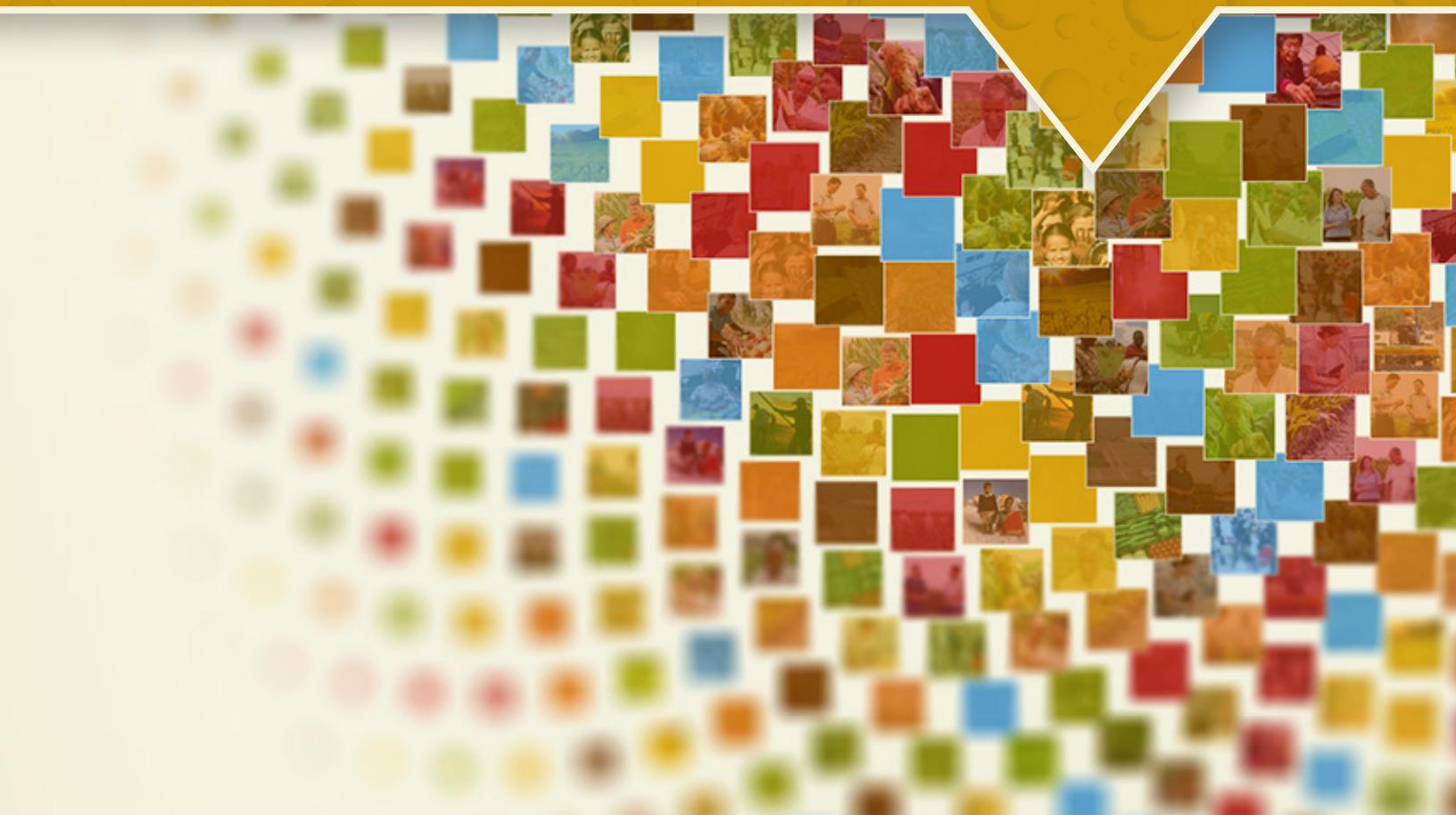


MONSANTO SPRING 2013

# PROGRESS REPORT

At Monsanto, our people have a long-standing commitment to sustainability that's focused on helping the world's farmers—our customers—produce more, conserve more and improve lives. This progress report provides an opportunity to share with stakeholders some key accomplishments made since our last full report in June 2013. Additionally, this report provides an opportunity for us to offer more complete and transparent information on our company and its values, as we continue on our sustainability journey.



## OUR CONTINUED COMMITMENT TO SUSTAINABILITY



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THE CHALLENGES THAT LIE AHEAD ARE GREAT, AND THEY DEMAND MORE TOOLS AND ALL PARTS OF THE FOOD CHAIN WORKING TOGETHER TO ADDRESS THEM.

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Global demand for food, energy, fiber and other materials is growing dramatically, but the resources of our planet are not. Innovation is an essential part of our everyday lives in areas like medicine, communications and transportation. It is also essential in agriculture, to enable increased crop productivity and efficiency and improved environmental efficiency and stewardship.

As consumers and members of society, our people at Monsanto are keenly aware of the need to safely and sustainably meet demand for a global population projected to reach more than 9.6 billion by the year 2050. The challenges that lie ahead are great, and they demand more tools and all parts of the food chain working together to address them.

At Monsanto, we work with farmers to provide innovations that can help producers and consumers ensure we get the most out of every seed, every acre and every harvest in a sustainable way. Our research and development teams are specifically focused on innovations across a variety of research areas and platforms, including breeding, biotechnology, agricultural biologicals research and improved agricultural systems. It's the combination of these technologies that we believe will help farmers provide safe, nutritious, and affordable food for families while using fewer resources, improving environmental outcomes and bringing greater societal benefits.

## INTRODUCTION, CONT.

### In This Report

#### 4 Commitments

- 5** Our Commitments
- 7** Monsanto Collaborations on Innovative Ag Practices
- 8** The Honeybee Health Coalition
- 9** Reporting Strategy and Commitments
- 12** Our Materiality Process

#### 13 Environment

- 14** A Worldwide Challenge: The Demand for Water
- 15** Our Operational Footprint
- 16** Water Efficiency Improvements in Brazil
- 17** Brazil's Crop Protection Business
- 18** The Reuse of Washing Water to Reduce Fresh Water Usage in Seed Processing
- 19** The AquaTEK™ Project—Bringing Drip Irrigation to Farmers in Need
- 20** Integration of Irrigation Technologies in Latin America North
- 21** Water Education and Advocacy
- 23** Our WASH Pledge in Action: Monsanto Aurangabad, India Vegetable Breeding Station Provides a School with Water
- 24** CEO Water Mandate



#### COMMITMENTS:

Our sustainability initiatives always focus on our most important partner—the farmer. We shape these initiatives by engaging our stakeholders, listening to their perspectives and internalizing their feedback. It's a constant process of learning and refining.

COMMITMENTS

## OUR COMMITMENTS



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IT IS  
IMPORTANT  
THAT WE LISTEN  
TO ALL OF OUR  
STAKEHOLDERS  
AND CONSIDER  
WHAT WE  
LEARN IN  
OUR DECISION-  
MAKING  
PROCESSES.

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At Monsanto, our people have a long-standing commitment to sustainability that's focused on helping the world's farmers—our customers—produce more, conserve more and improve lives. Our approach to sustainable agriculture has been well informed by our active engagement with the science community, agriculture value chain and our farmer customers. But, we recognize our work doesn't just impact farmers.

Commitments

Environment

We are a seed company that is a part of your food supply chain. It's important that we listen to all of our stakeholders and consider what we learn in our decision-making processes. Increasing our level of listening and engagement can also help us communicate more effectively who we are, what we do and what these innovations can mean for our ever-growing world.

We are actively working to listen and engage more and more, and you can expect that this will only continue to be a part of the culture of our company for years to come. Over the past year, our executives and other company leaders have listened to and engaged with a multitude of stakeholders—from moms and consumers of all ages, to environmentalists and civil society organizations to academics, farmers and consumer-facing value chain companies.

## COMMITMENTS, CONT.

We needed feedback from a cross-section of stakeholders on perceptions of our company, why those perceptions exist, and more importantly, what could be done to increase dialogue and understanding.

Having open lines of communication about what matters to each of these groups is important to us. And through these conversations, we've come to better understand a number of the values that we share:

- We all care about product safety. For the employees at Monsanto, the safety of our products is our first priority and we identified safety as a top material priority in our [2012 Sustainability Report](#). We're spending much more time engaging in that conversation, understanding all points of view and addressing your questions.
- Transparency is essential and we know that all of our stakeholders, particularly consumers, want Monsanto to show up, engage with them more and share information. We are committed to providing answers to questions and engaging in ongoing dialogue with all stakeholders.
- We all care about where our food comes from—it's what nourishes our families and it's often the centerpiece of our family rituals. Our people recognize that we need to do more than speak from a place of science and reason, but also from a place of values and shared principles. We want to learn from various perspectives and find common ground in the values we share.

**WE ARE  
COMMITTED  
TO PROVIDING  
ANSWERS TO  
QUESTIONS  
AND ENGAGING  
IN ONGOING  
DIALOGUE  
WITH ALL  
STAKEHOLDERS.**

## Moving from Dialogue to Action

Based on increased engagement with multiple audiences, we recognize the need to share information in multiple ways. We're continuing to listen to and engage with stakeholders with a goal of strengthening relationships, understanding concerns and collecting and acting on new ideas for sustainably feeding the world.

As a result, in 2013 we advanced several important partnerships to engage in dialogue and help tackle the challenges of our growing planet. Among these initiatives are the Soil Health Partnership, GMO Answers and the Honeybee Health Coalition.

Commitments

Environment

## COMMITMENTS, CONT.

# MONSANTO COLLABORATIONS ON INNOVATIVE AG PRACTICES

For years, Monsanto has been working with the U.S. Department of Agriculture (USDA) and others to better understand how innovative management of entire agricultural systems (e.g. crop choices, planting, harvest, nutrient and water use) can result in better economic results for the farmer, as well as improved environmental outcomes—including biodiversity, soil health and water quality. Over this past year, we expanded this important research through three key partnerships.

### **Creating a New Crop Research Program**

To support research focused on growing more food on less land in a more environmentally friendly way, Monsanto worked with several other organizations to create the Agronomic Science Foundation Sustainable Research Program, which supports research at Land Grant Universities.

### **Closing a Critical Gap in Continuing Long-Term Research**

When Federal budget cuts threatened to end their long-term soil research program, the USDA turned to the nonprofit group, Agricultural Technology Innovation Partnership Foundation (ATIP), for help. Working with ATIP, Monsanto and six other organizations founded the Resilient Economic Agricultural Practices (REAP) public-private partnership.

### **Launching an Initiative to Benefit Farmers**

To study farming practices that improve soil health as well as farmers' livelihoods, Monsanto partnered with the Walton Family Foundation and others to help the National Corn Growers Association launch the Soil Health Partnership. This initiative is creating a network of demonstration farms where research findings can be put into practice. Monsanto also joined with others in the food and agriculture industry to create a place where anyone can go to get answers and information on agricultural biotech products, often called genetically modified organisms (GMOs). The website [www.gmoanswers.com](http://www.gmoanswers.com) provides updated information about GMOs from a range of independent world-class experts within academia, government and the industry. Anyone can visit [gmoanswers.com](http://www.gmoanswers.com) and ask a question about GMOs or other topics related to biotechnology. There is also a GMO Basics section that answers many of the most common questions people may have.



**TO STUDY  
FARMING  
PRACTICES  
THAT IMPROVE  
SOIL HEALTH  
AS WELL AS  
FARMERS'  
LIVELIHOODS,  
MONSANTO  
PARTNERED  
TO HELP THE  
NATIONAL CORN  
GROWERS  
ASSOCIATION  
LAUNCH THE  
SOIL HEALTH  
PARTNERSHIP.**

Commitments

Environment

COMMITMENTS, CONT.

## THE HONEYBEE HEALTH COALITION

Honeybee health is a critical issue for all of us. Monsanto's commitment is to move dialogue into action. This commitment was recently demonstrated by building a multi-stakeholder coalition to address declining honeybee health. The coalition was announced at the 2013 Clinton Global Initiative Annual Meeting.

This coalition is made of individuals active in honeybee health, including key stakeholders from the beekeeping communities, agriculture industry, academics, government agencies and NGOs to collectively explore the challenges facing honeybee health.



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**WE BUILT  
A MULTI-  
STAKEHOLDER  
COALITION  
TO ADDRESS  
DECLINING  
HONEYBEE  
HEALTH.**

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Commitments

Environment

The coalition has **four priority areas** of focus:

1. Improve honeybee nutrition.
2. Provide research investment in novel technology for varroa mite and virus control.
3. Articulation of science-based approaches to studying pesticide impacts on honeybees and increasing awareness of pesticide best management practices among growers and beekeepers.
4. Enable economic empowerment of beekeepers.

COMMITMENTS, CONT.

## REPORTING STRATEGY AND COMMITMENTS

As we advance in our sustainability journey, this Sustainability Progress Update is an opportunity to share with stakeholders some key accomplishments made since our last full report in June 2013, many of them focused on water. We'll also share some of our plans moving forward.

Reporting is an opportunity to offer more complete information on our company and its values, and we're committed to increasing our performance disclosures throughout our business. Through reporting, we also have the opportunity to get more informed feedback on our sustainability performance. In addition, the reporting process allows us to show how our people focus on positive contributions to society and engage in dialogue about challenges and issues. This past year, increased disclosure about our sustainability strategy and initiatives helped Monsanto earn recognition by two important organizations.

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**WE ARE  
COMMITTED TO  
INCREASING OUR  
PERFORMANCE  
DISCLOSURES  
THROUGHOUT  
OUR BUSINESS.**

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### Corporate Responsibility Magazine

38th on 2014 100 Best Corporate Citizens List



### Global 100 Most Sustainable Companies

37th on 2013 List

### Commitments

### Environment

This report provides updates on our reporting timeline, shares our enhanced materiality process, which helps to identify the issues of most importance to our company and our stakeholders, and demonstrates materiality in action by profiling our work to address water scarcity and quality challenges.

Additionally, we are committed to on-going improvements in the accessibility, and breadth and quality, of company information. One of the many ways for us to improve accessibility is to create a dedicated website with mobile technology access and improved search capabilities. Please refer to our website [sustainability.monsanto.com](http://sustainability.monsanto.com) for a full discussion of how we are embedding sustainability into our business systems and strategies.

## COMMITMENTS, CONT.

As we evolve our sustainability and reporting strategies, 2014 will be an important transition year. Here's an outline of what is in development:

- We are transitioning our reporting cycle from a calendar year to a fiscal year, to align our sustainability reporting with our financial reporting.
- We are transitioning our framework for sustainability reporting from the Global Reporting Initiative (GRI) 3.1 standard to G4 and plan to issue a G4 report in early 2015. In the interim, we will release two sustainability updates in 2014, the one you're reading now and one later in the calendar year.
- We are in the process of updating our materiality analysis incorporating additional stakeholder feedback and input from our global business operations.
- We plan to establish a much-expanded baseline for our operational footprint data regarding energy, water, waste, procurement and logistics. Our next set of environmental data will be available and reported in June 2014.
- Finally, in 2013, Monsanto signed on to the GRI G4 Pioneers Program, one of eight U.S.-based companies to do so. Created exclusively for GRI Organizational Stakeholders, the G4 Pioneers Program is an opportunity for our company to demonstrate our commitment increased transparency through adoption of the new G4 Guidelines.

# 2014

## INCREASING LEVELS OF TRANSPARENCY AND REPORTING.

Commitments

Environment



COMMITMENTS, CONT.

## Operational and Data Reporting Timeline and Scope

ONGOING REPORTING – Monsanto Eco-efficiency data				
OPERATIONAL REPORTING	Calendar Year Data collection on energy use at Monsanto-owned facilities (bricks and mortar)	Calendar Year Energy and water at Monsanto-owned facilities (bricks and mortar)	Calendar Year Energy, water, waste at Monsanto-owned facilities (bricks and mortar) and Monsanto-owned land	Fiscal Year Energy, water, waste, logistics and procurement at Monsanto-owned facilities (bricks and mortar), Monsanto-owned land, and Monsanto contracted land and leased facilities
	2011	2012	2013	2014
DATA REPORTING				April 2014 Sustainability Progress Update  June 2014 Environmental Data Release  September 2014 Sustainability Progress Update
				Jan–Feb 2015 G4 Report reflecting change to fiscal year

## GRI Reporting Timeline

REPORTING CYCLE	REPORT RELEASE	REPORT
CY '11	FY '12	C Level PDF based report
CY '12	FY '13	B Level Web based report Material Issues presented
FY '14 Sustainability Progress Updates	FY '15 Full Sustainability Report	Shifting to G4 comprehensive reporting Shifting to FY based reporting Share commitments against material issues

Commitments

Environment

COMMITMENTS, CONT.

## OUR MATERIALITY PROCESS

The conversation continues.

Our materiality analysis continues to be at the core of our sustainability framework. This analysis helps our company ensure our sustainability strategy focuses on the critical, or material, information needed to inform our decision-making.

### Materiality Process



WE ARE WORKING TO BETTER UNDERSTAND AND IDENTIFY NOT ONLY WHAT THE IMPORTANT ISSUES ARE, BUT ALSO WHERE AND HOW THESE ISSUES IMPACT OUR GLOBAL BUSINESS AND STAKEHOLDERS.

Commitments

Environment

We embrace the spirit of the increased emphasis that G4 places on materiality. We've included new stakeholder input into our analysis, with more focus on the voice of the consumer. We are also working to better understand and identify not only what the important issues are, but also where and how these issues impact our global business and stakeholders.

In order to better understand the scope of our material issues, we engaged a group of internal colleagues from our global regions to gain a more global perspective. These employees work within our regional business functions and have ongoing dialogue with stakeholders from their regions. These global leaders have the expertise that we need to better understand the impact of our business. We gained a better understanding that, while our material issues are important aspects of agriculture around the world, there are meaningful and unique differences.



#### ENVIRONMENT:

Our business is helping farmers increase yields while using fewer resources. For the farmer, water and its availability, the amount and cleanliness are all extremely important. That's why we proudly partner with various environmental research organizations to develop seeds that mitigate water stress and apply agricultural systems that use water more efficiently.

## A WORLDWIDE CHALLENGE: THE DEMAND FOR WATER

The world's water challenges were a recurring theme during our stakeholder engagement and materiality analysis processes. Access to and the amount, availability and cleanliness of water are among the most important challenges facing society and agriculture and the people dedicated to producing safe, nutritious and affordable food.

Monsanto is committed to using water responsibly on a global scale and collaborating with customers, suppliers and other stakeholders on solutions that will improve water use efficiency, quality and accessibility.

We take a comprehensive strategy to improve water use efficiency based on stakeholder input and our materiality process including:

- Products and partnerships
- Our operational footprint
- Advocacy and awareness

Several innovations in agriculture have improved crops' water use—better genetics, conservation tillage and biotech traits that protect against bugs and competition from weeds. Building on these innovations, part of [Monsanto's R&D pipeline](#) focuses on yield and stress traits.

In 2008, we made a sustainability commitment to provide tools and information that help farmers double their harvests with a third less cumulative resources, including water. Progress has been made through a number of products and partnerships toward that goal as provided in our [2012 Sustainability Report](#).

In this report, we will highlight steps we are taking to enhance our operational footprint and advocacy efforts.

**MONSANTO IS COMMITTED TO USING WATER RESPONSIBLY ON A GLOBAL SCALE AND COLLABORATING WITH CUSTOMERS, SUPPLIERS AND OTHER STAKEHOLDERS ON SOLUTIONS THAT WILL IMPROVE WATER USE EFFICIENCY, QUALITY AND ACCESSIBILITY.**



*To download the 2014 Research and Development Pipeline brochure, please visit [www.monsanto.com/products/pages/research-development-pipeline.aspx](http://www.monsanto.com/products/pages/research-development-pipeline.aspx)*

ENVIRONMENT, CONT.

## OUR OPERATIONAL FOOTPRINT

In addition to participation in multi-stakeholder initiatives, our people work every day to support the efficient use of fresh water in farming operations. As a formal demonstration of these efforts, Monsanto is committed to improve irrigated water-use efficiency throughout its production operations by 25 percent by 2020. After thoroughly reviewing our operations and reviewing our strategy with external stakeholders, we chose 25 percent as a stretch goal that could be accomplished with advances in technology and irrigation methods over the next several years.

By achieving this improvement we will bring our overall irrigation water-use efficiency to approximately 90 percent for our operations. Water-use efficiency is defined as the percentage of applied water that is actively used by the plant for growth.

### Improving Water Efficiency in Monsanto's Operations:

- Includes owned, leased and contracted land used to produce seeds for core crops and vegetables.
- We'll work to make water application improvements within our production operations and measure our progress using water application efficiency factors developed by scientists at major universities.
- When it doesn't rain, we look to irrigation methods in order to produce sustainable yields, so we're striving to use the right amount of water at the right times, utilizing the right technologies.
- To track progress, in 2013 Monsanto focused on collecting water-use data for all of our owned land, and beginning this year, the company has started to collect and analyze water data from its leased and contracted land around the globe.

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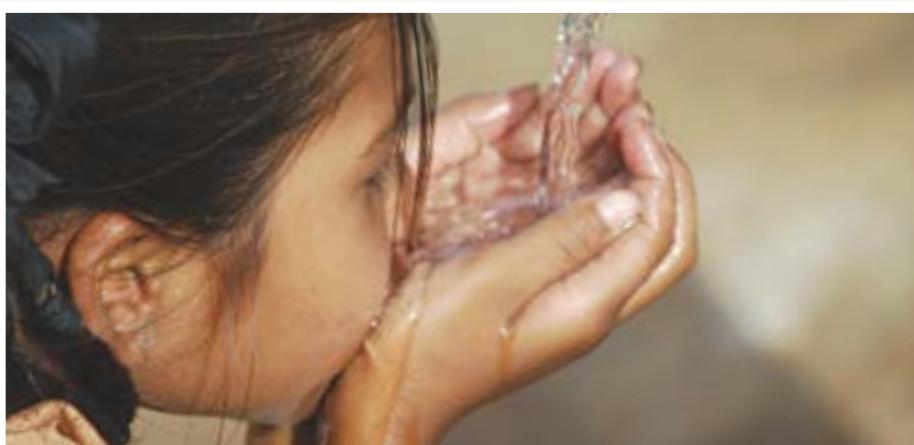
BY 2020,  
MONSANTO IS  
COMMITTED  
TO IMPROVING  
IRRIGATED  
WATER-USE  
EFFICIENCY  
THROUGHOUT  
ITS PRODUCTION  
OPERATIONS BY

**25%**

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Commitments

Environment



## ENVIRONMENT, CONT.

To reach our efficiency goals, we're focused on optimizing irrigation methods and increasing the application of technology and data driven irrigation management. A variety of irrigation methods are used for agriculture around the world today, including sprinklers, surface and sub-surface systems. While university and government research demonstrates that drip irrigation technology is the most efficient means of irrigation today, enabling for up to 95 percent efficiency, all irrigation systems can be used more efficiently if the right amount of water is used at the right places and times. Data science can help farmers to optimize irrigation practices, which can enable them to operate more efficiently and farm more sustainably.

These goals encompass our global operations in our core crops and represent best practices that Monsanto has followed for decades. These recent commitments are formalizing our efforts and aligning Monsanto with external water management frameworks and with our desire to increase business transparency through externally facing goals that can be tracked and measured. The following stories are examples of efforts underway around the world to increase our efficient use of water in our operations.

## WATER EFFICIENCY IMPROVEMENTS IN BRAZIL

### Seed Operations

Monsanto plays a key role in irrigated agriculture in Brazil. 100 percent of Monsanto's corn seed production fields in the country are irrigated, totaling more than 52,000 hectares per year (more than 128,000 acres—a hectare is equivalent to 2.471 acres or 10,000 square meters).

In 2012, Monsanto started monitoring irrigation in a selection of our suppliers' corn and sorghum fields through a partnership with farmers and the IRRIGER® program. IRRIGER is a technology company that offers consultancy in irrigation projects. It acts as an adviser for companies to support the implementation of irrigated areas and the irrigation management.

As a result of this partnership, 93 percent of the pivots on farms producing corn or sorghum in Brazil are now monitored, achieving a reduction of 60 percent of irrigated water, saving more than 4 million gallons of water/year.

The engagement of the participants of this project has helped seed producers to be aware of irrigation practices to achieve environmental benefits and to enhance production and profitability.

Commitments

Environment

BRAZIL

**60%**  
**REDUCTION  
OF IRRIGATED  
WATER**

## BRAZIL'S CROP PROTECTION BUSINESS

Over the past few years, Monsanto Brazil has been employing new technologies and optimized existing processes in order to reduce the consumption of water at its plants in Camaçari, Bahia and São José dos Campos, São Paulo. The water used at our Camaçari facility comes from three different sources: the Joanes River, underground water and local water utilities. Considering that the Joanes River provides about 40 percent of the water supply for the city of Salvador and the metropolitan area of the state of Bahia, this project is important to the country and its communities.

We adjusted and improved our processes in two of our Brazilian plants, by utilizing **three specific technology improvements**:

### New Production Technology of Roundup® Herbicide Line

By adapting our technology, which is used in the synthesis reaction of glyphosate production, we were able to reduce the volume of water that was being used in both plants. This helped us achieve a reduction of about 50 percent (168 million gallons per year, enough to fill 254 Olympic-size swimming pools) in the use of process water, while the production rate doubled.

### Optimization of the Reverse Osmosis System

The Reverse Osmosis System purifies the water in our production systems. The optimization of this process comprises in an operation efficiency increase of 12 percent, leading to a water consumption reduction of 44 million gallons per year.

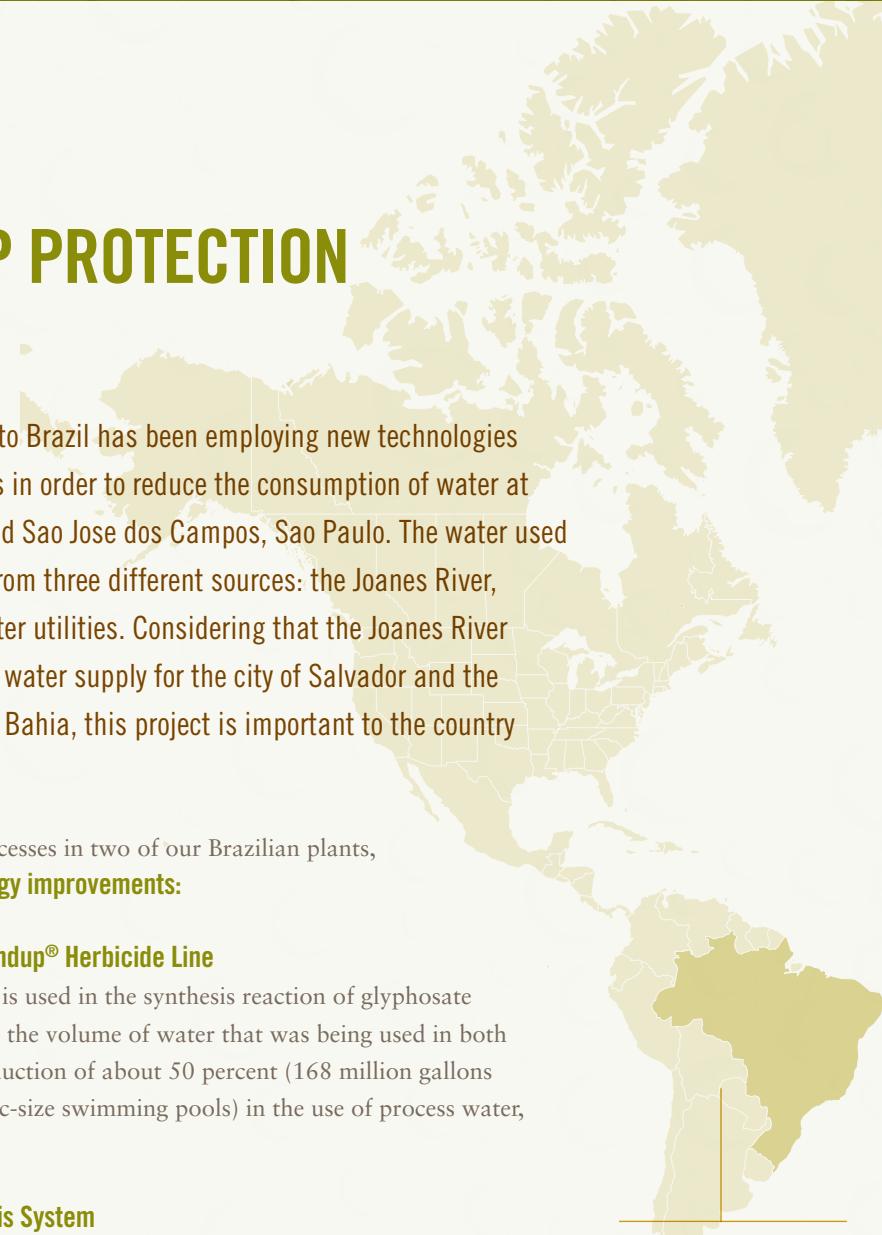
### Reutilization of Rainwater

Rainwater is collected at the facilities through rainwater run-off channels. All of this water is ultimately used as clarified water in the production process. A total of 66 million gallons of water have been collected in three years of operation.

The results from the improved processes were impressive. These projects resulted in an average of 230 million gallons per year of saved water. Our desire to embrace a more sustainable business model in Brazil positively impacted the community and provided a greater availability of water. The water saved annually through our more sustainable practices has the ability to supply water to an entire town with a population of 16,657 people for a year.

Commitments

Environment



BRAZIL

**50%**  
**REDUCTION**  
**IN THE USE OF**  
**PROCESS WATER**

ENVIRONMENT, CONT.

## THE REUSE OF WASHING WATER TO REDUCE FRESH WATER USAGE IN SEED PROCESSING

We continue to work diligently at finding ways to function more sustainably across our supply chain. At our manufacturing facility in Mojokerto, Indonesia, we identified a potential solution to address water usage in the facility and how to create a more sustainable process.

During seed manufacturing, there is a treatment to mix the seed with compounds that provide color coding to protect it from pests. In addition, there is a cleaning process that requires fresh water to wash the equipment. In the past, our team at the facility had always disposed of the washing water with a licensed third party in accordance with legal regulations.

However, the third-party disposal process was expensive and our team identified opportunities for significant improvements. To combat this issue, our engineering team began exploring potential ideas. During the discovery process, we found that the washing water being used on the equipment could be reused in the seed treatment process.

To make the idea a reality, an advanced water tank reservoir system was built on-site, which helped to greatly reduce those third-party costs and retain the washing water for additional use. Previously, water usage at the facility was 21.5 liter/kilogram seed sales unit (KSSU). With the implementation of this reservoir and the new process, the water usage is now 4.9 Liter/KSSU, which is equivalent to a 77 percent water savings.

MOJOKERTO, INDONESIA

**77%**

**WATER SAVINGS  
DUE TO THE  
IMPLEMENTATION  
OF THE  
RESERVOIR  
AND THE NEW  
PROCESS.**



Commitments

Environment

ENVIRONMENT, CONT.

## THE AQUATEK™ PROJECT — BRINGING DRIP IRRIGATION TO FARMERS IN NEED

Over the past 10 years, rainfall distribution has changed in Conselice, Italy.

Historically, this region has had plenty of available water but was struggling during recent summers. For example, in 2012, corn yield in this area was very low due to the severe drought during the summer season. Irrigation, which had not previously been a common local practice, has become a crop production necessity.

Alessandro Pettoni and his family were acutely aware of this. Pettoni and his family took over management of La Speranza Farms in 1990. His father founded the farm in 1960. La Speranza Farms today grows 140 hectares of corn and winter wheat.

Some of Pettoni's fields could be irrigated by pressurized water, but not all were receiving effective amounts of water. A fixed cost for pressurized water is about 90 Euros (€)/ha, plus 0.15€ for each cubic meter of water used. This is approximately \$126 USD, plus 0.21 for each cubic meter of water used.

The average yield of corn for Pettoni's farm during a "normal year" is about 9 tons/hectare (t/ha) and normally Pettoni and the other local farmers did not use any kind of irrigation system. Due to a very severe period of drought in the summer of 2012, Pettoni got only 0.70t/ha: similar results as the other local farmers. He decided to change and start thinking about the "drip solution," and the results were impressive. He reached 13t/ha in 2013, utilizing more efficient irrigation systems.

In 2013, Pettoni sought a more efficient drip irrigation system in one of his cornfields. To this end, La Speranza Farms became one of the five active partners for the AquaTEK™ project in Italy, which is supported by Monsanto and Netafim, an irrigation solutions provider.

A drip irrigation line was placed five centimeters (two inches) below the soil surface, in a two-hectare area. The area received irrigation at a specified time for about six hours every four days.

This drip irrigation method not only conserves more water than other irrigation systems, it also increases efficiency. Through this method, yields should improve because water reaches the accessible zone for plant roots more quickly.

CONSELICE, ITALY

**THIS DRIP  
IRRIGATION  
METHOD NOT  
ONLY CONSERVES  
MORE WATER  
THAN OTHER  
IRRIGATION  
SYSTEMS, IT  
ALSO INCREASES  
EFFICIENCY.**

Commitments

Environment

## ENVIRONMENT, CONT.

The most critical component of the drip system is the filtration mechanism. This filtration system cleans the drip lines, which retain salt, sediment and bacterial growth that corrode and clog emitters. It also permits Petitoni to add nitrogen to his irrigation schedule when needed.

This innovative method of irrigation is clearly the future of farming. It helps farmers like Petitoni turn a profit from corn, even under stressful climate conditions.



*“Now that I have had this great experience in corn with drip irrigation, I can’t imagine farming it any other way. It’s the irrigation of the future that helps me to guarantee a profit from my corn even under different climate conditions!”*

**Alessandro Petitoni, Italian Farmer**

## INTEGRATION OF IRRIGATION TECHNOLOGIES IN LATIN AMERICA NORTH

In 2012, Monsanto’s Latin America North manufacturing group defined a strategy to integrate irrigation technologies in its production fields to better inform grower decisions. Having experienced critical droughts in the northern states of Mexico, our team performed tests to evaluate the benefits of irrigation technologies.

LATIN AMERICA NORTH

DRIP  
IRRIGATION  
INCREASES  
YIELDS BY

**17%**

VERSUS FLOOD  
IRRIGATION.

### Results for this project included:

- 1. Water Conservation:** Drip irrigation decreased water consumption by 50 percent versus flood irrigation. Sprinkler irrigation decreased the water consumption by 30 percent versus flood irrigation.
- 2. Yield Increase:** Drip irrigation increases yields by 17 percent versus flood irrigation.
- 3. Freedom to Operate:** In the northern states of Mexico, the government controls the water for agriculture but does not restrict water to farmers who have drip irrigation systems, which grants them the freedom to receive water at any time.

Commitments

Environment

## ENVIRONMENT, CONT.

At the end of 2013, 1,210 hectares (ha) of Monsanto production fields had drip irrigation systems (8 percent) and 2,647 ha had sprinkler irrigation systems (18 percent). The team is aiming to reach 40 percent (10,000 ha) of the total production area by 2020. The anticipated total water savings from 2013 to 2018 is estimated to reach 178,550,000 cubic meters.

Through dialogue and transparency, our field production team convinced growers that their investment would benefit them, their community and the environment.

This integration of drip and sprinkler irrigation systems in 3,857 ha has already saved nearly 14 million cubic meters of water since the project's inception in 2012. The 3,857 hectares of Monsanto's production fields are the sum of 1,210 hectares of drip and 2,647 hectares of sprinkler irrigation. This water savings could supply water to a city of 29,000 inhabitants for one year.



## WATER EDUCATION AND ADVOCACY

As a demonstration of our commitment to developing solutions for the water challenges the world is facing, Monsanto joined the World Business Council for Sustainable Development (WBCSD) in 2012.

The WBCSD is a global coalition of more than 200 companies that advocate for progress on sustainable development. In joining the WBCSD, we seek to demonstrate the role of business in providing sustainable solutions to global challenges, including increasing water use efficiency.

Through our partnership with the WBCSD and its members, Monsanto is advocating for the vision we all share of sustainable agriculture.

"Monsanto is the first agriculture company to commit to providing all its employees in all locations under company control with access to safe water, sanitation and hygiene by signing up to the WBCSD WASH Pledge. In doing so it demonstrates leadership in direct business contribution to the realization of the Human Right to Water and Sanitation, addressing related issues such as health, productivity and food security," said Peter Bakker, President, WBCSD. "Moreover, with agriculture accounting for 70 percent of the world's fresh water withdrawals, the company's commitment to improve irrigated water-use efficiency throughout its production operations by 25 percent by 2020 is a strong call to action for the entire industry that plays a central role in ensuring water quality, availability and accessibility. WBCSD's water vision, to which Monsanto is an active contributor, is to ensure a sustainable and fair allocation of water for all users with broader objectives of integrated water, energy and food security. I therefore welcome Monsanto's commitments to action to provide solutions to these key challenges on the way to a truly sustainable future."



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**IN APRIL 2014, CEO HUGH GRANT ANNOUNCED THAT MONSANTO WILL BE THE FIRST AGRICULTURE COMPANY TO SIGN THE WBCSD WASH PLEDGE.**

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Commitments

Environment

## ENVIRONMENT, CONT.



We believe that by working with the WBCSD, which allows us access to state-of-the-art thinking on business and sustainable development, we can continue to build on the progress farmers around the world have made to produce more food while using fewer resources. We appreciate the input and guidance we've received from WBCSD and look forward to continued collaboration as we all work toward more sustainable agricultural systems.

Monsanto strongly supports the WBCSD advocacy that all people should have access to adequate drinking water. As such, on April 9, 2014, CEO Hugh Grant announced that Monsanto will be the first agriculture company to sign the WBCSD WASH Pledge.

In 2014, Monsanto became the first agricultural company to sign the WASH pledge. And while signing the pledge was an important step, we plan to share our process for fulfilling the pledge to help other companies and make an even bigger impact.

Access to water and sanitation is a fundamental human right and essential to life and health. That is the essence of the WASH campaign, which refers to “Water, Sanitation and Hygiene.” Initiated by the Water Supply and Sanitation Collaborative Council in cooperation with the WBCSD, WASH helps people in developing countries gain access to safe water and adequate sanitation and provides proper hygiene education to help reduce illness and death caused by water-borne diseases.

The WBCSD, in collaboration with member companies, developed a long-term vision and implementation plan, which begins with signing a pledge on access to safe water, sanitation and hygiene at the workplace.

*“Monsanto is the first agriculture company to commit to providing all its employees in all locations under company control with access to safe water, sanitation and hygiene by signing up to the WBCSD WASH Pledge.”*

**Peter Bakker**  
*President, WBCSD*

Commitments

Environment

ENVIRONMENT, CONT.

## OUR WASH PLEDGE IN ACTION: MONSANTO AURANGABAD, INDIA VEGETABLE BREEDING STATION PROVIDES A SCHOOL WITH WATER

The Monsanto Aurangabad, India vegetable breeding station, in conjunction with the Monsanto Fund, recently helped a nearby school gain access to clean drinking water and better seating.

The school is located in the village of Mulani Wadgaon, which is home to many of the seasonal workers that Monsanto Aurangabad hires to help with farm operations.

Villagers, school authorities and members of local organizations approached Monsanto Aurangabad to help support school infrastructure needs and provide clean drinking water. Our team developed a plan to help. With proceeds from the sale of scrap metal at the Monsanto Aurangabad site they raised the funds to buy 30 school benches so the children would no longer have to sit on the floor. The Monsanto Fund, with local assistance from AFPRO (Action for Food Production), installed a clean drinking water facility.

“Monsanto is a great company who contributes to the welfare of the school,” said one of the villagers. “There are several companies in the nearby areas; however Monsanto is actively involved in the welfare and development of the school.”



MULANI WADGAON, INDIA

*“Monsanto is a great company who contributes to the welfare of the school.”*

**Mulani Wadgaon  
Villager**

Commitments

Environment

ENVIRONMENT, CONT.

## CEO WATER MANDATE

In April 2014, Monsanto became a signatory to the UN CEO Water Mandate, a landmark program to develop strategies and solutions to the emerging global water crisis.

The Mandate was established through a partnership between the United Nations Global Compact (UNGCP), the Government of Sweden, and a group of committed companies and specialized organizations who are dealing with the challenges of water scarcity and sanitation. This mandate engages companies from around the world that are willing to undertake serious efforts, in partnership with other stakeholders, to address water scarcity and sanitation concerns. Whenever possible, the Mandate will coordinate efforts and work with existing water programs—both global and local—in order to maximize impact.

Joining the CEO Water Mandate is another important step in our sustainability journey. As water scarcity and quality concerns become more and more prevalent throughout the world, we must take a proactive position and commit ourselves to working with our partners to manage and conserve this fundamental resource.

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**IN APRIL 2014, MONSANTO BECAME A SIGNATORY TO THE UN CEO WATER MANDATE.**

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### CEO WATER MANDATE COMPONENT AREAS

**FIRST COMPONENT**

Direct Operations

**SECOND COMPONENT**

Supply Chain and Watershed Management

**THIRD COMPONENT**

Collective Action

**FOURTH COMPONENT**

Public Policy

**FIFTH COMPONENT**

Community Engagement

**SIXTH COMPONENT**

Transparency

Commitments

Environment



## ENVIRONMENT, CONT.

The CEO Water Mandate has six key component areas: Direct Operations; Supply Chain and Watershed Management; Collective Action; Public Policy; Community Engagement; and Transparency. Monsanto shares the views expressed in the Mandate and has committed to utilizing this framework to enhance and administer our water strategy.

**MONSANTO SHARES THE VIEWS EXPRESSED IN THE MANDATE AND HAS COMMITTED TO UTILIZING THIS FRAMEWORK TO ENHANCE AND ADMINISTER OUR WATER STRATEGY.**

### 1. Direct Operations

Along with other signatories, Monsanto will work to measure and increase water use efficiency, reduce wastewater discharge and develop strategies for eliminating impacts on communities and ecosystems.

### 2. Supply Chain and Watershed Management

Our company will seek opportunities through which to encourage improved water management among our suppliers and public water providers.

### 3. Collective Action

Our people will continue to look to participate in collective efforts with civil society, intergovernmental organizations, communities and businesses partners to advance water sustainability.

### 4. Public Policy

Monsanto will work with partners to facilitate the development and implementation of sustainable, equitable and coherent water policy and regulatory frameworks.

### 5. Community Engagement

Our regional operating teams will seek ways to improve community water efficiency, protect watersheds and increase access to water services as a way of promoting sustainable water management and reducing risks.

### 6. Transparency

As in all of our operations, we are committed to transparency and disclosure in order to hold ourselves accountable and work to meet expectations of our stakeholders.

You can find information on the additional core areas by [clicking here](#). You can also find Monsanto's communication on progress for the UN Global Compact [here](#).

Commitments

Environment

Monsanto's journey to a more sustainable business doesn't have a finish line. We continue to reach out and engage with stakeholders and refine and adapt our approach. These are processes through which we can view our business—pinpointing areas of improvement and finding innovative and sustainable ways to manage our operations.

Sustainability reporting enables us to be more transparent and open, and following the G4 guidelines is an important part of the process. But we know that change must come from the inside, and we're committed to doing just that. As we move forward addressing water challenges around the globe, it is our hope that our increasing transparency and involvement with various partners across the world will help other companies find the answers to their own sustainability challenges.

**After all, we're in this together. We need to be. It's the only way change can happen.**



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