

MONSANTO 2012

SUSTAINABILITY REPORT

EXECUTIVE SUMMARY



As the population continues to increase, so does the demand for valuable resources. Our people are working for a better tomorrow by putting the right tools in the hands of farmers today. Farmers can be people working as little as an acre in Africa, to a family working 10,000 acres in the Corn Belt of America, to a large enterprise farming hundreds of thousands of acres in Ukraine, Brazil or Argentina. By offering these growers better tools and information, we become their partners, protecting natural resources, fighting hunger, improving nutrition, and providing economic benefits to everyone involved in an improved system of agriculture.

About Monsanto


COMPANY HEADQUARTERS
ST. LOUIS, MO, USA

MONSANTO HAS
21,164
GLOBAL EMPLOYEES

OPERATING
404
FACILITIES

IN
66
COUNTRIES

ABOUT THIS EXECUTIVE SUMMARY

This executive summary contains highlights of the Monsanto 2012 Sustainability Report, which was developed following the Global Reporting Initiative (GRI) guidelines for sustainability reporting. As a member of the United Nations Global Compact, the world's largest sustainability and corporate citizenship initiative, Monsanto adheres to the Ten Principles of the Global Compact. The complete report includes information that applies to both the GRI guidelines and UN Global Compact Principles. The full list of disclosures can be found at sustainability.monsanto.com.

FROM THE CHAIRMAN

DEAR STAKEHOLDERS,

We live in dynamic times. Rising affluence, increasing urbanization and the needs of our growing planet are putting pressures on our environment and our ability to support these demands sustainably.

The topic of sustainability has taken center stage around the world and has driven the attention and focus of a growing number of powerful voices and interests around the world. We recognize that we have a place in these discussions and a commitment to be a leading corporate citizen.

As a company focused on agriculture and farmers, I am proud of the opportunity we have to offer farmers tools and services that promote a safe, healthy, affordable food supply for all of us. Sustainability is central to global agriculture and its success both today and in the future.

Agriculture is a tough business. And, it's clear that delivering innovation to the world's farmers to accelerate growth is more critical than ever. No single company, organization or government can do it all. The public and private sector need to do a better job of working together with increasing efficiency and scale.

I encourage you to take time to visit our website at sustainability.monsanto.com to learn more about the work that we are doing as a company and in partnership with others to support farmers and sustainable agriculture. I'm very proud of the work that we've done to date and I look forward to accelerating our efforts over the coming years.

Sincerely,



Hugh Grant

Chairman and CEO
Monsanto Company



"The sustainability of agriculture is also central to our three-point vision—produce more, conserve more and improve lives. But it isn't just a vision. It's the heart of our business. Whether that is through our work in the field with farmers, or in the communities where we operate around the world, it is core to our global operations and is a priority for how we steward our business every day."

Hugh Grant

Chairman and CEO
Monsanto Company



COMMITMENTS:

When outlining our sustainability initiatives, materiality process or product development, our principled code of conduct is always present. This genuine value system—our pledge—emphasizes integrity, respect, ethics, perspective and honesty and always stays focused on our most important partner, the farmer.

COMMITMENTS, CONT.

MONSANTO'S SUSTAINABILITY JOURNEY

8

MEGATRENDS SHAPING AGRICULTURE TODAY:

GLOBAL FOOD
SECURITY

INCREASING WORLD
POPULATION

INCREASING
PROTEIN DEMAND

ECOSYSTEM IMPACTS
FROM CLIMATE CHANGE

BIOFUEL DEMAND

DEMAND FOR
HEALTHIER DIETS

WATER AVAILABILITY
& QUALITY

RESOURCE
CONSERVATION

Over the next four decades, food production will need to increase, enabling us to combat hunger, malnutrition and meet the needs of changing diets and a growing population. Our people remain committed to investing in agricultural systems that can sustainably support the demands of our growing planet—on the farm or at home.

We know that no single company or organization can meet these challenges alone. Collaboration among stakeholders in the public and private sectors, across virtually every sector of the value chain is vitally important. Our people are committed to continue and accelerate our participation in stakeholder dialogue and supporting initiatives that are focused on increasing agricultural productivity, managing and reducing the environmental impact of agriculture, and improving the economic success of farmers and their families in all parts of the world.

In 2008, after an 18-month engagement with internal and external stakeholders, we declared our ongoing commitment to sustainable agriculture. Our people believe that if all farmers have access to appropriate tools and information, they can Produce More, Conserve More and Improve Lives. This is the foundation of our commitment to improving lives through agriculture.



THE SUSTAINABILITY STRATEGY COUNCIL

As we move forward on our journey toward greater sustainability, we recognized the need for a more formal body to develop and implement our company's sustainability goals and practices. The Sustainability Strategy Council (SSC) assembles people from every facet of our business, from our technology sector to specialists in our seed varieties and from finance to manufacturing. It was important that each department had a voice and shared their perspective.

The focus of the SSC is to establish the way we'll move forward with our sustainability platform. The SSC will establish, align and steward the strategic intent of Monsanto to be recognized for our transparent reporting, engagement and leadership in sustainable agriculture—producing more, conserving more and improving lives.

The **long-term objectives** are to:

1. Effectively integrate sustainability into business strategy and practices
2. Ensure all relevant sustainability policies and goals are well informed, aligned and efficiently executed
3. Ensure high levels of organizational understanding, alignment and engagement of the corporate vision throughout the company
4. Establish Monsanto as a recognized sustainability leader in agriculture

**THE SSC
ASSEMBLES
PEOPLE FROM
EVERY FACET
OF OUR
BUSINESS**

**IT WAS
IMPORTANT
THAT EACH
DEPARTMENT
HAD A
VOICE AND
SHARED THEIR
PERSPECTIVE**

**“MATERIALITY
ASSESSMENT”
IS THE PROCESS
OF DEFINING
WHAT’S
IMPORTANT
SOCIAL-
LY, ENVIRON-
MENTALLY AND
BUSINESSWISE
TO BOTH OUR
INTERNAL AND
EXTERNAL
STAKEHOLDERS**

MATERIALITY PROCESS CHARTING OUR COURSE

Talking to our stakeholders, whether it’s our farmer customers, employees, or investors, has always been an important part of how we do business.

However, in 2011, we began more formalized stakeholder engagements. The conversations not only included our business activities, but also our mission, values and commitments to sustainability. We brought many internal and external stakeholders to the table—both to discuss with our Board of Directors and its committee dedicated to sustainability and the leaders of Monsanto—through in-person meetings and surveys to share, debate and find common ground. During these stakeholder engagement exercises, there was one thing we heard loud and clear: Do a better job at opening up and engaging society. Moving forward, it is vital that our stakeholder engagement and materiality process be inclusive, flexible and open to all audiences and ideas.

An important step in the discovery process for sustainability is to better understand the challenges and opportunities related to our business. We need to listen carefully to the interests of our stakeholders, including our customers, employees, society and shareowners and think about the interests of future generations.

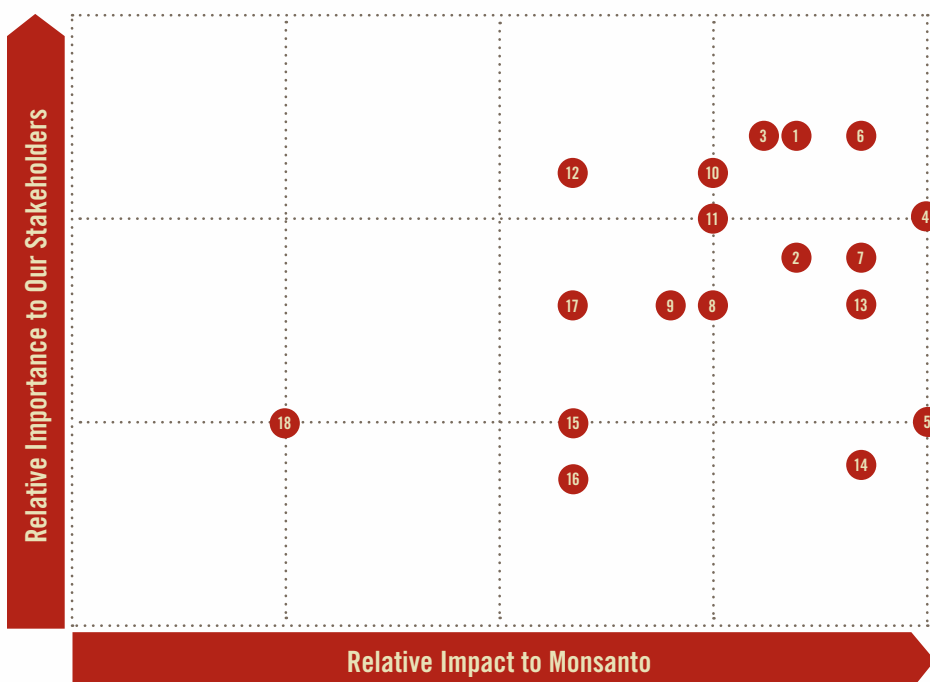
Our people see the materiality process as an exercise involving the analysis of key business issues, risks and opportunities, and how they intersect with stakeholder needs and interests. The gaps and intersections among those issues, risks and opportunities help steer the focus forward. It’s a tool that allows us to focus our intentions and create the solid ground on which we can build our future plans. “Materiality Assessment” is the process of defining what’s important socially, environmentally and businesswise to both internal and external stakeholders. It helps to define what we’re passionate about and where we can make the most positive impact. Materiality helps us focus on the areas that truly matter to the world, stakeholders and the business, enabling the allocation of internal resources towards well-targeted goals and initiatives.

COMMITMENTS, CONT.

Materiality Matrix: Issues Mapping

ISSUE DESCRIPTIONS

- 1 **Water:** Protecting and preserving water resources in agriculture
- 2 **Nutrition:** Access to safe, nutritious agriculture-based products
- 3 **Food Security:** Protect and grow yield to meet growing global needs for food, fiber and energy
- 4 **Continuous Improvement in Agriculture:** Systems-based solutions & enhanced information that creates value for farmers
- 5 **Employees:** Attracting, developing and empowering our people while providing a safe, diverse and rewarding working environment
- 6 **Product Safety & Stewardship:** Products and technologies that meet or exceed regulatory requirements relative to safety, the environment and use
- 7 **Farmer Livelihoods:** Improving the lives of our farmer customers and the economic vitality of farming communities
- 8 **Dialogue & Engagement:** Actively engaging with stakeholders for awareness, perspective and input
- 9 **Technology Innovation & Access:** Safeguarding intellectual property while enabling access to products and innovations
- 10 **Business Ethics & Transparency:** Operating in a compliant, ethical and socially responsible way
- 11 **Environment:** Stewarding the environment throughout our operations, managing our footprint. See also Biodiversity, Climate Change, Water
- 12 **Climate Change:** Helping farmers mitigate and adapt to climate change
- 13 **Local Communities:** Enhancing the communities in which our employees and customers live and work
- 14 **Youth in Ag & Science:** Championing the next generation of agricultural innovators
- 15 **Human Rights:** Supporting the human rights of our employees and business partner employees
- 16 **Sustainable Supply Chain:** Promoting sustainable behavior in our supply chain
- 17 **Biodiversity:** Supporting increases in natural habitats and habitat protection
- 18 **Legacy Matters:** Indemnification obligations related to certain historical business operations and chemical products



OUR COMMITMENT TO SUSTAINABLE AGRICULTURE



MONSANTO'S SUSTAINABLE AGRICULTURE GOALS

Each day, the world supports another 200,000 people more than the day before. As the population increases, so does the demand for food, fiber, energy and water. Arable land per capita in 2030 will be just one third of what was available in 1980. We must wisely use our natural resources to meet these future challenges.

Monsanto's **sustainable agriculture goals** are threefold:

Producing More

Developing improved seeds and agronomic practices to help farmers double yields by 2030 from 2000 levels for corn, soybeans, cotton and canola. In addition, we pledged \$10 million to support rice and wheat breeding, crops essential to food security, by establishing Monsanto's Beachell Borlaug International Scholars Program.

Conserving More

Conserving resources by developing seeds and agronomic practices that by 2030 use one third fewer key resources than in 2000 per unit of output to grow crops, while working to lessen habitat loss and improve water quality.

Improving Lives

Helping improve the lives of farmers and their families, including 5 million people in resource-poor farm families by 2020.

We acknowledge that Monsanto, alone, cannot accomplish these goals. However, as an agricultural company focused on increasing crop yields sustainably, we have pledged our best efforts to support the needs of farmers as they tackle these challenges. We are also committed to working with partners, new and already established, who offer diverse capabilities to address the daunting challenges.

SUSTAINABLE AGRICULTURE GOALS SCORECARD

PROGRESS TO GOAL: ● ACHIEVED ● AHEAD OF PACE ● ON PACE ● OFF PACE

IMPROVING LIVES

Helping to improve lives,
including 5 million resource-poor
farm families by 2020



2.7 MILLION

SMALLHOLDER FARMERS
ADOPTING BIOTECH

\$5.48 BILLION

IN ADDITIONAL NET INCOME
AS A RESULT OF TECHNOLOGY
ADOPTION

PRODUCING MORE

Doubling yields from year
2000 levels by 2030



Corn 13%



Soybeans 10%



Cotton 33%



Canola 21%

CONSERVING MORE

Reducing resources by one third
by 2030

Land use, irrigation water, energy,
soil loss, greenhouse gas emissions



Corn -4%



Soybeans -15%



Cotton -19%



PRODUCING MORE IN 2012

GOAL

Double the yields of corn, soybeans, cotton and spring-planted canola between 2000 and 2030

PROGRESS INDICATOR

National average crop yield levels in leading countries

METHOD

Country-by-country comparisons, year-over-year

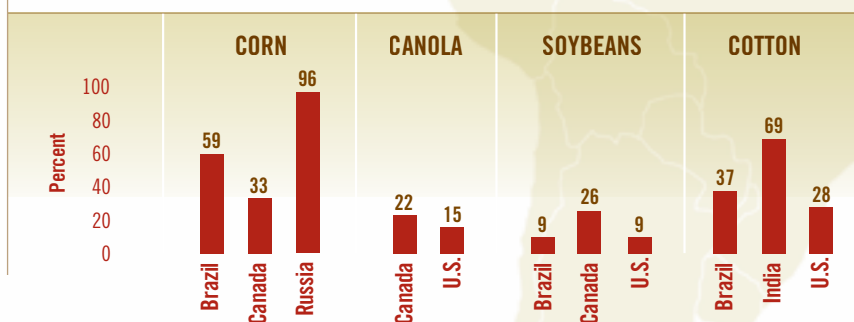
Corn—While corn farmers are off pace due to the drought, without improvements in irrigation and seed technologies, yields could have been much worse. With normal weather patterns in the U.S. corn belt, significantly higher yields are expected. Among corn producing countries, Russia, Ukraine, Brazil, Paraguay and the Philippines have some of the best results and are well ahead of pace on the goal of doubling yields. Countries such as Uruguay and Canada are effectively on the pace required.

Canola—In Canola producing regions, Canadian farmers have the best performance, but have only recently fallen off the pace due to weather and disease pressures. U.S. farmers have increased yields since 2000; however, they will need to see more rapid progress to get back on pace.

Soybeans—The most challenging crop relative to the goal of doubling yields is soybeans. Almost across the board, yields have been significantly off pace with what will be required to double yields by 2030. The industry has seen only a 10 percent gain since 2000 levels. Roundup Ready 2 Yield® soybeans have been widely adopted in Canada and recent weather patterns have been favorable. Canadian farmers have exhibited the highest gains with yields at 26 percent more than 2000 levels.

Cotton—For the 2011 reporting year, cotton farmers have made the most progress toward the goal of doubling yields. They are on pace to do so with farmers in South Africa leading the way. Cotton farmers in India are ahead of pace and Brazilian farmers are on pace to the goal. U.S. farmers were on pace toward the goal; however, their yields lagged recently due to severe weather conditions.

PACE TO GOAL—Doubling Yields (2000–2030)—Selected Countries



Source: USDA PS&D Database

CONSERVING MORE IN 2012

GOAL

Reduce aggregate use of key resources by one third per unit of output between 2000 and 2030

PROGRESS INDICATOR

Efficient use of land, water and energy; minimization of soil loss and greenhouse gas emission

METHOD

Reporting of EcoEfficiency data in the U.S. and other leading countries as available

Monsanto is proud to be a founding member of Field to Market: The Keystone Alliance for Sustainable Agriculture. Field to Market has risen to the challenge of comprehensively measuring the resource intensity of major row crops in the United States. Key performance indicators measured by Field to Market include land use, climate impact, energy use, irrigated water use and soil loss.

Employing a three-year rolling average of Field to Market data and analytical methods in 2011, cotton farmers in the U.S. are tracking ahead of pace to achieve the goal of one third fewer key resources per unit of crop output. U.S. cotton farmers have achieved a 19 percent increase in resource efficiency and are ahead of pace. Soybean farmers have achieved a 14 percent increase in resource use efficiency and are on pace with the goal. Corn farmers have seen a 4 percent increase in efficiency when it comes to conserving natural resources. While corn farmers are off pace, it is largely due to the historic 2012 drought in the United States. In fact, progress toward this goal for cotton, soybean and corn farmers was significantly impacted by the 2012 drought.

Monsanto is supporting efforts to document similar data and analytical methods in additional countries. Multi-stakeholder efforts in Canada, Brazil and Spain have developed efforts largely aligned with the Field to Market effort in the United States. Moreover, Monsanto is consistently voicing our support for more robust efforts to collect data on a global basis that would allow for more consistent monitoring of resource-use intensity levels in agricultural production systems.

THE 2012 DROUGHT

Impact on Yields

Just over 80 percent of U.S. agricultural land experienced drought in 2012, which made it the most extensively experienced drought since the 1950s. The lack of rain damaged large portions of crops in the U.S. Midwest, leaving field corn and soybeans the hardest hit. Retail food and animal feed prices increased, and forecasters have indicated the nation will feel the pinch well into 2013. More than 2,000 counties in the United States were designated as disaster areas, and about 60 percent of farms were located in areas experiencing drought.

COMMITMENTS, CONT.

Yields in 2012 v. 1988

The U.S. drought was very similar to the one in 1988. The lack of water pushed farmers to the limit. Yields were down and costs skyrocketed. But the difference between 1988 and 2012 was technology. Because of better breeding, use of biotechnology, and better agronomic practices, the American farmer saw yields that were actually 41 percent higher than they were in 1988—an average of 35 bushels per acre higher than in the same drought conditions of 1988. The data shows us, and the farmer, that the work we're committed to is effective. With climate change statistics forecasting a scenario worse than originally projected, it's a fact that water will grow scarce. Compound that scarcity with continuing possible drought-like conditions, and it becomes clear why our people are investing in drought readiness technologies.

IMPROVING LIVES IN 2012

Monsanto believes that agriculture can only be sustainable if the livelihoods of farmers and their families are improving.

We seek to improve the lives of all farmers we are privileged to serve; however, we also set a goal of achieving a measurable improvement in the lives of at least 5 million people living in resource-poor farm families between 2008–2020. We know that we can't do this alone. That's why we've organized numerous partnerships with governments, non-profits and groups that are committed to working hand-in-hand with us to achieve these vital goals.

GOAL

Helping to improve lives, including 5 million resource-poor farm families by 2020

PROGRESS INDICATOR

Net income gains among farmers adopting improved crops and systems

METHOD

Global meta-analysis of net income effects attributable to improved crops and systems



SIGNATURE PARTNERSHIPS SCORECARD

PROGRESS TO GOAL:

● ACHIEVED ● AHEAD OF PACE ● ON PACE ● OFF PACE



MONSANTO'S BEACHELL-BORLAUG INTERNATIONAL SCHOLARS PROGRAM

\$10 million investment over 5 years resulted in the support of 52 scholars from 21 countries. Scholars received full scholarships to study wheat and rice breeding.



MISSISSIPPI RIVER WATERSHED PARTNERSHIP

\$5 million investment in the Mississippi River watershed. Through partner organizations (The Nature Conservancy, Delta Wildlife and the National Audubon Society) on-farm best management practices were developed to reduce nutrient run-off; demonstration rain gardens were established for urban storm water education; and 1,000 water control structures were installed in the Delta to improve water quality, reduce erosion and provide wildlife habitat.



CONSERVATION INTERNATIONAL

Partnership to preserve biodiversity and prevent deforestation in the Cerrado and Atlantic Forest regions of Brazil. The program has reached more than 5,000 farmers and citizens and preserved more than 8,000 hectares.



WATER EFFICIENT MAIZE FOR AFRICA

Developing pipeline of new drought-tolerant hybrids for sub-Saharan Africa. Phase II of the program was officially launched in 2013 and the first WEMA hybrids are scheduled to be in the hands of Kenyan farmers this fall.



PROJECT SHARE

Pilot program for Indian cotton and corn farmers. Over four years the project is on pace to reach more than 10,000 Indian farmers with tools they need to boost production as well as their income.

FOOD & NUTRITION:

At Monsanto, we are committed to helping solve one of the world's biggest food challenges: productivity. In order to feed the world's growing population and meet global food and nutrition security needs, farmers must produce more food in the next fifty years than they have in the past 10,000 years combined.*

With increasingly limited resources, and the threat of continued climate change, experts believe the only way farmers can achieve the required levels of production will be to produce more on every available acre. That's why our people are working hard to contribute to the goal of helping farmers double yields in our core crops by 2030. We are proud to be working with our partners to help develop innovative programs and technologies throughout the world to help reach that goal.

As a leading agriculture company involved in one of the first steps of food production, we recognize we play a critical role in providing farmers with tools and services that promote a safe, healthful and affordable food supply. We are committed to careful testing and review to ensure the safety of our products. We are also committed to diverse market approaches that provide both farmers and consumers with choices in the marketplace.

As members of families and communities, our people care about food security and nutrition security and how we can help contribute to a balanced plate for people all over the world. Our stakeholder outreach and materiality process continues to help us identify partnerships and opportunities for us to make a unique contribution in this area.

* Source: J. Hatfield, US National Laboratory for Agriculture and the Environment.

We take a **three-part approach** to provide tools and options that can help farmers of all sizes produce more food while conserving resources:

1. **Traditional markets** in which we make improved seeds broadly available by licensing to seed companies of all sizes in order to support a competitive marketplace that provides the greatest seed choices for farmers.
2. **Philanthropic donations** utilizing the sharing element of our Pledge as well as our foundation, the Monsanto Fund provides financial support and shares technology with public research institutions to improve crops that are important to hunger alleviation, but not core to the company's business (such as cassava and cowpea).
3. **Cooperative development partnerships** that combine traditional market approaches and philanthropic donations to provide unique solutions that improve choices for farmers. Some examples of these approaches are provided below.

PARTNERING FOR AFRICAN AGRICULTURE

BY 2017, IT'S
ANTICIPATED
THAT AT LEAST

25

NOVEL
HYBRIDS WILL
BE DEVELOPED
& DELIVERED

Monsanto's commitment to Africa and smallholder farmers continues to grow. From our initial involvement in the World Economic Forum's (WEF) New Vision for Agriculture to our current involvement in Water Efficient Maize for Africa (WEMA) and Grow Africa, our people are committed to playing our part in helping to improve the lives of rural African farmers through education, improvements in infrastructure and innovation.

Corn or maize is the most widely grown staple crop in Africa—more than 300 million Africans depend on it as their main food source. Maize production is severely affected by drought, which can lead to unpredictable and low yields, and at worst, complete crop failure.

Water Efficient Maize for Africa (WEMA)

WEMA is a public/private partnership project that aims to improve food security and rural livelihoods among smallholder farmers and their families by helping develop seeds that mitigate drought risk and manage

FOOD & NUTRITION, CONT.

insect pressure. Led by the African Agricultural Technology Foundation (AATF), and funded by the Bill and Melinda Gates Foundation, the Howard G. Buffett Foundation and the United States Agency for International Development (USAID), WEMA key partners include the National Agricultural Research Institutes in Kenya, Mozambique, South Africa, Tanzania and Uganda, the International Maize and Wheat Improvement Center (CIMMYT) and Monsanto.

The WEMA project leverages the strengths and expertise of each of the partner organizations to develop improved hybrid maize seeds that will be available to all seed companies in Africa to provide a wide range of choices for smallholder farmers. Monsanto donated drought tolerant maize varieties from around the world, breeding capabilities and drought tolerance and insect protection transgenes to the project royalty-free. Our scientists have been working closely with scientists from the partner organizations for the last five years, and we're excited that the project will launch its first improved drought tolerant hybrid seed by the end of 2013.

As we enter the next phase of the WEMA project, we will continue to develop a pipeline of conventional and transgenic drought-tolerant and insect-pest resistant maize hybrids for Africa. These hybrids are expected to help farmers adapt to the challenges of climate change by enabling them to harvest 20–35 percent more grain under moderate drought conditions. It's the goal of the partnership that by 2017, these seeds will improve the food security and livelihoods of more than 25 million people in sub-Saharan Africa.

VIRUS RESISTANT CASSAVA

Cassava is one of the most important staple food crops for more than 200 million sub-Saharan Africans. In the East African countries of Uganda, Kenya, Tanzania, Mozambique, Rwanda, Burundi and Malawi, approximately 130 million people depend on this crop, and farmers produce nearly 30 metric tons annually.

Despite cassava's natural drought tolerance and ability to flourish on marginal lands, it is very susceptible to various pathogens and virus diseases. In fact, the popular Ebwanateraka cassava has been virtually wiped out of

WEMA'S GOAL:

**IMPROVING
FOOD SECURITY
AND THE
LIVELIHOODS
OF MORE THAN**

25

**MILLION
PEOPLE IN
SUB-SAHARAN
AFRICA**

FOOD & NUTRITION, CONT.



**AFRICAN
FARMERS
PRODUCE
NEARLY
30
METRIC
TONS OF
CASSAVA
ANNUALLY**

production due to cassava brown streak disease (CBSD) and cassava mosaic disease (CMD). Monsanto is partnering with the Danforth Plant Science Center, the National Crops Resources Research Institute in Uganda and the Kenya Agricultural Research Institute to apply biotechnology to develop cassava varieties with increased resistance to CBSD and CMD. The project is supported by the Monsanto Fund and our partners at the Bill and Melinda Gates Foundation, the Howard G. Buffett Foundation and the United States Agency for International Development (USAID).

To date, no conventional sources of resistance to CBSD have been identified, so biotechnology may provide the best solution for preventing the spread of this devastating disease. We believe the Virus Resistant Cassava for Africa (VIRCA) project will improve the lives of millions of people by allowing them not only to grow adequate food, but increase productivity so farmers will have the funds needed to educate their children and afford good medical care. The Monsanto Fund has committed \$5.4 million dollars beyond our initial five-year commitment of \$7.5 million to the first phase of the project. Along with funding from our partners, the VIRCA project has received over \$11.9 million to finance the second phase of this important effort.

These enhanced cassava cultivars created by the VIRCA project will be readily available to farmers in the same way traditional cassava is being offered currently. This means farmers will be able to freely multiply, save and share their planting materials.

VEGETABLES AND ENHANCING NUTRITION

Our people are committed to delivering products that provide both sustainable and healthful options for producers, food companies and consumers. By applying breeding and biotechnology innovations, we help provide farmers with better oilseeds and vegetable seeds.

Such innovations help farmers and others in the value chain bring consumers products that help support a healthful lifestyle. With greater

FOOD & NUTRITION, CONT.

choice and access to appropriate tools, farmers can continue to support food security and nutrition needs around the work.

Improved Oils

Improving soybean oil's nutritional composition provides the opportunity to positively impact consumer diets and achieve dietary guidance recommendations. The USDA/HHS Dietary Guidelines for Americans, 2010 recommends keeping trans fat consumption as low as possible and consuming no more than seven percent of your daily calories as saturated fat.

Our Vistive® Gold soybeans, in Phase 4 of our pipeline, produce high-oleic, low-saturate, low-linoleic soybean oil that has 85 percent less saturated fat than palm oil, 70 percent less saturated fat than fry shortening and 60 percent less saturated fat than conventional soybean oil. When commercialized, Vistive Gold soybean oil will provide food companies with more stable oil for frying, cracker and snack food production as well as baking applications that can lower levels of saturated fat and eliminate trans fats, allowing consumers to enjoy the foods they love with less saturated fat.

Vegetables and Melons

Despite the well-documented health benefits associated with fruit and vegetable consumption, very few Americans actually meet dietary guidance recommendations. We support balanced diets for people around the world, and we seek to make vegetables and melons more appealing to and convenient for consumers. Our plant breeders are using traditional and advanced plant breeding techniques to develop improved vegetables and melons with excellent quality, nutrition and flavor—all characteristics that help increase the appeal and consumption of vegetables.

Better Vegetable Seeds Lead to Sustainable Practices

Monsanto strives to provide farmers with seeds that require fewer inputs, which helps conserve resources. From disease- and insect-resistant traits to herbicide tolerant varieties, we help farmers improve yields, reduce chemical sprays and continue to increase their productivity. By helping farmers become more sustainable, we reduce their need to expand cultivated acres and help preserve wildlife habitats and biodiversity.



**MONSANTO
STRIVES
TO PROVIDE
FARMERS
WITH SEEDS
THAT REQUIRE
FEWER INPUTS,
WHICH HELPS
CONSERVE
RESOURCES**



ENVIRONMENT:

We're an agricultural company, and our business is helping farmers all over the world increase yields while using fewer resources per unit produced. We are stewards of the land, a responsibility we don't take lightly. From our partnerships with various environmental research organizations, to developing seeds that help mitigate water stress, to agriculture systems that use less land, Monsanto is dedicated to the environment.

ENVIRONMENT, CONT.

Our sustainability efforts aren't limited to a single department; they're shared throughout the company. Arguably the area in which this sustainability effort is most prevalent is within our manufacturing operations. Our people have always produced and supplied exceptional products for our customers. Now, we're looking not just at making exceptional products, but making the process of how we make these products exceptional. Everything from the resources we use to cultivate, grow and package our seeds, to the shipping of our products from factory to farm.

The **FOCUS initiative** was created as a mission statement for our manufacturing process. These priorities are as follows:

Freedom to Operate

Model safety, health and environmental excellence
Ensure compliant business practices
Implement and support Monsanto's Human Rights Initiatives

Operational Excellence

Deliver high quality products and services
Implement cost effective, flexible and reliable processes
Effectively support new product launches and commercial innovation
Leverage technology to improve cost, quality and product performance

Customer and Partner Focused

Excel in customer service
Become our customers' supplier of choice
Strengthen our role as a vital Monsanto business partner

Unlock Potential

Develop our talent and provide opportunities for growth
Create a culture of innovation, where great ideas flourish
Support communities

Sustainability

Employ sustainable and efficient operations from supplier to customer
Reduce our environmental footprint and continuously measure performance



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ENVIRONMENT, CONT.

FIELDSCRIPTS™ PROGRAM THE PRESCRIPTION FOR INCREASING YIELDS

With the help of science, farmers have doubled corn yields twice in the history of farming.* The first increase was due to the mechanization of agriculture. The second doubling took place during the new age of science. We went from 75 to 150 bushels an acre. That climb was a result of chemical weed control, better seed and better fertility.

Now, farmers are ready to use science to help double their yields again. This time, with the help of technology and bioscience working together, the industry hopes to pass the 150-bushel per acre threshold. With population increasing, farmers will need to double yields to meet the increased demand.*

A Science-Based Approach Meets New Technology

Computer-based agriculture tools have been around for years. However, the interface was challenging and more often than not, the information was held on a USB drive. Farmers would put yield data and feeding prescriptions on the drive and then insert the drive into their cab computer; a system that was confusing and more technical than most farmers would like to deal with.

Along came the iPad®, changing everything. The iPad had enough processing capability and an intuitive, easy-to-use platform that was simpler to utilize. Precision Planting, an agriculture technology company that Monsanto acquired, saw the benefit in using the iPad technology with their equipment. They engineered a way to connect the iPad in the cab of their tractors and provide farmers with an experience similar to that provided by an iPad or iTunes.

*Source: J. Hatfield, US National Laboratory for Agriculture and the Environment.



**TECHNOLOGY
THAT MAY
HELP REACH
THE GOAL OF
300
BUSHELS
AN ACRE**

ENVIRONMENT, CONT.

The farmer will provide inputs like field boundaries, yield data, and fertility test results to their seed dealer. The dealer will work with the farmer to select each field to enroll in FieldScripts. Using Monsanto's extensive seed-by-environment data, the company will deliver a variable rate seeding prescription by yield management zone and a recommendation for the best hybrid for each field.

Beyond the benefit of helping farmers increase yields, FieldScripts allows farmers to very selectively apply their resources, only using as much water, fertilizer and passes over the field as required.

FieldScripts is about technology and science working together to help farmers feed the world. When we marry the world's best genetics with the world's best planter technology, the goal of doubling yields again may be well within our grasp.



CLIMATE CHANGE

In 2007, a panel of Monsanto Fellows reviewed existing scientific studies and concluded that climate change would affect agriculture.

However, a 2013 external draft report has recently concluded that the climate is actually changing more quickly than originally projected. This report was published by the National Climate Assessment and Development Advisory Committee (NACDAC), a federal advisory committee established by the U.S. Government. Over 200 scientists contributed to this report, which is overseen by an advisory panel that includes Monsanto's own Dave Gustafson, Senior Fellow and Director of Environmental and Ag Policy Modeling.

The new report suggests near-term impacts to agriculture will likely be greater than previously concluded. The average temperature in the U.S. has risen 1.5 degrees Fahrenheit since 1895, with most of that increase coming in the last 30 years. Additionally, the frost-free growing season is expanding, with anywhere from five to 21 extra frost-free days per year compared to the early 20th century.

These kinds of temperature increases and changes in growing seasons can significantly disrupt the agricultural and food production industry. One of the potential impacts of increasing temperatures is severe drought. In 2012, the U.S. got a close look at what a drought can mean to their dinner tables, and farmers got a close look at the havoc that changing temperatures can have on their crops and livelihoods. Climate change scientists look at the drought of 2012 as a sign of things to come. If we have a decade of very high drought and heat, the consequences could be crippling. A two degree Celsius increase in a single decade would be enough to reduce global yields by roughly 10 percent. Couple that decrease with an increase in population, and we are facing a serious threat to global food security.

**THE AVERAGE
TEMPERATURE
IN THE U.S.
HAS RISEN**

1.5°

**FAHRENHEIT
SINCE 1895**

**FARMING
USES
70
PERCENT OF
THE WORLD'S
AVAILABLE
FRESH WATER
WITHDRAWALS**

THE CHALLENGE OF WATER

More than any other natural resource, water connects all of us. It's at the center of economic, social, environmental and political issues. Farmers depend greatly on water. The amount, availability, and cleanliness all weigh heavily on farmers all over the world.

In fact, farming uses 70 percent of the world's available fresh water withdrawals. As we look at all of the challenges we face to support an ever-growing population, water may be the most important issue.

From an agricultural perspective, it's the single most limiting factor for crop production, crop growth and development. We'll need to roughly double the food supply to feed our growing planet, and we'll have to do it with less water than we are using for agriculture now. Our team is committed to working with farmers to address the challenge of water and offer sustainable solutions to help them meet their demands while improving yields.

Our company position on water is divided into **three broad areas:**

- **Our Operations**
- **Products & Partnerships**
- **Advocacy & Awareness**

Within each of these areas, there are specific programs that will drive results.

Gothenburg Water Utilization Learning Center

Our Gothenburg Water Utilization Learning Center in Gothenburg, Nebraska, is focused entirely on water and its role in growing food. This state-of-the-art facility serves two functions: as a learning center for farmers, students, media and the general public, and secondly, as a research facility with an emphasis on building a systems-based approach in helping farmers increase their yields while using fewer resource inputs, particularly water.

ENVIRONMENT, CONT.

Gothenburg is a desirable location to conduct research because it is near the center of the state of Nebraska. In Nebraska, precipitation varies from 34 inches in the east to 14 inches annually in the west. Gothenburg receives an average of 23 inches of rain annually. This places our facility in the transition zone of dry land farming to irrigated farming. As a result, we have research on both systems to help farmers understand how to manage water better.

Our team is also using our Gothenburg facility to determine the relationship between water use and yields when different management approaches are applied. In a demonstration called “The Journey of Drought”, we applied six different combinations of agronomic practices, hybrid selection and biotech trait protection to measure the impact of drought on the various parts of a corn-growing system. The combinations ranged from poor to best practices, and we found that when the best of agronomic practices, hybrid selection and biotech traits were used, this combination produced more bushels for every inch of water.

Genuity® DroughtGard™ Hybrids

There is no magic solution to solving the impact of drought on a plant. However, research into understanding drought and its complex mechanisms has come a long way in recent years. Hybrid selection and agronomic practices for drought-prone areas have shown solid results.

DEKALB®, our national brand for corn seed, has been rating its hybrids for drought-tolerance since the 1970s. Using biotechnology as a tool to address drought hasn't been available, until now. In collaboration with BASF, we've discovered a biotech trait that can give corn seed the enhanced ability to better utilize water. Combined with hybrid selection and the use of agronomic practices, Genuity DroughtGard hybrids have the potential to enhance yield stability for U.S. farmers during times of drought stress.

Due for release in 2013, these seeds have native drought-tolerant characteristics and a biotech trait to help them manage the risk of drought stress. These seeds will be grown under stewardship requirements while pending import approvals in key export markets.



**DUE FOR
RELEASE
IN 2013**

**BIOTECH
TRAIT TO HELP
MANAGE
THE RISK
OF DROUGHT
STRESS**



COMMUNITIES:

At Monsanto, we believe agriculture has the power to lift people out of poverty, improve communities and change lives. That's why our people work so diligently with our partners to provide the best seed and the best agriculture practices to people all over the world. It's a commitment that starts in our Pledge and continues through each and every one of our employees and partners. In short, we support those who support the world's food supply.

COMMUNITIES, CONT.

OUR COMMITMENT TO THE COMMUNITIES OF THE WORLD

A large portion of our community outreach programs work in parallel with the principles and objectives of the UN's Millennium Development Goals for rural area progress and human rights.

Specifically we focus on **five of the eight goals**:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Ensure environmental sustainability
5. Develop a global partnership for development

We're proud of our partnerships with non-governmental organizations (NGOs), government agencies, multilaterals, and foundations all over the world. With their help, we're confident we'll reach our goals of enhancing communities, supporting education and championing the farmer.



**TELLING THE
STORY OF THE
AMERICAN
FARMER AND
THEIR EFFORTS
TO FEED
THE WORLD**

IMPROVING FARMERS' LIVES

As part of our commitment to improving lives, our people continue to champion America's farmers. We are proud to provide several programs that support growers and the rural communities in which they live and work.

When we looked at the ways we could most positively affect the American farmer, our people identified three themes that now form the pillars of a collaborative effort among farmers, their communities and us. This became known as the America's Farmers campaign.

COMMUNITIES, CONT.



An extension of our America's Farmers campaign is the Farm Mom of the Year initiative. This program recognizes farm women who amaze and make contributions to the family, farm, community and agriculture. Farm moms are nominated for a regional \$5,000 prize and a chance to win an additional \$5,000, if they win the national portion of the program.

Farmers told us over and over again that they don't need us to simply come in to their towns and places of business and sell seed, rather support their communities, too. We listened and created the America's Farmers Grow Communities program. This program, sponsored by the Monsanto Fund, is called America's Farmers Grow Rural Education. It's a grant award system that enhances nominated rural school districts.

America's Farmers Grow Communities

The program, which launched in 2010, allows farmers to enter to win a \$2,500 donation for their favorite community not-for-profit organization, such as 4-H, FFA, schools, fire departments and other civic groups. In 2012, one winner was selected in each of the 1,271 eligible counties in 39 states.

To further support counties that were declared disaster areas by the United States Department of Agriculture (USDA) due to the 2012 drought, winning farmers in these counties could choose where to direct an additional \$2,500 donation based on community needs that surfaced because of the drought. The Monsanto Fund will invest more than \$5 million to local not-for-profit organizations across the country through Grow Communities during the program year.

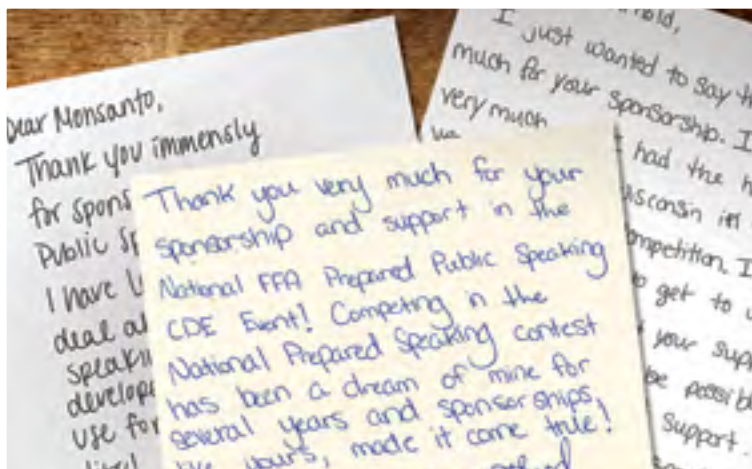


\$5.84 MILLION
TOTAL FUNDS AWARDED IN 2012:

COMMUNITIES, CONT.



\$2.3 MILLION
TOTAL FUNDS AWARDED IN 2012:



America's Farmers Grow Rural Education

Our people know education of the next generation of farmers is vital to the future of agriculture. We also know that once a school closes down or relocates, the sustainability of the community is at risk. That's why we introduced America's Farmers Grow Rural Education to help farmers positively impact their communities and support local school districts. In total, the Monsanto Fund invested nearly \$2.3 million to rural school districts in 39 states in 2012.

America's Farmers Grow Rural Education offers farmers the opportunity to nominate rural public school districts to compete for a grant of up to \$25,000 to benefit their math and science programs. There are 6,900 rural public school districts that were eligible for the grants in 2012, and more than 70,000 farmers nominated their community school districts. The America's Farmers Grow Rural Education Farmer Advisory Council is made up of 29 farmers from across the country. They are responsible for reviewing the top grant applications in each of the targeted crop reporting districts (CRDs) and selecting the winning school districts.

These programs are just a part of our broad commitment to the American farmer. We see investing in rural communities and education as fundamental to building both the present and the future of agriculture in America. And we couldn't be more proud to be a part of the success of both.

COMMUNITIES, CONT.

DR. DEKALB FARM CARE

In May 2010, our people launched a free service for farmers in India. This service was designed to break through the challenges of illiteracy and rural isolation and provide Indian farmers with possible solutions to their crop challenges.

The Monsanto Farm AgVisorySM Services (MFAS) program, known as “Dr. DEKALB Farm Care” for corn growers, is an innovative and interactive mobile advisory platform for farmers. Available 365 days a year, Dr. DEKALB Farm Care is a customized approach to providing information and advising farmers in remote locations on a variety of topics that help them produce heartier crops and higher yields.

The inbound advisory function provides assistance in crop management, such as pest and disease control, fertilizer usage, weed management and irrigation. Additionally, farmers can access information on pre-planting and harvest issues, including suitable seed selection, land preparation, harvesting issues, weather forecasts, and yield and local commodity prices. All of the information is available in seven languages to farmers in 16 Indian states.

Dr. DEKALB Farm Care also offers outbound advisory functions as well. Farmers receive customized messages sent to their mobile phone throughout the season. Alerts consist of information regarding crop management, hybrid recommendations, weather forecasts and local commodity prices.

When a farmer calls into the center, an advisor attempts to resolve the query. If the advisor is unable to provide an answer, the query is sent to our expert panel. The solution is then passed back to the advisor, who relays the advice to the farmer. If no solutions can be provided, a representative will visit the farmer’s field and provide advice and insight.

The program has been, by all indicators, a powerful resource for Indian farmers. By helping to diagnose a farmer’s problem and provide them with a customized advisory, regardless of dialect, our people have built on our promise to improve lives and increase yields.

**DR. DEKALB
FARM CARE
IS AVAILABLE**

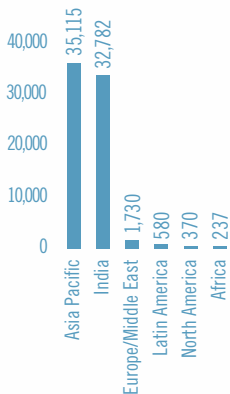
**365
DAYS A YEAR**

MONSANTO'S HUMAN RIGHTS PROGRESS

Monsanto Human Rights Business Partners

by Geographic Area, 2012

Monsanto Data



Across the globe, stories abound about the rights of workers being abused in various industries including agriculture. Because we produce seeds in more than 40 countries, our people are in a position to improve the lives of workers in our seed production supply chain. In 2006, we adopted our Human Rights Policy that set high standards for our sites and our business partners, who provide manual labor in the production of our seeds.

Our priorities are guided by a global risk assessment, which covers each part of the Policy in every country where we grow our seeds. We encourage our business partners to follow our lead and champion those who need support. We work on a country-by-country basis to evaluate our business partners and look closely at how they treat our most valuable resource—people.

Our Practices and Policy

Our Human Rights Policy has identified **nine areas of commitment**.

They are:

- **Child Labor**
- **Compensation**
- **Harassment and Violence**
- **Freedom of Association**
- **Legal Compliance**
- **Forced Labor**
- **Working Hours**
- **Discrimination**
- **Occupational Safety**

Our continuous improvement approach frames our process and helps us identify high-risk countries and focus our resources to make the greatest impact possible. All of our seed supply contracts are structured to include a human rights provision. By signing the contract, our business partners indicate that they have read and understood the Policy and agree to act in compliance with applicable labor laws. We're proud to announce that in 2012, we had a major increase in the number of business partners in two

COMMUNITIES, CONT.

critical geographic areas, Asia Pacific and India, and we maintained our high standards with our human rights clause in 100 percent of the contracts.

A second practice our people use with our business partners is to test their compliance with our Red Flag Assessment, a 22-question screening tool. In 2012, we conducted 37,494 assessments, the majority of which were in India. If a red flag was found, indicating a potential problem, we launched an immediate investigation.

In some of our highest risk areas, we provided in-person training to communicate our expectations. We've found a face-to-face approach is very effective in reaching more than 26,000 of our business partners in these areas. Unfortunately, if we uncover issues that cannot, or will not, be addressed by our business partners, we have to terminate their contracts. In 2012, we discontinued working with three business partners in Malawi because of issues that couldn't be resolved. In India, we found 240 children on 171 farms this past season, and all of those 171 business partners were disqualified from our program for the future.

As we continue to improve our process, we've hired 3rd party risk assessment specialists to help us with our screening procedures. These consultants conducted in-depth analysis in parts of Africa, Latin America and India. When potential violations were uncovered, the concerns were immediately raised with our business partners and corrective actions were put in place.

Champions of Human Rights

A vital part of our work around the globe is led by our Human Rights Champions Network. These Champions increase visibility and awareness of human rights and implement our processes. This includes getting into the field, conducting audits, coordinating initiatives and implementing corrective actions to ensure the treatment of workers is consistent with our Policy.

Luigi Terzini serves as our Environment, Safety and Health (ESH) Regional Lead and Human Rights Champion for South America. Since 2007, he has worked in different regions of the world, including Europe, the Middle East, Africa, Latin America South and Brazil. Every day, he works within our organization and supply chain to create better working environments, and he is a tireless advocate for human rights.



"I'm committed to making a difference by ensuring safe and healthy workplaces and human rights at our locations, and whenever possible, with our partners, customers and communities."

Luigi Terzini,
Human Rights Champion

COMMUNITIES, CONT.

“Being a Human Rights Champion provides me with a real, great and effective opportunity to make a difference in the lives of people. Recently, I’ve worked hand-in-hand with the Argentine Seed Industry Association and the field workers’ unions to improve the working conditions of thousands of field migrant workers of the many seed business farms in the country.

I’m honored to support the educational and health needs of our people and local communities. Often, I become overwhelmed by challenges that look too big to be accomplished, but thanks to our people’s passion for improving the well being of people, we can achieve great things. This makes me extraordinarily proud to be a Human Rights Champion.”

MONSANTOGETHER

**WE ENDED THE
2012 CALENDAR
YEAR AT**

54,057
**TOTAL
VOLUNTEER
HOURS**

As we continue to work for human rights across the globe, we know it’s vital that we create a workplace that improves the lives of individuals here at home.

A big part of that mission rests upon the shoulders of our employees. Philanthropy and community outreach have always been a big part of our culture. We encourage our employees to give to their selected charities and communities and provide the support they need, including matching grants to charities our people support.


SINCE THE PROGRAM’S LAUNCH IN 2010:

- 600** team volunteer events organized
- 6,129** individual projects completed
- 3,691** employees participated in volunteer events
- 90,114** employee volunteer hours logged
- 165** global sites participate in the program
- \$402,500** in total grants awarded



Monsantotogether

Enriching Communities. Helping Others.



We welcome your feedback on our
commitment to be a more sustainable
and socially responsible company.

YOU MAY CONTACT US AT:

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This Sustainability Report contains forward-looking statements. Because these statements are based on assumptions and factors that involve risk and uncertainty, the company's actual performance and results may vary in a material way from those expressed or implied in any forward-looking statements. A description of the factors that may cause such a variance is included in the Safe Harbor language in our most recent 10-K at this hyperlink: www.monsanto.com/investors/Documents/Annual%20Report/2012/2012-10K.pdf

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