



Nurturing

• OUR PLANET •

RESPONSIBLE SOURCING ANNUAL MILESTONES

Kellogg's

REPORTING YEAR 2017

Table of Contents

Ten Priority Ingredient Progress.....	3
Measuring Continuous Improvement.....	4
Advocacy.....	5
Supporting Farmer Livelihoods.....	6
Corn/Maize.....	8
Wheat.....	9
Rice.....	10
Potatoes.....	11
Fruits.....	12
Sugar Beet.....	13
Sugar Cane.....	14
Cocoa.....	16
Vanilla.....	17
Eggs.....	17
Soy.....	17
Watershed Support.....	18
Deforestation.....	19
Post-Harvest Loss and Food Waste.....	19
Pollinator Health and Biodiversity.....	20

(See [Sustainable Palm Milestones Report](#) for Progress on Palm Oil)

Kellogg's GLOBAL SUSTAINABILITY COMMITMENTS

RESPONSIBLE SOURCING

- Ingredients / Materials**: Responsibly source priority 10 ingredients/materials by 2020
- Sustainable Agriculture**: Support 500,000 farmers, focusing on Climate Smart Agriculture, to improve livelihoods
- Smallholder Farmers**: Help improve livelihoods for 15,000 smallholder farmers in regions from which we source
- Women Farmers / Workers**: Identify women in the value chain & develop programs to help improve their livelihoods, families and communities

CONSERVING NATURAL RESOURCES

- Energy**: By 2020, expand low carbon energy use in plants by 50% and reduce energy, GHG in plants by an additional 15%*
By 2050 reduce GHG from our operations by 65% and work with direct suppliers to help reduce their GHG by 50%
- Packaging**: Continue adding value to foods and the planet via increased resource-efficient packaging
- Water**: By 2020, implement reuse projects in at least 25% of plants, reduce usage by additional 15%* and continue watershed quality support
- Waste**: By 2020, reduce total waste in plants by 15%*

* Per metric tonne food produced
Goals released August 2014, updated October 2016
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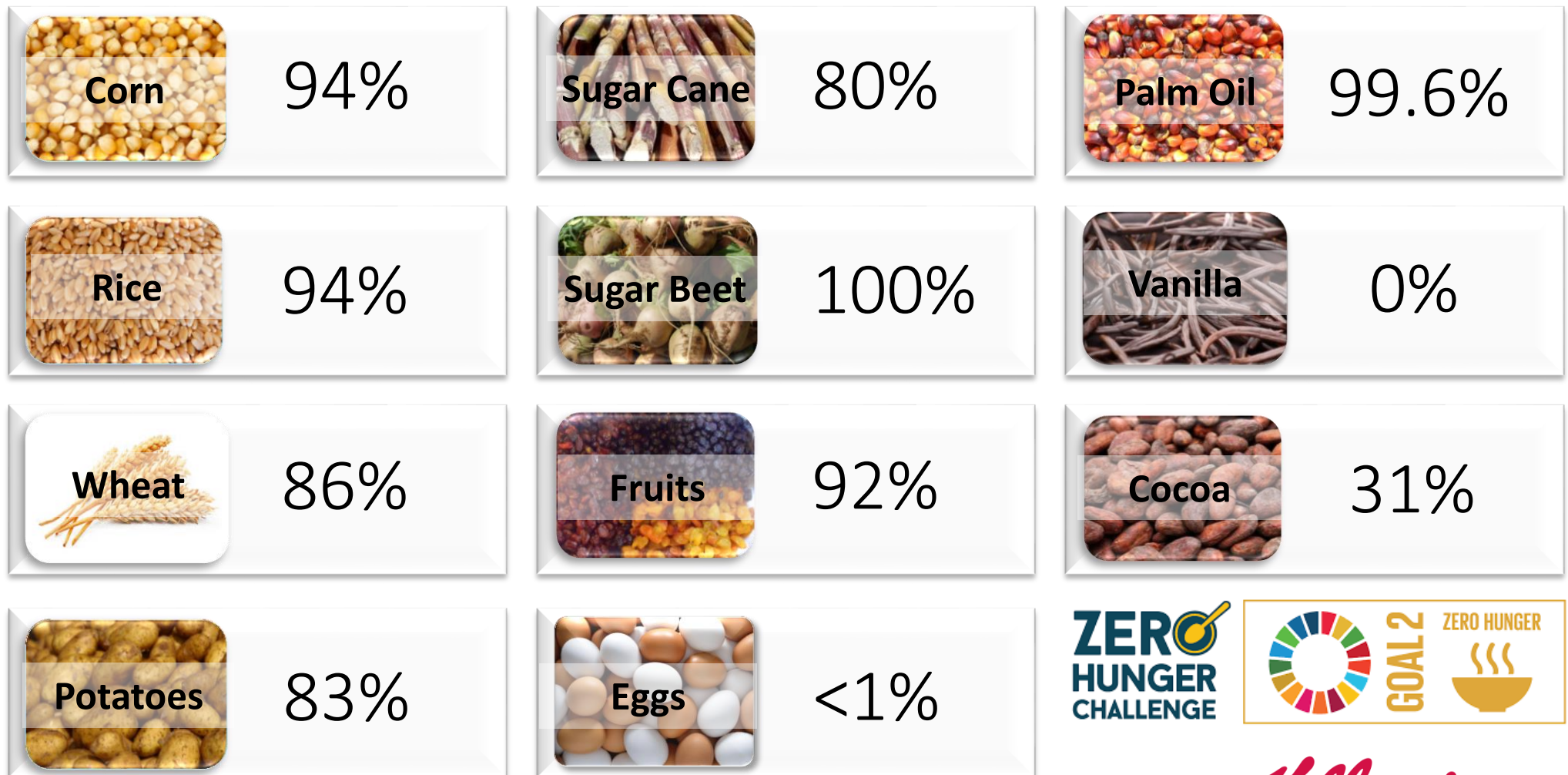
RESPONSIBLE SOURCING ANNUAL MILESTONES

Reporting Year 2017

Nurturing Our Planet

As a global food company, Kellogg Company knows we play an important role in the inter-connected issues of health and wellness, climate resilience and food security. Kellogg has committed to responsibly source its priority ingredients and support agriculture, which is smart for our climate and smart for the growers. This commitment will enable improved resilience to impacts from things such as weather events or market shocks, productivity, particularly for smallholder farmers, and reduction of greenhouse gas emissions. This data collection helps Kellogg better understand risk and opportunities in our supply chain and build programs with farmers.

PROGRESS TOWARD RESPONSIBLE SOURCING THROUGH CONTINUOUS IMPROVEMENT AND DIRECT INVESTMENT



In-scope ingredients defined by major purchased commodity, representing over 80% of total global use. More information can be found here: [Kellogg Company Global Sustainability Commitments Goals](#)

MEASURING CONTINUOUS IMPROVEMENT

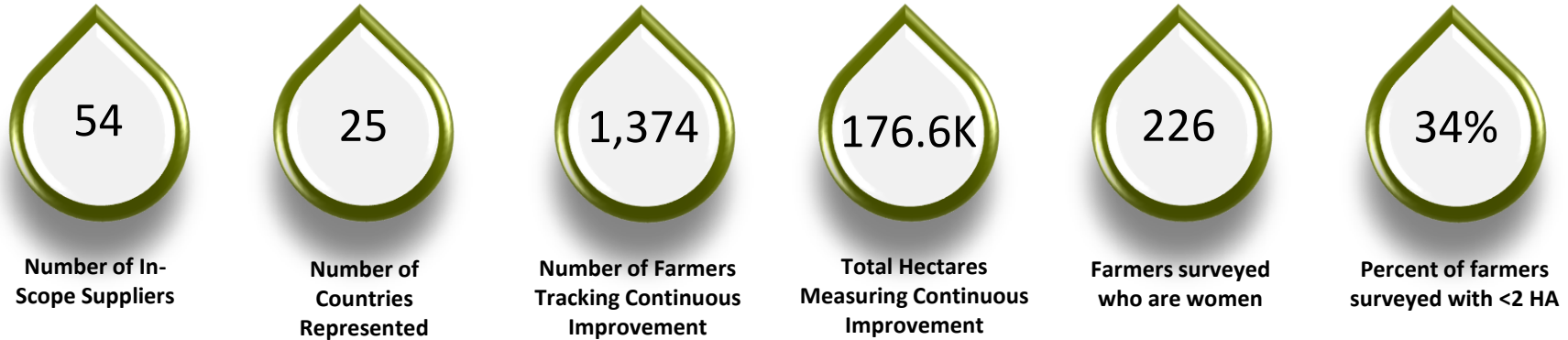
Reporting Year 2017

Nurturing Our Planet

For row crop farming like corn, wheat, rice, potatoes, fruits, and sugar beets, we are committed to responsibly sourcing our ingredients through measured continuous improvement on key environmental and social indicators.

To do this, we use industry standard tools like Field to Market's Fieldprint® Calculator and Sustainable Agriculture Initiative's Farmer Self-Assessment.

Where industry tools don't exist or satisfy requirements, we use the Kellogg Grower Survey to capture this data.



KELLOGG GROWER SURVEY

To meet the global needs of our consumers, we rely upon suppliers, manufacturers, contractors, joint venture partners, agents, distributors and consultants. Each is a Supplier to our company, and we hold all our Suppliers to the same high standards of business integrity to which we hold ourselves.

We know that significant environmental impacts occur in our supply chain, in the growing of our agricultural ingredients. In recent years, food security, feeding the ever-increasing global population going forward, has also emerged as a critical issue facing the agriculture industry. As a responsible food company, we work to do our part to minimize the impacts of agricultural production and help improve agricultural sustainability. It's the right thing to do, and it's what our consumers – who are increasingly interested in where and how their food is grown – expect us to do.

We are committed to responsibly sourcing ingredients such as rice, wheat, corn, and potatoes. We do this by measuring continuous improvement through water use, fertilizer use, greenhouse gas emissions, and soil health metrics. By measuring this information, we demonstrate that farmers are good stewards of the land and continue to improve, while identifying opportunities for further improvement.

To collect and report this information we developed The **Kellogg Grower Survey (KGS)**, an on-line tool used to document and measure grower specific data over time. This data helps us identify opportunities for Kellogg to provide training and programs with our suppliers and their growers.

Beyond continuous improvement, we partner with farmers and others implementing programs to strengthen climate smart agriculture practices and support farmer and worker livelihoods through:

- Research, market access, finance, and other tools.
- Providing data, maps, tools, agronomic support, and/or training to support continuous improvement in climate adaptation

Key indicators for sustainable agriculture reporting include:

- **Number of farmers**
- **Optimization of agricultural inputs**
- **Greenhouse gas emissions**
- **Optimization of water use**
- **Improvement of soil health**
- **Key conservation practices**



Kellogg is committed to supporting climate smart agriculture and soil health practices. As an example, we're co-chairs of the World Business Council for Sustainable Development Climate Smart Agriculture program.



World Business Council for Sustainable Development

Agricultural Challenges Today

- We need 50% more food for 9 billion people by 2050
- Agricultural communities and value chains are extremely vulnerable to climate change
- Agriculture is responsible for 25% of global GHG emissions
- Addressing these issues is a priority for business continuity from a risk and production perspective



Climate-Smart Agriculture has 3 'pillars'



1. PRODUCTION

Sustainably increasing agricultural productivity & incomes



2. RESILIENCE

Adapting and building resilience to climate change



3. MITIGATION

Reducing absolute and/or intensity of GHG emissions

CSA Action Areas

1. Smallholder Resilience



2. Scaling up Finance



3. Monitoring performance



4. Zero deforestation



5. Food Loss & Waste



CSA Focus regions

ASEAN



Brazil



Ghana & West Africa



India



North America



Support 500,000 farmers, their families, and communities with Climate Smart Agriculture practices

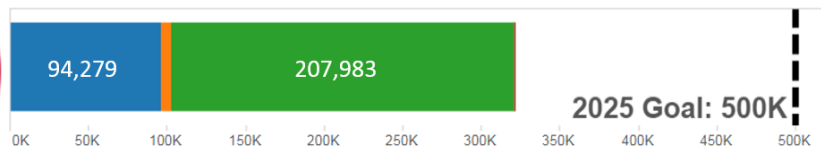
As part of our *Breakfasts for Better Days™* commitments, to help address Food Security and U.N. Sustainable Development Goal 2, we are committed to supporting 500,000 farmers, their families and communities with Climate Smart Agriculture practices to increase yields, improve climate resiliency and reduce post-harvest food loss by 2025. Kellogg has assessed the [number of small-scale and women farmers](#) in our priority supply chains. As of 2017, we have reached over 299,000 farmers through programs, research and technical assistance.

SUPPORTING FARMERS

Generally, Kellogg does not contract directly with farmers to grow the ingredients we use in our foods, but purchases our ingredients from suppliers, like millers, who process raw materials into ingredients such as flour, fruit paste or potato flakes. Kellogg partners with a variety of suppliers, NGOs, research groups and others on programs that contribute to improved yields, incomes and climate resiliency, including improving Climate Smart Agricultural practices. Although smallholder farmers grow a small percent of our total purchased volumes, we know that smallholder farmers are disproportionately impacted by climate change. In 2017 over 55% of our corporate sustainability budget was dedicated to smallholder farmer programs.

Sustainable Agriculture
Support 500,000 farmers by 2025, focusing on Climate Smart Agriculture to improve livelihoods

Number of Farmers Reached

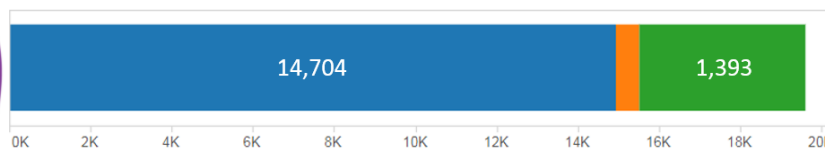


Total Farmers Reached - Globally
299,365

Specific program support and resources are dependent on specific needs of crops, locations and farmers.

Smallholder Farmers
Help improve livelihoods for 15,000 smallholder farmers in regions from which we source

Number of Smallholders Reached



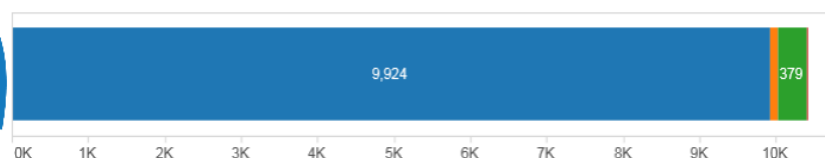
Total Smallholders Reached - Globally
16,990

Climate Smart Agriculture is defined as agricultural practices that:

- Increase Yields,
- Increase Climate Resiliency, and/or
- Reduce GHG emissions

Women Farmers / Workers
Identify women in the value chain & develop programs to help improve their livelihoods, families and communities

Number of Women Reached



Total Women Reached - Globally
10,419

■ Asia Pacific and Africa ■ Europe ■ Latin America ■ North America



**RESPONSIBLE SOURCING ANNUAL MILESTONES:
REPORTING BY COMMODITY**



Kellogg's

REPORTING YEAR 2017

Our Commitment: Source corn grits responsibly by 2020 by measuring continuous improvement at the farm level on environmental and social indicators, including soil health, greenhouse gas emissions, and fertilizer efficiency



COUNTRIES WITH FARMER PROGRAMS

KELLOGG'S ORIGINS™ PROJECTS FOCUSED ON FARMER LIVELIHOOD AND CLIMATE SMART AGRICULTURE

MEXICO MAIZE

Since 2013, Kellogg has partnered with **CIMMYT** and our supplier, **SACSA**, to support the **MasAgro** program supporting smallholder and women farmers to improve crop yields and increase income through agricultural training. CIMMYT's MasAgro program connects farmers to technology, resources and best practices that improve sustainable agriculture and farmer livelihoods. Kellogg also funds CIMMYT research on the nutritional benefits of unique heritage maize seeds. In 2016, Kellogg's expanded the agreement with CIMMYT to include the "Corn Grit Responsible and Sustainable Sourcing in Mexico" project to implement a sustainable and replicable corn sourcing model for Kellogg in Mexico providing a steady and more resilient supply chain.

Results:

- 357 smallholder farmers directly engaged
- 67 women smallholder farmers directly engaged
- 199,680 total farmers directly and indirectly reached through these programs

U.S CORN

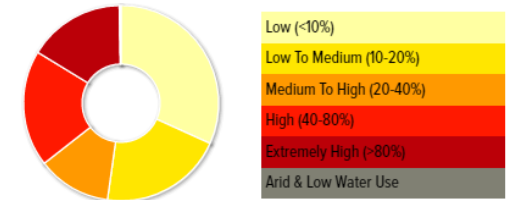
In 2009, Kellogg started working with our supplier, **Bunge**, to track continuous improvement and best agriculture practices within our North America corn supply chain for products such as *Kellogg's Corn Flakes*®. This expanded in 2012 with the creation of Bunge's *Centerfield*™ program, which focuses on quality and improving corn as a food ingredient, doubling farmer participation in 2013. This Centerfield project engages growers by using technology to track farm level crop data and sharing data outcomes over time to support implementation of best practices. Bunge visits Centerfield growers a minimum of five times in the growing season to document metrics such as water usage, soil erosion, greenhouse gas emissions and crop progression.

Results:

- Project locations: Nebraska, Kansas, Illinois, and Indiana
- 166,000 total acres
- 96 farmers directly engaged

Maize

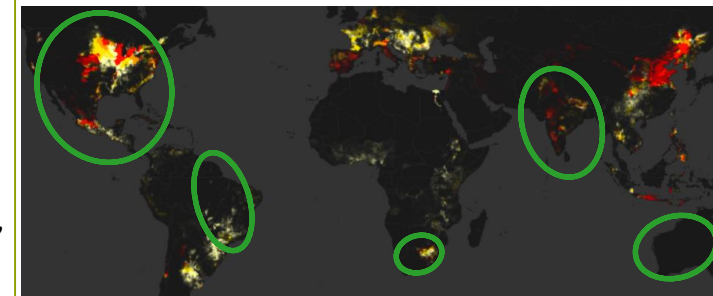
This chart shows what percentage of maize is grown in areas facing different levels of water stress



35% in areas of high to extremely high stress

Average Water Footprint

This crop consumes 1,222 m³ of water per ton of yield



Circle denotes sourcing areas

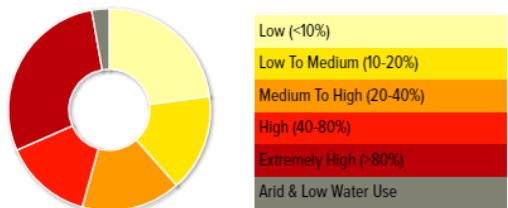
Our Commitment: Source wheat berries and wheat flour responsibly by 2020 by measuring continuous improvement at the farm level on environmental and social indicators including soil health, greenhouse gas emissions, and fertilizer efficiency



KELLOGG'S ORIGINS™ PROJECTS FOCUSED ON FARMER LIVELIHOOD AND CLIMATE SMART AGRICULTURE

Wheat

This chart shows what percentage of wheat is grown in areas facing different levels of water stress

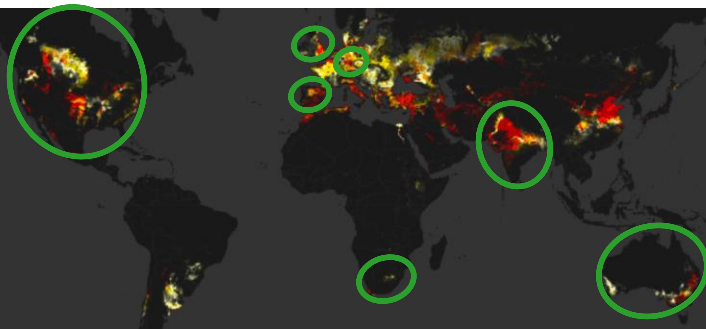


43% in areas of high to extremely high stress

Average Water Footprint

This crop consumes 1,827 m³ of water per ton of yield

Aqueduct's [baseline water stress](#) is a measure of demand and supply for water in a given area, and is calculated as the ratio of local water withdrawal over available water supply.



PACIFIC NORTHWEST WHEAT

In 2016, Kellogg and **Ardent Mills** launched a project with wheat farmers in Idaho and Utah to measure on-farm continuous improvement on key environmental indicators. The Kellogg's *Origins*™ Pacific Northwest Wheat Project uses **Field to Market's Fieldprint**® calculator to better understand and communicate how farming choices affect overall sustainability performance and operational efficiency.

Results:

- Through this program, Kellogg is working with farmers like **Scott Searle**, a third generation potato and wheat farmer from Shelley, Idaho, to measure improvements in sustainable agriculture on his 3,500 acre farm.
- To date, the project reaches over 8,000 acres of wheat production within the Kellogg sourcing region.

EUROPEAN WHEAT

Since 2015 this program engages farmers in the UK and Germany providing access to agricultural best practices which improve farm performance while helping to protect natural habitats in the agricultural landscape where Kellogg's grains grow.

Results:

- **Training in soil structure analysis helped improve soil nutrition and fertilizer application practices**
- **Increased biodiversity by planting wildlife and pollinator margins alongside roads, ditches and difficult to farm 'corners'.**
- **Differentiated field zoning based on soil characteristics and yield potential to improve soil nutrition and positioning of wildlife margins**

Our Commitment: Source whole and broken rice ingredients responsibly by 2020 by measuring continuous improvement at the farm level on environmental and social indicators including soil health, greenhouse gas emissions, water use, and fertilizer efficiency



94%



17



8



438



24K



177K



COUNTRIES WITH FARMER PROGRAMS

In-Scope Ingredient Responsibly Sourced through Continuous Improvement

Number of In-Scope Suppliers

Number of Countries Represented

Number of farmers engaged

Total Hectares Measuring Continuous Improvement

MT Sourced Annually

KELLOGG'S ORIGINS™ PROJECTS FOCUSED ON FARMER LIVELIHOOD AND CLIMATE SMART AGRICULTURE

EGYPT RICE

Rice is a strategic crop in Egypt and a source of food security. It is one of the most environmentally taxing commodities during production and post-harvest handling, second only to sugar cane for water consumption, which in Egypt's arid climate, places a substantial burden on an already limited resource. The **Improving Incomes and Climate Resiliency (IICR)** project increased the incomes of 550 Egyptian smallholder farmers, introduced climate-smart practices to address production inefficiencies, supported income diversification through crop rotation, and connected reliable rice supply chains to high-value markets.

Results:

- 300 farmers directly engaged
- 50% increase in productivity and 10% decrease in cost per acre
- 140% increase in returns of EGP/acre
- Increasing empowerment of local women to participate actively and fairly in training and supply chain activities

LOWER MISSISSIPPI RIVER BASIN

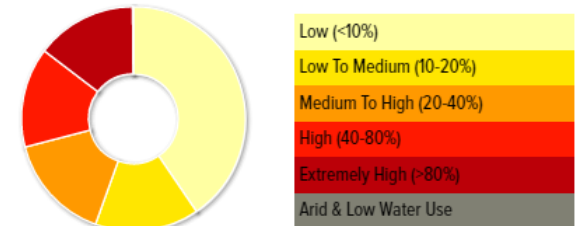
In 2016, Kellogg and **Syngenta** launched the *Kellogg's Origins™* Lower Mississippi Basin Rice Project, which tracks continuous improvement in Kellogg's Arkansas and Louisiana rice supply chain. The data collected through this project is in alignment with **Field to Market®** metrics and uses Syngenta's on-farm record keeping system, Land.db® to confidentially record data and analyze results.

Results:

- 30,000+ total acres
- 18 farmers from 5 different farmers directly engaged
- Jennifer James, a participating farmer, was awarded the Field to Market Farmer of the Year award for her leadership and commitment to sustainable agriculture

Rice

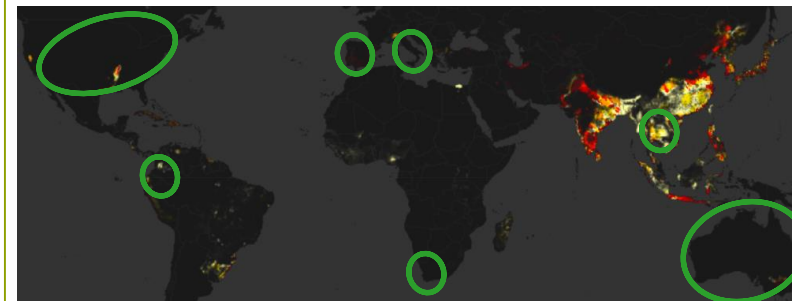
This chart shows what percentage of rice is grown in areas facing different levels of water stress



29% in areas of high to extremely high stress

[Average Water Footprint](#)

This crop consumes 1,673 m³ of water per ton of yield



Circle denotes sourcing areas

Our Commitment: Source potato flakes responsibly by 2020 by measuring continuous improvement at the farm level on environmental and social indicators including soil health, greenhouse gas emissions, and fertilizer efficiency

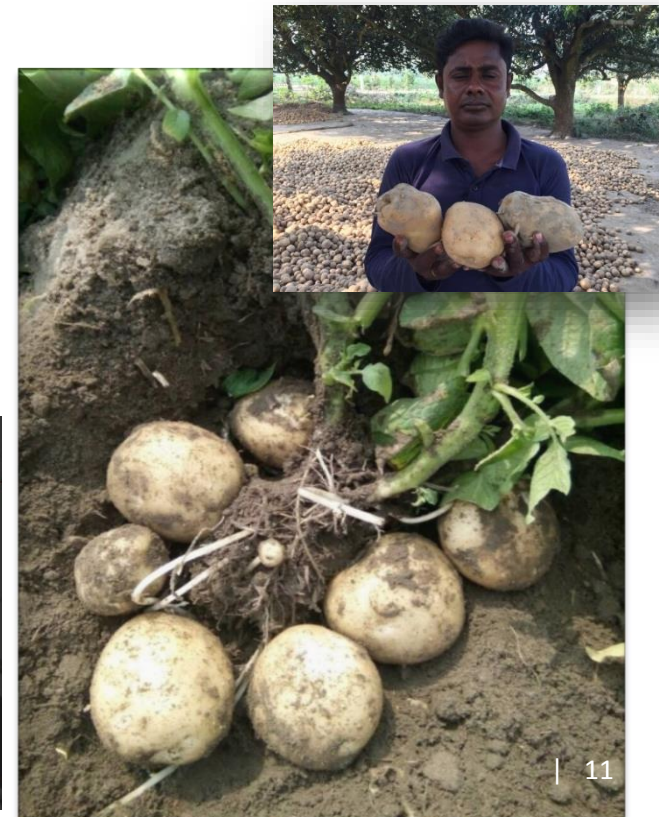


KELLOGG'S ORIGINS™ PROJECTS FOCUSED ON FARMER LIVELIHOOD AND CLIMATE SMART AGRICULTURE

BANGLADESH POTATOES

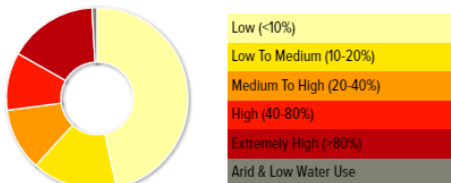
As one of the poorest countries in the world, Bangladesh has numerous political, economic, social and environmental challenges. However, Bangladesh is the third largest producer of potatoes in Asia and potatoes are the second largest agricultural crop in Bangladesh. Kellogg is working with smallholder potato farmers for use in Pringles for the Asian market.

In 2014, Kellogg and **SEBA Limited** worked directly with smallholders to help improve farming methods that improved yields and boosted incomes. Farmers received technical training and new techniques, and were given access to new markets. By 2017, over 1,200 smallholder farmers have been directly engaged through this work. Crop yields were 25-100 percent higher compared to the national average, which resulted in higher profit margins for the contract farmers.



Roots And Tubers

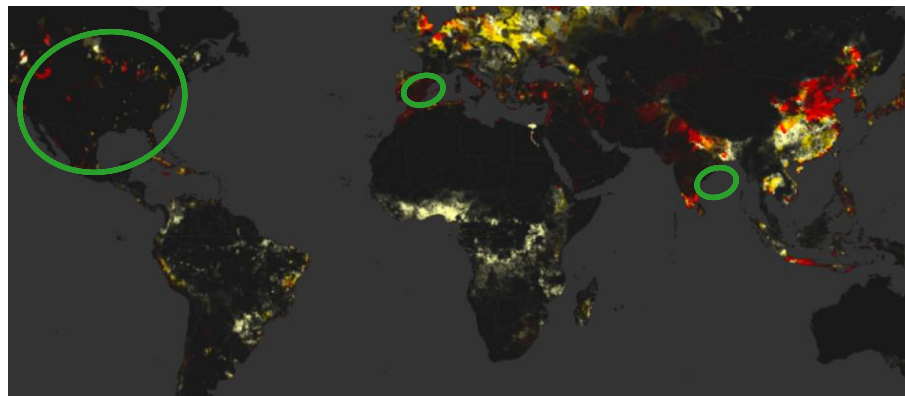
This chart shows what percentage of roots and tubers are grown in areas facing different levels of water stress



26% in areas of high to extremely high stress

Average Water Footprint

This crop consumes 387m³ of water per ton of yield



Circle denotes sourcing areas

Our Commitment: Source raisins, sultanas, and freeze-dried strawberries responsibly by 2020 by measuring continuous improvement at the farm level on environmental and social indicators including soil health, greenhouse gas emissions, and fertilizer efficiency



In-Scope Ingredient Responsibly Sourced through Continuous Improvement

Number of In-Scope Suppliers

Number of Countries Represented

Number of farmers engaged

Total Hectares Measuring Continuous Improvement

KELLOGG'S ORIGINS™ PROJECTS FOCUSED ON FARMER LIVELIHOOD AND CLIMATE SMART AGRICULTURE



STRAWBERRIES

Kellogg sources strawberries in several countries globally, including China for the Asia Pacific market. In 2017, Kellogg partnered with our supplier, **Chaucer**, and participated in their annual Supplier Day and training event (left), providing three training sessions on strawberry seedling cultivating, pesticide control, food safety control.

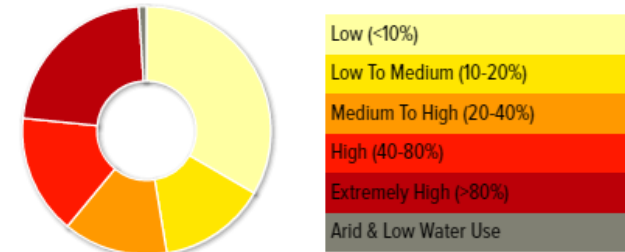
CALIFORNIA RAISINS

Kellogg partners with our California raisin suppliers to support climate smart agriculture and continuous improvement on environmental metrics including water use and fertilizer optimization.

One such supplier is **Sun-Maid**, a co-op of proud raisin farmers, many of whom have been farming for generations. Sun-Maid farmers are focused on implementing sustainable farming practices such as drip irrigation and mechanical harvesting to reduce waste.

Fruits

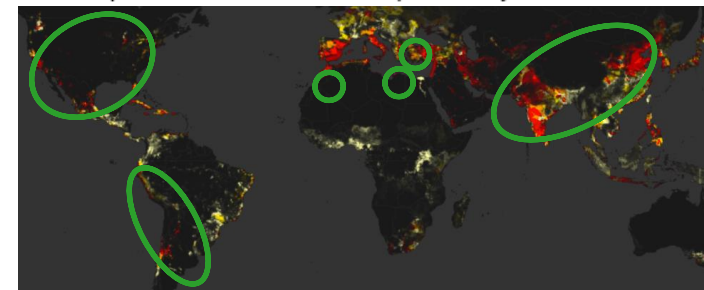
This chart shows what percentage of fruits are grown in areas facing different levels of water stress



38% in areas of high to extremely high stress

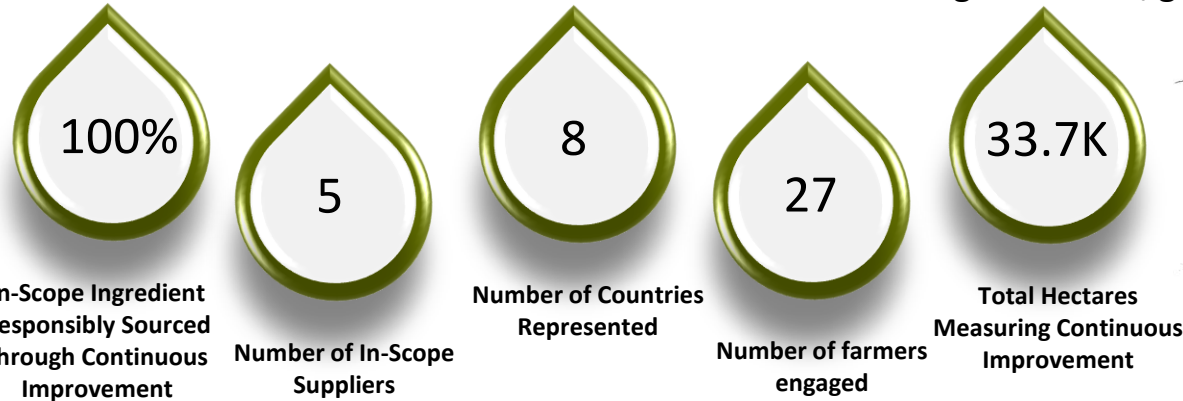
Average Water Footprint

This crop consumes 967m³ of water per ton of yield



Circle denotes sourcing areas

Our Commitment: Source granulated sugar from sugar beets responsibly by 2020 by measuring continuous improvement at the farm level on environmental and social indicators including soil health, greenhouse gas emissions, and fertilizer efficiency



KELLOGG'S ORIGINS™ PROJECTS FOCUSED ON FARMER LIVELIHOOD AND CLIMATE SMART AGRICULTURE

U.S. SUGAR BEETS

In 2017, Kellogg joined our supplier **United Sugar (American Crystal Sugar)** and General Mills to engage sugar beet farmers in the Red River Valley of Minnesota and North Dakota, the largest sugar beet growing region in the United States, in measuring continuous improvement utilizing the *Fieldprint*® Calculator. During 2017, the partnership reached 27 farmers across 24,000 acres of sugar beet production. Through this partnership, Kellogg will continue to work with all partners to grow the reach of the project and provide feedback on results to participating farmers.



EUROPEAN SUGAR BEETS

Kellogg, as a member of **SAI Platform**, participates in the **Farm Sustainability Assessment (FSA)** to support the production of sustainable agricultural raw materials worldwide, and has partnered with the **United Nation's International Trading Centre (ITC)** to offer a practical solution for farmers and other stakeholders to benchmark, assess and communicate their sustainability practices along the supply chain. Many of SAI Platform's members, including Kellogg, agreed to work together to mainstream sustainability in their agricultural supply chain by using FSA.

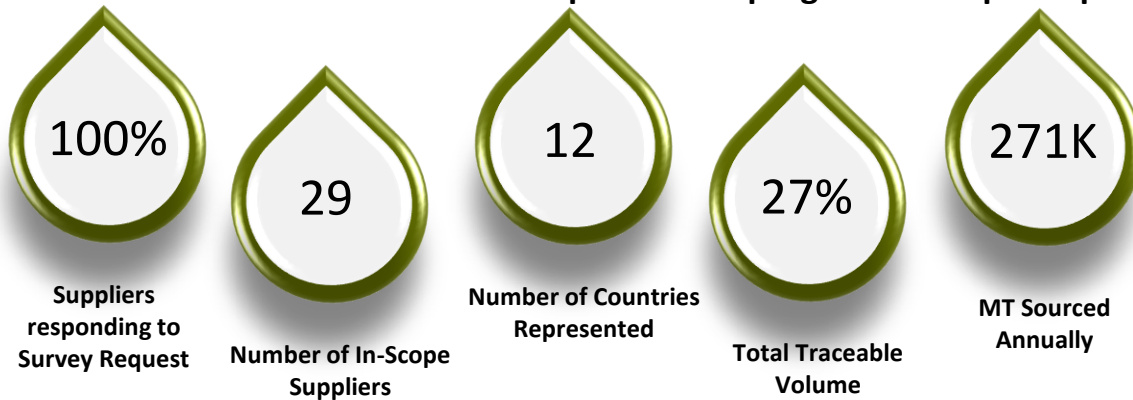
The FSA will improve consistency of sustainability expectations and harmonize sustainability definitions, reduce assessment and assurance duplication at the farm and supply base level, and promote continuous improvement in the sustainable production of agricultural resources.

Kellogg uses FSA for European sugar beet sourcing, engaging directly with farmers through suppliers, and as a benchmarking tool for performance. More information is available on [SAI's website](#).

Results:

- All European sourced sugar beets are from farms that have achieved SAI Silver or higher rating
- More than 300 soil tests conducted for soil health improvement tracking
- Test farms increased annual yield per hectare by approximately 8%
- Crop prices increased, resulting in higher profits
- Environmental inputs were reduced

Our Commitment: Source granulated sugar from sugar cane responsibly by 2020 through industry certifications and continuous improvement programs to improve performance on key indicators.



KELLOGG'S ORIGINS™ PROJECTS FOCUSED ON FARMER LIVELIHOOD AND CLIMATE SMART AGRICULTURE

GLOBAL SUGAR CANE

Our use of sugar cane is primarily in the Americas and in our Asia Pacific business. Kellogg defines responsibly sourcing sugar cane through a combination of:

- Traceability to mill and supply base
- Transparent mill operations, with continuous improvement programs in place
- No grievances reported (worker, community, environmental)

We have partnered with **Proforest** to assess compliance to our requirement across global sugar cane supply, except in the U.S.

Compliance is verified through:

- **Bonsucro** certification through direct purchase or credits
- Continuous improvement programs in the wider supply base to improve performance (long term programs esp. for smallholders)*
- Use of **SMETA** audit (or equivalent) and demonstration that they are working on improving mill performance as well as continuous improvement programs in their supply base

Status of Kellogg Sugar Cane Supply Base:



- Supply Fully Certified
- Supplier's supply base certified
- Uncertified by 3rd party verified of on-site practices
- Need to improve programs
- Need more data

Kellogg recognizes that sugar cane has environmental challenges, human rights risks, and risks to smallholder farmers and workers. This requires different strategies for each region in which we source sugar cane.

- **Latin America:**
 - Funding a stakeholder group with **Solidaridad** and **Bonsucro** to improve labor conditions in the sugar cane supply chain.
 - Participation in an industry group-led project to improve cane cutter working conditions in the Veracruz region of Mexico through improvements to water, rest, and shade. With industry-group **AIM-Progress**, **La Gloria Mill**, and implementation coordinators **ABC Mexico**, built shade shelter tents, increased access to potable water, provided additional personal protection equipment, and facilitated workers best practice training. This project directly supports 2,100 field workers and indirectly supports over 4,000.
- **United States:** Partnering with **University of Michigan** graduate students to capture work already underway in sustainable agriculture in the U.S. and identify continuous improvement opportunities.

MEASURING PERFORMANCE IN THE UNITED STATES

The United States sugarcane industry spans across Louisiana and Florida, contributing significantly to state economies and impacting local social and environmental issues. Kellogg partnered with **University of Michigan** graduate students to create a survey for sugarcane farmers in Louisiana to determine the current status of best practice adoption and identify areas of opportunity for collaboration with suppliers and farmers. The University of Michigan team partnered with Kellogg suppliers, local mills and **LSU AgCenter** to assess environmental and social risks, and ensure alignment while building the farmer and mill surveys to determine best practices and inform Kellogg's sustainability approach within the industry.

Timeframe: February - March 2018

Implementation Partner: LSU AgCenter

Composition: 38 Questions

Topics Surveyed:

- Land Management
- Water Management
- Air Quality
- People & Livelihoods
- Community Development

Survey Respondents

- **73** Respondents
- Total Cane Acres Surveyed: **177,032** acres
- Average Cane Land/Grower: **2,425** acres
- Minimum Cane Acreage: **350** acres
- Maximum Cane Acreage: **10,200** acres

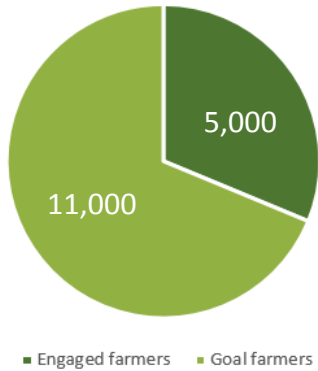
FINDINGS:

- **Climate:** While 85% of growers said they feel at risk for various weather events, only 9% identified weather as the biggest challenge facing future generations. Labor, economic viability and land grabs/subdivisions were the top challenges identified. Only one grower expressed a direct concern about environmental impact due to climate change, but **seven expressed concerns over changing weather and its impact on growing conditions. Of these growers, 80% had nutrient management practices (20% above the average) and 90% had Integrated Pest Management Plans (1% above the average).** However, growers who expressed concerns over weather were 18.5% less likely to rotate pesticides and 9.7% less likely to have an enhanced nutrient management plan. Growers who expressed a concern over weather on average used 13 lbs/acre less fertilizer than their peers, a 9.89% reduction.
- **Water:** Flooding was a major source of yield loss and was connected to the most common water management strategy: drainage. There was a slight negative correlation between **how often growers examined in-field drainage** and **whether the grower suffered yield loss**. The data suggested that growers did not tend to examine their in-field drainage proactively, but instead only after some yield loss was expected. The existence or contents of a **water management plan** had no noticeable impact on **yield loss**. There was a slight negative correlation between the **thoroughness of a water management plan** and the **existence of yield loss**. These results raise questions as to what factors led growers to include certain components within their water management plan and if growers acted proactively or reactively to water management issues
- **Conservation Practices:** The most commonly used (by >90% of growers) were land forming/precision grading, pesticide management, and nutrient management. **96%** of growers conducted controlled agricultural burns last year, with **61%** conducting them post harvest and **37.5%** pre AND post harvest. Growers who burned cane pre and post harvest were **17.2%** more likely to have a nutrient management plan than those who burned just after harvest. **47%** of sugarcane growers practiced alternative methods, such as row sweeping, with farms larger than 2,000 acres **two times** more likely to practice this method. Only **16.44%** of growers used cover crops and less than **50%** of growers used reduced tillage practices, rotated crops or had an enhanced nutrient management plan
- **Nutrient & Pest Management:** **90.41%** of growers managed pesticide use with drift control agents, rotations, precision application systems, or low-drift nozzles. **89.04%** of growers used Integrated Pest Management. Only **60.27%** of growers claimed to have a nutrient management plan consistent with best management practices from a credible institution.
- **Insurance:** **84.5%** of sugarcane growers had crop insurance. For those growers with insurance, they felt **5%** more prepared to address risks.

Our Commitment: Source cocoa ingredients through direct investment in the regions in which we source

focused on improving farmer livelihoods and climate smart agriculture practices

Progress to Cocoa Engagement Goal



Kellogg is working with all of our cocoa suppliers to assure they are addressing the human rights and production risks associated with the cocoa supply chain. In 2017, we explored several programs with these suppliers to continue to improve the industry with implementation plans in 2018.

We continue our leadership role in the **World Business Council for Sustainable Development (WBCSD) Climate Smart Agriculture Program**. In the CSA focus region of Ghana, our overall objective is to strengthen agriculture-based value chains by developing a diversified landscape model that builds on climate viable crop production pathways:

1. Improve smallholder productivity, household income and food security within cocoa and other value chains, and reducing forest clearing for agricultural lands;
2. Strengthen cocoa and other value chains by building climate resilience and adaptive capacity of smallholders;
3. Increase private sector commitment to sustainable and deforestation free sourcing of agricultural products;
4. Foster an improved business environment for small and medium enterprises through better coordination and transparency within the sector's governance structures.

KELLOGG'S ORIGINS™ PROJECTS FOCUSED ON FARMER LIVELIHOOD AND CLIMATE SMART AGRICULTURE

GENDER TRAINING GHANA

In 2017 Kellogg partnered with **ASDA, Cargill** and **CARE** to address barriers faced by women in cocoa farming communities and provide better access to training. Women farmers represent nearly half of Africa's agricultural workers, and are critically important to developing the full potential of African agriculture and food security. The work included:

- Gender sensitization training for Anader agents (Côte d'Ivoire's national agency for rural development)
- Gender assessments to understand the number of women cocoa farmers across farming regions, the activities they are involved in and current levels of access to training and information.
- Established specific female-only training for up to 1,000 women farmers to improve agricultural and business skills.
- Supported by the **African Cocoa Initiative**, a **World Cocoa Foundation** program that supported the first gender sensitization training program for 100 regional agents from Anader who are responsible for training cocoa farmers in local communities. Cargill trained over 70,000 Ivorian cocoa farmers through its network of 1,800 Farmer Field Schools with the support of Anader.

WBCSD CLIMATE DATA PILOT IN AFRICA

This program, together with **Kukua**, will help mitigate the adverse effects of climate change by bringing weather information to cocoa farmers, improving their ability to respond to changes and patterns.

Access to credible, local weather data is limited for farmers in Sub-Saharan Africa. Poor weather tracking infrastructure and forecasting are major barriers to farmers receiving information needed to increase yields, effect weather-based decision-making, and implement climate smart agricultural practices.

Traditional forms of agricultural management by the dissemination of generational knowledge is being undermined by climate change.

Misinformation and changing climate patterns are responsible for increased rates of crop failure and reduced agricultural production, which contribute to regional issues of hunger, malnutrition, and disease.

ECUADOR CLIMATE SMART AGRICULTURE TRAINING

This partnership program with **Olam** will benefit 3,000 farmers in Ecuador over a 3 year period. Training and materials will be provided to 1,000 farmers per year through farmer field schools. Olam will complete 6 workshops in the first year to a total of 36 farmers (6 farmers per workshop), 3 of which will be women only.

The workshops will involve Olam's expert farmer trainers building a nursery alongside a select group of farmers and providing farmer field schools with live demonstrations during the setting-up. Olam will monitor the management of these nurseries, and they will be used as demonstration sites for other farmers in the area.



Vanilla

Reporting Year 2017

Nurturing Our Planet

Our Commitment: Source in-scope vanilla ingredients through direct investment in the regions in which we source focused on improving farmer livelihoods and climate smart agriculture practices

Although Kellogg buys a very small amount of natural vanilla, we are committed to ensuring the vanilla we do source is grown responsibly, focused on improving farmer livelihoods.

Kellogg recently announced the conversion of many of our products to natural colors and flavors. That innovation and renovation change has impacted the sourcing of vanilla and we are in the process of mapping our new volumes and sourcing footprints.

Throughout this process, Kellogg is committed to working with partners who share our values and, as part of our 2020 Global Sustainability Commitments, we're exploring opportunities to partner and support farmer livelihood for vanilla.



GLOBAL NATURAL VANILLA SOURCING

Eggs

Reporting Year 2017

Soy

Reporting Year 2017

Nurturing Our Planet

Our Commitment: Source 100% Cage-Free eggs by the end of 2025

We use eggs in some of our foods, such as our *Eggo*® frozen breakfast foods and *MorningStar Farms*® frozen veggie foods brands.

We continue to focus our efforts on sourcing eggs from suppliers utilizing enriched colony hen housing and cage-free options that measure impacts on animal welfare, food safety, worker and employee welfare, and the environment.

To enhance this work, we are committed to reach 100% cage-free eggs by 2025.



Our Commitment: Source 100% responsible soy

As part of our commitment to responsibly source our ingredients, Kellogg recognizes the important role we play in supply chains such as soy. Even though we use a small amount of soy and soy related products in our food, we know that working with our suppliers and industry partners to mitigate the potential negative impacts to environments and communities where soy is grown and produced is an important component to us as a global company.

This is why we are proud to support the **Consumer Goods Forum** through the use of the **Sustainable Soy Sourcing Guidelines** to encourage the implementation of strategies that reduce deforestation and support sustainable practices.

To continue our engagement, in 2017 Kellogg also became signatories to the Brazilian [Cerrado Manifesto](#), a declaration confirming our intent and support of initiatives that seek to halt forest and natural vegetation loss associated with agricultural soy production in Brazil by “working with industry, producers, governments and civil society to protect globally important natural landscapes within a framework of good governance and land planning policy.”

Kellogg only sources soy from Brazil for use in our Brazilian business, specifically our 2017 acquisition, Parati.

Kellogg co-chairs the **Midwest Row Crop Collaborative (MRCC)**. This diverse coalition is committed to working with farmer organizations, environmental groups, and state and local watershed partnerships to help solve local and macro water challenges like Gulf hypoxia and groundwater depletion and improve soil health. The work will begin in three pilot states in the Upper Mississippi River Basin (Illinois, Iowa, and Nebraska). Through Kellogg's leadership in the MRCC, we have supported the work of two **Regional Conservation Partnership Program (RCPP)** projects in the Midwest – in Iowa and Illinois.

In addition, Kellogg has also participated in three other **Regional Conservation Partnership Programs** in Michigan, Louisiana and across the rice growing region of the United States. All of these programs support soil health practices, watershed health and biodiversity for improved habitats. Kellogg advocates on federal policy in support of public private partnerships and conservation investments.

Across these 5 Regional Conservation Partnership Programs, USDA has made over \$34 million available for farmers to invest in conservation practices.

RCPP: PRECISION CONSERVATION MANAGEMENT

In Iowa we are part of the **Midwest Agriculture Water Quality Partnership**, which is sponsored by the **Iowa Department of Agriculture and Land Stewardship (IDALS)** and the **Iowa Agriculture Water Alliance (IAWA)**. This project helps reduce nutrient loss and improve water quality, soil health, and habitat for at-risk species, with an emphasis on priority watersheds in Iowa through using precision agriculture information from farms plus collaboration and training from its partners to increase conservation practices implemented and sustainability metrics reported on those agricultural areas.

An important service to farmers, this project is increasing the implementation of conservation practices on agricultural acres on a large scale in the Mississippi River Basin. It also provides the MRCC with the opportunity to promote and support effective field level practices using Field to Market tools and programs to increase the use of sustainability metrics and conservation practices via improved management of grower data.

RCPP: PRECISION CONSERVATION MANAGEMENT

In Illinois, MRCC supports the "**Precision Conservation Management: A Farm Enterprise Approach to Promoting Conservation Practices**" project sponsored by the Illinois Corn Growers Association. This project uses training and precision agriculture information with the goal of integrating conservation into the foundational farm management of commodity crop operations. PCM provides

- financial impact analysis of conservation practices,
- technical assistance from trained conservation specialists,
- supplemental privately-funded financial assistance, data-rich assessment tools to guide producers through **National Resources Conservation Service (NRCS)** program options,
- and precision conservation technology to enhance effectiveness and minimize risk associated with conservation practices.

SAGINAW BAY WATERSHED

The **Saginaw Bay Watershed Conservation Partnership** is specifically designed to reduce excess nutrients and sediment in regional waterways throughout the Saginaw Bay watershed by employing three innovative strategies:

- Setting outcome-based goals for implementing conservation practices in optimal locations
- Harnessing the influence of agribusiness and crop advisors to deliver conservation practices directly to growers
- Tracking progress using cutting edge online modeling tools



Our Commitment: To help achieve zero net deforestation by 2020 through the responsible sourcing of relevant commodities and maintain 100% of timber-based packaging sourced from recycled content or certified sustainable resources

As a member of the **Consumer Goods Forum**, we are committed to help achieve zero net deforestation from tropical forests.

We are committed to ensuring that our packaging is effective in protecting our foods while minimizing the materials used. We utilize a sustainable packaging framework that focuses on improving performance in three key areas: the package-to-food ratio, percent recycled material content and percent materials that are commonly recoverable. Kellogg is committed to continuing further implementation of resource-efficient packaging, as measured by improved performance for recycled content, recyclability and food-to-package ratios.

Kellogg will maintain our commitment to 100% timber-based packaging from either recycled content or from certified sustainable sources. Most of our cereal, cracker and waffle box liners are made of high-density polyethylene (HDPE) which is coded as #2 flexible plastic which is commonly recycled, but the recycle symbol is not typically printed on plastic bags or liners. Kellogg is undertaking initiatives to help people recognize and recycle this material.

Kellogg supports the [Consumer Goods Forum \(CGF\)](#) resolution to achieve zero net deforestation by 2020 through the responsible sourcing of key commodities relevant to our business including palm oil, paper and pulp, soy and cocoa.

Kellogg is a signatory to **the NY Declaration on Forests** and is a member of the **Tropical Forests Alliance 2020**. Working together in industry platforms we can achieve more together, voicing consistent expectations to supply sectors.

Post Harvest Loss and Food Waste

Our Commitment: Reduce total waste, with a focus on food waste, in our manufacturing facilities by 15% by 2020*

Kellogg was one of the first U.S.-based companies to join **Champions 12.3** and to become a **U.S. Food Loss and Waste Champion**.

In 2017, we achieved a **4.7% reduction in food waste** within our Kellogg manufacturing operations, measured by the Food Loss and Waste protocol. In 2016, we piloted **the World Resource Institute Food Loss and Waste Standard** reporting methodology and are one of the first companies reporting global food waste data by destination.

As a global food company, we believe we have a significant role to play in helping to end hunger, achieve food security, improve nutrition and promote sustainable agriculture. In doing so, we are committed to supporting the **U.N. Sustainable Development Goal 2**. We also do our part to halve per capita global food waste at the retail and consumer level, and to reduce food losses along the production and supply chains including post-harvest losses by 2030, which supports **U.N. Sustainable Development Goal 12.3**.

We contribute in four important ways:

- **FARMING:** Reducing post-harvest loss so that more of the food that is grown is consumed.
- **MAKING OUR FOOD:** Eliminating food waste in our processes, capturing it instead to feed people in need, and when that use is not appropriate, ensuring it is used for animal feed.
- **REACHING OUT TO CONSUMERS:** Standardizing food date labels and educating consumers if food is safe to consume, as well as delivering tips and packaging innovation to help them reduce unnecessary food waste.
- **SHARING WITH COMMUNITIES:** Using our global signature cause platform, **Breakfasts for Better Days™** to assure our food also goes to help those in need either due to natural disasters or chronic hunger in communities we support around the world.

* *per metric tonne of food produced*



At Kellogg, we recognize the importance of biodiversity and pollinator health. Pollinators, such as honeybees, play a vital role in the world's food supply chain.

Through our **Kellogg's Origins™ Programme**, we are working with farmers and our suppliers to support biodiversity, natural resource conservation and pollinator health in the areas where our priority ingredients are grown, including wheat, rice, corn and potatoes. As part of this program, Kellogg introduced the **Natural Heritage Initiative** to increase natural care practices that benefit pollinators and other habitat, including planting wildflower fields and flowering cover crops, reducing pesticide use, practicing integrated pest management, and bringing other natural species to the countryside to improve pollinator well-being. This program, which began in the Delta Del Ebro in Spain, has expanded into Valencia in Spain, Great Britain, Italy and around the world.

In 2017, Kellogg also joined the **Honey Bee Health Coalition** to help drive collective solutions and substantive improvements for honey bee health, the health of native and managed pollinators, and worldwide food security.

Providing increased resources for pollinators in crop and non-cropped areas:

- Through the **Natural Heritage Initiative**, participating farmers plant wildflower mixes to provide pollen and nectar to honeybees and other pollinating species. This practice extends the availability of pollen and nectar throughout the year, enabling more species to pollinate crops such as oilseed rape, which were used in crop rotation.
 - **Spain:** thousands of yellow Iris' were planted to help protect the dykes in the flooded rice fields in the Delta rice growing region. Irises are known for growing well in water areas with root structures to support dykes, and have a long, tubular structure offering large pathways for easy access to nectar, thus providing excellent conditions for bees and pollination.
 - **Germany:** farmers planted wildflower strips along roadsides and in unproductive areas like ditches and difficult-to-farm 'corners' to stimulate biodiversity and attract pollinating species.
 - **Italy:** Kellogg organized field tours for farmers, visiting the Rice Research Center of Ente Risi and two rice farms in which farmers used agronomic techniques to reduce the environmental impact of rice cultivation.
- In the U.S., Kellogg provided educational materials from the Honey Bee Health Coalition to suppliers of key ingredients to increase sustainable agronomic practices and biodiversity.

Integrated pest management:

Kellogg helps improve habitats and protect honeybees and other pollinators from harmful exposure to pesticides with practices such as cover crops. Cover cropping involves growing plants to cover the soil on farmland between the harvest and sowing the next set of crops to help to prevent soil erosion, improve soil structure, increase organic matter and suppress weeds and pests without application of chemicals.

- **UK:** Kellogg worked with 13 farmers to incorporate and test the positive outcomes of cover crop usage and the reduction of pesticides on farm. Grassy field margins and hedges were also established. These "highway like" buffer strips helped bees and other species promote plant pollination while also offering natural crop protection. Beetle banks were also tested to help control pests and reduce chemical pesticides. Our research showed that the use of beetles as natural pest predators resulted in less pesticide use and, in some fields, pesticides have not been needed in more than 10 years.
- **Spain:** Kellogg supplied 70 bat boxes to encourage roosting on the farm. Bats are nocturnal pollinators, eat predators and protect crops, thus reducing the need for pesticides. 140 native trees were also planted to support biodiversity in the area.



Kellogg understands that some consumers have questions about the use of the herbicide glyphosate as a desiccant prior to harvest, particularly on wheat. Kellogg In late 2016, Kellogg surveyed 29 suppliers of our U.S. ingredients, representing approximately 38% of ingredient spend, regarding the use of glyphosate as a desiccant on crops used for Kellogg ingredients. We followed up with our suppliers to discuss plans for different practices.



Number of Suppliers Surveyed



% of US Ingredient Spend Surveyed



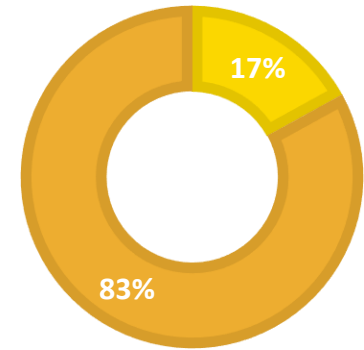
Number of Crops Where Glyphosate May Be Used



% of Surveyed Spend With Potential Glyphosate Use

PERCENT OF U.S. INGREDIENT SPEND WITH POTENTIAL GLYPHOSATE USE

■ Potential Glyphosate Use ■ No Glyphosate Use



SUPPLIER RESPONSES

RESPONDED WITH “NO GLYPHOSATE USAGE”:

- “The prerequisite for our approved suppliers is that they do not use glyphosate as a harvest aid. That being said, some of our suppliers are large grain elevators and it is possible that the grain they supply us may be comprised of some growers who have used glyphosate as a harvest aid.”
- “Testing is done on a quarterly basis... continuing guarantee from supplier states undetectable levels”

OTHER CUSTOMER REQUESTS

- “Not currently aware of which customers specifically prefer glyphosate-free products.”
- “We have been approached by one other customer..”
- “At this time we are not aware of any interest from companies other than Kellogg”
- “In the spring of 2015 we announced our intention to... require the phase out of pre-harvest desiccant on oats, the only miller in North America to do so”

USAGE OF GLYPHOSATE

- “The use of Glyphosate as a harvest practice, is more common in irrigated production, which we don’t do, than dry land”
- “the application of glyphosate can be part of no till strategy .
- “Wheat naturally dries as it matures and does not require application of a herbicide to aid in harvest. While glyphosate may be used as a desiccant in cool, wet environments, it is not a common practice”

“I don’t know” responses were counted as using glyphosate for 100% of the crop which was 9/29 respondents

