

# Our business enablers extended 2013 (incl. CR performance discussion)

Corporate Responsibility (CR) is an integral part of everything we do. We are guided by the conviction that value creation depends on the successful integration of business, social and environmental performance. Our CR performance is covered throughout the printed Annual Review, summarized in the Corporate Responsibility information section and explained in further detail in the extended “Our business enablers” section of the Online Annual Report ([www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)).

In this document, we provide the extended “Our business enablers” section with the detailed information on our CR performance in 2013.

## Assured CR performance indicators 2013

You can download a document with the assured CR performance indicators from [www.syngenta.com/ar2013](http://www.syngenta.com/ar2013), section “Our business enablers”.

## Contact us

Your feedback is important to us. It will help us to improve our reporting and inform our sustainability strategy.

[csr@syngenta.com](mailto:csr@syngenta.com)

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# Research and Development

Research, development and innovation are at the heart of Syngenta's strategy and The Good Growth Plan. With over 5,000 people in Research and Development (R&D) centers and field stations worldwide, we deliver innovation that addresses growers' need to increase farm productivity sustainably. At the same time, we continue to meet the ever-higher expectations of regulators, crop processors and consumers. In 2013, we invested \$ 1.38 billion in R&D.

## Investment in Research and Development \$bn



Our R&D strategy covers both our core business in biotic stress management and promising new technology areas. These include: RNA interference (RNAi), areas where computational science and biology meet, and environmental stress.

Our pipeline will bring value-added integrated solutions that enable growers to deliver the yield increases targeted in our Good Growth Plan. We have also dedicated resources to address the specific needs of smallholders and help fulfill our commitments in this area.

## Investing in innovation

We are investing in new facilities designed to support our strategy by facilitating collaborative, multidisciplinary working across crops and scientific disciplines.

At our Research Triangle Park site in North Carolina, USA, we opened a \$72 million Advanced Crop Lab, the largest single R&D infrastructure investment in our history. This new facility can simulate any agricultural climate – enabling scientists to collaborate on global challenges from one site across multiple crops. A second phase is due for completion in 2016.

At Jealott's Hill, UK, we opened a new Doubled Haploid production facility to accelerate our work on hybrid wheat. And in Switzerland we began the latest in a series of major enhancements at our Stein research center. We will be investing \$48 million to provide multi-purpose facilities including greenhouses, growth chambers and offices designed to facilitate collaboration and knowledge sharing.

An important acquisition made in 2012 – Devgen – has already achieved success by combining our crop protection portfolio and GROMORE™ protocol with Devgen's rice hybrids. The rice R&D teams are working well together, sharing expertise and breeding approaches to develop a portfolio taking the best of both companies' previous work and to realize the potential of integrated solutions.

Devgen's pioneering work in RNAi has enabled us to use its Ghent facilities (Belgium) as the center of excellence for expanding our global RNAi platform as we seek to apply this technology in biological pest control and new traits.

## Delivering innovation

We delivered a number of new products in 2013. HYVIDO®, our range of 12 barley hybrids, was launched across Europe. Our innovative concepts and production methods, combined with the skills of our breeders, have given us a substantial lead in barley hybridization.

AGRISURE® DURACADE™, our new corn rootworm trait, received approval in the USA. Developed to produce a unique insecticidal protein, it has a new mode of action. In combination with our existing AGRISURE® rootworm trait, it will provide unmatched control of an insect that is increasingly resistant to existing controls.

CLARIVA™, launched in the USA, is our first application of technology obtained through the acquisition of Pasteuria Bioscience Inc. It is a seed treatment technology that uses natural bacteria to combat soybean cyst nematodes. These worm-like soil organisms cost growers almost \$1.5 billion annually in the USA alone. Our technology has annual sales potential of over \$100 million in soybean and will be expanded into other crops.

ELATUS™, which received its first registration in 2012, is currently going through the registration process in a number of Latin American countries. This fungicide sets new standards in rust control for soybeans, and is based on our work on SDHI chemistry including isopyrazam and sedaxane. This work highlights our ability to develop a family of related molecules tailored to specific crops and pest targets.

We have a full seeds pipeline, with projects progressing well for all our key crops. They include our hybrid wheat program, strong innovations in hybrid rice due in part to the Devgen acquisition, and broomrape control in sunflowers. Major developments in our crop protection pipeline include progressions in our insecticide chemistry and successful deals for new technology such as our collaboration with DuPont.

## Research and Development continued

### Partnering with others

We collaborate with hundreds of universities, institutes and companies, and agreed on several promising new partnerships in 2013.

In the UK, we are working with Rothamsted Research Ltd in a partnership focused on Rothamsted's 20:20 Wheat Programme to "increase wheat productivity in a sustainable way to yield 20 tonnes per hectare within 20 years". The partnership aims to translate state-of-the-art scientific knowledge into technologies that will benefit farmers directly, provide support to UK agriculture, contribute to UK economic growth, and improve wheat yields worldwide.

Using Netherlands-based PlantLab's expertise in LED lighting and controlled climates, we aim to accelerate breeding, make biological assessments more efficient, and produce higher-quality plants. Our multi-year joint research project will have a significant impact on the speed and cost of young plant production.

Our three-year partnership with Evogene Ltd in Israel is being extended to identify plant genes that provide resistance to soybean cyst nematodes. Soybean growers can lose more than 20 percent of their yield to this pest, while defenses against it are limited. Evogene's computational capability enables us to make best use of our genetic data, and the work has potential beyond soybeans.

We continue to use internet platforms to attract new ideas and share our own intellectual property. In early 2013, we launched our Traitability e-licensing platform, giving plant breeders and research institutes easy access to our patented traits and certain biotech enabling technologies. Licenses are available on fair, reasonable and transparent terms, and are free of charge to academic and non-profit organizations.

### External recognition

Two accolades stood out in 2013. Firstly, Dr. Mary-Dell Chilton, who has been working as a scientist for our company since 1983, was named as one of three winners of the 2013 World Food Prize. She was recognized for her groundbreaking research on using plant bacteria in genetic engineering and for establishing one of the world's first industrial agricultural biotechnology programs. Secondly, *Science* magazine ranked us in its top 20 biotech employers for the fifth year running – this time placed at 13th. In particular, we were cited for treating employees with respect, being socially responsible and doing important, quality research.

# People

## Overview

Our growth ambition requires us to attract, develop and retain the best talent in rapidly changing markets and workforce environments. In 2013, we continued to develop our people and HR strategies to address the needs of the business and our employees. While there was a slight increase in the people turnover rate to 14.1 percent, the number of voluntary leavers declined to 5.5 percent in 2013.

## Investing in our people

Throughout the year, employees participate in goal setting, review and development discussions with their line managers. These discussions enable them to take accountability for developing themselves and their careers. We invested \$27.1 million (+10 percent) in training programs to enable employees to achieve their full potential and develop the right capabilities for our business.

## Reinforcing a strong culture

We continue to recognize the critical role our strong culture plays in the successful delivery of our integrated strategy. In 2013, we invested in a major all-employee engagement program, which explored our values, culture and our new leadership model.

The changing nature of our industry requires all employees to work with external stakeholders to help shape the direction and perception of agriculture. This is recognized both in our corporate strategy and in The Good Growth Plan. For employees, the implementation of The Good Growth Plan includes opportunities to participate in community engagement activities, which support the achievement of our six commitments.

## Diversity and inclusion

A diverse and inclusive culture is fundamental to innovation; if we want to think like our customers, our diversity should mirror theirs.

Our work on fostering diversity is also focusing on gender. Our Diversity and Inclusion Steering Committee has laid the foundations, and we are now developing and implementing programs to encourage an increasingly diverse workforce. We are tailoring existing mentoring programs to promote gender balance, and piloting an accelerated leadership development program for women.

At the most senior level, our Board of Directors also mirrors our globally diverse company. It includes representatives from eight nationalities, drawn from broad international business backgrounds.

## Health, safety and wellbeing

The health and safety of our people is paramount. Since 2011, our Goal Zero initiative has sought to achieve zero harm to people and zero safety incidents.

We experienced a slight increase in our illness and injury rate in 2013 – to 0.41 per 200,000 hours worked, from 0.39 in 2012.

### Recordable illness and injury rate per 200,000 hours

2013	0.41
2012	0.39
2011	0.44

Most of the increase was reported in Latin America, where the transfer of seasonal field production workers from a third party to Syngenta exposed a need to strengthen safety management. This led to an increase in our recorded injuries, which we addressed throughout 2013 by increasing worker training and field visits by safety teams.

Across the rest of the business, we kept the number of incidents stable; in a growing workforce, this meant a lower illness and injury rate. There were no fatalities in 2013.

Key initiatives in 2013 included extending Goal Zero to field production and enhancing safety training for drivers. This training is now available in 48 languages and covers motorcycles as well as cars. Days lost through vehicle accidents were reduced by more than half in 2013.

Employees' wellbeing can be affected by a range of issues at home and at work. The number of work-related stress cases was reduced to 36 in 2013, following extensive consultation with employees at the Monthey site, where we reported an increase of cases in 2012. We also launched a global Employee Assistance Program for employees and their families, providing confidential, expert help from independent advisors.

### People retention

To support continued business growth, the number of people we employ increased to 28,149 full-time equivalent in 2013. We operate sites around the world, with almost half of our employees based in Europe, Africa and the Middle East (EAME), including our headquarters in Basel, Switzerland.

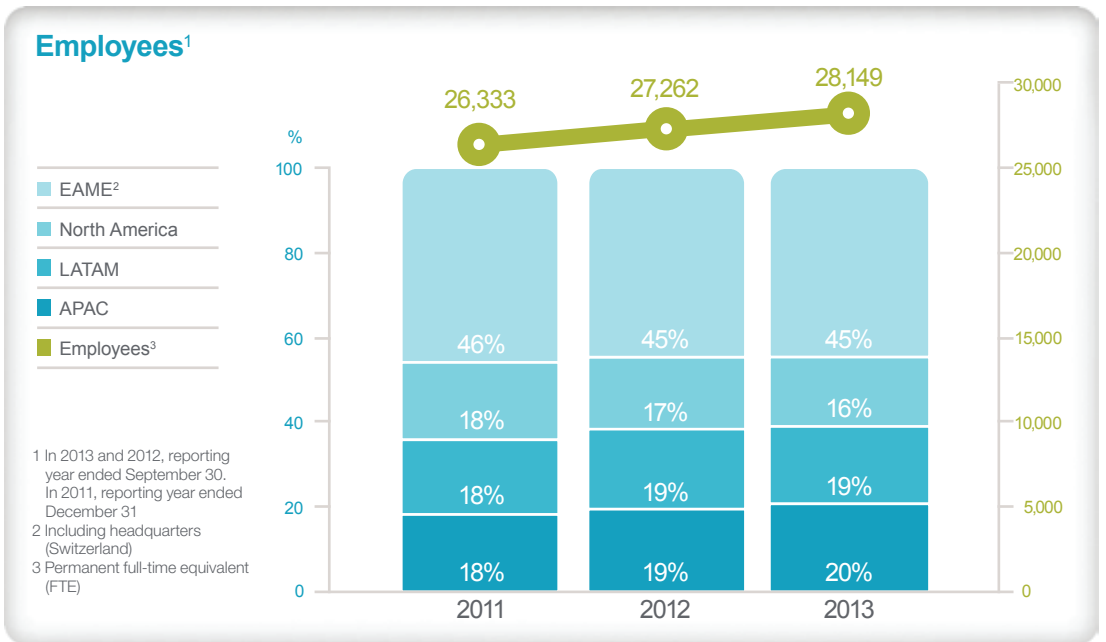
We invest in succession planning and recently set up a strategic workforce planning practice to support forecasting and planning for future needs.

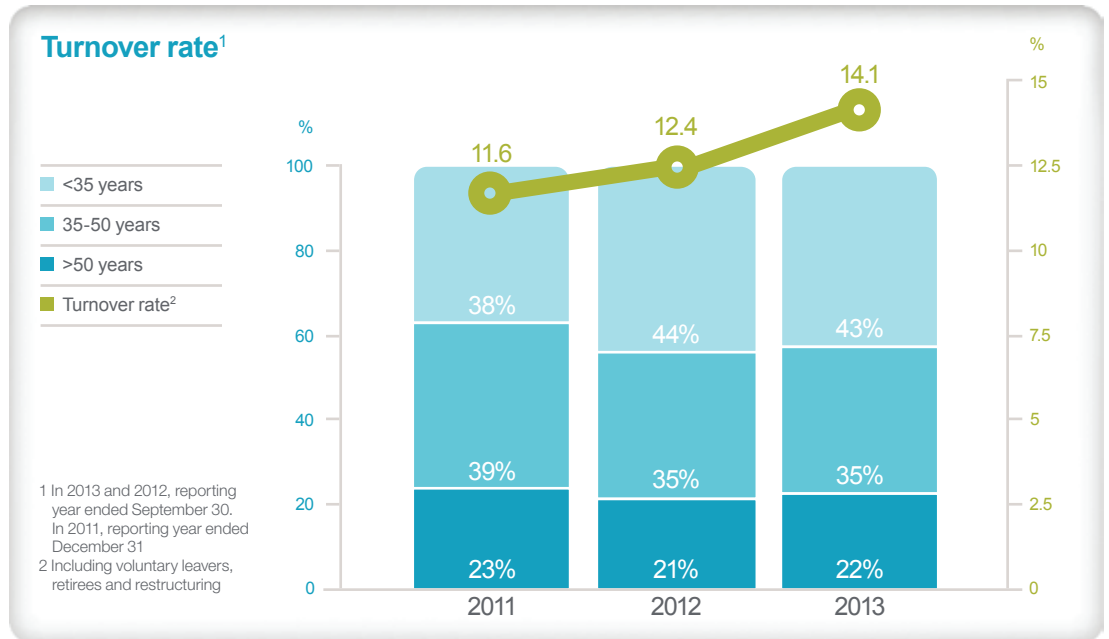
Syngenta offers flexible employment to help balance business priorities with work-life integration. In 2013, the number of our part-time employees was virtually unchanged.

#### Part-time employees<sup>1</sup>

	2011	2012	2013
Part-time employees	881	975	976

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31





In 2013, the employee turnover rate increased from 12.4 percent to 14.1 percent. This included voluntary leavers, retirees and employees leaving the organization due to restructuring. The percentage of voluntary leavers decreased to 5.5 percent from 6 percent in 2012.

By providing our workforce with the skills, confidence, and training to succeed, we nurture the innovative thinking that is integral to our continued success. In 2013, we continued to provide an environment which enables our people to gain additional skills and experience through internally-run programs, external specialist programs and our graduate programs.

We continue to recognize the critical role our strong culture plays in the successful delivery of our integrated strategy. Throughout 2013 we invested in a major all-employee engagement program to reinforce our values, culture and new leadership model.

### Diversity and inclusion

We recognize that diversity is important to our business. Embracing the unique perspectives and capabilities of our employees will help us continue to drive innovation and achieve our business goals. Our culture enables us to create an environment of involvement, respect and connection with the communities where we operate – benefitting individual employees and the company.

#### Women in the workforce<sup>1</sup>

	2011	2012	2013
Female employees	32%	31%	30%
In management roles	21%	20%	20%
In senior management	12%	13%	13%

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

The number of women holding management positions continued to increase. However, the relative proportion of women in the total workforce declined by one percentage point in 2013. In response, our work on fostering diversity is focusing initially on gender.

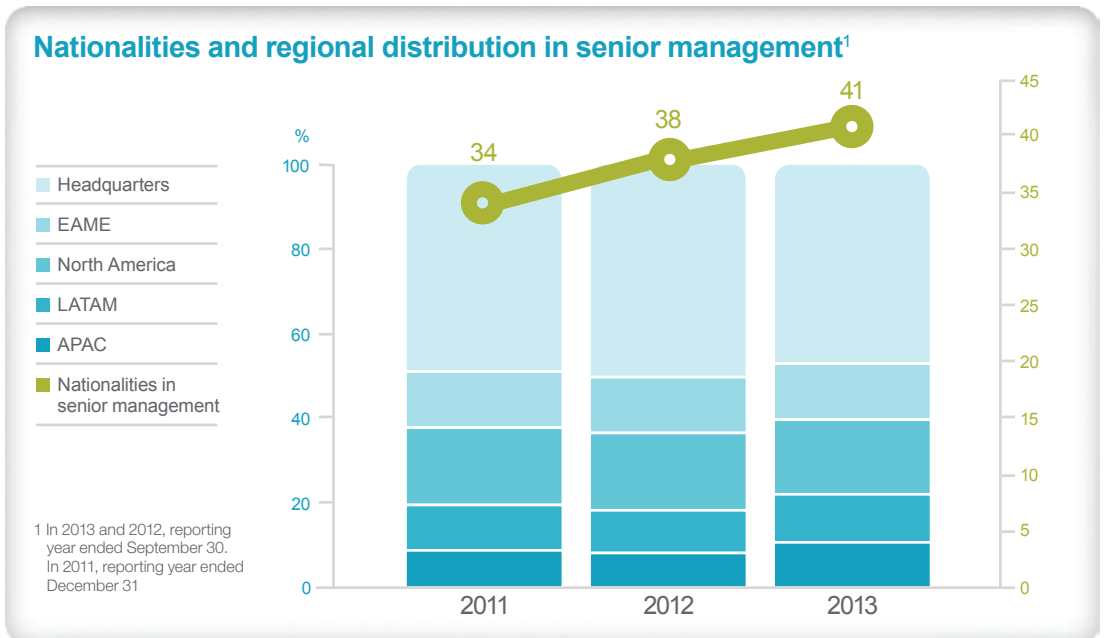
The Diversity and Inclusion Steering Committee has laid the foundations and we are now developing programs to embed and implement our new diversity strategy. This work includes increasing awareness, tailoring existing mentoring programs to promote gender balance throughout the organization, and piloting an accelerated leadership development program for women. We are also looking for ways to better support work-life integration.

In 2013, Syngenta employed about 350 people in senior management positions across the organization. The majority of these positions are in our headquarters in Switzerland (47 percent), followed by North America (18 percent) and Europe, Africa and the Middle East (EAME, 13 percent). However, reflecting the needs of our business, we have seen increased representation from Latin America (LATAM, 12 percent) and Asia Pacific (APAC, 10 percent): both increased by two percentage points in 2013.

Our senior management teams now include 41 different nationalities, up from 38 in 2012.

At December 31, 2013, our Executive Committee included one woman and eight men, representing four nationalities and with a variety of professional backgrounds and experience. In August 2013, Patricia Malarkey was appointed as Head Research and Development with effect from January 1, 2014, changing the composition of the committee to two women and eight men.

At the most senior level, our Board of Directors also mirrors our global diversity. It includes three women and seven men, representing eight nationalities and drawn from a broad range of international business and scientific backgrounds.



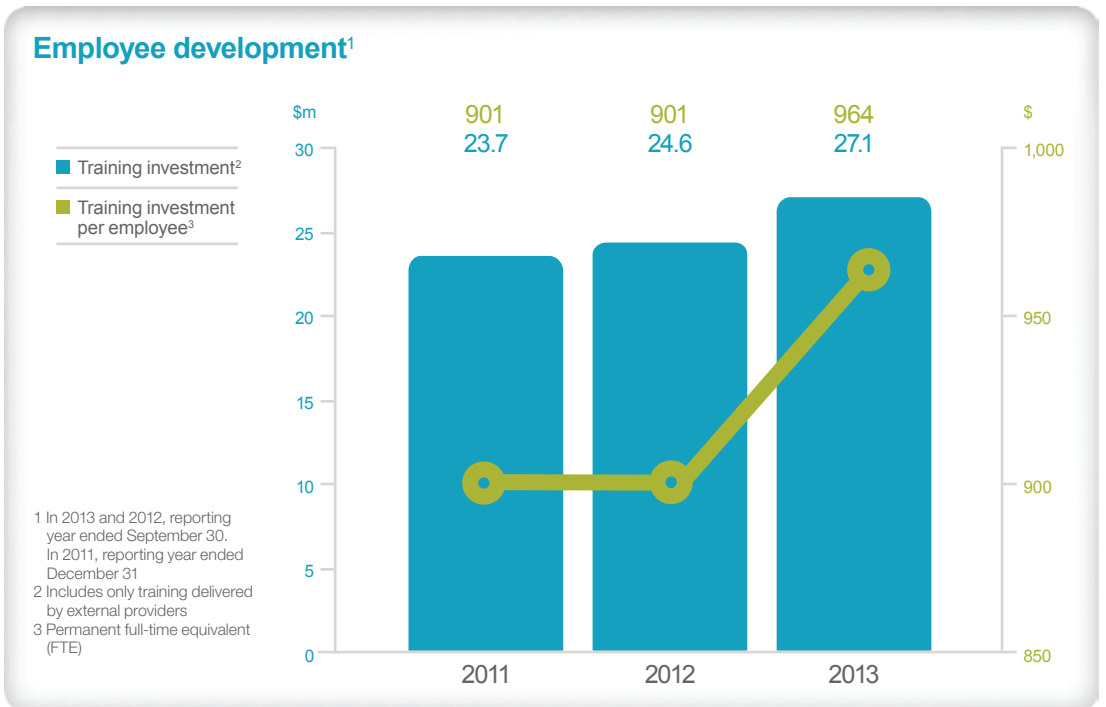
### Employee development

One of Syngenta’s key attractions is the scope we offer for personal growth and development. We provide this through the openings created by our growth and change, and through opportunities for personal learning and development, as well as good career prospects. We expect our people to develop their skills and capabilities during their careers with the support of their leaders.

As we strive to achieve our strategic ambitions, deliver on our commitments and meet our growth challenges in the years towards 2020, we must constantly review the content and relevance of our leadership programs. We also need to evaluate more broadly the way we build new capabilities within Syngenta. Continued investment in our workforce’s capabilities is essential. Our approach to employee development recognizes the importance of focusing on individual needs (competency levels) and the organization’s strategic priorities. We manage a combined offer of global and local learning programs, which ensures training access and coverage for all our employees.

The employee development performance indicators in the chart show our investment in training delivered by external providers. In 2013, we invested \$27.1 million in learning programs, or \$964 per employee. This represents only a part of our overall investment in many different learning opportunities across the company – and these are further complemented by, for example, on the job learning and coaching.

Compared with 2012, our training investment increased just over 10 percent – outpacing the 3.3 percent increase in the number of employees. As we transform our business, all of us need to learn new roles and skillsets while adapting to a newly consolidated team. Hence the current focus and effort on developing competencies such as collaboration, business strategy, marketing excellence, team building and solution selling. At the same time, we continue to offer a robust platform of technical competency training through our functional academies. Together, all these investments are accelerating the pace of learning and development, increasing our effectiveness and helping Syngenta to achieve its ambition.





## Reward and recognition

Reward and recognition are integral components of our total employee value proposition, supporting our culture and enabling us to attract, motivate, engage and retain highly qualified, successful employees to deliver the strategic plans and objectives of the company.

Our compensation and benefits programs are aligned with the market conditions in our different locations globally. We reward our employees for their individual contribution to the business. Our performance management system emphasizes the need for coaching and development alongside appraisal. Incentive programs are linked to financial and individual performance indicators and support our global strategy and culture.

### Reward and recognition<sup>1</sup>

	2011	2012	2013
Employees eligible to participate in Employee Share Purchase Plan (ESPP)	16,872	16,561	<b>18,790</b>
Eligible employees participating in ESPP	46%	46%	<b>47%</b>
Employees participating in long-term equity incentive plans	1,047	1,098	<b>1,226</b>

<sup>1</sup> In 2013 and 2012, reporting year ending September 30. In 2011, reporting year ending December 31

The Employee Share Purchase Plan (ESPP) provides employees with the opportunity to become Syngenta shareholders through the purchase of Syngenta shares at a preferential price. Under the Swiss ESPP, participants can purchase up to CHF 5,000 worth of shares per year at 50 percent of the share price on the date of purchase. Similar employee share purchase plans are in operation in other countries where reasonably possible, taking into account local practices, tax and legal requirements. In 2013, the ESPP was introduced in 19 new countries, bringing the total number of countries with an ESPP to 37.

The Long-Term Incentive Plan and the Deferred Share Plan for members of the Executive Committee and selected leaders are designed to reward leadership, innovation and performance. They provide participants with equity-based incentives that are restricted for three years, linking the potential compensation to Syngenta's long-term success and share price.

## Health, safety and wellbeing

The health of our people is a top priority and underpins our success. Our aim is to maintain an industry-leading approach to employee health, safety and wellbeing – and we foster a culture where everyone is expected to take personal responsibility for safety.

Our robust global health and safety policies are communicated through local training programs at all our sites. We monitor performance across the business and each site reports monthly through our HSE Performance Reporting System.

### Health, safety and wellbeing

	2011	2012	2013
Recordable injury and illness rate (IIR) per 200,000 hours <sup>1</sup>	0.44	0.39	<b>0.41</b>
Recordable injury rate per 200,000 hours <sup>1</sup>	0.39	0.35	<b>0.35</b>
EAME <sup>2</sup>	0.38	0.39	<b>0.38</b>
North America	0.99	0.87	<b>0.64</b>
LATAM	0.20	0.17	<b>0.38</b>
APAC	0.17	0.16	<b>0.15</b>
Recordable occupational illness rate per 200,000 hours <sup>1</sup>	0.05	0.03	<b>0.07</b>
EAME <sup>2</sup>	0.05	0.07	<b>0.07</b>
North America	0.16	0.00	<b>0.14</b>
LATAM	0.00	0.00	<b>0.08</b>
APAC	0.01	0.03	<b>0.02</b>
First aid cases	798	693	<b>623</b>
Recordable injuries	147	144	<b>148</b>
Cases of recordable occupational illness	19	14	<b>28</b>
Cases of work-related stress <sup>3</sup>	32	127	<b>36</b>

<sup>1</sup> According to US OSHA definition for injuries and illness

<sup>2</sup> Including headquarters (Switzerland)

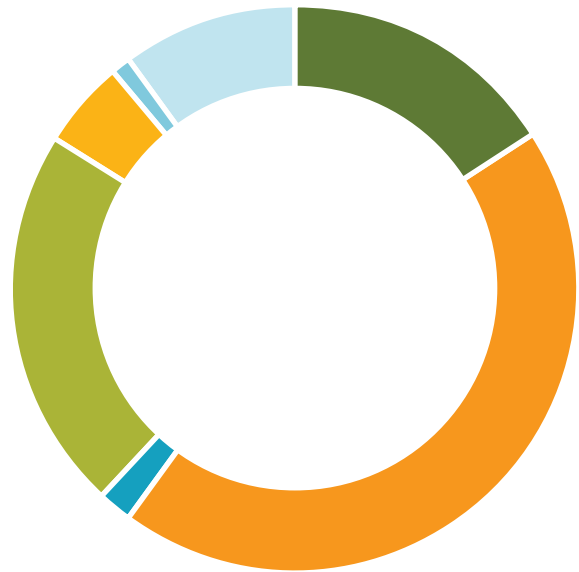
<sup>3</sup> The increase in 2012 is due in most cases to a change in shift pattern at our Monthey site in Switzerland. Following extensive consultation, a new shift pattern was implemented early in 2013

The recordable injury and illness rate (IIR) increased slightly in 2013. Most of the increase was reported in Latin America (LATAM), where the transfer of seasonal field production workers from third party to Syngenta exposed a need to strengthen safety management. This led to an increase in our recordable injuries, which we addressed throughout 2013 by increasing worker training and field visits by safety teams. Despite the increase, at 0.41 the IIR stayed well within our commitment to keep the level below 0.5.

Instances of work-related stress declined in 2013. The high level of work-related stress in 2012 was primarily due to a change in shift patterns at our Monthey site in Switzerland. In response, new shift patterns were implemented in early 2013.

## 2013 recordable injuries

Fracture	16%
Bruise, strain and pain	44%
Burn	2%
Cut and abrasion	22%
Eye injury	5%
Head injury and concussion	1%
Other	10%



The majority of injuries suffered by our employees are relatively minor bruises, strains and sprains, or cuts and abrasions. However, we continue to address particular local causes of injuries. For example, in early 2013 we reinvigorated the global Drive to Life program, developed to further increase the safety of our sales force when driving. Its key focus areas are communication and awareness e-learning, behind-the-wheel driver training, improvement of car fleet standards, and performance monitoring.

In 2013, we initiated Behavior Based Safety (BBS) pilot programs in all regions. BBS applies behavior analysis to modify unsafe behavior. It promotes people-focused interventions that include observation of employees performing work tasks, setting goals and giving feedback on safety-related behavior, and mentoring. One of these pilots, the Seeds of Safety program in North America, has reduced IIR significantly. Further development of BBS programs is planned for 2014.

In 2013, we also introduced a new Serious Injury and Fatality rating for incident reporting to sharpen our focus on life-changing and life-threatening incidents. It will roll-out across Syngenta in 2014.

Employees' wellbeing can be affected by a range of issues at home and at work. In 2013, we launched a global Employee Assistance Program offering employees and their families confidential, expert help from independent advisors. We also offer a range of wellbeing programs tailored to local needs, including sports centers, healthy options at staff restaurants, health checks, family counseling services, and access to legal advice.

# Manufacturing and procurement

## Overview

The Production and Supply strategy supports Syngenta's targeted sales ambition of \$25 billion by 2020. It aims to ensure we deliver innovation to our customers profitably, while maximizing economies of scale, and with the agility to respond quickly to unpredictable market movements.

## Expanding capacity

We continue to make major investments to meet demand in growth regions.

We are building two new crop protection units at our Nantong site in China, and have begun work on a new seeds site in Shandong to support projected vegetable seed sales growth. In the USA, we have been expanding corn and soybean seed production. We are also planning the expansion of an existing corn and sunflower seed site in Argentina.

The strategic aim to reach more smallholders requires more products in small packs. In 2013, we opened a one-dose packaging line at Enofyta in Greece to produce 15 million packs of insecticides and fungicides a year for smallholders, mainly in Africa.

Our eight active ingredient (AI) sites continued to run at high capacity, further increasing production volumes at St. Gabriel and Greens Bayou in the USA and at Goa, India. All expansion projects were delivered on time and budget, including key projects at Monthey and Kaisten in Switzerland and at Huddersfield in the UK. Further expansions follow at Huddersfield, St. Gabriel and Monthey, as well as at Nantong in China.

## Operating efficiently

Our technology and engineering teams delivered many projects to install efficient new production and processing capacity. In addition, lean initiatives at processing sites significantly increased capacity and market responsiveness while reducing costs. The global sourcing team again achieved year-on-year savings while increasing capacity both internally and at our suppliers to support sales growth.

As well as supporting new product introduction, capacity expansion and suppliers' cost reduction initiatives, we made good progress in reducing single-source risk and improving HSE standards.

## Working responsibly

We aim to set the industry standard for health, safety, environmental and quality (HSEQ) performance.

As part of the 2013 Production and Supply strategy review, we made a detailed assessment of sustainability risks in the supply chain. This focused on water and effluent management, hazardous waste, suppliers' sustainability management and logistics.

We have a well-established HSEQ audit program covering all our activities and have developed a rigorous HSEQ assessment program to identify and address process safety issues in our active ingredient plants. In 2013, we enhanced our risk management by broadening its scope and tightening the training and competence requirements for auditors.

In Latin America, the transfer of seasonal field production workers from a third party to Syngenta exposed a need to strengthen safety management in this area, which we addressed immediately.

All our key suppliers must meet the HSEQ standards that we set for ourselves. We are currently extending the sustainability aspects of our supplier program to improve management in areas such as process safety, paying particular attention to our growing supplier base in China. In 2013, we carried out 124 HSEQ assessments at chemicals suppliers and 157 at warehouse/logistics service providers. To audit seed suppliers, we use a methodology developed jointly with the Fair Labor Association: the number of suppliers covered by this program rose from 17,625 to 22,895 over the year.

### Seed supply farms in the FLA Program

2013	22,895
2012	17,625
2011	16,880

Counterfeiting of our products can put users and the public at risk. In 2013, we further increased our efforts to combat this growing challenge, coordinating our own and other companies' activity through trade associations.

## Manufacturing and procurement continued

We launched several initiatives to protect the security of staff, their families and the public in high-risk countries. For people traveling to these countries, we introduced more stringent travel security controls. We established a new code of practice for armed guards covering issues such as selection, training and use of force. And we instituted risk-based background security checks for high-level recruits in countries and roles, where regulatory compliance is a particular concern.

We have also begun implementing a new security strategy to protect websites and systems from hackers and cyber-attacks.

### Our production and R&D sites

Syngenta has operations in more than 90 countries around the world. Our global presence keeps us close to the challenges facing growers every day. We use this insight to inform the development of our products and solutions.

#### Our production and R&D sites<sup>1,2</sup>

	2012	2013
Active ingredient production	8	8
Formulation, fill and packaging	23	23
Lawn and Garden supply chain	15	15
Seed processing	62	67
Research and development	154	139

1 2012 first year of reporting

2 Including 34 multi-functional sites in 2013 and 35 in 2012

Raw materials and intermediates are converted into active ingredients for our crop protection products at eight sites around the world. All these sites are well established. In 2013, they all ran at high capacity, setting new records at St. Gabriel and Greens Bayou in the USA and at Goa in India. Expansion projects included key projects at Monthey and Kaisten in Switzerland and at Huddersfield in the UK. Further expansions follow at Huddersfield, St. Gabriel and Monthey as well as at Nantong in China.

Active ingredients are shipped to our formulation, fill and packaging sites to produce crop protection products for our customers. The number of these sites remained unchanged at 23 in 2013.

Our seeds processing sites dry, process, treat and pack seeds. The increase in sites from 62 to 67 in 2013 was due mainly to the integration of Devgen Rice in the Asia Pacific region. We have also begun work on a new seeds site in Shangdong to support projected vegetable seed sales growth. In the USA, we have been expanding corn and soy seed production. We are also planning expansion of an existing corn and sunflower seed site in Argentina.

Our Lawn and Garden business offers a range of solutions for turf and landscape professionals, flower growers and consumers. Our 15 Lawn and Garden supply chain sites consist of farms producing unrooted plant cuttings and flower seeds, facilities processing and packing seeds, and others growing and distributing young plants.

One key to our R&D success is our strong global presence, which keeps us close to the different challenges facing growers. We have 139 sites with field, laboratory or greenhouse operations, which are supported by an extensive network of field trial locations. We are applying an integrated approach to where and how we invest in our technologies, assets and capabilities in order to achieve innovation at scale. To this end we are making strategic investments to extend and upgrade our R&D infrastructure and science capabilities across the globe – for instance in Switzerland, the USA and Brazil. This will enhance the flexibility and scalability of the R&D organization and provide the foundation to deliver Syngenta's integrated crop strategies and meet current and future business demands efficiently and effectively.

### Quality management

We maintain robust quality assurance processes to ensure that we continue to deliver high-quality products and services. By expanding these processes to cover sites managed by suppliers, we ensure our high standards are replicated throughout our supply chain.

#### Quality management<sup>1,2</sup>

	2012	2013
Quality audits performed on own sites	91	83
Quality audits performed on third parties <sup>3</sup>	89	496

1 2012 first year of reporting

2 In 2013, reporting year ended September 30. In 2012, reporting year ended December 31

3 411 audits occurred in North America due to the wider introduction of a trait technology

We undertake audits at seed and crop protection sites managed by Syngenta and third parties. This audit program assesses processes against international standards such as ISO and ETS, as well as our own internal standards. Each year, we select the sites to audit based on risk, but keep the selection flexible so that we can respond to any issues that may arise. By tracking performance against a range of indicators we can quickly identify issues and put strategies in place to address them. Our Global Codes of Practice help local teams apply consistent rules and procedures wherever they are.

In 2013, we conducted 83 quality audits at Syngenta sites: 58 at seeds sites and 25 at crop protection sites. Another 496 were completed at third party sites. Most of these (411) were in North America, due to a significantly higher number of growers using Enogen trait technology for ethanol production in 2013. From 2013, the reporting period for this indicator is October 1 to September 30 to align with that of the other CR indicators presented in this report. To ensure consistency with previously published data, we have not restated the 2012 value.

In line with our strategy to integrate the Crop Protection and Seeds businesses, the Quality function has started a program to harmonize and standardize core quality processes across Syngenta. This program will extend through 2014.

## Manufacturing and procurement continued

### Security management

Syngenta takes the security of its people, products, assets and information extremely seriously. We make it a priority to create an environment where employees feel secure, have peace of mind and can perform at their best.

#### Security management<sup>1</sup>

	2012	2013
Evaluated sites in medium and high risk countries	72	70
Of which: production sites	39%	44%

<sup>1</sup> 2012 first year of reporting

Making security a key consideration in our everyday work helps us manage continually changing risks. As a global organization we are exposed to a significant and complex range of potential risks – from cybercrime to conflicts arising from political instability. We aim to assess, identify and address emerging security risks proactively, before they become live issues.

Our security processes focus on sites in high and medium risk countries identified by a Country Security Risk Index, which considers risk to people, products, assets and information. Under our Security 360 program, these sites are evaluated by our own security professionals to determine the level of risk. We then develop an improvement plan with the site and monitor progress.

Security 360 assessments are conducted at our own production, R&D or commercial facilities, and also at third party supplier sites and warehouses. As of September 30, 2013, 70 sites were part of the Security 360 program – of which 31 were production sites.

### Responsible supply chain

Choosing responsible partners to work with is part of our commitment as a responsible business. We set global requirements for suppliers on health, safety, environment, labor and human rights, and we carry out rigorous assessments to monitor compliance.

#### Supplier assessments<sup>1</sup>

	2011	2012	2013
Seed supply farms included in Syngenta/FLA program	16,880	17,625	22,895
HSEQ assessments at chemical suppliers <sup>2</sup>	67	74	86
HSEQ assessments at formulation, fill and packaging suppliers	30	35	38
HSEQ assessments at warehouse/logistics service providers	129	115	157

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

<sup>2</sup> 2012 and 2011 values have been restated to separately report HSEQ assessments at formulation, fill and packaging suppliers

We conduct health, safety, environment and quality (HSEQ) assessments of chemical suppliers and warehouse and logistics service providers globally. Selection of sites for assessment is based on a range of criteria including their strategic importance and location.

In 2013, our HSEQ team assessed 86 chemical suppliers: five in Europe, Africa and the Middle East, and 81 in Asia Pacific. To promote further improvements, we have added process risk assessment to the range of HSE support we offer to leading suppliers.

In 2013, we assessed 38 formulation, fill and packaging suppliers: five in Europe, Africa and the Middle East, two in Asia Pacific, seven in North America and 24 in Latin America.

We also carried out 157 HSEQ assessments at warehouse and logistics service providers. This was a 37 percent increase on 2012, due to including seeds warehouses in the assessment program for the first time. Since merging our crop protection and seeds business into one organization, we have been working towards a more consistent approach to HSEQ assessments across the business.

For seed suppliers, we focus on assessing labor conditions using Fair Labor Association (FLA) methodology. This measures performance relating to health and safety, child labor, awareness of workers' rights, wages and benefits, working hours, harassment and abuse, and discrimination. Since becoming a full member of the FLA in 2009, we have steadily increased the number of seed farms assessed. The 2013 total of 22,895 was about 5,300 up on 2012, following the further expansion of our assessment area to include Bangladesh, Thailand and Turkey. We also increased the Indian seed farms assessed by over 1,900.

Although there are still some challenges to overcome, Syngenta/FLA program results are encouraging. In India, our internal monitoring system and independent external monitoring have revealed the virtual elimination of child labor over recent years. Other positive changes include wage increases, adoption of good HSE practices, and adoption of formal working contracts.

To provide independent assurance that our processes are robust and comply with FLA methodology, FLA representatives visit farms, review documentation and interview workers. Their three-day visits take place during peak production seasons when the risk of non-compliance is greatest. The FLA publishes records of the audit process on its website, and in response to audit findings we work with the FLA and growers to develop detailed remediation plans.

# Environment

## Overview

The Good Growth Plan commits us to helping farmers produce more food without using more land, water or inputs, and we recognize our own responsibility to protect the environment. Our industry-leading commitment to environmental performance is crucial to developing and protecting our reputation with all our stakeholders.

As a manufacturer, we use natural resources to produce our seeds and chemicals. We aim to reduce our environmental footprint by actively managing our emissions and use of resources. Our Environmental Codes of Practice set minimum requirements for reducing potential soil, surface water and groundwater contamination. Our leaders are expected to champion our standards and encourage every employee to take personal responsibility for reducing our impacts.

Our production facilities use a robust environmental management system to monitor impacts and identify ways of reducing them. Our proprietary system is on par with current ISO, EMAS and OSHA systems, with a greater focus on risk management and reporting requirements.

## Communicating our standards

Local environmental regulations and enforcement vary widely. We treat all local requirements as an absolute minimum. The standards we set for ourselves are often more rigorous as we strive for consistency across the organization. And we constantly raise the bar to meet society's rising expectations.

Our formal policies and codes of practice are substantial documents. To communicate them more effectively, we have been testing a new visual approach using infographics in place of text. Publishing 10 of our standards in diagrammatic form has helped to improve employee understanding and compliance, and we are now extending the scheme.

## Measuring our performance

Higher production volumes increased our environmental emissions in 2013. As a consequence, our reported environmental impact rose across all measures. Our long-term aim is to grow a profitable business while controlling our environmental footprint. 2013 proved to be a difficult year with some challenges, but also successes.

Our carbon footprint in 2013 increased 9 percent to 1.7 million tonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e). While we were able to slightly reduce CO<sub>2</sub> emissions from our operations, we observed a significant increase from purchased energy and distribution. We are committed to reducing our carbon footprint. A priority in 2014 is therefore to analyze CO<sub>2</sub> emissions in our supply chain and identify lower carbon options.

### CO<sub>2</sub>e emissions intensity

CO<sub>2</sub>e kg/\$EBIT

Year	CO <sub>2</sub> e kg/\$EBIT
2013	0.75
2012	0.62
2011	0.61

Other air emissions rose to 1,514 tonnes (+7 percent) due to higher production levels as well as improved measurement capability at our sites in Grangemouth, UK, and Goa, India. The largest increase was observed at our Goa site with a significant increase of SO<sub>2</sub> emissions from 260 tonnes in 2012 to 464 tonnes in 2013, due to improvements in our waste treatment processes that led to higher incineration. A priority for 2014 is to reduce these emissions.

One of our priorities in 2013 was to gather more data about the volumes of water we consume and the sources we use. We also ran a risk assessment to understand potential future impacts of water scarcity on our production sites and our farmers; and we reviewed our existing processes and practices to reduce our risk exposures, including potential environmental impacts. With the constant growth of our seeds business, we are increasing the number of production sites that use irrigation water. As a consequence, our water use increased to 36.8 million cubic meters (+9 percent) in 2013.

Higher production volumes also increased waste. Hazardous waste increased by 24 percent to 235,200 tonnes partly as a result of an increase in on-site incineration. 71,900 tonnes (+20 percent) were recycled and 147,800 tonnes (+25 percent) were incinerated. Non-hazardous waste rose 20 percent to 131,700 tonnes, of which 100,500 tonnes (+26 percent) were recycled. The amount going to landfill was further reduced to 16,800 tonnes in 2013 (18,500 tonnes in 2012).

We experienced one unplanned release of ammonia due to temporary reduction on scrubber efficiency at our site in Greens Bayou, USA, with no lasting impact on the surrounding area. Corrective actions were taken immediately. Preventive actions, such as training and new operating instructions have also been put in place to avoid reoccurrence.

## Environment continued

We continue to enhance our environmental reporting by improving data quality and adding sites to the reporting scope. To drive performance improvement, we are implementing site-specific efficiency programs for energy, water, air emissions, and waste generation, to focus on the initiatives that will have greatest impact.

In 2013, our Environment team worked on setting new goals both externally and internally. As part of The Good Growth Plan, we set out what we intend to achieve in the world beyond our own farms and production sites; internally, we have been integrating sustainability into the strategic review for our Production and Supply (P&S) operations. We are now entering a new phase of sustainability development – building on the work we have done in P&S to set new goals, which will be introduced in 2014.

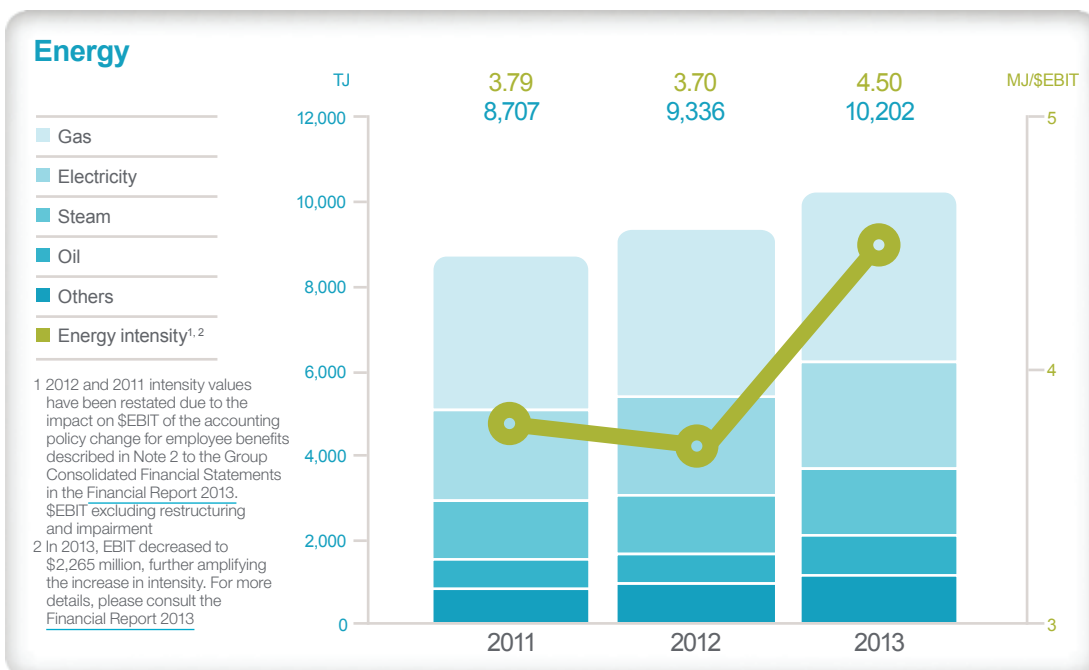
### Energy efficiency

Reducing the amount of energy consumed across our operations is critical to helping us cut costs and greenhouse gas emissions. We encourage our sites to monitor energy usage and implement programs for reducing consumption and increasing operational efficiency.

Increased production volumes in 2013 resulted in total energy consumption of 10,202 TJ, a 9 percent increase from 2012 in absolute terms.

Energy consumption increased across the board, with the greatest increases in steam (+11 percent), oil (+39 percent) and other energy sources (+23 percent) such as liquid gas. Energy consumption increased in our top energy consuming sites, especially those that manage active ingredient production processes. At our Goa site in India, energy consumption rose 58 percent. Higher electricity consumption (+26 percent) was driven by increased production. Greater heavy fuel oil usage (+60 percent) was driven by the site's increased waste incinerator and boiler use. Our Grangemouth site in the UK increased energy consumption by 10 percent due to increases in both purchased steam (+18 percent) used in production and natural gas (+29 percent) used for heating in an unusually long winter. Our Nantong site in China and St. Gabriel site in the USA increased energy consumption by 13 percent and 12 percent respectively due to increased production.

Site energy-saving initiatives are tailored to local needs. Our Aigues-Vives site in France invested in a new steam boiler, which reduced gas consumption by 22 percent despite a production increase of 14 percent. Our largest UK site, in Huddersfield, kept its increase in energy use to about 2 percent, despite a significant increase in production, by operating its Combined Heat and Power unit more efficiently. We have energy reduction targets and energy management plans in place at 15 of our sites.



Environment continued

**Climate change and GHG emissions**

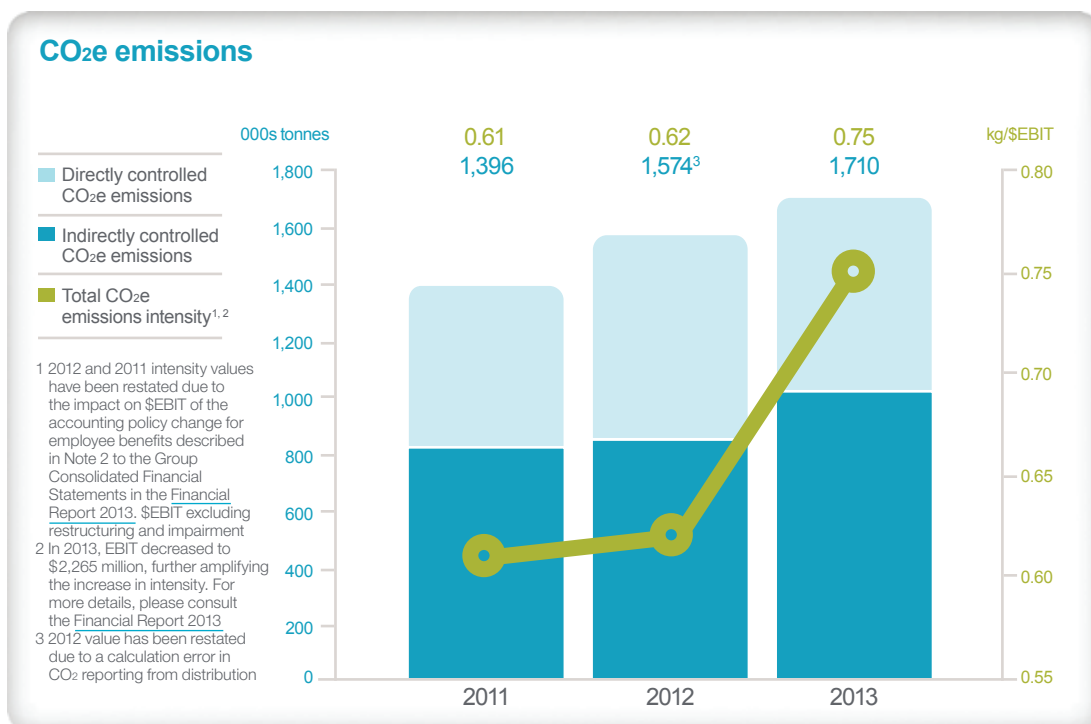
Managing greenhouse gas (GHG) emissions is important to ensure that business growth is not matched by increases in our climate impact. Reducing GHG emissions is a high priority at Syngenta.

However, in 2013 our total GHG emissions increased by 9 percent to 1.7 million tonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) as a result of increased production volumes and associated increases in electricity consumption and support activities such as distribution.

Scope 1 (direct) emissions from our own operations and company vehicles fell by 3 percent in 2013 to 710,000 tonnes of CO<sub>2</sub>e. This reduction, despite higher energy consumption, resulted from better control of our process GHG emissions. Reported emissions from company vehicles rose by 12 percent due to improvements in data collection, which added about 300 vehicles to the reporting scope.

Scope 2 (indirect) emissions associated with the production of energy we purchase were 417,000 tonnes of CO<sub>2</sub>e in 2013, an increase of 7 percent reflecting increased production. Some 19 percent of our electricity comes from renewable sources such as solar, wind, biomass or hydroelectric.

Scope 3 (indirect) emissions associated with product distribution and business travel increased 30 percent to 583,000 tonnes of CO<sub>2</sub>e in 2013. This reflected a 34 percent increase to 543,000 tonnes in emissions from distribution, which in 2013 included the distribution of seeds in Asia Pacific and Latin America not reported in the past. In the upcoming year, we anticipate also accounting for emissions from seeds distribution generated in Europe, Africa, the Middle East and North America. Emissions from business travel decreased 11 percent as a result of improvements in the way we manage employees' travel choices. Our policy is to limit unnecessary business travel. We are committed to further improving reporting quality and reducing our Scope 3 emissions.





Environment continued

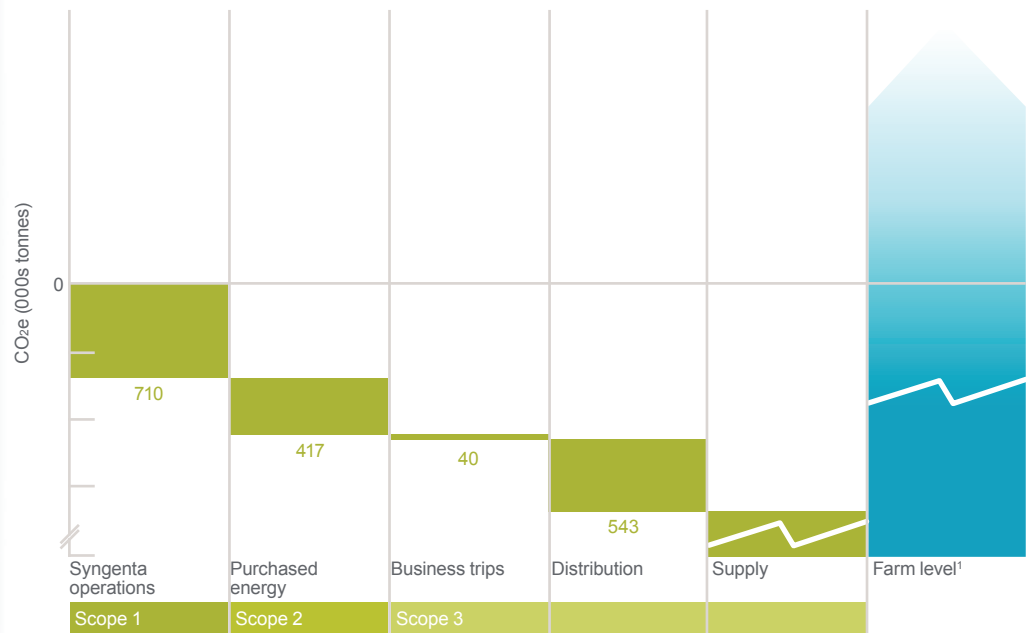
We monitor all GHG emissions relating to our operations – even those outside our direct control. The diagram above illustrates our carbon footprint at each stage of our products’ lifecycle – from supply chain through production to use by growers. We estimate emissions outside our direct control, which we cannot accurately quantify, including emissions from suppliers and farms. Based on these figures and estimates, we believe the overall carbon footprint of our products is net positive.

By working on GHG management with our supply chain and growers we can tackle the elements of our footprint beyond our direct control and reduce our overall impact on climate change.

We support the World Resources Institute/World Business Council for Sustainable Development protocol to properly measure emissions generated within our supply chain. We also work with suppliers to share GHG reduction best practice and improve their data collection systems.

We work with growers to increase resource efficiency and develop farming techniques that produce higher and better yields while using less land, energy and water. In doing so, we ensure that farmers around the world can adapt to changing climates, reduce their GHG emissions and maximize the potential of their land.

2013 carbon footprint



<sup>1</sup> Use benefits on the farm driven mainly by increasing and protecting yield and enabling minimum tillage

## Environment continued

### Other air emissions

Greenhouse gases are not the only emissions to air that we monitor and control. Our manufacturing processes also release emissions such as nitrogen oxides, sulfur dioxide, particulates and volatile organic compounds (VOCs). We maintain local systems that limit these emissions to reduce our impact on air quality.

#### Other air emissions

	2011	2012	2013
Other air emissions intensity (g/\$EBIT) <sup>1, 2</sup>	0.63	0.56	<b>0.67</b>
Other air emissions (tonnes) <sup>3</sup>	1,454	1,421	<b>1,514</b>
NO <sub>x</sub> (tonnes)	445	476	<b>440</b>
Non-halogenated VOCs (tonnes)	647	505	<b>427</b>
Halogenated VOCs (tonnes)	29	13	<b>21</b>
Particulates (tonnes)	114	108	<b>105</b>
SO <sub>2</sub> (tonnes) <sup>3, 4</sup>	180	295	<b>494</b>
NH <sub>3</sub> (tonnes)	22	8	<b>8</b>
HCl (tonnes)	17	16	<b>19</b>

1 2012 and 2011 intensity values have been restated due to the impact on \$EBIT of the accounting policy change for employee benefits described in Note 2 to the Group Consolidated Financial Statements in the [Financial Report 2013](#). \$EBIT excluding restructuring and impairment

2 In 2013, EBIT decreased to \$2,265 million, further amplifying the increase in intensity. For more details, please consult the [Financial Report 2013](#)

3 2012 value has been restated due to a calculation error in SO<sub>2</sub> reporting at a site in APAC

4 Increase in 2013 value due to 34% increase in fuel oil consumption in the waste incinerator at a site in APAC

In 2013, we saw an overall 7 percent increase of other air emissions in absolute terms to 1,514 tonnes driven by emissions of sulfur dioxide (SO<sub>2</sub>, +67 percent to 494 tonnes), halogenated VOCs (+62 percent to 21 tonnes) and hydrochloric acid (HCl, +19 percent to 19 tonnes). The rise in SO<sub>2</sub> emissions resulted mainly from a 60 percent increase in heavy fuel oil consumption at our Goa site in India due to increased use of the waste incinerator and boiler to support increased production. The site's SO<sub>2</sub> emissions rose from 260 tonnes in 2012 to 464 tonnes in 2013.

All other emissions to air were reduced – non-halogenated VOCs by 15 percent, nitrogen oxides (NO<sub>x</sub>) by 8 percent and particulates by 3 percent – or stayed stable: ammonia (NH<sub>3</sub>) was unchanged at 8 tonnes.

Environment continued

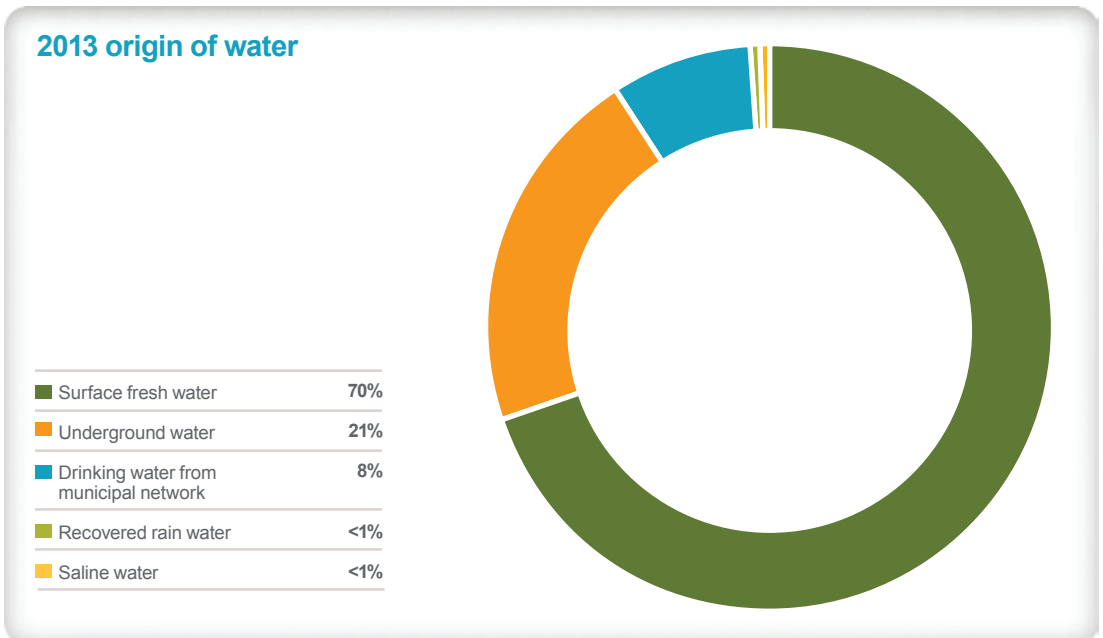
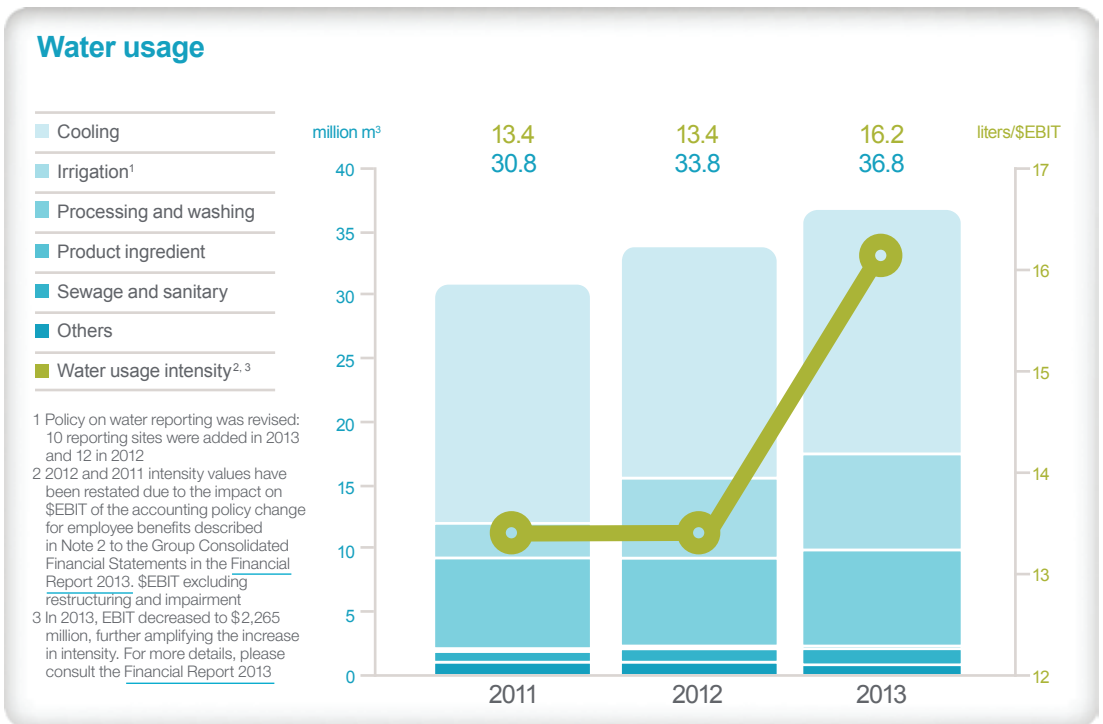
Water

Water is an essential resource for agriculture and plays an important role in our manufacturing – for cooling, irrigation and as raw material in product formulations. As well as working to reduce water use in our own operations, we are working with growers to develop innovative and sustainable farming techniques that require less water.

Our total water consumption in 2013 was 36.8 million cubic meters, 9 percent up on the previous year. More than half the water consumed across our sites is used for cooling (19.4 million cubic meters). See wastewater for more information on cooling water.

While water use in most areas remained constant, we recorded an increase in water used for irrigation as we improved data quality and continued to include more seeds sites in our reporting (10 sites added in 2013 and 12 in 2012).

Most of the water we use is surface fresh water, including the water used in our cooling systems and for irrigation. We monitor usage to identify opportunities to reduce water consumption. For example, our Goa site in India has started using treated saline water (350 thousand cubic meters) from the Cumbharjua canal for its processes, reducing its use of fresh surface water.



Environment continued

Wastewater

Managing wastewater is an important part of operating our sites. Ensuring it is treated before discharge – either on-site or off-site by Syngenta, a contractor or a municipal system – minimizes our impacts on surrounding watercourses.

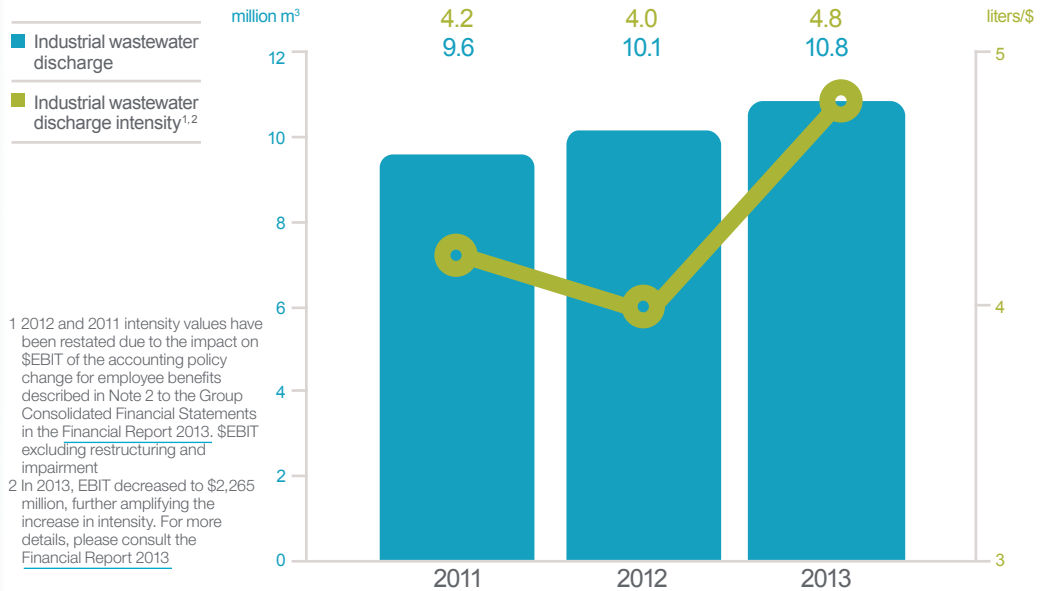
In 2013, we released 7 percent more wastewater, due to increased production. From a total 10.8 million cubic meters, about 45 percent was processed in on-site wastewater treatment plants and the rest was treated off-site.

Wastewater

	2011	2012	2013
Direct discharge of uncontaminated cooling water (million cubic meters)	18.5	17.8	19.1

In 2013, we used 19.1 million cubic meters of water for non-contact cooling, representing more than 98 percent of the total water withdrawn for cooling. “Non-contact” means there was no contact with chemicals or contaminants, so the water could be returned to rivers and lakes without the need for treatment.

Industrial wastewater discharge



## Environment continued

## Waste

Managing hazardous and non-hazardous waste is integral to the efficient operation of our sites. Robust waste management ensures compliance with local and international legislation and helps minimize our impact on the local environment.

Effective waste management is a high priority for all our sites, which apply our global policies and report against individual targets and action plans. 14 sites have local waste reduction programs.

## Hazardous waste

	2011	2012	2013
Hazardous waste intensity (kg/\$EBIT) <sup>1, 2</sup>	0.09	0.07	<b>0.10</b>
Hazardous waste (000s tonnes)	201.4	190.0	<b>235.2</b>
Recycled and re-used (000s tonnes)	66.9	60.0	<b>71.9</b>
Incinerated (000s tonnes)	121.5	118.0	<b>147.8</b>
Landfill (000s tonnes)	0.4	1.0	<b>2.5</b>
Other (000s tonnes)	12.6	11.0	<b>13.0</b>
<i>Hazardous waste by type:</i>			
Chemical	59%	65%	<b>66%</b>
Solvents	29%	26%	<b>27%</b>
Other	12%	9%	<b>7%</b>

<sup>1</sup> 2012 and 2011 intensity values have been restated due to the impact on \$EBIT of the accounting policy change for employee benefits described in Note 2 to the Group Consolidated Financial Statements in the [Financial Report 2013](#). \$EBIT excluding restructuring and impairment

<sup>2</sup> In 2013, EBIT decreased to \$2,265 million, further amplifying the increase in intensity. For more details, please consult the [Financial Report 2013](#)

We handled 235,200 tonnes of hazardous waste in 2013, a 24 percent increase from 2012 due mainly to greater activity in most of our active ingredient sites. We also sent one-off shipments of hazardous waste for off-site incineration from our Goa site in India (refractory material) and Grangemouth site in the UK (wastewater effluents due to a treatment plant malfunction).

Over 30 percent of hazardous waste was reused or recycled. About 60 percent was incinerated under controlled high-temperature conditions to ensure safe disposal. The increase in the amount of hazardous waste delivered to landfill resulted mainly from the removal of contaminated soil during the final stage of remediating acquired land at our St. Pierre-la-Garenne site in France.

## Non-hazardous waste

	2011	2012	2013
Non-hazardous waste intensity (kg/\$EBIT) <sup>1, 2</sup>	0.04	0.04	<b>0.06</b>
Non-hazardous waste (000s tonnes)	94.5	109.8	<b>131.7</b>
Recycled and reused (000s tonnes)	64.3	80.0	<b>100.5</b>
Incinerated (000s tonnes)	7.1	4.1	<b>7.5</b>
Landfill (000s tonnes)	19.1	18.5	<b>16.8</b>
Other (000s tonnes)	4.0	7.2	<b>6.9</b>

## Non-hazardous waste by type:

	2011	2012	2013
Plant and seed waste from seed sites	56%	60%	<b>66%</b>
Inerts	5%	5%	<b>3%</b>
Packaging materials	9%	7%	<b>7%</b>
Household	5%	5%	<b>5%</b>
Other	25%	23%	<b>19%</b>

<sup>1</sup> 2012 and 2011 intensity values have been restated due to the impact on \$EBIT of the accounting policy change for employee benefits described in Note 2 to the Group Consolidated Financial Statements in the [Financial Report 2013](#). \$EBIT excluding restructuring and impairment

<sup>2</sup> In 2013, EBIT decreased to \$2,265 million, further amplifying the increase in intensity. For more details, please consult the [Financial Report 2013](#)

The 20 percent increase in non-hazardous waste in 2013 was due mainly to a 32 percent increase in plant and seed waste from our seeds sites. Of the 131,700 tonnes of non-hazardous waste produced, 76 percent was recycled or reused – up from 73 percent in 2012. Our sites constantly seek ways to reduce waste. For example, our Nantong site in China and Iksan site in South Korea have moved from drums to bulk delivery and storage for some chemicals, reducing the amount of packaging waste.

## Environment continued

### Environmental compliance

We maintain comprehensive management systems that help our facilities comply with our own standards and environmental regulations. Each site measures and monitors its environmental impacts, reporting its data to group and regional HSE managers. The Syngenta Compliance and Risk Management Committee reviews performance quarterly, and the Syngenta Executive Committee and Board-level Corporate Responsibility Committee review progress annually.

#### Environmental compliance

	2011	2012	2013
Significant unplanned releases <sup>1</sup>	0	0	1

<sup>1</sup> Releases that escape beyond the site boundary and cause either environmental impact and/or concern from neighbors, regulators, etc

Unplanned releases from our chemical manufacturing activities are a particular concern and we allocate significant resources to prevent them. In 2013, we experienced one significant unplanned release. Due to temporarily reduced scrubber efficiency resulting from a technical failure at our Greens Bayou site in the USA, we released about 135 kilograms of ammonia. We took immediate corrective action and instituted preventive action. Staff were retrained, documented procedures were updated and new spray nozzles were installed in the scrubber. A capital project is currently in process to replace the scrubber heat exchanger. The release triggered an off-site complaint by an industrial neighbor when an employee smelled ammonia. The employee was evaluated by the neighbor's on-site medical personnel: no treatment was administered and the neighbor classified it as a first aid report.

# Responsible agriculture

## Overview

Our ambition of helping farmers to increase their production sustainably means we must ensure that our products remain available, safe and effective in the future. This means managing our technology responsibly, and making sure it is used correctly.

It starts with R&D, where we think holistically about new molecules and seed varieties – considering safety, environmental impact and regulatory concerns next to efficacy at the earliest practicable stage. It also includes training farmers to use the right protocols, and to handle and store our products safely.

## Making products fit for the future

Our approach is increasingly proactive and is reshaping our crop strategies. Our product teams are integrating sustainability into their strategies. This includes areas such as user safety, resistance and residue management, and environmental impacts.

These considerations are becoming an integral part of the way we develop solutions that are safe and profitable for farmers. In rice, for example, our TEGRA® system greatly reduces the need for chemical handling on the farm. It transfers much of the chemicals use to our nurseries, where young plants are grown in controlled conditions with strict stewardship measures.

Similarly, our GROMORE™ solution has very strict protocols for using chemicals efficiently. Farmers may be tempted to use chemicals too heavily, or to cut costs by using too little, which can lead to resistance. Our protocols maximize efficient use by ensuring that chemicals are applied in the right amount at the optimum time.

## Bee health

In December 2013, the EU began a two-year moratorium on neonicotinoid pesticides, including Syngenta's thiamethoxam. This followed major campaigns, which claimed a link between neonicotinoids and declining honey bee populations.

Honey bees, which are vital to farming, have clearly been impacted by a complex range of health threats. We are actively working with independent partners to understand these threats and possible solutions. Many years of independent monitoring have shown that neonicotinoids do not damage the health of bee populations when used properly, as they consistently are. We believe the EU's action has been driven by public disquiet and political pressure rather than scientific evidence. Nonetheless, the issue highlights the challenges we face in some countries regarding the societal perception of our products and what we do.

## Teaching people to use products safely

The health, safety and environmental impacts of our products are governed to a large extent by how they are used. In 2013, we ran 160 programs worldwide to teach the safe, efficient use and disposal of our products, reaching 2.8 million people. The focus of our programs has been to reach a large number of users, but we are aware of the challenge to also measure the effectiveness of the training.

### Number of people trained

m



As part of our Good Growth Plan we are committed to maintaining a high level of training while enhancing its effectiveness. We recently completed a pilot study in Kenya to assess farmers' practices before and after training. We are currently analyzing the data to help us develop better measures for knowledge uptake, and we are already introducing post-training assessments to confirm what people have learned.

## Responsible agriculture continued

To support the rapid growth in use of seed treatments, we are increasing the training of our sales teams who, in turn, train growers in safe use.

An important aspect of our training programs is the way we tailor our approach to suit local needs and practices. We have redesigned training, equipment and working practices to meet chemical industry, rather than agricultural industry standards. For example, we have been holding health and safety workshops for managers of our seed processing facilities worldwide, as well as the external facilities to which we supply chemicals. We operate 67 of these sites, which vary greatly in the size and sophistication of their equipment. Enabling them to identify and address their own health and safety issues has proved more effective than a one-size-fits-all solution.

Sometimes lack of caution in chemical handling or deliberate misuse, can lead to adverse health incidents. We have effective processes for managing and reporting incidents of suspected poisoning. In 2013, 100 countries representing 93 percent of our crop protection sales had programs in place. We also continue to work with the World Health Organization and International Association for Suicide Prevention on secure storage measures to prevent access by children and potential suicides.

### **Increasing sustainability and profitability of the farm**

In Europe, we have taken a lead in sustainable intensification by establishing the INTERRA® network of best-practice demonstration farms. As well as keeping neighboring farmers up to date, these centers of expertise help educate and inform stakeholders such as local communities, government representatives, business partners, students and our own employees. In 2013, some 3,000 people visited the network's five farms, including the newly-operational sites in Hungary and Morocco. Three more sites are planned to be added to the network in 2014.

Our best-practice initiatives are always tailored to local needs. For example, in India, Project Nirmiti is equipping local entrepreneurs to provide knowledge and services to smallholders. In Guatemala, the lidemaya Partnership with NGOs is bringing our technology and training to smallholders, raising average productivity by almost half.



## Responsible agriculture continued

### Resource efficiency

Syngenta works with farmers worldwide to help them grow more from less. Efficient use of resources and our commitment to creating value in rural economies result in sustainably increased farm productivity.

In 2013, we invested \$9.4 million in over 253 resource efficiency programs. Through these programs we promote better farming practices including safe handling and correct application of products, prevention of soil erosion, protection of water courses, and improved biodiversity.

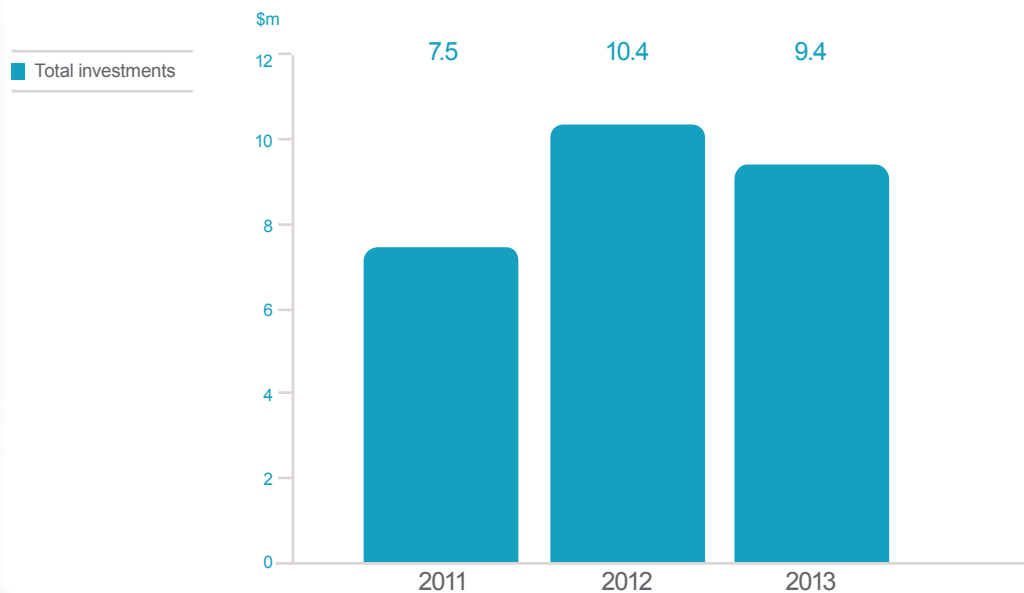
For instance, in the state of Odisha in rural East India we started Project Nirmiti, an initiative that develops a network of local people to make agricultural knowledge, inputs and services available to smallholders – improving productivity, profitability and livelihoods. Syngenta is partnering with other companies to train enterprising smallholders to set up their own businesses providing agricultural know-how and technology to fellow farmers in nearby villages – earning a commission for the inputs and services that they provide. The initiative has already trained 40 entrepreneurs, who have registered over 8,000 smallholder farmers – and the initiative will expand to other regions in the coming months.

The project is currently developing a software platform to enable these entrepreneurs to register their farmers, give crop advice, explain their product portfolio, take orders and keep customer records on tablet computers.

In Guatemala, we have partnered with the Mayan Institute for Research and Development – lidemaya – to improve maize and bean yields on smallholder farms. A 14 percent of the country's population works in agriculture. Smallholder farms make up 92 percent of the total number of landholdings. Their productivity is still well below the global average, and to increase their productivity and income they need training, technology and financial resources. The project focuses specifically on the hard-to-reach indigenous Mayan communities and trains local students to set up demonstration plots and train farmers on good agronomic practices. To date, over 1,000 farmers have received training and there has been an average productivity increase of 47 percent.

From 2014, we expect to report resource efficiency program performance under The Good Growth Plan framework.

### Resource efficiency programs



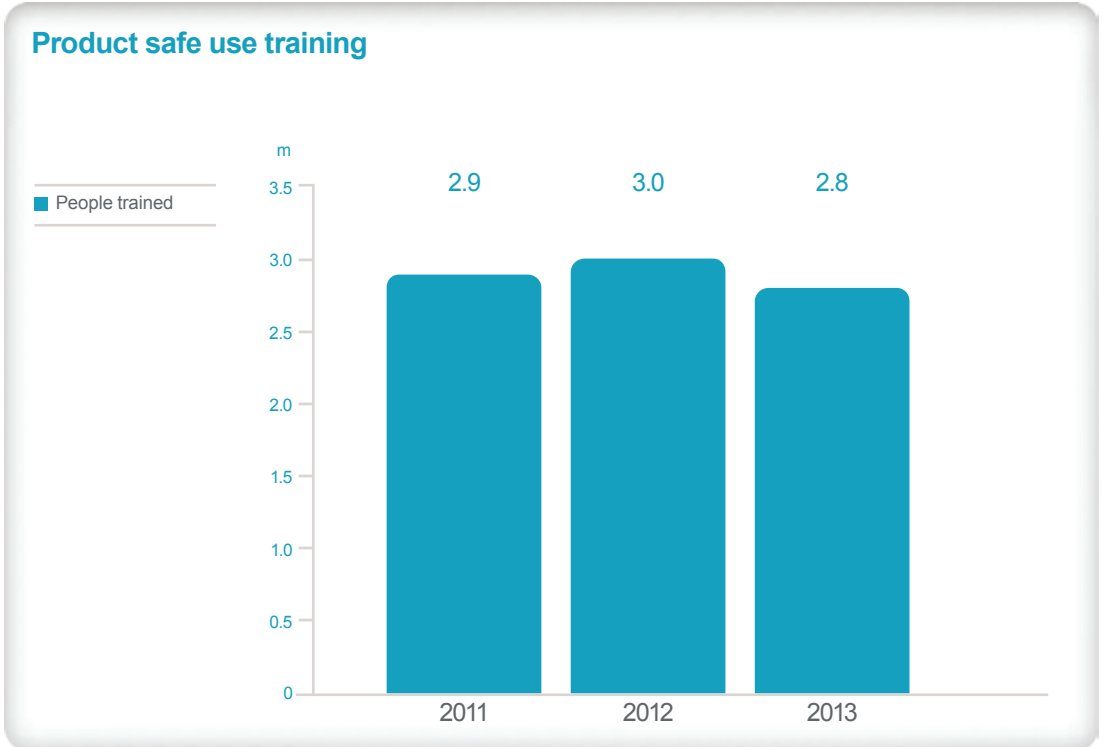
## Responsible agriculture continued

### Product safe use

Our stewardship programs support and train growers to use our products safely and effectively to maximize benefits while reducing the risk of harm to themselves or the environment.

Face-to-face product safe use training is delivered locally by Syngenta employees with established training partners. In 2013, our 160 training programs reached more than 2.8 million people. Over the past three years, we have reached about 9 million farmers with face-to-face training.

There are an estimated 500 million farmers spread all over the world, often located in very remote areas. We work with local agricultural extension organizations in many countries, pooling our resources to reach as many farmers as possible.



## Responsible agriculture continued

Each training program covers one or more of three focus areas: human health, environment, and value chain. The majority of programs in 2013 focused on human health training, emphasizing the wellbeing of the workers who apply the product or plant the seed. Environmental training focuses on protecting and enhancing natural resources such as water, biodiversity and soil, while value chain training looks at how farmers can meet local or global standards such as Good Agriculture Practice certification to help them access new markets.

In developing countries, many smallholders rely on outdated agricultural practices and have limited access to markets, creating dangerous cycles of hunger and poverty. Lack of infrastructure and the limited levels of literacy in these parts of the world add a further challenge, as they limit the efficacy of sharing ideas and training face-to-face. To reach smallholders in this environment it is essential to supplement in-person training with alternative communication channels.

In our efforts to help farmers acquire knowledge, skills and competencies we attach great importance to safe use of products and sustainable intensive agricultural practices. Tools such as brochures, training manuals, websites, TV and radio can amplify the spread of information and reach much wider audiences. Radio, with its high penetration rate in many African countries, is a particularly important channel for delivering information where it is most needed, reliably and fast.

In Tanzania for example, we have complemented our face-to-face training efforts with agricultural radio shows about best practice, tailored to local needs and conditions and delivered in local languages. Through this combined approach we can potentially reach many more Tanzanian farmers to improve their yields and farm safety. We see significant scope for using this form of awareness raising to improve the way we reach smallholders and help them realize their potential.

From 2014 we expect to report performance information on product safe use training under The Good Growth Plan framework.

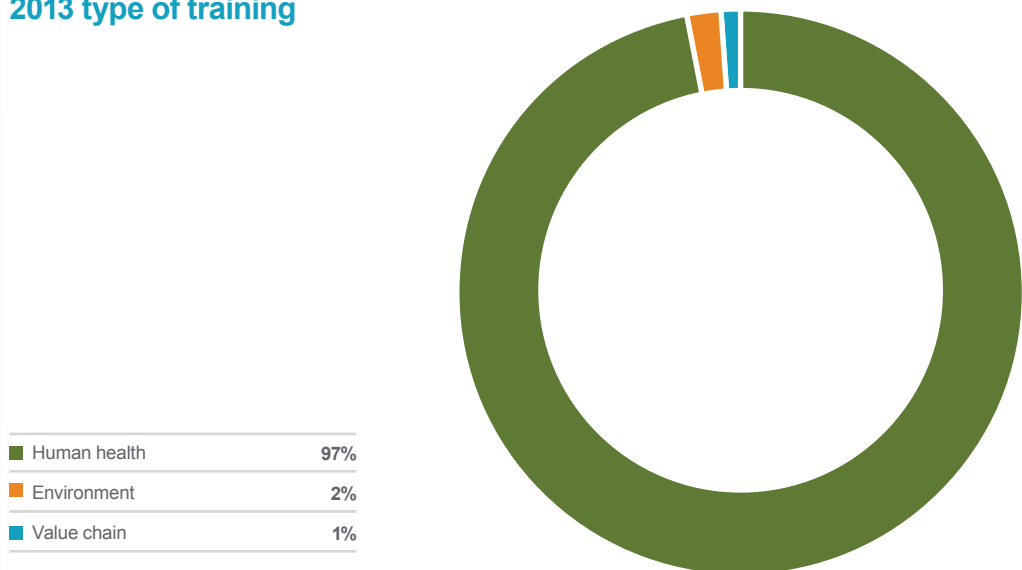
### Medical stewardship<sup>1</sup>

	2011	2012	2013
Countries with established Syngenta product toxicovigilance programs	85	85	100
Crop Protection sales represented	89%	92%	93%

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

Through our toxicovigilance program we ensure that attending physicians can get medical advice on treatment for any health effects following misuse of pesticides, whether accidental or intentional. We gather and review all available information on exposure incidents, and have now extended the program to 100 countries covering 93 percent of our crop protection sales. The most recent program expansion has included African countries without local poison control centers: through our service, local physicians now have access for the first time to a 24-hour helpline providing medical expert advice on treatments.

### 2013 type of training



# Economic value shared

## Overview

In more than 90 countries worldwide, we are an integral part of local economies and communities. We aim to benefit them in a variety of ways.

## Generating economic benefits

We help millions of farmers to improve their productivity, increase resource efficiency and earn a better living. Our products, training and support help them add value for their local economies and communities while improving food security for millions of people: that is the essence of our Good Growth Plan.

We contribute to local economies in many ways: by paying taxes, employing locally, and sourcing goods and services locally where appropriate. The economic benefits from our operations are significant in many communities, and we are also committed to increasing our role as a community partner in other ways.

## Valuing our community contribution

Our Code of Conduct requires us to engage with and support local communities – listening to concerns, creating benefits, sharing value, protecting the environment, promoting health, and improving the quality of life. This helps us to earn community goodwill and consent for our business objectives.

It is difficult to put a cash value on this kind of support. We report a figure for “community investment”, calculated by totaling the value of cash, in-kind contributions and staff time spent on sponsorships, donations and community engagement programs. In 2013, we valued our total community investment at \$21 million (+11 percent). This is in addition to local employment and local sourcing.

### Corporate community investment \$m

2013	21
2012	19
2011	18

Our approach to community investment is highly localized – shaped by each community’s setting, demographics and needs. In the USA, for example, we work with local United Way volunteering groups and Hunger Walk fundraising. In India, we support programs to empower women and create business credit schemes for them. We work on clean water and youth education in Latin America, and on community health in Africa. The nature of our support also varies according to local cultures and needs – ranging from cash donations and sponsorships for local causes to direct engagement in development projects.

In the aftermath of the typhoon Haiyan in the Philippines, we initiated a global program together with the International Red Cross to assist with immediate relief. Under the program, Syngenta committed to match employee donations. In addition, our ASEAN team set aside funds to support employees and their families affected by the storm, and our local teams in the Philippines collected urgently needed supplies like food and clothing. For the longer term, we are exploring projects that support the rebuilding of agricultural areas and recovery of rural communities.

## Economic value shared continued

## Economic contribution

Syngenta contributes to the economies and communities of the countries where it operates.

Our operations stimulate sustainable supply chains and create significant revenue for thousands of companies and suppliers worldwide. Our purchasing helps strengthen local economies and communities.

We invest in the communities where we operate through training and advice that help millions of farmers to improve productivity, increase resource efficiency and earn a better living.

The biggest impact we make is through our products and services, which help improve food security for many millions of people. By developing innovative products, techniques and technologies – and by working with farmers and growers to increase productivity and sustainability – we add value to economies and communities while helping farmers meet increasing global demand for food. Our commitment to sharing knowledge, operating sustainably, promoting health and improving quality of life is integral to the way we work with farmers.

Economic value shared<sup>1</sup>

	2011	2012	2013
Economic value shared (\$m)	12,784	13,257	<b>14,864</b>
Payments to suppliers <sup>2</sup>	8,140	8,550	<b>9,792</b>
Employee wages and benefits	2,661	2,710	<b>2,828</b>
Payments to governments (taxes) <sup>3</sup>	312	345	<b>405</b>
Payments to providers of capital <sup>4,5</sup>	1,078	971	<b>1,139</b>
Capital expenditure	575	662	<b>679</b>
Corporate community investment <sup>6,7</sup>	18	19	<b>21</b>

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

<sup>2</sup> Increase in Payments to suppliers reflects an increase in seeds production costs and higher inventory levels linked to projected sales growth

<sup>3</sup> Consists of income and other taxes paid, excluding VAT (included in Payments to suppliers) and employment-related taxes (included in Employee wages and benefits)

<sup>4</sup> Consists of expenditures for dividends, share repurchases (excluding those for employee share plans) and interest on debt

<sup>5</sup> Increase in Payments to providers of capital reflects an increased dividend payment in 2013

<sup>6</sup> In 2013, \$0.4 million for resource efficiency programs

<sup>7</sup> The PwC Independent Assurance Report includes in its scope only the Corporate community investment figure used in the calculation of Economic value shared

As our business continues to grow, the value we create is shared. In 2013, our contribution through paying employee wages and benefits increased by almost \$118 million from 2012. Our payments to suppliers increased 14.5 percent due to increases in seeds production costs and higher inventory levels linked to projected sales growth. Our payments to governments and providers of capital also increased, both by about 17 percent. The latter was due to an increased dividend payment.

In 2013, we made direct community investments of \$21 million, a 11 percent increase on 2012. These investments support locally-tailored initiatives that address environmental issues, improve access to technology, increase health and nutritional awareness, and enhance science and education. In 2013, they included direct financial contributions, in-kind contributions and staff time spent on sponsorship, donation and community engagement programs. Much of this support is channeled through the Syngenta Foundation.

An example of our community investment is the SPARSH Women's Self-help Group (SHG) program in the villages around our Goa site in India. We developed SPARSH, which translates locally as "Touching Lives", in partnership with a local NGO, Margdarshak. It aims to empower women to become income earners – helping to lift their families out of poverty. In three years, over 2,000 women have joined the scheme. Each SHG, consisting of 10-20 women, has received training in livelihood skills such as flower making, painting, cooking and beauty care, according to members' interests and skills. With backing from Syngenta and Margdarshak, these SHGs have been able to get funding from local banks and government agencies. In addition, every member contributes a fixed monthly amount into the SHG's bank account. This fund provides an internal lending system for members, usually to start a small business or for other livelihood purposes.

# Business integrity

## Overview

At Syngenta, business integrity is more than a compliance or risk management issue. We believe that doing the right thing is vital to being a sustainably successful business, and we are actively working to embed that view in our culture.

We comply with all local, national and international laws, codes and conventions, and uphold the principles set out in the Universal Declaration of Human Rights and the International Labor Organization's Core Conventions.

Our Code of Conduct sets out clear ethical, environmental and social responsibilities to which we expect all employees to adhere. And we have clear whistleblowing procedures that encourage employees to report any suspected breaches. We also monitor our suppliers' compliance with our standards and external regulations on issues such as health and safety, the environment, fair labor practices and animal welfare.

We have Compliance and Risk Management Committees in all territories, mirroring our global governance structure. These bring together leaders of the commercial organization, Human Resources, Finance, Legal and Taxes, Syngenta Business Services, Production and Supply, and Health, Safety and Environment, so that we can take a holistic view of compliance and risk. In 2013, we continued to refine the way they work, broadening their role from reviewing and monitoring to a more proactive stance.

## From policy-centered to values-driven

No formal system of rules and regulations can cover all eventualities. So we are fostering a culture in which ethical behavior governs all our dealings, whatever the circumstances. To support this, we must clearly communicate what we expect and give people the tools they need to be fully accountable.

We are evolving from reliance on a rules-based approach to one that is more based on values. While we continue to improve our policies, the focus now is on the standards we set for ourselves and our shared commitment to integrity and ethical leadership.

This involves helping our managers to become compliance leaders, building a culture where their people can discuss compliance matters naturally and openly. The emphasis is on face-to-face training – centered on real-life examples, rather than abstract rules and principles. We are teaching our leaders how to be clear about Syngenta's expectations, how to build "doing the right thing" into their language and communication, and how to encourage team members to voice any concerns they may have.

We have developed a set of tools to help managers build integrity and compliance into their teams' daily lives. And we are training people as ambassadors to spread awareness of what we expect from individual employees and their leaders.

## Enabling people to speak up

We encourage employees to speak up and report concerns through a variety of channels, including a confidential, global helpline. In 2013, we increased communication to raise awareness of our global helpline leading to 110 incidents being reported in 2013. All reported cases are treated seriously. They are logged, assessed and investigated, and corrective or disciplinary action is taken as appropriate. From 2014, the helpline will play a broader role – including offering compliance information and guidance on possible courses of action, enabling us to manage compliance reporting and support more effectively.

### Compliance cases reported through the compliance helpline

2013	110
2012	58
2011	82

## Consistent values, everywhere

Wherever we do business, we are working to embed the same values.

In developing our new production facilities, we make compliance thinking an integral part of the way we manage the project. Everyone involved, whether employed by Syngenta or by contractors, is given compliance training and certification, and is signed up to our compliance framework.

We are now drawing on this experience as we start to deliver on our commitment to build a \$1 billion business in Africa over the next decade. We have established a cross-functional Compliance and Risk Management Committee for the region to take a holistic view of our development. And compliance thinking has been embedded from the outset to ensure that we grow our African footprint in line with our values.

## Business integrity continued

## Corporate conduct

We have clear reporting procedures that encourage employees to speak up and report any suspected breaches of our Code of Conduct.

### Corporate conduct<sup>1</sup>

	2011	2012	2013
Compliance cases reported through the compliance helpline <sup>2</sup>	82	58	110

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

<sup>2</sup> This does not include cases reported through line management, HR or legal processes

Issues and concerns can be raised directly to management or to compliance functions including Legal, Compliance or Human Resources. Employees can also use our confidential global compliance helpline, which is available 24 hours a day, seven days a week in local languages. Every reported case is taken seriously and investigated as appropriate.

In 2013, 110 cases were reported. The increase from 58 in 2012 was due to our efforts to raise awareness about the importance of compliance and encourage employees to come forward with any concern or suspected breach of the Code of Conduct. To further foster a speak-up culture, we are relaunching the compliance helpline with new features. In future, employees will be able to ask questions about compliance in addition to raising potential issues.

We embed our Code of Conduct into our everyday operations and expect employees to take personal responsibility for their behavior. We give all new employees a copy of the Code and offer them Code of Conduct e-training. As of September 30, 2013, over 80 percent of employees had completed the online course. Alongside this e-training we offer targeted training and support on a variety of compliance-related issues – often through face-to-face workshops where employees role-play real-life scenarios.

## Animal testing compliance

Syngenta uses animal studies only when appropriate and aims to develop alternative techniques that replace and reduce the use of animals. However, in many countries and some industries the law requires animal testing to ensure the safety of customers and the environment. We set the highest standards for animal care and audit our contractors to ensure these standards are applied consistently.

### Animal testing compliance<sup>1</sup>

	2011	2012	2013
Management system audits performed in contract laboratories	8	15	13
Management system non-compliances found	0	1	0

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

We expect our contract laboratories to use management systems that are consistent with our policies and commitment to the care and use of animals in research and development. We maintain an agreed audit plan for contractor laboratories to ensure compliance. The 2013 level of inspection was consistent with maintaining appropriate oversight of our global pool of contract laboratories. The number of audits undertaken can fluctuate annually depending on the geographical locations being reviewed.

## Biotechnology and regulatory compliance

Our focus on safety and the environment begins at the start of our product lifecycle. We are committed to complying with plant biotechnology regulations and our management system for handling genetically modified crops is modeled on the ISO 9001 international quality standard.

### Biotechnology and regulatory compliance<sup>1</sup>

	2011	2012	2013
Employees completing trial regulatory compliance training	2,044	1,559	1,228
Trial locations requiring a permit	406	400	420
Trial inspections performed by Syngenta	155	278	272

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

In 2013, we trained 1,228 employees and contractors in field trial regulatory compliance. The training figure spiked in 2011 as the number of Crop Protection employees involved in biotechnology field trials increased after the integration of our Crop Protection and Seeds businesses.

Globally, planting trials were conducted in 420 authorized greenhouse and field trial site locations in 2013. We carried out 272 inspections to ensure these sites complied with regulatory requirements.

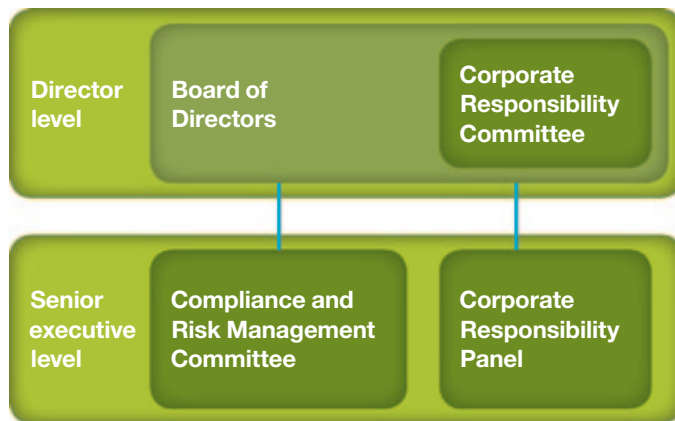
Our regulatory compliance team works globally to ensure best practices are shared, and comprehensive compliance programs are in place in every region. This approach, combined with the experience, knowledge and risk awareness of our employees, ensures that we maintain a high level of compliance.

# About our CR reporting

## CR governance

Corporate Responsibility (CR) is integral to our business. Our ambition is to bring greater food security in an environmentally sustainable way to an increasingly populous world by creating a worldwide step-change in farm productivity. In The Good Growth Plan, we have set specific, ambitious and measurable targets, which focus on boosting resource efficiency, rejuvenating ecosystems and strengthening rural communities. We are also committed to reduce our environmental footprint, develop our people and enhance our social engagement throughout our operations. Syngenta is guided by the conviction that short-, medium- and long-term value creation depends on the successful integration of business, social and environmental performance.

Our Board-level Corporate Responsibility Committee (CRC), chaired by the Syngenta Chairman, acts as the custodian on all CR matters for Syngenta. At senior executive level, the Corporate Responsibility Panel (CRP) directs CR-related standards, strategy, objectives, and partnerships and the Compliance and Risk Management Committee (CRMC) reviews and advises on CR reporting and the effectiveness of implementation of internal policies.





## About our CR reporting continued

### Materiality and stakeholder engagement

We regularly assess stakeholder concerns and expectations and the issues that we believe present the greatest risks and opportunities for our business. We use the results to drive our strategy, determine allocation of resources and guide our communication.

We engage and collect feedback from stakeholders in a variety of ways. We hear from the grower community through satisfaction surveys and farmers' direct contact with our sales teams on the ground. We also engage directly with our employees and locally with the communities close to our operations. Our interaction with industry associations, non-governmental organizations, governments and the investor community enables us to gather feedback on our activities and monitor issues important to stakeholders.

In July 2013, we commissioned a global research study involving over 7,500 people in 13 countries to assess their perceptions on the topic of food security and the challenges of agriculture. The [Agricultural Disconnect](#) study concluded that producing more food for a growing population in an environmentally sustainable way will be one of the next decade's most important global challenges. However, there are conflicting opinions about how best to address this challenge, and about the likely impact of increased production on the environment and on the people who grow the food and work on the farms:

- **Responsibility** – there is a belief that farming today is not conducted responsibly. There is a preference for local, organic and urban farming, but a recognition that governments and large scale farming have the greatest potential to address the global challenge of food security
- **Technology** – respondents are open to using technology in a general sense to meet the need to grow more food, but want specifically to minimize the use of pesticides, fertilizers and genetically modified seeds
- **Environment** – there are very mixed and uncertain views about the environmental impact of increased food production. There is a belief that more water and land should be used but a limited understanding of the consequences of doing so
- **People** – most respondents believe that more human labor should be used in agriculture to produce more food and that increased production will have a positive impact on rural communities.

Assessment of environmental and social factors is also part of our risk management processes. These factors are considered at Group level for strategic business decisions, and are also included as part of local risk management processes. Environmental and social risks include:

- Adverse weather, climate and geographical conditions as well as natural hazards
- Effects of not meeting stakeholder expectations
- Environmental damages and liabilities
- Adverse macro-economic situations and population developments
- National or regional insecurity.

All these sources of information help us identify our most material issues. Our contribution to food security is the most important issue to our stakeholders. In particular, they want to know how our technologies and products will enable growers to deliver sustainably the quality and quantity of food needed by an increasing global population. Maintaining soil fertility, using water efficiently and conserving biodiversity are priorities. Other important issues for us and our stakeholders are business integrity, labor rights, responsible supply chain, environmental efficiency, health and safety, talent attraction and retention, and community engagement.

## About our CR reporting continued

### Scope and report structure

Our CR reporting focuses on the aspects that are most material to our business and our stakeholders. Syngenta's CR performance is covered throughout the printed Annual Review and explained in further detail in the extended Online Annual Report ([www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)).

Detailed CR performance data and associated explanations are presented in additional tabs online under the following six headings, further elaborating on the information presented in the "Our business enablers" section of the printed Annual Review:

- **People** – attract and retain talent while creating an environment that stimulates innovation and personal performance and development
- **Manufacturing and procurement** – maintain the highest standards within our operations and work with our partners and suppliers to ensure the same ethical behavior
- **Environment** – manage and reduce the environmental footprint of our operations from energy use and carbon emissions to waste and water use
- **Responsible agriculture** – develop sustainable farming techniques that increase productivity while minimizing the impact on the environment and develop products that are used safely and securely to deliver maximum benefit
- **Economic value shared** – provide benefits to the communities and economies in which we operate
- **Business integrity** – maintain the highest standards across our entire business and go beyond regulatory compliance.

Our CR reporting is for the operations of Syngenta Group, including material interactions with selected third parties (e.g. seed suppliers, chemical suppliers, growers undergoing training, communities in which we invest, animal testing contract laboratories). Our CR reporting is guided by the GRI principles and externally assured by PwC. The CR reporting period is October 1 to September 30, with the exceptions noted.

We report on our environmental performance in absolute and intensity-based terms. Intensity figures are normalized using \$EBIT excluding restructuring and impairment as of December 31. As a result of stakeholder feedback, we are looking into alternatives to the current normalization factor. We will replace EBIT as the normalization factor for our intensity performance measures in the upcoming years.

To report our progress towards the goals set out in The Good Growth Plan, we anticipate revising the current CR reporting structure and publishing additional indicators next year.

### UNGC and GRI

Syngenta is a signatory of the United Nations Global Compact (UNGC). We are committed to aligning our operations with the Compact's 10 principles in the areas of human rights, labor, environment and anti-corruption. Our Annual Review and the additional CR reporting information presented in the Online Annual Report form our Communication on Progress made in implementing these principles.

Our CR performance reporting is guided by the 3.1 Reporting Guidelines of the Global Reporting Initiative (GRI). We publish the [GRI Content Index](#) alongside our reporting against the UNGC on our corporate website. We have maintained our GRI Application level at A+ since 2010.



### Supporting United Nations Global Compact

Syngenta continues to support the 10 principles of the United Nations Global Compact (UNGC) through an established commitment to Corporate Responsibility and ongoing implementations of policies on human rights, fair labor, environmental protection and anti-corruption. We actively engage in UNGC workgroups such as the CEO Water Mandate and the UNGC Sustainable Agriculture Business Principles.

## About our CR reporting continued

### Recognition

Syngenta has been a member of the FTSE4Good Index since 2005. This is one of the best known and referenced environmental, social and governance (ESG) indexes and is used by socially responsible investment (SRI) investors and stakeholder groups. By assessing environmental and social performance it recognizes leading sustainability-driven companies around the world.

Syngenta was also included in the Dow Jones Sustainability Index (DJSI) between September 2006 and September 2013. In 2013, we decided to stop submitting the Corporate Sustainability Assessment questionnaire to RobecoSAM, the organization responsible for conducting the DJSI assessment process. As a result, we are not further included in the DJSI. Under the strategy we launched in 2011, we have merged our crop protection and seeds businesses into one organization with fully integrated systems, structured by crop (corn, cereals, vegetables, etc). This meant that RobecoSAM's classification of Syngenta as a "chemical company" no longer represented our organization or its material topics.

Syngenta encourages engagement with ESG/SRI service providers and other stakeholders based on a fully transparent and independent approach. To increase the transparency and accessibility of information about our activities, in 2013 we launched the [Questions about Syngenta](http://www.questions.syngenta.com) website ([www.questions.syngenta.com](http://www.questions.syngenta.com)). This provides responses to FAQs from stakeholders, including rating agencies, on topics such as corporate governance, technology, intellectual property, health and safety, environment, product stewardship, supply chain management and community engagement.

Syngenta also reports greenhouse gas emissions and water use through the [CDP](http://www.cdp.com). In the climate change program, our disclosure score increased from 84 out of 100 to 91 in 2013 in recognition of our transparent reporting on management of greenhouse gas emissions. Our performance score of B was unchanged. We qualified for the 2013 CDP CDLI DACH – the Climate Disclosure Leadership Index for Germany, Austria and Switzerland.

## About our CR reporting continued

### External assurance

#### Independent Assurance Report on Syngenta's Online Corporate Responsibility Reporting

To the Head of Legal and Taxes, Syngenta AG, Basel ("Syngenta")

We have been engaged to perform assurance procedures to provide assurance on the aspects of the 2013 Corporate Responsibility (CR) reporting of Syngenta included in the Online Annual Report 2013.

#### Scope and Subject matter

Our limited assurance engagement focused on the following data and information disclosed in the CR reporting of Syngenta and its consolidated subsidiaries, for the financial year ended December 31, 2013:

- The application of the Syngenta internal Health, Safety and Environment (HSE) and Corporate Community Investment (CCI) reporting guidelines to the CR, in all material aspects;
- the internal reporting system and procedures, including the control environment, to collect and aggregate CR data;
- with the exceptions noted below, the CR performance indicators disclosed in the "Our business enablers" section of the Online Annual Report 2013 with a limited assurance.

Our assurance procedures do not cover the information presented in the "Research and development", "Economic value shared" and "About our CR reporting" pages, the side bars and the footers of the Online Annual Report 2013.

#### Criteria

The reporting criteria used by Syngenta are described in the internal HSE and CCI reporting guidelines and define those procedures, by which the CR data are internally gathered, collated and aggregated.

The accuracy and completeness of CR performance indicators are subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. Our assurance report should therefore be read in connection with Syngenta's internal guidelines, definitions and procedures on the reporting of its CR performance.

#### Responsibility and Methodology

The Board of Directors of Syngenta AG is responsible for both the subject matter and the criteria as well as for the selection, preparation and presentation of the selected information in accordance with the criteria. Our responsibility is to form an independent opinion, based on our limited assurance procedures, on whether anything has come to our attention to indicate that the identified CR information selected contained in the Online Annual Report 2013 is not stated, in all material respects, in accordance with the reporting criteria.

We planned and performed our procedures in accordance with the International Standard on Assurance Engagements (ISAE 3000) "Assurance engagements other than audits or reviews of historical financial information". This standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance on the identified HSE and CR information.

For the subject matter for which we provide limited assurance, the nature, timing and extent of procedures for gathering sufficient appropriate evidence are deliberately limited relative to a reasonable assurance engagement.

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

During 2013, we have not performed any tasks or services for Syngenta that would conflict with our independence, nor have we been responsible for the preparation of any part of the report; and therefore qualify as independent as defined by Code of Ethics and applicable legal and regulatory requirements.

#### Main Assurance Procedures

Our assurance procedures included, amongst others, the following work:

- **Evaluation of the application of group guidelines**  
Reviewing the application of the Syngenta internal HSE and CCI reporting guidelines;
- **Site visits**  
Visiting four different sites in Europe and Kenya (Seeds, Active Ingredients and Lawn and Garden). The selection was based on quantitative and qualitative criteria;  
Interviewing personnel responsible for internal reporting and data collection at the sites we visited and at the Group level;
- **Assessment of the performance indicators**  
Performing tests on a sample basis of evidence supporting the CR performance indicators relative to completeness, accuracy, adequacy and consistency;
- **Review of the documentation**  
Reviewing the relevant documentation on a sample basis, including management and reporting structures and documentation;
- **Review of the management assertions**  
Reviewing the evidence supporting the CR-related management assertions on the Online Annual Report 2013 relative to accuracy and adequacy;
- **Review of consistency with the printed version of the Syngenta Annual Review 2013**  
Reviewing the consistency of the CR data and information disclosed in the Online Annual Report 2013 with that disclosed in the CR Performance Summary in Syngenta's Annual Review 2013;

## About our CR reporting continued

### – Assessment of the processes and data consolidation

Reviewing the appropriateness of the management and reporting processes for CR reporting.  
Assessing the consolidation process of data at the group level;

### – Review of technical processes related to the update of the Online Annual Report 2013 content (change management, security)

Understanding the change management procedures to update the Online Annual Report 2013 content;  
Understanding the security concept around the Online Annual Report 2013 and the supporting infrastructure.

We have not carried out any work in respect of projections and targets nor such outside of the agreed scope and therefore restrict our conclusion to the 2013 Corporate Responsibility (CR) reporting of Syngenta.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusions.

### Limited assurance conclusions

With reference to the identified CR Reporting 2013, the following applies:

- Based on our work performed, nothing has come to our attention causing us to believe that the internal HSE and CCI guidelines are not being applied in all material aspects;
- Based on our work performed, nothing has come to our attention causing us to believe that the internal reporting systems to collect and aggregate CR data are not functioning as designed and provide an appropriate basis for its disclosure in all material aspects;
- Based on our work described in this report, nothing has come to our attention that causes us to believe that the data and information mentioned in the subject matter and disclosed with the CR reporting in the Online Annual Report 2013 does not give a fair picture of Syngenta's performance in the area of CR.

Zurich, March 12, 2014

PricewaterhouseCoopers AG

Gerd Tritschler

Jonas Buol

# Assured Corporate Responsibility performance indicators 2013

Syngenta's CR performance is covered throughout the Annual Review, summarized in the CR performance summary below and explained in further detail in the extended Online Annual Report ([www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)).

CR performance data is presented in six categories that align with our business enablers: people, manufacturing and procurement, environment, responsible agriculture, economic value shared and business integrity. Our CR reporting is for the operations of Syngenta Group, including material interactions with selected third parties as reported in the CR performance summary. Our CR reporting is guided by the GRI principles and externally assured by PwC. The CR reporting period is October 1 to September 30, with the exceptions noted.

## Corporate Responsibility performance summary

### People

	2013	2012	2011
<b>People retention<sup>1</sup></b>			
Employees <sup>2</sup>	<b>28,149</b>	27,262	26,333
Europe, Africa and Middle East <sup>3</sup>	<b>12,763</b>	12,417	12,134
North America	<b>4,654</b>	4,598	4,713
Latin America	<b>5,221</b>	5,095	4,681
Asia Pacific	<b>5,511</b>	5,152	4,805
Part-time employees	<b>976</b>	975	881
Turnover rate <sup>4</sup>	<b>14.1%</b>	12.4%	11.6%
of which: <35 years	<b>43%</b>	44%	38%
35-50 years	<b>35%</b>	35%	39%
>50 years	<b>22%</b>	21%	23%
<b>Diversity<sup>1</sup></b>			
Female employees	<b>30%</b>	31%	32%
In management roles	<b>20%</b>	20%	21%
In senior management	<b>13%</b>	13%	12%
Senior managers	<b>366</b>	334	345
Headquarters	<b>47%</b>	50%	49%
Europe, Africa and Middle East	<b>13%</b>	13%	13%
North America	<b>18%</b>	19%	19%
Latin America	<b>12%</b>	10%	10%
Asia Pacific	<b>10%</b>	8%	9%
Nationalities in senior management	<b>41</b>	38	34
<b>Employee development<sup>1, 5</sup></b>			
Training investment (\$m)	<b>27.1</b>	24.6	23.7
Training investment per employee (\$) <sup>2</sup>	<b>964</b>	901	901
<b>Reward and recognition<sup>1</sup></b>			
Employees eligible to participate in Employee Share Purchase Plan (ESPP)	<b>18,790</b>	16,561	16,872
Eligible employees participating in ESPP	<b>47%</b>	46%	46%
Employees participating in long-term equity incentive plans	<b>1,226</b>	1,098	1,047

<sup>1</sup> In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

<sup>2</sup> Permanent full-time equivalent (FTE)

<sup>3</sup> Including headquarters (Switzerland)

<sup>4</sup> Including voluntary leavers, retirees and restructuring

<sup>5</sup> Includes only training delivered by external providers

## Corporate Responsibility information continued

### People continued

	2013	2012	2011
<b>Health, safety and wellbeing</b>			
Recordable injury and illness rate (IIR) per 200,000 hours <sup>1</sup>	0.41	0.39	0.44
Recordable injury rate per 200,000 hours <sup>1</sup>	0.35	0.35	0.39
Europe, Africa and Middle East <sup>2</sup>	0.38	0.39	0.38
North America	0.64	0.87	0.99
Latin America	0.38	0.17	0.20
Asia Pacific	0.15	0.16	0.17
Recordable occupational illness rate per 200,000 hours <sup>1</sup>	0.07	0.03	0.05
Europe, Africa and Middle East <sup>2</sup>	0.07	0.07	0.05
North America	0.14	0.00	0.16
Latin America	0.08	0.00	0.00
Asia Pacific	0.02	0.03	0.01
First aid cases	623	693	798
Recordable injuries	148	144	147
Fracture	16%	17%	14%
Bruise, strain and sprain	44%	30%	34%
Burn	2%	1%	3%
Cut and abrasion	22%	30%	28%
Eye injury	5%	6%	7%
Head injury and concussion	1%	3%	3%
Other	10%	13%	11%
Cases of recordable occupational illness	28	14	19
Cases of work-related stress <sup>3</sup>	36	127	32

1 According to US OSHA definition for injuries and illness

2 Including headquarters (Switzerland)

3 The increase in 2012 is due in most cases to a change in shift pattern at our Monthey site in Switzerland. Following extensive consultation, a new shift pattern was implemented early in 2013



Read more about "People" on  
[www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)

### Manufacturing and procurement

	2013	2012	2011
<b>Our production and R&amp;D sites<sup>1, 2</sup></b>			
Active ingredient production	8	8	
Formulation, fill and packaging	23	23	
Lawn and Garden supply chain	15	15	
Seed processing	67	62	
Research and development	139	154	
<b>Quality management<sup>1, 3</sup></b>			
Quality audits performed on own sites	83	91	
Quality audits performed on third parties <sup>4</sup>	496	89	
<b>Security management<sup>1</sup></b>			
Evaluated sites in medium and high risk countries	70	72	
Of which: production sites	44%	39%	
<b>Responsible supply chain<sup>5</sup></b>			
Seed supply farms included in Syngenta/FLA program	22,895	17,625	16,880
HSEQ assessments at chemical suppliers <sup>6</sup>	86	74	67
HSEQ assessments at formulation, fill and packaging suppliers	38	35	30
HSEQ assessments at warehouse/logistics service providers	157	115	129

1 2012 first year of reporting

2 Including 34 multi-functional sites in 2013 and 35 in 2012

3 In 2013, reporting year ended September 30. In 2012, reporting year ended December 31

4 411 audits occurred in 2013 in North America due to the wider introduction of a trait technology

5 In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

6 2012 and 2011 values have been restated to separately report HSEQ assessments at formulation, fill and packaging suppliers



Read more about "Manufacturing and procurement" on  
[www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)

## Corporate Responsibility information continued

## Environment

	2013	2012	2011
<b>Energy</b>			
<b>Energy intensity (MJ/\$EBIT)<sup>1</sup></b>	<b>4.50</b>	3.70	3.79
Energy (TJ)	<b>10,202</b>	9,336	8,707
Gas (TJ)	<b>4,050</b>	3,936	3,655
Electricity (TJ)	<b>2,459</b>	2,347	2,155
Steam (TJ)	<b>1,578</b>	1,419	1,438
Oil (TJ)	<b>975</b>	703	660
Other (TJ)	<b>1,140</b>	931	799
Sites setting energy targets	<b>15</b>	19	19
<b>Greenhouse gases</b>			
<b>Total CO<sub>2</sub>e emissions intensity (kg/\$EBIT)<sup>1</sup></b>	<b>0.75</b>	0.62	0.61
Total CO <sub>2</sub> e emissions (000s tonnes) <sup>2</sup>	<b>1,710</b>	1,574	1,396
Within direct control:			
CO <sub>2</sub> e emissions from own operations (000s tonnes)	<b>634</b>	665	513
CO <sub>2</sub> emissions from company vehicles (000s tonnes)	<b>76</b>	68	65
Within indirect control:			
CO <sub>2</sub> e emissions from purchased energy (000s tonnes)	<b>417</b>	391	374
CO <sub>2</sub> emissions from business trips (000s tonnes)	<b>40</b>	45	51
CO <sub>2</sub> emissions from distribution (000s tonnes) <sup>2,3</sup>	<b>543</b>	405	393
<b>Other air emissions</b>			
<b>Other air emissions intensity (g/\$EBIT)<sup>1</sup></b>	<b>0.67</b>	0.56	0.63
Other air emissions (tonnes) <sup>4</sup>	<b>1,514</b>	1,421	1,454
NO <sub>x</sub> (tonnes)	<b>440</b>	476	445
Non-halogenated VOCs (tonnes)	<b>427</b>	505	647
Halogenated VOCs (tonnes)	<b>21</b>	13	29
Particulates (tonnes)	<b>105</b>	108	114
SO <sub>2</sub> (tonnes) <sup>4,5</sup>	<b>494</b>	295	180
NH <sub>3</sub> (tonnes)	<b>8</b>	8	22
HCl (tonnes)	<b>19</b>	16	17
<b>Water</b>			
<b>Water usage intensity (liters/\$EBIT)<sup>1</sup></b>	<b>16.2</b>	13.4	13.4
Water usage (million cubic meters)	<b>36.8</b>	33.8	30.8
Cooling (million cubic meters)	<b>19.4</b>	18.0	18.7
Irrigation (million cubic meters) <sup>6</sup>	<b>7.6</b>	6.5	2.9
Processing and washing (million cubic meters)	<b>7.4</b>	7.0	7.0
Product ingredient (million cubic meters)	<b>0.3</b>	0.2	0.2
Sewage and sanitary (million cubic meters)	<b>1.1</b>	1.0	1.0
Other (million cubic meters)	<b>1.0</b>	1.1	1.0
Origin of water:			
Surface fresh water (million cubic meters)	<b>25.6</b>	23.9	22.4
Underground water (million cubic meters)	<b>7.8</b>	7.1	5.9
Drinking water from municipal network (million cubic meters)	<b>3.0</b>	2.7	2.6
Recovered rain water (million cubic meters)	<b>0.1</b>	0.1	0.1
Saline water (million cubic meters)	<b>0.3</b>	0.0	0.0

1 2012 and 2011 intensity values have been restated due to the impact on \$EBIT of the accounting policy change for employee benefits described in Note 2 to the Group Consolidated Financial Statements in the Financial Report 2013. \$EBIT excluding restructuring and impairment

2 2012 value has been restated due to a calculation error in CO<sub>2</sub> reporting from distribution

3 Increase in 2013 value due to inclusion of seeds distribution in Asia Pacific and Latin America

4 2012 value has been restated due to a calculation error in SO<sub>2</sub> reporting at a site in Asia Pacific

5 Increase in 2013 value due to 34% increase in fuel oil consumption in the waste incinerator at a site in Asia Pacific

6 Policy on water reporting was revised: 10 reporting sites were added in 2013 and 12 in 2012



**Corporate Responsibility information** continued

**Environment** continued

	2013	2012	2011
<b>Wastewater effluents</b>			
<b>Industrial wastewater discharge intensity (liters/\$EBIT)<sup>1</sup></b>	<b>4.8</b>	<b>4.0</b>	<b>4.2</b>
Industrial wastewater discharge (million cubic meters)	<b>10.8</b>	10.1	9.6
Total organic carbon (TOC) (tonnes)	<b>879</b>	771	1,033
Chemical oxygen demand (COD) (tonnes)	<b>2,679</b>	2,337	3,119
Biological oxygen demand (BOD) (tonnes)	<b>225</b>	239	308
Total suspended solids (tonnes)	<b>345</b>	363	520
Soluble salts discharged (000s tonnes)	<b>143</b>	133	120
Direct discharge of uncontaminated cooling water (million cubic meters)	<b>19.1</b>	17.8	18.5
<b>Waste</b>			
<b>Hazardous waste intensity (kg/\$EBIT)<sup>1</sup></b>	<b>0.10</b>	0.08	0.09
Hazardous waste (000s tonnes)	<b>235.2</b>	190.0	201.4
Recycled and re-used (000s tonnes)	<b>71.9</b>	60.0	66.9
Incinerated (000s tonnes)	<b>147.8</b>	118.0	121.5
Landfill (000s tonnes)	<b>2.5</b>	1.0	0.4
Other (000s tonnes)	<b>13.0</b>	11.0	12.6
Hazardous waste by type:			
Chemical	<b>66%</b>	65%	59%
Solvents	<b>27%</b>	26%	29%
Other	<b>7%</b>	9%	12%
<b>Non-hazardous waste intensity (kg/\$EBIT)<sup>1</sup></b>	<b>0.06</b>	0.04	0.04
Non-hazardous waste (000s tonnes)	<b>131.7</b>	109.8	94.5
Recycled and re-used (000s tonnes)	<b>100.5</b>	80.0	64.3
Incinerated (000s tonnes)	<b>7.5</b>	4.1	7.1
Landfill (000s tonnes)	<b>16.8</b>	18.5	19.1
Other (000s tonnes)	<b>6.9</b>	7.2	4.0
Non-hazardous waste by type:			
Plant and seed waste from seed sites	<b>66%</b>	60%	56%
Inerts	<b>3%</b>	5%	5%
Packaging materials	<b>7%</b>	7%	9%
Household	<b>5%</b>	5%	5%
Other	<b>19%</b>	23%	25%
Sites with waste reduction programs	<b>14</b>	16	16
<b>Environmental compliance</b>			
Significant unplanned releases <sup>2, 3</sup>	<b>1</b>	0	0

<sup>1</sup> 2012 and 2011 intensity values have been restated due to the impact on \$EBIT of the accounting policy change for employee benefits described in Note 2 to the Group Consolidated Financial Statements in the Financial Report 2013. \$EBIT excluding restructuring and impairment

<sup>2</sup> Releases that escape beyond the site boundary and cause either environmental impact and/or concern from neighbors, regulators, etc

<sup>3</sup> In 2013, release of ammonia due to temporary reduction on scrubber efficiency at one site in North America. Corrective actions were immediately taken



Read more about "Environment" on  
[www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)

## Corporate Responsibility information continued

## Responsible agriculture

	2013	2012	2011
<b>Resource efficiency programs (soil, water, biodiversity, IPM/ICM, safe use)</b>			
Total investment (\$m)	9.4	10.4	7.5
Europe, Africa and Middle East <sup>1</sup>	55%	37%	48%
North America	1%	4%	20%
Latin America	34%	35%	14%
Asia Pacific	10%	24%	18%
Active programs	253	157	150
<b>Medical stewardship<sup>2</sup></b>			
Countries with established Syngenta product toxicovigilance programs <sup>2</sup>	100	85	85
Crop Protection sales represented	93%	92%	89%
<b>Product safe use training</b>			
Active training programs	160	92	61
Human health <sup>3</sup>	97%	83%	
Environment <sup>3</sup>	2%	2%	
Value chain <sup>3</sup>	1%	15%	
People trained (m)	2.8	3.0	2.9

1 Including headquarters (Switzerland)

2 In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

3 2012 first year of reporting



Read more about "Responsible agriculture" on  
[www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)

## Economic value shared

	2013	2012	2011
Economic value shared (\$m) <sup>1</sup>	14,864	13,257	12,784
Payments to suppliers <sup>2</sup>	9,792	8,550	8,140
Employee wages and benefits	2,828	2,710	2,661
Payments to governments (taxes) <sup>3</sup>	405	345	312
Payments to providers of capital <sup>4,5</sup>	1,139	971	1,078
Capital expenditure	679	662	575
Corporate community investment <sup>6,7</sup>	21	19	18

1 In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

2 Increase in Payments to suppliers reflects an increase in seeds production costs and higher inventory levels linked to projected sales growth

3 Consists of income and other taxes paid, excluding VAT (included in Payments to suppliers) and employment-related taxes (included in Employee wages and benefits)

4 Consists of expenditures for dividends, share repurchases (excluding those for employee share plans) and interest on debt

5 Increase in Payments to providers of capital reflects an increased dividend payment in 2013

6 In 2013, \$0.4 million for resource efficiency programs

7 The PwC Independent Assurance Report includes in its scope only the Corporate community investment figure used in the calculation of Economic value shared



Read more about "Economic value shared" on  
[www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)

## Business integrity

	2013	2012	2011
<b>Corporate conduct<sup>1</sup></b>			
Compliance cases reported through the compliance helpline <sup>2</sup>	110	58	82
<b>Animal testing compliance<sup>1</sup></b>			
Management system audits performed in contract laboratories	13	15	8
Management system non-compliances found	0	1	0
<b>Biotechnology and regulatory compliance<sup>1</sup></b>			
Employees completing trial regulatory compliance training	1,228	1,559	2,044
Trial locations requiring a permit	420	400	406
Trial inspections performed by Syngenta	272	278	155

1 In 2013 and 2012, reporting year ended September 30. In 2011, reporting year ended December 31

2 This does not include cases reported through line management, HR or legal processes



Read more about "Business integrity" on  
[www.syngenta.com/ar2013](http://www.syngenta.com/ar2013)