁵Greenhouse Gas Emissions from the Dairy Sector. Food and Agriculture Organization. <http://www.fao.org/docrep/012/k7930e/k7930e00.pdf>.

Chapter 2 | Alignment with Recognized Programs

Global Dairy Alignment

Dairy is integral to the lives of billions of people worldwide. In the American diet alone, dairy supplies 58 percent of vitamin D, 51 percent of the calcium and 16 percent of the protein. Further, the livelihoods of approximately one billion people are connected to dairy and seven percent of the world's land is cared for by the dairy sector.⁶ Thus, dairy has a significant role to play in contributing positive outcomes to address the world's most pressing challenges, such as nutritional security, poverty reduction, resource scarcity and climate action. As the largest dairy producing country in the world, the U.S. must play a leadership role. This wider context fuels the Innovation Center's work with leading global dairy, crop and environmental organizations to support shared efforts for sustainable dairy.



A Global Platform for Sustainable Dairy

The linkages between dairy, its societal benefits and the environment are complex. The challenge has been to establish a common global platform to advance sustainability across the diversity of dairy production.

To this end the Dairy Sustainability Framework (DSF), developed by the Global Dairy Agenda for Action (GDAA), was established for dairy

organizations worldwide to map and connect their sustainability activities in a consistent manner. As of 2019, the DSF has five aggregators that report national progress on behalf of their sourcing regions and more than 30 member organizations across the world.⁷

The DSF consists of 11 Global Criteria outlining high-level objectives (strategic intents) committed to by the dairy sector. Recognizing the diversity of dairy production systems, the DSF enables regional setting of priorities and measures and the quantification of progress.

On behalf of the U.S. market, the Innovation Center is an aggregating

member of the DSF. In this role, it submits national progress to demonstrate U.S. contributions to sustainable dairy for DSF global reporting. Through the Dairy Sustainability Alliance® the Innovation Center also provides a national convening body for DSF-engaged dairy stakeholders, while the Stewardship Commitment Metrics provide the measurement and reporting protocol for all DSF-recognized dairy companies in the U.S. market. U.S. dairy companies that adopt the Stewardship Commitment are recognized as members of the DSF.

Global Criteria	Stewardship Commitment Alignment
Environment	
Biodiversity	• Feed Impact (Page 13)
Greenhouse Gas	• Greenhouse Gas Intensity (Page 15, 20)
Soil	• Feed Impact (Page 17)
Soil Nutrients	• Nutrient Management Plan (Page 17)
Waste	• Resource Recovery (Page 22)
Water	• Water Quantity (Pages 16, 21), Water Quality (Page 21), Feed Impact (Page 17)
Social	
Animal Care	• FARM Animal Care (Page 18)
Product Safety & Quality	• Food Safety (Page 25), Traceability (Page 26)
Working Conditions	• Worker Safety (Page 23), Human Resources (Page 23)
Economic	
Market Development	• Foundational to U.S. dairy (Page 2)
Rural Economies	• Community Contributions (Page 24)

⁶UN Food and Agriculture Association, *The Global Dairy Sector: Facts*. <http://bit.ly/2qds8Rt> (stat includes cows, sheep, goats and buffalo).

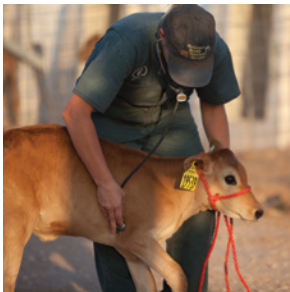
⁷<https://dairysustainabilityframework.org/dsf-membership/members/>

Chapter 3 | Stewardship Commitment Adoption

Terms of Adoption

2018 marked the 10th Anniversary of the Innovation Center for U.S. Dairy (Innovation Center), a milestone to celebrate the progress of the dairy community and commit to ambitious goals and aspirations for the years ahead. This inflection point showcased the opportunity to build upon industry alignment and further quantify dairy's overall impact, which sparked the launch of the U.S. Dairy Stewardship Commitment. To catalyze this process, the Innovation Center Board of Directors approved voluntary, formal adoption terms for the Stewardship Commitment. Shaped by dairy farmers and representatives from more than 30 dairy companies and industry organizations, these terms set the stage for dairy cooperatives and processors to demonstrate their alignment with U.S. dairy's shared values and metrics, and begin reporting on dairy's collective social, economic and environmental benefit.

Cooperative and Processor Terms of Adoption



Companies that, in the exercise of their independent business judgment, decide to adopt the U.S. Dairy Stewardship Commitment, agree to the following:

1. Active membership in the Dairy Sustainability Alliance® and agreement to its terms of membership
2. Enrolled and in good standing with the National Dairy FARM (Farmers Assuring Responsible Management) animal care program and/or sourcing 100 percent of milk from FARM enrolled farms.
3. Use of Stewardship Commitment Metrics and accompanying measurement tools
At a minimum this includes:
 - Use of the current version of the FARM program for animal care reporting
 - Use of the FARM Environmental Stewardship Sampling Protocol to report on-farm GHG and energy metrics or a timebound goal in place to measure and report these metrics through this protocol
 - Use of at least one Community Contribution metric
 - An organizational commitment to the voluntary U.S. Dairy Traceability Guidelines
 - For dairy processor reporting, use of measurements consistent with methodologies outlined in the *Dairy Processor Handbook* (i.e., Greenhouse Protocol, EPA Waste Hierarchy)
4. Engagement in Innovation Center volunteer opportunities to discuss and inform future indicators, metrics and reporting needs aimed at telling U.S. dairy's social responsibility story
 - Participate in Commitment-focused initiatives such as voluntary working groups, committees, stakeholder review, etc., and/or inform updates to relevant resources
 - For companies with priorities related to field and feed sustainability, engage with and/or support Innovation Center activities to advance alignment with Field to Market®: The Alliance for Sustainable Agriculture
5. Recognition of U.S. Stewardship Commitment adoption in dairy company's sustainability messaging, customer outreach and on website
6. Acknowledgement of U.S. Stewardship Commitment adoption and agreement with terms through an annual survey

Learn more at usdairy.com/sustainability/commitment.

The Innovation Center for U.S. Dairy follows all applicable antitrust regulations. Each company is encouraged to exercise its own independent business judgment regarding whether or not to participate in this initiative and, if so, how. None of the suggested activities will take any action toward antitrust prohibited subject matters such as pricing, allocation of customers or markets, boycotts or refusals to deal or any other matter that could be construed as a combination in restraint of trade.

Chapter 3 | Stewardship Commitment Adoption

Industry Adoption

Dairy cooperatives and processors that adopt the Stewardship Commitment must submit a written affirmation statement signed by a senior executive or CEO. Adopting companies affirm to be part of a movement to advance dairy's values, participate in the work that defines what the industry stands for and contribute to better public understanding of dairy's stewardship efforts.

Those who adopt the Stewardship Commitment, at a minimum, meet defined criteria for animal care, environmental stewardship, traceability, stakeholder engagement, community contribution and communications.

At the national level, information from adopting companies will be aggregated as quantified proof points to demonstrate U.S. dairy's sustainability leadership.

As of November 2019, 26 dairy cooperatives and processors

representing more than two-thirds of the U.S. milk supply signed this pledge to formally adopt the Stewardship Commitment.

Cooperative and processor participation is updated regularly at www.usdairy.com/commitment.

Commitment Adoption Affirmation Statement



U.S. Dairy Stewardship Commitment – Company/Cooperative Affirmation

By adopting the U.S. Dairy Stewardship Commitment, <company/cooperative> proudly affirms U.S. dairy's long-standing values of responsible production and nourishing communities, emblematic of who we are as an industry and how we continually strive to improve.

As outlined specifically in the terms of adoption, < company/cooperative > commits to:

- Participate in U.S. dairy's pre-competitive, voluntary, transparent and multi-stakeholder input process to develop and agree upon important industry priorities, metrics and goals
- Implement industry-accepted best practices and use Stewardship Commitment Metrics to track and share progress, advancing the ability to aggregate and report on behalf of U.S. dairy as a whole
- Work to achieve stewardship goals that reflect values of < company/cooperative > and U.S. dairy, and to contribute to broader understanding of these efforts

By signing below, our organization affirms adoption of the Commitment.

Executive Signature:

Executive Name: _____

Title: _____

Date: _____

Chapter 4 | Field Metrics

Feed Impact

Every stage of the life cycle contributes to dairy's environmental footprint. To help understand field-level impacts, the Innovation Center works in partnership with Field to Market®: The Alliance for Sustainable Agriculture.

Field to Market® Alignment

On average, dairy farmers only grow 35 percent of their cattle feed.⁸ They are, therefore, limited in the ability to collect primary data on two-thirds of the feed supply. To address this, the Innovation Center has partnered with Field to Market, a diverse collaboration working to advance improvement in the sustainability of U.S. commodity crop production, and participates in all of its standing committees (metrics, education and outreach, verification and awards and recognition).

Because an estimated 45 percent of a dairy cow's feed comes from corn silage and alfalfa, the Innovation Center and Field to Market focus on enabling U.S. dairy to track sustainable production of these crops through Field to Market's platform. With the Innovation Center's financial support, version 3.0 of Field to Market's Fieldprint®

Calculator (released September 2018), includes these two key dairy feed crops. Currently, the Innovation Center and dairy cooperatives are working with Field to Market to field test the new tool and will continue to support Fieldprint projects.

Field to Market uses USDA data to calculate the environmental impact of feed production for several indicators. The scale varies depending upon the availability of data sets at national, state or Crop Reporting District levels. The dairy community will use these benchmarks in industry reports and tools. Individual companies can work directly with Field to Market to address specific supply chain reporting needs.

As a term of Stewardship Commitment adoption (Page 11), companies with priorities related to field and feed sustainability engage with and/or support this



ongoing partnership. With the dairy community's active support, the Innovation Center and Field to Market will continue to advance sustainability for both purchased feed and that grown on-farm.

Indicators	Metrics
<ul style="list-style-type: none"> Field to Market quantitative outcomes for land use, irrigation water use and soil conservation Field to Market qualitative indices for water quality, soil carbon and biodiversity Innovation Center quantitative outcomes for GHG and energy intensity 	<ul style="list-style-type: none"> The Innovation Center and Field to Market work together to ensure indicators and metrics are useful and relevant to dairy farmers, customers and consumers. U.S. dairy's Comprehensive LCA for U.S. Milk is used to measure the GHG and energy intensity of feed production. Metrics mirror those used at the dairy farm (Pages 14, 15) and are reported in aggregate. The Innovation Center and Field to Market are working together to determine how to integrate GHG and energy metrics over time.
Tools and Resources	
<ul style="list-style-type: none"> Field to Market, www.fieldtomarket.org: Learn about Field to Market membership. See examples of ongoing projects and how farmers and the supply chain are working together to catalyze continuous improvement. Fieldprint® Platform, http://bit.ly/2sZkSOH: Learn about the Fieldprint Platform, a pioneering assessment framework that empowers brands, retailers, suppliers and farmers at every stage in their sustainability journey to measure the environmental impacts of commodity crop production and identify opportunities for continuous improvement. 	

⁸U.S. Dairy's Environmental Footprint. <http://bit.ly/29qjs5i>.

Chapter 4 | Dairy Farm Metrics

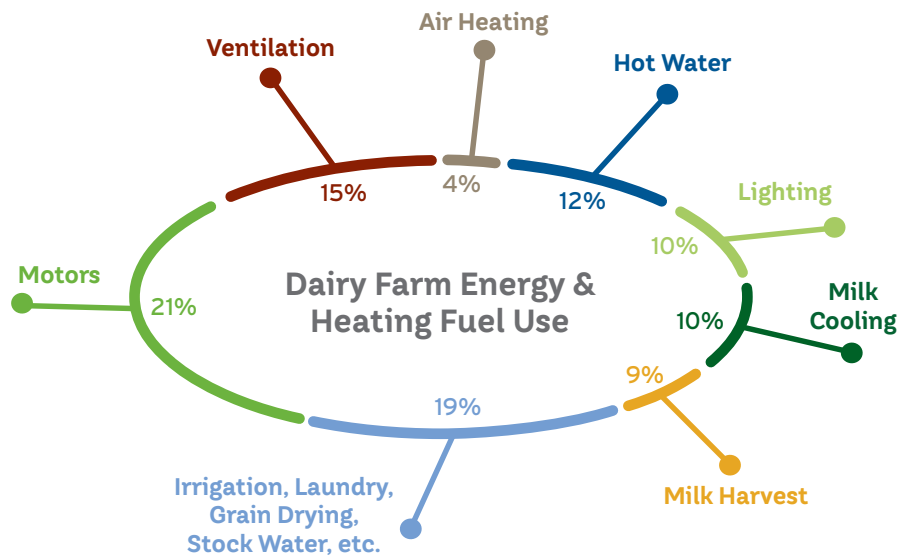
Energy Use

Fossil fuels, the world's primary energy source, release greenhouse gas (GHG) emissions into the atmosphere. As is the case for nearly all U.S. industries, the dairy community relies on energy and fuel throughout the value chain. This includes tractors used in feed production and trucks that distribute milk and dairy products; lighting, milking and other equipment necessary on the farm; and pasteurization, sanitation and other needs in processing and manufacturing plants. In total, energy use across the dairy supply chain — from feed production to the end consumer — accounts for about 36 percent of dairy's total GHG emissions.⁹

Managing Energy

As with all businesses, energy consumption affects the farm's bottom line. Dairy farmers can strategically manage energy use in order to reduce on-farm costs and lessen exposure to price volatility. While energy reduction methods are specific to each operation, modern technologies such as LED lighting, high efficiency milk chillers and improved ventilation can reduce the risk of volatile energy prices while ultimately increasing farm revenue. Moreover, there are growing opportunities to purchase energy from renewable sources or generate energy on-farm through solar power or anaerobic digestion.

The U.S. dairy's energy indicator uses an intensity metric of total energy use per pound of fat and protein corrected milk (FPCM).¹⁰ Based on the Innovation Center's



Comprehensive LCA for Fluid Milk, this metrics scope includes energy used in dairy farm and field operations, as well as purchased feed. The Innovation Center continues to work with Field to

Market (Page 7) to determine how best to integrate Field to Market's crop-specific energy measurements and data into dairy feed calculations.

Indicators	Metrics
<ul style="list-style-type: none"> Energy intensity 	<ul style="list-style-type: none"> Total energy use converted to MMBTU/lb. of milk (FPCM)
Tools and Resources	
<ul style="list-style-type: none"> FARM Environmental Stewardship, http://bit.ly/2pRA3Uc: Available to all FARM participants (Page 18), the FARM Environmental Stewardship (FARM ES) module enables the collection and dissemination of information on GHG emissions and energy use, helps identify potential efficiency gains and cost savings, and tracks progress in a secure, confidential platform. FARM Energy Efficiency, http://bit.ly/29fkOYB: This resource enables farmers to review best management practices, case studies and updates about financial assistance for energy audits and equipment upgrades. Continuous Improvement Reference Manual, http://bit.ly/2sKnCiX: The FARM Program worked with World Wildlife Fund and a technical review panel of independent experts to create a manual that lays out economically viable management practices, technologies and other considerations that can help reduce on-farm GHG emissions and energy use. 	

⁹U.S. Dairy's Environmental Footprint, <http://bit.ly/29gjs5i>.

¹⁰Because much of the energy in dairy feed is converted to milk solids (fat, protein, etc.), and not all farms produce milk with standard fat and protein composition, on-farm milk production is normalized to the average content (4% fat, 3.3% protein). Lactose has little impact on the overall calculation. When kept as a constant, FPCM is the same measurement as energy-corrected milk.

Chapter 4 | Dairy Farm Metrics

Greenhouse Gas Emissions

Concern over climate change means that reducing greenhouse gas (GHG) emissions is a global priority. Certain agricultural practices emit GHG's, so the agricultural sector can play an important role in efforts to mitigate climate change. Moreover, reducing GHG emissions on the farm can come from improved performance in other areas that impact the environment, such as energy and fuel use, as well as generate economic benefits through improved efficiency.

Measuring Greenhouse Gas

In 2008, the Innovation Center commissioned a life cycle assessment (LCA), unprecedented in size and scope, to create a rigorous approach to measure and improve the environmental footprint of U.S. dairy. In 2018, the LCA underwent significant updates and an independent, third-party review to account for current management practices and incorporate the latest available data.

The LCA findings help dairy farmers and cooperatives minimize the complexity of on-farm GHG measurement and reporting and are integral to the FARM Environmental Stewardship module (FARM ES). This facilitated assessment tool provides a national platform to measure and report on-farm GHG emissions. Use

of this tool is a dairy cooperative requirement for Stewardship Commitment adoption (Page 11). GHG intensity is measured as pounds CO₂e per pound of fat and protein corrected milk (FPCM).^{11,12} The scope includes farm and field operations as well as purchased feed.

Leading the World in GHG Reduction

U.S. dairy farms have the lowest average GHG intensity of milk production globally – in other words, the lowest amount of CO₂e emitted per gallon compared to any other country in the world. At 10.6 pounds CO₂e per gallon, the GHG intensity of U.S. milk is nearly half the world average of 20.4 pounds.¹³ Further, a 2018 UN Food and Agriculture Organization (FAO) report shows

that North America is the only region in the world that both increased production and decreased absolute (total) GHG emissions.¹⁴

Farmers have achieved this through a long history of increasing milk production efficiency as a result of improved cow comfort, health, nutrition, breeding and other on-farm advancements. Because of the adoption of modern practices, in 2007 the carbon footprint of a glass of milk was 63 percent lower than it was in 1944.¹⁴ Additional reductions can be achieved through practices that increase milk yield per cow, reduce enteric emissions, improve manure handling and processing, optimize breeding and enhance cow comfort. All on-farm practices must be considered in the context of a farm's daily management.

Indicators	Metrics
• GHG intensity	• Total GHG emissions (lb. CO ₂ e)/lbs. of milk (FPCM) produced
Tools and Resources <ul style="list-style-type: none"> • FARM Environmental Stewardship, http://bit.ly/2pRA3Uc: Available to all FARM participants (Page 18), the FARM Environmental Stewardship (FARM ES) module enables the collection and dissemination of information on GHG emissions and energy use, helps identify potential efficiency gains and cost savings, and tracks progress in a secure, confidential platform. • Continuous Improvement Reference Manual, http://bit.ly/2sKnCiX: An informational resource to accompany the FARM Environmental Stewardship module, the manual is intended for those who make on-farm decisions including farmers, nutritionists, veterinarians and manure specialists. It offers practical, science-based ideas for reducing GHG emissions in the areas of feed, production, manure management and energy use. These ideas are presented as opportunities and options for consideration. Links to resources for further information and detail are included. The FARM Program worked with World Wildlife Fund to organize a technical review panel of independent experts to review the manual. 	

¹¹CO₂e (carbon dioxide equivalent) is a standard unit for measuring carbon footprint. The idea is to express the impact of each different GHG in terms of the amount of CO₂ that would create the same amount of warming.

¹²Because much of the energy in dairy feed is converted to milk solids (fat, protein, etc.), and not all farms produce milk with standard fat and protein composition, on-farm production is normalized to the average content (4% fat, 3.3% protein). Lactose has little impact on the overall calculation. When kept as a constant, FPCM is the same measurement as energy-corrected milk

¹³FAO Livestock Primary Production. FAOSTAT. Food and Agriculture Organization. <http://www.fao.org/faostat/en/#home>.

¹⁴FAO and GDP. 2018. Climate change and the global dairy cattle sector – The role of the dairy sector in a low-carbon future. Rome 36 pp. License: CC BY-NC-SA-3.0 IGO

Chapter 4 | Dairy Farm Metrics

Water Quantity

Dairy farmers use water responsibly, generally recycling it multiple times. Clean water is used to wash cows, clean the milking parlor and equipment and cool milk storage tanks. That water is reused to flush manure from barn floors and then recycled and blended with irrigation water to nourish crops grown to feed cows. Due to improved water management and increased milk production efficiencies, in 2007 the water footprint of a glass of milk was 65 percent lower than in 1944.¹⁵



Reducing Water Use

Dairy farmers understand the importance of water resources because their prosperity is directly tied to water access, scarcity and excess. In recent decades, many farms have advanced water conservation and recycling practices, driven by economic and environmental concerns and the availability of more sophisticated data, research, equipment and technology. These advances are aided by state agriculture extension services, USDA's Natural Resources Conservation Service (NRCS), local conservation organizations and others.

Measuring on-farm water use can provide farmers with improved information and risk management options. Efficiency is the basic measure of on-farm water use. Dairy measures water efficiency per pound of fat and protein corrected milk (FPCM).¹⁶ Based on

the Comprehensive LCA for U.S. Milk (LCA), this metric's scope includes drinking, cooling, cleaning and washing for lactating dairy cows. Through LCA data collection at over 500 farms nationally, average on-farm water use is 14 gallons per pound of milk.¹⁷ This aggregate number can serve as a benchmark or be used for reporting when measurement tools for on-farm water use are unavailable.

Dairy feed production accounts for more than 90 percent of water use. Through the Innovation Center and Field to Market partnership (Page 13), feed impacts will be aggregated and used in dairy industry reports, tools and calculators. Since 65 percent of dairy feed is purchased,¹³ aggregate data is vital to capturing water stewardship efforts. In the future, the Innovation Center aims to find ways to address the estimated 35 percent of feed grown on U.S. dairy farms.

Indicators	Metrics
<ul style="list-style-type: none"> Dairy on-farm water use 	<ul style="list-style-type: none"> Gallons of water/lb. of milk (FPCM) <ul style="list-style-type: none"> This metric measures water use for lactating cows. The scope of this metric includes drinking, cooling, cleaning and washing.
Tools and Resources	
<ul style="list-style-type: none"> Penn State's Dairy Water Use Spreadsheet, https://bit.ly/2OpuWal: Allows dairy farmers to estimate their daily on-farm water use deploying simple inputs. PRO-DAIRY Calculator, https://bit.ly/2pJHFeO: Estimates a farmstead's water use (barns, milking etc.) with provisions for entering other water uses on farm. Based on use inputs, the calculator estimates average daily water use for each month. SnapPlus (Wisconsin) https://snapplus.wisc.edu/: Helps farmers make best use of their on-farm nutrients to protect soil and water quality. U.S. Dairy's Environmental Footprint, http://bit.ly/29gjs5i: Provides a summary of U.S. dairy's life cycle assessment findings including water use. 	

¹⁵Source: Capper JL, Cady RA, Bauman D. "The environmental impact of dairy production: 1944 compared with 2007." J Anim Sci. 2009;87(6):2160-2167.

¹⁶Because much of the energy in dairy feed is converted to milk solids (fat, protein, etc.), and not all farms produce milk with standard fat and protein composition, we have normalized on-farm production to the average content (4% fat, 3.3% protein). Lactose has little impact on the overall calculation. When kept as a content, this is the same measurement as energy-corrected milk.

¹⁷Innovation Center for U.S. Dairy. U.S. Dairy's Environmental Footprint: <http://bit.ly/29gjs5i>.

Chapter 4 | Dairy Farm Metrics

Nutrient Management

Fertilizer, manure and compost are used to enrich the soil in which crops are grown. The proper nutrients should be applied at the right rate, time and location to achieve optimal forage and crop productivity. Due to productivity improvements, in 2007 U.S. dairy used 90 percent less cropland to produce a gallon of milk than it did in 1944.¹⁸

Optimizing Nutrients

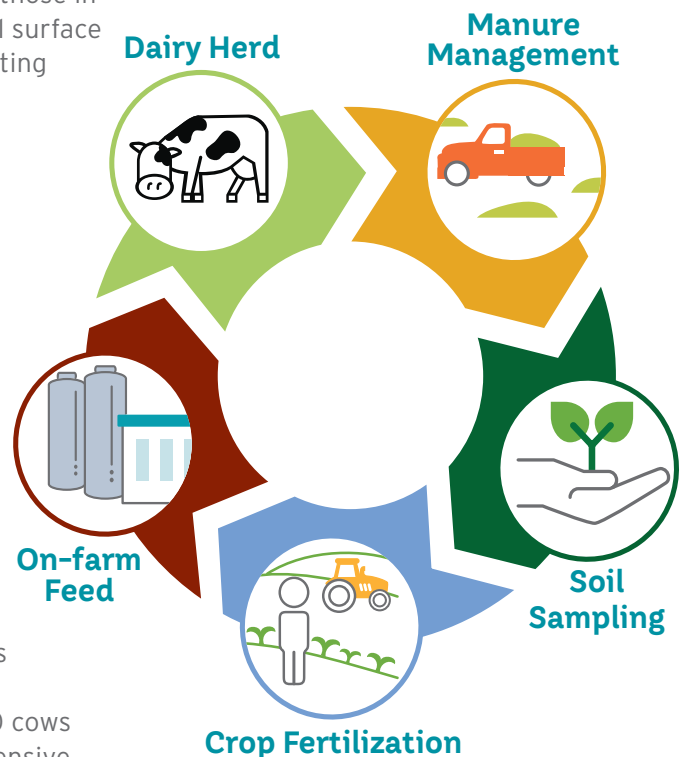
Nutrient management is the practice of efficiently using nutrients to maximize forage and crop growth while safeguarding natural resources. When inadequate nutrients are made available, yield and quality may be compromised. Also, when nutrients are applied in excess or improperly managed, farmers lose money on the wasted inputs and may adversely impact air and water quality.

A Nutrient Management Plan (NMP) helps guide management decisions to ensure nutrients are applied in an economically efficient and environmentally sound manner. For example, a NMP includes steps for testing soil nutrient levels before applying manure or fertilizer to help guide the proper source, rate, timing and placement of additional nutrients.

A NMP is tailored so recommendations meet a farm's unique needs.

For dairy farms, the NMP typically focuses on how manure and wastewater are handled, stored, transferred and applied. Some farmers, especially those in states with plentiful surface water and participating in certain federal conservation programs, are required to have a NMP. Many others voluntarily develop a NMP. The standards for developing a NMP vary by state. Regardless of state policies, Environmental Protection Agency national regulations require dairy farms with more than 700 cows to have a Comprehensive

NMP, which is a whole-operation conservation plan including nutrient management.



Indicators	Metrics
<ul style="list-style-type: none"> Nutrient Management Plan 	<ul style="list-style-type: none"> Do you implement and maintain a written Nutrient Management Plan? (Y/N)
Tools and Resources	
<ul style="list-style-type: none"> USDA NRCS Comprehensive Nutrient Management Plans (CNMPs), http://bit.ly/29vuGER: Animal feeding operations may wish to consult NRCS guidance related to CNMPs, including a manual and technical guide. USDA NRCS State and Local Agencies, http://1.usa.gov/1WlxT7G: State and local agencies offer regionally-specific NMP resources. Guidance documents and management tools include: <ul style="list-style-type: none"> The NRCS 590 Nutrient Management Conservation Practice Standard and related materials, http://bit.ly/29hIFxj. Nutrient Management Planning: An Overview, http://bit.ly/29vvfyt: A step-by-step guide to NMP principles. Manure Management Planner, http://bit.ly/29hmoP3: A computer program that helps users allocate manure (where, when and how much) on a monthly basis for the length of the plan (1 to 10 years). Newtrient, www.newtrient.com: Founded by 12 leading dairy cooperatives, Dairy Management Inc. (DMI), and the National Milk Producers Federation, Newtrient helps dairy farmers, technology providers and other stakeholders assess manure management opportunities and challenges to make informed decisions. Resources include a catalog of technologies and vendors, education materials and a 2015-2018 progress report. 	

¹⁸Source: Capper JL, Cady RA, Bauman D. The environmental impact of dairy production: 1944 compared with 2007. J Anim Sci. 2009;87(6):2160-2167.

Chapter 4 | Dairy Farm Metrics

Animal Care

U.S. dairy farmers are committed to ensuring the well-being of animals in their care. Uniting around the highest standards and making sound decisions are not only ethical obligations, but essential for a productive herd and critical to the farm's profitability and success.

FARM Animal Care Participation



U.S. dairy demonstrates its commitment to animal care through the National Dairy Farmers

Assuring Responsible Management™ (FARM) Animal Care Program. As the first ISO-compliant livestock animal care program in the world (Page 11), FARM fosters a culture of continuous improvement and provides assurance that dairy farmers raise and care for their animals in a humane and ethical manner. The FARM Program's measurement, reporting and continuous improvement platform is key to the Stewardship Commitment, and all adopting companies are enrolled in FARM and/or source from only 100 percent FARM enrolled farms (Page 11).

Currently, 98 percent of U.S. milk comes from participating farms. Guidelines around responsible operating procedures include appropriate care for all age classes of animals, proper housing, employee training, record-keeping and working with veterinarians and other animal care professionals.

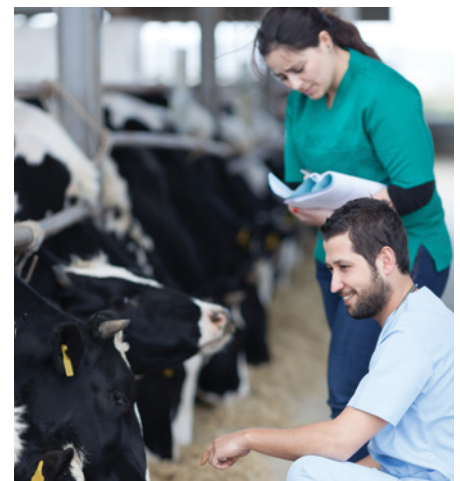
The program is updated every three years. As of 2017 farms must meet criteria in three "Priority One" areas: a relationship with a veterinarian documented by a completed and signed veterinarian client-patient-relationship form on an annual basis, animal stockmanship and care training for all employees and eliminating the practice of routine tail docking. "Priority Two" areas include animal observation benchmarks and a written Herd Health Plan outlining protocols for newborn and milk-fed dairy calves, pain management, training for non-ambulatory animal management, and euthanasia.

The program takes a three-pronged approach:

1. *The FARM Animal Care Reference Manual* and corresponding educational materials detail the highest standards for animal care.
2. Farmers are evaluated at least once every three years by trained and certified experts. Evaluators provide feedback around areas in which farmers are excelling, as well as those where improvement is needed.
3. Third-party verification ensures program integrity

through outside experts, who provide statistically verified data on the implementation of the program and industry-wide animal care.

If a needed improvement is identified, then a mandatory corrective action plan for Priority One areas or a continuous improvement plan for Priority Two areas is developed in consultation with dairy professionals. The action plan must be resolved and verified before the next evaluation for continuous improvement plans (sooner, if a mandatory correction action plan was assigned). If a Priority One area is not resolved within 12 months or sooner, the farm risks probation and eventual suspension.



Indicators	Metrics
• Farm animal care	• Do you participate in the FARM Animal Care Program? (Y/N)
Tools and Resources	
<ul style="list-style-type: none"> • Animal Care Resources, http://bit.ly/2qaTwQO: Resources include the Animal Care Reference Manual, training materials, FAQs and communications guidance. • FARM Program, www.nationaldairyfarm.com: Provides accompanying resources including the <i>Antibiotic Stewardship Drug Residue Manual</i> and <i>FARM Environmental Stewardship</i>. • Year in Review, http://www.nationaldairyfarm.com/resource-library: Provides an annual report of FARM progress and details the national results of on-farm assessments. 	

Chapter 4 | Dairy Processor Metrics

Energy Use

Energy intensity gauges the amount of energy used to produce a specific quantity of product. If tracked over time, it can demonstrate the results of processors' and manufacturers' efforts to reduce energy consumption and optimize production through the introduction of new technologies and/or energy management practices.

Measuring Energy

U.S. dairy processors consume around \$1.5 billion worth of purchased fuels and electricity per year. Energy efficiency improvements are a critical way for plants to reduce these costs and reduce susceptibility to volatile energy prices.¹⁹ Also, better energy performance can be a key strategy for reducing greenhouse gas (GHG) emissions and impacts from the extraction and processing of energy.²⁰ Through best practice energy management and insights obtained through EPA's ENERGY STAR program and other key resources, reduction opportunities exist for steam and refrigeration systems and a number of other dairy processing operations.

Energy intensity should be analyzed within the context of the company's operations and production outputs.

An improved intensity ratio is not a direct indication of reduced GHG emissions and, therefore, should be analyzed appropriately.

This indicator is intended to track continuous improvement. Because inputs, final products and processes vary across manufacturing plants, the reported energy intensity of an individual processor's production facilities should not be used to compare across companies.

When comparing the energy intensity of plants within the same company, the methods of measurement need to be the same. Some companies may process or produce both dairy and nondairy products. In that case, the company should indicate whether or not nondairy products were in the measurement and reporting.



Indicators	Metrics
<ul style="list-style-type: none"> Energy intensity 	<ul style="list-style-type: none"> Total energy use (converted to MMBTU)/lb. of production output
Tools and Resources	
<ul style="list-style-type: none"> Dairy Processor Handbook, http://bit.ly/2qI362G: Provides comprehensive step-by-step guidance on how to measure and report this metric. EPA's ENERGY STAR® Performance Indicators, https://bit.ly/2yG6WKW: Provides industry-specific benchmarking tools to score a plant's energy performance and compare it to that of similar plants; includes resources and guidance. EPA Water & Energy Efficiency by Sectors, https://bit.ly/2WEHCzKI: Provides guidance on how both energy and water can be used more efficiently. EDF Climate Corps Handbook, https://bit.ly/2pwIBpE: Provides strategic energy management information for organizations. Energy Insights and Tips, http://1.usa.gov/1OgYYfr: Includes insights on renewable energy technologies and energy saving tips for commercial buildings. 	

¹⁹<https://bit.ly/2OSUjWW>.

²⁰A. Brush, E. Masanet and E. Worrell. "Energy Efficiency Improvement and Cost Saving Opportunities for the Dairy Processing Industry," Environmental Energy Technologies Division, Ernest Orlando Lawrence Berkeley National Laboratory, 2011.

Chapter 4 | Dairy Processor Metrics

Greenhouse Gas Emissions

On average, processing accounts for 2.5 of the 17.6 pounds CO₂e per gallon²¹ of milk's total carbon footprint.²² Dairy processors and manufacturers can reduce greenhouse gas (GHG) emissions by using energy efficient materials and processing equipment and establishing energy conservation measures.

Measuring Greenhouse Gas

Increased expectations for GHG disclosure and the establishment of company and industry-wide reduction targets underscore the need for credible, consistent GHG measurement and reporting. To address this need, the Stewardship Commitment uses the GHG Protocol Corporate Accounting and Reporting Standard, the most widely accepted-and-adopted GHG standard in the world. As such, use of this protocol is a Stewardship Commitment adoption term for processor GHG reporting (Page 11).

In 2019 the Innovation Center published guidance on accounting for and reporting processor GHG emissions that is endorsed by the World Resources Institute with the "Built on GHG Protocol" mark, signifying its alignment with the most globally-recognized carbon



accounting methodology. The Stewardship Commitment is limited to reporting on Scope 1 and 2 emissions from internal operations and purchased energy. However, guidance exists for voluntary reporting Scope 3 emissions (supply chain activities) as well.

The Stewardship Commitment's GHG intensity metric is intended to track continuous improvement. Because

final products and processes vary across manufacturing plants, the reported GHG intensity of an individual processor's production facilities should not be used to compare across companies. Some companies may process or produce both dairy and nondairy products. In that case, the company should indicate whether or not nondairy products were included in the measurement and reporting.

Indicators	Metrics
<ul style="list-style-type: none"> GHG intensity 	<ul style="list-style-type: none"> Total GHG emissions (tonnes CO₂e, Scope 1 and 2)/lb. of production output
Tools and Resources	
<ul style="list-style-type: none"> Scope 1 & 2 GHG Inventory Guidance, http://bit.ly/2qI362G: Industry-specific GHG accounting and reporting guidance based on the GHG Protocol Corporate Standard. Scope 3 GHG Inventory Guidance for U.S. Dairy Processors, http://bit.ly/2qI362G: Industry-specific supply chain GHG accounting and reporting guidance based on the GHG Protocol Corporate Value Chain Standard. Dairy Processor Handbook, http://bit.ly/2qI362G: Includes guidance on the information and measurements needed to calculate and report this metric. CDP, www.cdp.net: Works with some of the largest corporations worldwide to help ensure that an effective carbon emissions/reductions strategy is made integral to their business. The Climate Registry, https://bit.ly/32cqkv2: Has voluntary and compliance GHG reporting programs and assists organizations in measuring, verifying and reporting emissions. EPA Energy Star Portfolio Manager, http://bit.ly/2CyaGzP: Guidance on how to assess a facility's GHG emissions footprint associated with energy consumption. EPA GHG Equivalencies Calculator, http://bit.ly/2rI99nG: Translates energy or emissions data into concrete equivalent impacts. 	

²¹CO₂e, or carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO₂ that would create the same amount of warming.

²²Thoma, et al., "Greenhouse Gas Emissions of Fluid Milk in the U.S." University of Arkansas, 2010, <http://bit.ly/2a9Md64>.

Chapter 4 | Dairy Processor Metrics

Water Quantity and Quality

Water is a finite resource under increasing pressure from human activities as well as changing climate, and the responsible use of water resources is a key priority for dairy processors and other food manufacturers.²³

Demonstrating Water Efficiency

A plant's water withdrawal and the volume and strength of its wastewater stream are strong indicators of how efficiently the plant is operating. Further, while water efficiency is a good general practice, the availability of water differs throughout the U.S. In areas where water is scarcer, optimal water management becomes increasingly important.

Water recycling is one of several strategies dairy processors can use

to reduce their impact on stressed water sources. Proper water management includes a variety of practices such as reusing water from milk solid separation (milk or condensate of whey [COW] water) and discharging surplus water in beneficial ways to reduce the volume of water withdrawn and impacts on quality.

Dairy processing plants can track water withdrawal and identify production efficiency opportunities using meters. In addition, processors



must monitor water leaving the plants to ensure quality meets or exceeds environmental regulations.

Indicators	Metrics
1. Water withdrawal	• Gallons of water withdrawn by source of water supply/lb. of production output
2. Water efficiency	• Gallons of water withdrawn/lb. of production output
3. Water recycling and reuse	• [Gallons of water supplied that are captured for reuse within the facility + milk water captured for use]/lb. of production output
4. Milk water use	• Gallons of water captured from milk for use within facility/lb. of production output
5. Surplus water	• [Discharge volume - water withdrawn]/lb. of production output
6. Water discharge and quality	• Do you have a policy, program or monitoring system that ensures routine compliance with industrial or storm water permit parameters? (Y/N)

Tools and Resources

- **Dairy Processor Handbook**, <http://bit.ly/2qI362G>: Provides comprehensive step-by-step guidance on how to measure and report this metric.
- **National Standards for Wastewater Discharges to Surface Waters and Publicly Owned Treatment Works for Dairy Products Processing**, <https://bit.ly/2NGG5F8>: Most states and localities require processors to comply with a permitting process.
- **EPA Sustainable Water Infrastructure**, <http://bit.ly/2roxC29>: Guidance and resources to assist facilities in their water stewardship efforts.
- **The Water Footprint Network**, <https://waterfootprint.org/en/>: Works across sectors to share knowledge and insights for water stewardship and resource efficiency.
- **ISO 14046**, <http://bit.ly/2sKmOdS>: An international standard which helps organizations identify and define their water footprint.
- **The World Resources Institute Aqueduct Measuring and Mapping Water Risk Tool**, <http://bit.ly/1XLTIE9>: Provides comprehensive global mapping to understand water risks and opportunities worldwide.
- **Recycling Cow Water [Milk Water] Best Practices**, <http://bit.ly/2WQdxgN>: Resource document outlining best uses and practices for recycled milk water.

²³Sarni, W. 2011. *Corporate Water Strategies*. Earthscan, Washington DC.

Chapter 4 | Dairy Processor Metrics

Resource Recovery

Resource recovery is the selective extraction of disposed materials (waste) for a specific next use, such as the production of new materials, compost or energy. Dairy processors can implement waste management plans to repurpose waste for productive use, reduce the amount of waste generated and prevent waste before it is ever created (avoided waste). Resource recovery may also be extended from processing to the dairy farm through opportunities such as using by-products from food processing as animal feed and sending organic waste to on-farm anaerobic digesters.

Optimizing Recovery

Faced with a growing population and a finite resource base, there is a clear need to do more with less. Furthermore, food waste is a significant contributor to GHG emissions and comprises over 20 percent of what is hauled to landfills.²⁴

Economically, reducing materials consumed and increasing efficiencies in the manufacturing process directly relates to lowered operational costs. Also, repurposed waste, such as

recyclable products, can become added sources of revenue.

Resource recovery options include recycled packaging, optimized use of raw materials and repurposed organics/food waste. Of these, food waste is a priority issue for agricultural products. In the U.S. 40 percent of food goes uneaten.²⁵ At the same time, one in every six Americans lack a secure supply of food. It is critical, therefore, to maximize efficiencies in the U.S. food system and minimize waste in the journey to consumers' plates.

EPA Waste Management and Food Recovery Hierarchies provide the basis for dairy's resource recovery metrics. As illustrated in the *Dairy Processor Handbook*, the Innovation Center merges these two hierarchies to aid processors in waste stream accounting and metric calculations. As term of Stewardship Commitment adoption (Page 11), dairy processors should use the EPA hierarchies as the basis for resource recovery and waste reduction reporting.

Indicators	Metrics
1. Waste diversion	<ul style="list-style-type: none"> Percent by weight total waste stream (lbs.) diverted from landfill or incineration without recapturing energy <ul style="list-style-type: none"> Source reduction is not included in the waste diversion metric, as it is not part of existing waste streams. However, having no waste to begin with is the most preferred method of waste reduction. Processors are encouraged to communicate their source reduction efforts.
2. Throughput efficiency	<ul style="list-style-type: none"> Total waste stream/lb. of production output <ul style="list-style-type: none"> Due to the breadth of dairy products and manufacturing processes throughput can't be used for benchmarking or comparison. This is intended metric for internal use only.
3. Resource utilization	<ul style="list-style-type: none"> Food donated or repurposed as animal feed and non-food recycled or composted (lbs.)/total waste stream (lbs.) Food repurposed for industrial uses or compost and non-food repurposed for energy recovery (lbs.)/total waste stream (lbs.) Waste sent to landfill or incineration without recapturing energy (lbs.)/total waste stream (lbs.) <ul style="list-style-type: none"> Food donations are not specifically reported in the resource utilization metric, as they are captured in the dairy processor metrics as monetary and product donation activities. (Page 24).

Tools and Resources

- Dairy Processor Handbook*, <http://bit.ly/2qI362G>: Provides comprehensive guidance on the information and measurements needed to calculate these metrics, as well as the merged EPA hierarchy diagram used to inform allocations.
- EPA Resources for Repurposing Food, <https://bit.ly/1RJQH4M>: Includes training, guidance and assessment tools.
- Food Recovery Hierarchy, <http://bit.ly/2qrjGjb>: Includes definitions for each tier of the hierarchy.
- Waste Management Hierarchy, <http://bit.ly/29PfUWP>: Used to inform indicators for non-food products and includes definitions for each tier of the hierarchy.
- EPA Sustainable Materials Management, <http://bit.ly/2CI343n>: Provides guidance on using and reusing materials more productively over their entire life cycles.

²⁴<https://www.epa.gov/sustainable-management-food/sustainable-management-food-basics>

²⁵www.nrdc.org/issues/food-waste

Chapter 4 | Dairy Processor Metrics



Workforce Development

Processors closely monitor workforce development, not only to ensure employee health and safety, but also because employee satisfaction and productivity are essential for a positive corporate culture, labor retention, profitability and business success. Further, labor management is closely watched by external stakeholders to help ensure employee safety and worker livelihoods.

Measuring Workforce Development

As milk and dairy products continue their journey from farm to table, employment opportunities expand from feed producers and dairy farmers to truck drivers, factory workers, grocers, retail employees and more.

Dairy processors alone provide more than \$12 billion in wages to over 150,000 employees across the U.S. and, moreover, are often located in rural communities.²⁶ This does not include jobs required to distribute, market and sell dairy products. As such, the sustainability of the dairy industry depends upon the

availability and retention of quality employees.

The scope of the workforce development metrics for processors includes employment opportunities; employee benefits, such as retirement plans and health care; proactive safety programs through leading indicators; and employee retention.

Days of Restricted Work Activity and Job Transfer (DART) provides an important metric for worker safety. It is a mathematical calculation that describes the number of employees involved in a recordable injury or illness.

Indicators	Metrics
1. Human resources	<ul style="list-style-type: none"> Total number of jobs supplied <ul style="list-style-type: none"> This metric includes full-time employees, part-time employees and consultants Indirect and non-monetary benefits available to employees <ul style="list-style-type: none"> This metric includes health insurance, retirement plans and other applicable benefits for both part-time and full-time employees. Total number employed during the past year and percentage of employees who have been employed for 5, 10 and 20 years
2. Worker safety	<ul style="list-style-type: none"> Do you have leading indicators to measure/encourage safe work behavior? Describe measurement systems employed, and how this has led to a safer workforce. Days of restricted work activity or job transfer (DART) rate <ul style="list-style-type: none"> Explain why this has changed over time.

Tools and Resources

- Dairy Processor Handbook**, <http://bit.ly/2qI362G>: Includes comprehensive guidance on the information and measurements needed to calculate these metrics.
- The Bureau of Labor Statistics**, <http://bit.ly/29nOcUM>: Find the National Industry-Specific Occupational Employment and Wage estimates for the dairy product manufacturing industry provided by the Bureau of Labor Statistics.
- OSHA 2012, Form 300A**, <http://bit.ly/29IJBRe>: Get forms for recording work-related injuries and illnesses.
- OSHA Guidance, Using Leading Indicators to Improve Safety and Health Outcomes**, <https://bit.ly/34uCOja>: Background on leading indicators and guidance on how to use them in your organization.
- Campbell Institute, Beyond Safety: Leading Indicators for Health and Wellbeing**, <https://bit.ly/2oLgPFR>: Describes five categories of leading indicators that best measure employee health and wellbeing.

²⁶International Dairy Foods Association, <https://bit.ly/2COapZy>.

Chapter 4 | Dairy Processor Metrics

Community Contributions

Dairy companies and their employees contribute to local communities and regions in ways that can be obvious to consumers and stakeholders, such as direct economic support, local taxes paid and as a source for local employment opportunities. Other impacts may be less obvious including community involvement by employers and employees in service organizations, churches and schools, charitable contributions and general contributions and capacity building to support the vitality of local communities.

Investing in Local Communities

Employees of dairy processors play leadership roles in their communities. For instance, employees may serve on local government, fire departments and school boards and may participate in community and youth programs. Many processors also offer scholarships for college students, provide grant funding to local community projects and get involved in community volunteering and charitable efforts.

The metrics for community contributions focus on the impact dairy processors have on sustaining

vibrant local communities.

They include time and financial contributions, such as volunteering, donations and educational opportunities which are provided in the form of tours and other informational events.

Additionally, dairy companies help sustain food insecure people through hunger relief programs such as Dairy Nourishes America, a joint initiative between the Innovation Center and Feeding America.

As a term of Stewardship Commitment adoption, (Page 11) dairy companies communicate



contributions to the communities they serve in their sustainability messaging and/or reports.

Indicators	Metrics
1. Community volunteering and capacity building	<ul style="list-style-type: none"> Volunteer activities performed by employees
2. Monetary and product donations	<ul style="list-style-type: none"> Monetary and product donation activities <ul style="list-style-type: none"> Provide a narrative description of product donations for the past year.
3. Educational opportunities	<ul style="list-style-type: none"> Describe community educational events per year and the total number of participants.
4. Production Contributions	<ul style="list-style-type: none"> Servings of dairy donated or consistently supplied to a non-profit organization to feed food insecure people

Tools and Resources

- Dairy Processor Handbook*, <http://bit.ly/2qI362G>: Includes comprehensive guidance on the information and measurements needed to calculate these metrics.
- The U.S. Department of Labor Fair Labor Standards Act, DOL 2012, <http://l.usa.gov/28NLmH1>: Provides clarification on what is meant by volunteer activities.
- Dairy Nourishes America Toolkit, <https://bit.ly/2NDMK35>: Describes four donation models to provide hungry people with nutritious dairy products.
- Feeding America's Map the Meal Gap Tool, <https://map.feedingamerica.org>: Provides map of food insecurity by county across the U.S. to identify where donating dairy products is the most impactful.

Chapter 4 | Dairy Processor Metrics

Food Safety

Dairy products have been a safe, healthy and important part of the American diet for generations. Upholding and enhancing a reputation for quality requires that the industry maintains and continuously improves the highest standards for food safety. Dairy processors can reinforce their rigorous food safety standards by following accepted practices and continuously updating systems with the latest validated food safety tools, templates and techniques.

Food Safety Leadership

Ensuring the safety of dairy products from grass to glass is both foundational to the industry and an ongoing priority. Dairy farmers and processors work closely with the Food and Drug Administration and state regulatory officials to establish rigorous food safety standards. These regulations continually evolve to ensure consumers receive wholesome, high quality dairy products.

Mitigating food safety risk and safeguarding consumer confidence in dairy products requires ongoing assessment of food safety management programs

and a commitment to continuous improvement.

Through science and research, the Innovation Center's Food Safety Committee develops food safety tools, leads ongoing dairy plant food safety workshops and designs up-to-date checklists, guidance and assessment materials for dairy processors. These resources help strengthen manufacturing practices in dairy processing facilities, advance science-based tools to diminish food safety risks and help assure dairy products are safe across all facets of dairy manufacturing.

The use of food safety metrics is key in assessing and communicating the



industry's commitment to follow and continuously improve food safety programs and management systems.

Indicators	Metrics
<ul style="list-style-type: none"> Food Safety 	<ul style="list-style-type: none"> Do you have validated, verifiable food safety programs and management systems in place? (Y/N) Do you frequently reassess your food safety programs to ensure efficacy and to reflect new food safety tools/practices and ensure continuous improvement? (Y/N)

Tools and Resources

- Dairy Processor Handbook**, <http://bit.ly/2qI362G>: Provides additional content on metric terminology and comprehensive guidance on how to measure and report this metric.
- The Control of Listeria Monocytogenes, Guidance for the U.S. Dairy Industry**, <https://bit.ly/2Qhdw1c>: Targeted listeria guidance for the dairy industry.
- Listeria Research Consortium**, <https://bit.ly/2P2Djd3>: An industry-funded research consortium to advance science with the ultimate goal of protecting consumers and developing new tools for use in dairy plants and products.
- Food Safety Workshops**, www.usdairy.com/foodsafety: Workshops are held each year to share best practices and help assure food safety performance.
- Food Safety Tools for Artisan/Farmstead Cheesemakers**, www.usdairy.com/artisan and www.safecheesemaking.org: Registration details for food safety basics certificate course, coaching workshops and other food safety resources.
- Dairy Plant Food Safety Resources**, <https://bit.ly/2n2hCNh>: Provides additional food safety resources including facility and equipment design guidance, sanitation procedures and program assessments.
- Validation and Verification of Food Safety Control Measures**, <https://bit.ly/2qoG7JG>: Definitions of validation and verification in food safety from Quality Assurance & Food Safety magazine.

Chapter 4 | Dairy Processor Metrics

Traceability

Traceability is the ability to track a product through all stages of production, processing and distribution. In 2009, the Innovation Center for U.S. Dairy (Innovation Center) made improved traceability a priority because it is increasingly critical in both domestic and global markets. An industry work group, comprised of U.S. processors on behalf of the Innovation Center and the U.S. Dairy Export Council, engaged fellow dairy processors to gain a better understanding of the variety of approaches being used for traceability. This led to the 2013 release of enhanced, voluntary practices for processors. Now more than 80 percent of the U.S. milk supply is covered by the Guidance for Dairy Product Enhanced Traceability: Voluntary Practices and Protocols for Strengthening the U.S. Dairy Supply Chain (U.S. Dairy Traceability Guidelines). In 2020, version 2.0 Guidelines will be released with changes to language and recommended practices due to the implementation of the Food Safety Modernization Act (FSMA) by U.S. processors.

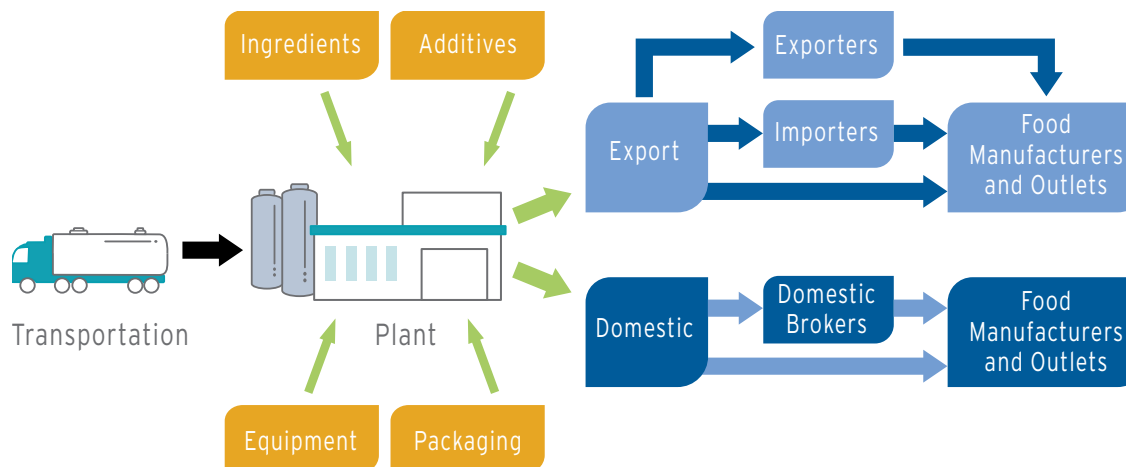
The U.S. Dairy Traceability Guidelines

More companies are seeing the benefits of traceability, not only in safeguarding themselves against a potential food safety crisis, but also in enhancing operational and logistical management. In order to maintain market growth, traceability is essential to distinguish

U.S. dairy products in the global marketplace, meet customer demands and enhance consumer confidence.

The U.S. Dairy Traceability Guidelines focus on product flows, labeling, recordkeeping, data collection and other protocols from the plant through the supply chain to end-product manufacturers. Key to the

industry's sustainability efforts, a commitment to these voluntary guidelines is a dairy processor requirement for Stewardship Commitment adoption (Page 11). Ultimately, enhancing global competitiveness and future prosperity are the goals of this industry-wide traceability initiative.



The U.S. Dairy Traceability Guidelines track history, application and location across the supply chain.

Indicators	Metrics
<ul style="list-style-type: none"> Traceability 	<ul style="list-style-type: none"> Commitment to voluntary U.S. Dairy Traceability Guidelines (Y/N)
Tools and Resources	
<ul style="list-style-type: none"> <i>Dairy Processor Handbook</i>, http://bit.ly/2qI362G: Provides additional guidance on metric terminology and how to measure and report this metric. <i>U.S. Dairy Traceability Guidelines</i>, https://bit.ly/2NNTCOa: A document to guide dairy processors through the steps to achieve a robust traceability system in their facilities. <i>Dairy Traceability Checklist</i>, https://bit.ly/2RwWpbN: A 21-point checklist to evaluate if dairy processing facilities follow the traceability best practices outlined in the guidelines. 	

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 Glanbia Foods Inc.
 Great Lakes Cheese
 Hilmar Cheese Company
 HP Hood
 Kemps
 Kraft Heinz Company
 The Kroger Company
 Leprino Foods Company
 Mars Inc.
 McDonald's
 Nestle
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 Sargento Foods Inc.
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 The Starbucks Company
 Unilever
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NOTE: This report represents a collaborative effort and, as such, its content may not reflect the perspective of each individual contributor, and all contributors may not be attributed.

Board | Companies

The Innovation Center for U.S. Dairy is strong because of the involvement of individuals and organizations from across the dairy community and beyond. Led by chairmen and chief executive officers serving on the Board of Directors, Innovation Center board companies commit to act as stewards and champion the work of the Innovation Center, integrating the principles into business practice and supporting a unified communications approach. Our leaders recognize that now is the time for the dairy community to be more united, more open and bold in proactively building trust with consumers by engaging in continuous improvement and transparency as we proudly tell our stories.

Innovation Center Board Companies



Notes:

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About the Innovation Center for U.S. Dairy®

The Innovation Center for U.S. Dairy® is a forum that brings together the dairy community to address the changing needs and expectations of consumers through a framework of shared best practices and accountability. Initiated in 2008 by dairy farmers through the dairy checkoff, Innovation Center members collaborate on efforts that are important both to the industry and valued customers – priorities like animal care, food safety, nutrition and health, the environment and economics.

The Innovation Center is committed to continuous improvement from farm to table, striving to ensure a socially responsible and economically viable dairy community. Learn more at www.USDairy.com.

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