

## Sustainable Business Report 2017

The value  
we create

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Syngenta Non-financial Reporting 2017

Syngenta's Sustainable Business Report includes quantitative and qualitative information on policies and actions taken regarding our business and corporate responsibility goals.

It also serves as our annual Communication on Progress (COP) for the United Nations Global Compact.

For further information and a section with answers to many "Questions about Syngenta", visit our corporate website:

[www.syngenta.com](http://www.syngenta.com)

## Our ambition

We play a vital role in the food chain to safely feed the world and take care of our planet.

We will be the most collaborative and trusted team in agriculture, providing leading seeds and crop protection innovations to enhance the prosperity of farmers, wherever they are.



## 2017 in numbers

Group sales

\$12.65bn

Crop Protection sales<sup>1</sup>

\$9.2bn

Seeds<sup>2</sup>

\$2.8bn

People trained on safe use

8.2m

Suppliers included in fair labor programs

86%

Recordable injury and illness rate<sup>3</sup>

0.37



90+

Countries

27,669

Employees<sup>5</sup>

111

Research and Development sites

100

Production and Supply sites<sup>7</sup>

1 Excluding Controls, including sales to Seeds

2 Excluding Flowers

3 Per 200,000 hours, according to US OSHA definition

4 Excluding Controls and Flowers

5 Permanent full-time equivalent (FTE) as of September 30, 2017

6 Including headquarters (Switzerland)

7 Including 4 multi-functional production sites

### North America

|                                |       |
|--------------------------------|-------|
| Sales <sup>4</sup> \$m         | 3,361 |
| Employees <sup>5</sup>         | 4,092 |
| Research and Development sites | 30    |
| Production and Supply sites    | 31    |

### Latin America

|                                |       |
|--------------------------------|-------|
| Sales <sup>4</sup> \$m         | 2,884 |
| Employees <sup>5</sup>         | 4,907 |
| Research and Development sites | 12    |
| Production and Supply sites    | 14    |

### Europe, Africa and Middle East

|                                |        |
|--------------------------------|--------|
| Sales <sup>4</sup> \$m         | 3,870  |
| Employees <sup>5,6</sup>       | 12,372 |
| Research and Development sites | 44     |
| Production and Supply sites    | 35     |

### Asia Pacific

|                                |       |
|--------------------------------|-------|
| Sales <sup>4</sup> \$m         | 1,853 |
| Employees <sup>5</sup>         | 6,298 |
| Research and Development sites | 25    |
| Production and Supply sites    | 20    |

## Chief Executive Officer's statement

# Helping farmers to sustainably feed the world



**“I have great confidence that we can continue to grow our business and make a lasting contribution to safely feeding the world while taking care of the planet.”**



In a challenging landscape, the world's population depends on farmers sustainably increasing their production, ensuring the supply of safe and affordable food while minimizing agriculture's impact on the environment. Syngenta is well placed to help farmers meet this challenge.

Over the last year – as I traveled to many parts of the world and met with our customers, farmers and our people – it was clear that 2017 was extremely challenging with yet another year of low commodity prices. But despite tough market conditions, we have continued to build on the foundations we laid in 2016, for a more sustainable business which makes a significant contribution to safely feeding the world while taking care of the planet. The passion that our people have for this challenge is tangible, and it makes me extremely proud to be part of the Syngenta team. With the closing of the ChemChina transaction, we now also have an owner who understands the importance of taking the long view in support of this direction.

### **The Good Growth Plan delivering real impact for sustainability**

We made great progress in 2017 towards our Good Growth Plan commitments. The Plan – now in its fifth year – puts sustainability center stage in the way we do business and aligns closely with the UN Sustainable Development Goals. In the last year, we have seen it deliver real, measurable value both for growers and society at large.

In 2017, our reference farms showed substantial improvements in yield, while the efficiency with which these farms use resources, including pesticides, has also improved substantially. These strong results have been achieved while delivering a significant reduction in greenhouse gas emissions, which shows that productivity and efficiency – the key components of a sustainable system – can go hand in hand.

### **Transparency and partnerships drive accountability**

We are committed to transparency and so the results of The Good Growth Plan, which have been independently audited - are available to anyone through our website [www.data.syngenta.com](http://www.data.syngenta.com).

Along with The Good Growth Plan, the appointment of the Chief Sustainability Officer, Alexandra Brand, will also bring a sharper focus to our work and support our commitment to work more closely and transparently with governments, NGOs and society to find the solutions we collectively need.

We continue to build new partnerships with key partners – including academics, entrepreneurs, policymakers, associations, NGOs and other private-sector partners – to build programs that will help farmers to upskill themselves and make their businesses more resilient. As these partnerships develop, they will improve food value chains, provide food security for local populations and support farmer livelihoods.



### Record free cash flow despite challenging market conditions

In 2017, we achieved record free cash flow despite a challenging year in which we saw continuing pressure on grower and supplier profitability. Unfortunately, we were not able to overcome these challenges to revenue and Crop Protection sales declined. Addressing this challenge in 2018 will require us to drive short-term performance while focusing on longer-term direction.

Total sales were down 1 percent. Crop Protection sales fell 3 percent to \$9.2 billion – and measures to resolve channel inventory issues in Brazil more than offset growth in other parts of the world. Driven by strong sales of corn and soybean in North America, our Seeds business grew sales by 6 percent to \$2.8 billion for the year. We continue to strengthen the business, announcing the purchase of Nidera Seeds from COFCO International in December 2017. Flowers and Controls sales were 3 percent higher at \$0.7 billion.

### Investing for the future

In addition to the acquisition of Nidera Seeds, we strengthened the leadership of our Seeds business, recruiting key talent from across the industry to provide the leadership necessary to capture opportunities in the sector. We were also pleased to obtain Chinese import approval for AGRISURE DURACADE®, ensuring that US farmers can use this class-leading technology for the control of corn rootworm without incurring export restrictions.

In 2017, we also continued success in North America with new crop protection products including TRIVAPRO™, the first three-mode-of-action foliar fungicide; TALINOR™, a post-emergence herbicide developed to control broadleaf weeds in wheat and barley; MINECTO® PRO, a new insecticide for vegetable and specialty crops; and BESIEGE™, a broad-spectrum foliar insecticide.

The Argentine registration of MIRAVIS™ DUO for peanuts and MIRAVIS™ TOP for tomatoes, peppers and squash marked the launch of a new brand with broad market potential for this broad-spectrum fungicide. Growers in Brazil and Argentina have also benefitted from the first full-year sales of our leading seed treatment, FORTENZA®.

We began the European roll out of VIBRANCE™ DUO, which controls a range of soil-borne cereal diseases, and we saw the successful introduction of ELATUS™ in France, Germany and the UK to help farmers fight fungal disease in cereals.

### Our work matters

A key element of our ambition is to be the most collaborative and trusted team in agriculture. To support this ambition, we have continued to invest in our people with new training and development programs for all employees and extensive leadership programs for managers. Almost one in three people participated in some form of training, leadership or development programs.

In 2017, I was also delighted to lead the renewal of our ambition and values, known internally as our “Backbone”. Our Backbone goes to the core of who we are as a company, setting out the cultural values that guide our behavior as individuals and as an organization, as well as the qualities and commitments we expect from our leaders.

### Looking ahead

I would like to thank everyone in Syngenta for their ongoing energy and enthusiasm. Their dedication to helping our customers and farmers succeed gives me great confidence that we can continue to grow our business and make a lasting contribution to safely feeding the world while taking care of the planet. Achieving these two objectives goes to the heart of our commitment to sustainability and performance over the long term.

**J. Erik Fyrwald**  
Chief Executive Officer



## The future of food

# Doing more with less – and doing it faster

Once, the task for farmers was simply to grow enough food. Today, it's more complex. The world expects its farmers to feed a growing – and increasingly demanding – population, while also taking good care of the planet. Achieving either of those goals is hard, and increasingly so. Achieving both at once will require the entire food supply chain to rethink the way it works, in order to drive faster innovation and change.



## NOT JUST MORE BUT BETTER, MORE EFFICIENT, LOWER IMPACT

The challenges are well known and understood. The fundamental drivers are population growth, pressure on land resources – from soil degradation, urban sprawl and the need to conserve earth’s remaining unfarmed land – and pressure on other resources such as water.

But those “need to grow more with less” challenges are just the start. These are some of the many complicating factors:

Climate change is adding to the pressure. As well as adapting to growing conditions that are often becoming more difficult and volatile, farmers themselves must help to mitigate their own contribution to global warming.

Societal concerns may limit farmers’ options. Potential solutions may be resisted by people concerned about the impacts of new technology – particularly the possibility of residues in food or adverse effects on biodiversity and the environment.

Further improvement in crop yields is vital – especially for smallholders, who play a crucial role in feeding the world but lack the productivity of larger farms.



**“The disproportionate impact of climate change on the world’s poorest people means that there is a more urgent need than ever to help the poorest farmers improve their productivity in the increasingly tough conditions that they continue to face.”**

Bill & Melinda Gates Foundation<sup>1</sup>

But as well as delivering more calories, the food system must also adjust to meet changing consumer aspirations and preferences. Worldwide, rising prosperity drives demand for higher quality, wider choice, bigger meals and a dietary shift towards eating more meat. There’s also growing demand for organic produce – spurred largely by societal concerns around the perceived impacts of modern agriculture.

So the challenge is not just to grow more, but to grow it differently: with fewer inputs, lower impacts and higher quality. If humanity is to be sustainable, its food supply has to be sustainable too.

But the idea of “sustainable food” is itself complicated. Do we mean economic sustainability, ensuring the financial returns are sufficient to sustain rural livelihoods? Or environmental sustainability, avoiding depletion of scarce resources and minimizing impacts on wildlife habitats, biodiversity and the environment? Or social sustainability, producing food in ways that consumers find acceptable? The reality is that the food system must address all these issues.

Efficiency improvements can pay multiple dividends. The “Green Revolution” that has boosted crop yields since the 1960s didn’t only help to feed the planet. By reducing the need to clear forest and grassland for farming, scientists calculate that it avoided 590 billion tonnes of greenhouse gas emissions.

That’s equivalent to a third of all global emissions since the Industrial Revolution began in the 1850s.<sup>2</sup>

## GROWING AFFLUENCE, GROWING APPETITES

In 1995, there were an estimated 200 million obese adults worldwide.<sup>3</sup> By 2016, there were over 650 million.<sup>4</sup> The average US restaurant meal is four times bigger than it was in the 1950s.<sup>5</sup>



## The future of food

### THE FUTURE DEPENDS ON INNOVATION

Today, another efficiency step change is needed. If farmers are to successfully and sustainably feed the world, they need access to new solutions, delivered at pace and scale. Traditional farming and distribution methods won't be enough – the whole industry needs to change and come up with new ideas.

Innovation is needed across the board, because there are no simple answers. Farmers face multi-faceted challenges that need multi-faceted solutions, tailored to local needs and opportunities. There will be many different perspectives to reconcile and contributions to incorporate.

In agrochemicals, R&D teams are looking beyond efficacy – developing tightly targeted molecules that are safer for the environment and effective against evolving pests and diseases. Advanced breeding techniques are producing seeds that are more resilient to climate change and pests.

Advances in other branches of science and technology are helping to enhance farm productivity and sustainability. More pests and diseases can be controlled through effective use of natural predators and other biological solutions. The combination of big data with precision agriculture technology is enabling farmers to better understand and manage the land, field by field.

And by combining digital and biological techniques, breeders are accelerating the development of new crop varieties with desirable characteristics.



**“Modern technologies, by using natural ecosystem flows and services more efficiently, offer a real chance of reducing the totality of human impacts on the biosphere.”**

An Ecomodernist Manifesto, 2015<sup>6</sup>





## LAND UNDER THREAT

Urban sprawl threatens land resources: over 60 percent of the world's cropland lies on the edges of cities.<sup>7</sup> And over 60 percent of farmland is affected by soil degradation.<sup>8</sup>



**“Satisfying the world’s increasing demand for food will require innovative, cross-sector global partnerships. We believe it is possible to meet the needs of people and nature by driving improvements in soil health, habitat conservation and resource efficiency.”**

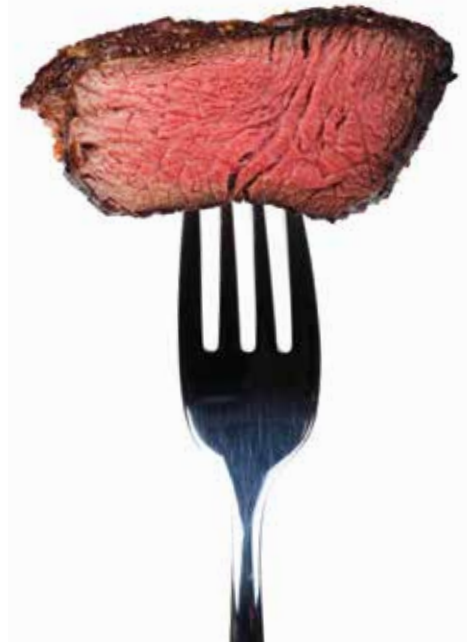
The Nature Conservancy<sup>9</sup>

Technological advances like these are enhancing food quality as well as input productivity: the world needs not only more calories, but also foods that deliver better nutrition. This is especially important for children in developing countries. Better nutrition makes them not only healthier, but also more attentive in school – contributing to communities’ future prosperity.

Changing social attitudes to food can make big differences, for better or worse. For example, the impact of resource-intensive animal farming could be reduced by new lab-grown cultured meat products, increased consumption of insect protein, or by a shift to lower-meat, vegetarian or vegan diets. In some of the wealthiest nations, there is evidence that meat consumption may already have peaked.<sup>10</sup> Conversely, rising demand for organic crops, with their inherently lower yields, could increase pressure on resources such as land.<sup>11</sup> Innovation is needed here to make organic farming more productive.

A third of all food production is lost or wasted along the supply chain.<sup>12</sup> So innovation to reduce these losses could be as valuable as big uplifts in crop yields.

Significant improvements could come from bringing production closer to consumption, which also reduces the environmental impacts of excessive “food miles”. Over half the global population now lives in cities, and that proportion is expected to reach two-thirds by 2050.<sup>13</sup> Urban sprawl eats up existing farmland – but technologies for urban farming are beginning to offset this impact: production from “vertical farms” in buildings is forecast to grow by 25 percent a year to 2022.<sup>14</sup>



## MEAT IS A THIRSTY FOOD

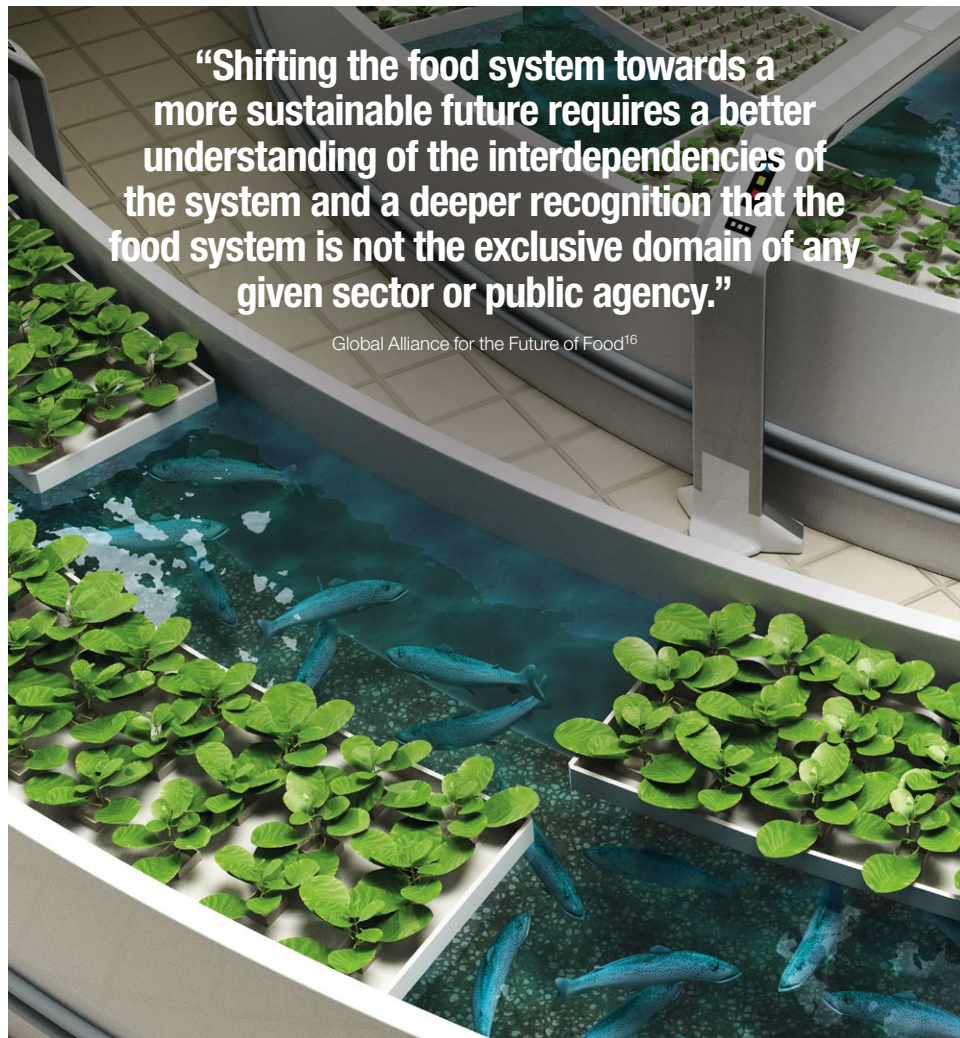
Liters of water required to produce one gram of protein<sup>15</sup>:

Beef  
**112**

Vegetables  
**26**

Cereals  
**21**

## The future of food



### INNOVATION DEPENDS ON COLLABORATION

The scope for improvement in agricultural production is significant, and there's no shortage of opportunities for innovation. But the challenge to produce more with less is an urgent one. While demand growth continues to outpace improvements in production, humanity is consuming renewable resources 50 percent faster than nature can replace them.<sup>17</sup> The pace of change needs to accelerate.

That's not just a matter of developing new techniques and technologies faster. They don't start making a difference until they're widely applied. And putting innovation into practice in the field isn't always a quick or easy process – especially when so much of the world's food is produced by some 500 million<sup>18</sup> smallholders, many in isolated rural areas.

Traditionally, advances in agriculture have been fragmented and piecemeal. That has to change. No one company or organization can make enough difference on its own. But they can take positive steps to be part of a bigger picture, in which many organizations make many different contributions – both individually and in collaboration with others.

All participants in food production and distribution need to take a more holistic view – to think in terms of “food systems” where they work in synergy, rather than seeing themselves in separate silos such as “farming” or “manufacturing” or “distribution”.

The future of food – safe, sustainable, plentiful, nourishing, satisfying food – depends on unprecedented cooperation that brings together all the players with relevant knowledge and resources.

So for suppliers of agricultural products and services like Syngenta – and equally for academia, governments and NGOs, agricultural equipment companies, farmers' customers in the value chain, and providers of finance and insurance – the challenge is a shared one. The pace of innovation depends ultimately on how successfully we all work together. The future of food depends on us all.



**“Family farms are also the custodians of about 75 percent of all agricultural resources in the world, and are therefore key to improved ecological and resource sustainability.”**

Food and Agriculture Organization<sup>19</sup>



## SYNGENTA'S ROLE IN THE FUTURE: COLLABORATIVE AND INNOVATIVE

Over recent years, Syngenta's vision of the future has placed increasing emphasis on collaboration with organizations in the public, private and nonprofit sectors.

Partnerships and collaborations amplify the value of the assets we have, leveraging our innovation, capabilities and networks. By sharing information and data openly, we leverage what we know and enable others to progress agriculture.

This philosophy informs our relationships with farmers, our customers. Increasingly, we see them as our partners in driving innovation and promoting adoption of new solutions. We've made this explicit in The Good Growth Plan – for more on this, see pages 18-27.

We see the developing world's hundreds of millions of smallholders as crucial to meeting the world's growing food needs.

The Syngenta Foundation for Sustainable Agriculture builds and supports partnerships to improve their production and livelihoods through services, technology and links to markets. For more on this, visit [www.syngentafoundation.org](http://www.syngentafoundation.org)

Successful collaboration, whether internal or external, depends on trust. Openness, transparency and a willingness to debate your position honestly are essential. These attributes are at the heart of our culture and values – for more on this, see page 29. Our principal relationships and interactions are set out in the business model on pages 10-11.

**“We are passionate about helping farmers around the world, and we will continue to work with others and invest our resources to make agriculture ever more sustainable.”**

**J. Erik Fyrwald**  
CEO, Syngenta

## Our business model

# Creating value now and for the long term

**Syngenta plays a vital role in enabling the food chain to feed the world safely and take care of our planet. Our ambition is to be the most collaborative and trusted team in agriculture, providing leading seeds and crop protection innovations to enhance the prosperity of farmers, wherever they are.**

Our strategy is to grow through customer-focused innovation – not just in product research and development, but in every aspect of our business model. We seek new and better ways to use resources, to develop and deliver products and services, and to create value for our many stakeholders – including employees, the communities where they live and society at large.

All this innovation has one focus: a **passion for our customers**, the farmers who grow the world's food. To make our business work, we have to understand their needs and deliver products and services that they value. And to make our business sustainable, we have to take **the long view**: ensuring that what we do today strengthens Syngenta and the food chain for tomorrow – economically, environmentally and socially.

That's why our Good Growth Plan commitments are integral to our business strategy. They put sustainability center stage in the way we do business and align closely with the UN's Sustainable Development Goals – see page 19 for details.

If we succeed, we will achieve not only growth for our business but also **growth for all** – creating value that benefits our employees, customers, communities and food chain partners. But in a sector as challenging as agriculture, success is not a given. It will require **determined execution**. We will need to collaborate with many partners to achieve better outcomes and to earn trust by delivering on our commitments.

That trust depends not just on what we do: the **“how” matters**, too. So transparency, ethics, safety and compliance are core to the way we work. In operating our business model, we're determined to live by the values we have set ourselves – the words in bold above.

## The resources we depend on

Financial capital

People and the intellectual property they create

Chemical, biological, genetic and computational sciences

Natural resources

Facilities and services

Local communities

Laws and regulations





## What we do

### Research and development

#### What we do

- ▶ Crop protection discovery and innovation
- ▶ Advanced seed breeding
- ▶ Addressing insect, disease, weed and environmental stress on crops

#### Who we work with

- ▶ Research institutions and universities
- ▶ Farmers and suppliers
- ▶ Agricultural extension services
- ▶ NGOs

### Production

#### What we do

- ▶ Production of active ingredients and intermediate chemicals production
- ▶ Formulation, fill and packaging
- ▶ Production of seeds
- ▶ Production of flowers

#### Who we work with

- ▶ Suppliers
- ▶ Toll manufacturers

### Commercial

#### What we do

- ▶ Product management
- ▶ Marketing and sales
- ▶ Distribution

#### Who we work with

- ▶ Growers
- ▶ Distributors
- ▶ Demonstration farms
- ▶ Processors and the food chain
- ▶ Agronomists
- ▶ Agricultural extension services
- ▶ Technology providers

### Supporting activities

#### What we do

- ▶ Safe and sustainable use of our products
- ▶ Product registration
- ▶ Health, safety and environment
- ▶ Multi-stakeholder engagement

#### Who we work with

- ▶ Industry associations
- ▶ Government and regulatory authorities
- ▶ NGOs and IGOs
- ▶ Communities

## What we create

### Products, services and solutions

#### ▶ Crop protection

- Herbicides
- Insecticides
- Fungicides
- Seed treatment
- Biologicals
- Crop enhancement

#### ▶ Seeds

- Seeds
- Traits

#### ▶ Grower programs

#### ▶ Digital agriculture

## The value we provide

### Return on investments for growers

### Food, feed, fuel and fiber

### Sustainable agriculture solutions for small- to large-scale farms

### Grower and customer satisfaction

### Sustainable production

### Development of our people and partners along the value chain

### Economic value shared with employees, suppliers, governments and communities

### Collective well-being of communities

### Stimulating research, sharing data and knowledge



## Our offer

# Innovating for growers – and for society

**Our strategy for both crop protection and seeds is “Growth through customer-focused innovation”. Farmers want us to help them work profitably, safely and sustainably. They face constantly evolving climatic, agronomic and commercial challenges while meeting the expectations of their own customers: food processors, retailers, consumers and society as a whole. These demands are constantly evolving, too. So our customer-focused innovation has to be continuous, multilayered and responsive to local conditions wherever we operate.**





## Crop Protection

Syngenta is the world market leader in crop protection products, with broad coverage of an extremely diverse market. We develop and produce herbicides, insecticides, fungicides and seed treatments that promote strong and healthy plant growth.

In addition to protecting plants from pests and diseases, we provide crop enhancement products that help them tolerate environmental stresses such as heat, cold and drought. We also offer products that boost nutrient uptake in crops – helping growers to use fertilizers more efficiently, increasing yields while improving sustainability.

While our principal customers are farmers, our Controls business adapts our agricultural technologies to meet the needs of professionals in turf, tree and landscape care, residential and commercial pest management, disease vector control, commercial flower production and consumer garden care.

### Meeting society's expectations

Across the world, consumers want access to a wide variety of healthy and affordable food choices while being increasingly interested in the safety and sustainability of food production. We see an opportunity for dialog in addressing societal concerns about the role of agricultural technology in food production. Working with all players in the highly regulated crop protection industry – regulators, policymakers and the value chain, particularly retailers – we seek to allay consumer

concerns over issues such as potential residues in food, as regulation becomes more restrictive – and politicized.

One example is our Fruit Quality Contract in Europe, the US and Latin America. This grower program is designed to help farmers meet stringent food chain standards, with a unique combination of products and services enabling them to achieve and document compliance in critical areas such as residue levels. Another example is the introduction of digital track-and-trace technology for all our products to provide full documentation and traceability for the food value chain, with easy access to application and safe-use information.

We accept our responsibility to develop safe and sustainable products and steward them carefully, investing approximately 30 percent of the cost of a new active ingredient on product safety. We've also made the commitment to train 20 million farm workers on labor safety by 2020. For more on this – see “Help people stay safe” on page 25.

We continue to promote the case for realistic, science-based regulation – and transnational consistency on standards such as maximum residue levels (MRLs), so that crops meeting regulatory requirements in the country where they are grown are not barred from sale in another. At the same time, we work to develop solutions like our MIRAVIS™ DUO fungicide that meet the strictest MRL regulations, so that treated crops can be exported anywhere. And we have now committed to make our safety data publically accessible.

We strive to build constructive and open relationships with governments, regulators, NGOs and food processors. We continue

to establish strategic partnerships and alliances with organizations such as the World Business Council for Sustainable Development, the International Rice Research Institute, The Nature Conservancy, USAID and value chain companies and organizations such as IDH – The Sustainable Trade Initiative. And we share good agronomy practices, combined with safe-use and environmental stewardship, through initiatives such as locally-tailored Syngenta Learning Centers on demonstration farms.

### Delivering the products and services customers need

Growing populations and changing diets create new opportunities for growers. Demand for grain has increased by almost 90 percent since 1980 and will continue to increase at an average rate of around 1.4 percent per year. In 2020, one hectare will need to feed more than five people compared to 1960 when it had to feed two people. These changing demands lead to intensification, a primary driver for the global market for crop protection products.

As farmers pursue higher crop yields and productivity levels, a second driver is pest and disease resistance. We give farmers advice and training on the best ways to inhibit resistance; but over time new modes of action will always be needed, as pests evolve to resist existing solutions. Both intensification and resistance demand a steady stream of innovation through investment in research and development (R&D).

In developing and marketing our products and services, we have a strong focus on growers' return on investment, helping them to maximize yields and build resilience

against risks including climate change and increasingly volatile weather. In 2017, we saw continued success in North America with new products including TRIVAPRO™, the first three-mode-of-action foliar fungicide; TALINOR™, a post-emergence herbicide developed to control broadleaf weeds in wheat and barley; MINECTO® PRO, a new insecticide for difficult to control pests in vegetable and specialty crops; and BESIEGE™, a broad-spectrum foliar insecticide.

The Argentine registration of MIRAVIS™ DUO for peanuts and MIRAVIS™ TOP for tomatoes, peppers and squash marked the launch of a new brand with broad market potential. MIRAVIS™ features our ADEPIDYN™ broad-spectrum fungicide, which is highly effective against damaging and hard-to-control diseases such as fusarium head blight, botrytis, sclerotinia and corynespora.

Further MIRAVIS™ launches will follow globally in 2018 as work continues on products for canola, cereals, corn, soybean, specialty crops, vegetables and the Controls markets. Latin America also saw the launch of our FORTENZA® insecticide seed treatment for corn.

We continued the European roll out of ELATUS™ fungicides for treating the most important and damaging cereal diseases, including septoria and rust. In 2017, we launched ELATUS™ products for cereal crops in France, Germany and the UK. The key active ingredient, SOLATENOL™, is already used on soybean in Latin America and on a wide range of crops in the US and Canada. We also began the European roll out of VIBRANCE™ DUO, which controls a range of soil-borne cereal diseases.

## Our offer

We also launched PLENARIS™ seed treatment fungicide for controlling downy mildew in sunflower and other crops. It incorporates a novel chemistry that now gives us four different modes of action to combat this key seedling disease. The first sales were in the US, with Argentina to follow in 2018.

### Extending the grower's toolbox

Insects, weeds and diseases are constantly evolving threats. To provide the best available solutions and tools, we apply our world-class science and facilities to develop new active ingredients (AIs), formulations and biocontrols. We add value by sharing our agronomic expertise, providing advice and support with use protocols, precision application and other technologies – and by developing holistic solutions such as our grower program offers.

Product life cycle management ensures we make the best possible use of our broad portfolio of around 70 AIs to deliver new products to market. Every year, label and formulation extensions enable us to bring farmers hundreds of new applications for our AIs. Many of these are tailored for minor crops, greatly enhancing the viability of growers whose options are often limited.

Not all solutions are chemical-based. Syngenta is extending the grower's toolbox with products that use naturally occurring organisms – bacteria, fungi or viruses – to protect or stimulate crops. These biocontrols offer new modes of action to combat resistance, address previously unresolved challenges, complement traditional chemical methods or provide more sustainable alternatives. They will play a growing role as the regulatory landscape changes.

Increasingly, we are also supplementing our products with agronomic advice and services that help to enhance farm performance, mitigate risks and improve access to markets. Our presence in local farming communities ensures that we can meet growers' needs with greater agility, local knowledge and insight.

Our grower programs combine best-in-class Syngenta products with agronomic protocols, data and other services, accurately tailored for local needs and conditions. Exceptionally high customer loyalty rates testify to their success. In the US corn market, for example, AGRIEDGE EXCELSIOR® brings together selected seeds, seed treatment, crop protection and post-harvest products with risk mitigation measures and farm management services, to address yield-limiting factors throughout the year. For barley growers in Germany, France and the UK, the HYVIDO® Cashback Yield Guarantee offers a similar approach, with insurance that guarantees return on investment. AGRICLIME™ protects Australian farmers by combining best-in-class inputs with a financial guarantee against pre-agreed heat or drought conditions. We continue to develop programs like these, to offer more growers an optimized, locally-tailored toolbox of solutions.

Grower programs not only help growers increase yield and profitability, they contribute greatly to the sustainability of farming as well. For example, our soybean fungicide program in Brazil has products with four different modes of action to help growers manage soybean rust resistance, which can devastate yields.

### Stepping up the pace of innovation

Over the next decade, we will be bringing forward new crop protection approaches that help growers address many of their agronomic challenges. Innovative formulation technology that includes how we combine chemistries will also have a role to play. We are working on ways to optimize the performance of our products in conventional agriculture systems and with precision application, which allows us to target specific areas on a plant, therefore reducing the amount of product applied. To help us increase the pace of innovation over the next few years, we will make increasing use of partnerships, biocontrols and digitalization.

### Partnerships

Partnerships and collaborations have been key to our innovation model for many years. Through partnerships we can gain access to existing technologies or jointly develop entirely new classes of chemistry.

In the public health field, our partnership with the Bill & Melinda Gates Foundation and Innovative Vector Control Consortium (IVCC) to develop insecticides with a novel mode of action for controlling resistant mosquitoes, is currently progressing several highly promising leads. Collaborating with the IVCC, we developed ACTELIC® 300CS, which is highly effective against resistant mosquitoes. In 2017, it was used in 32 countries across sub-Saharan Africa, and is estimated to have protected around 34 million people from malaria. Its use has seen malaria transmission reduced by almost 40 percent in Eastern Zimbabwe and up to 60 percent in Northern Ghana. In Central-West Senegal, the risk of malaria transmission was 14 times lower following applications of ACTELIC® 300CS.

We also invest in smaller innovation companies through Syngenta Ventures. Current investments include Agbiome, novel crop protection biocontrols; Phytech, decision support based on plant monitoring; and Asilomar Bio, products to enhance crops' drought resilience.

### Biocontrols

Biocontrols are expected to record double-digit growth: by 2030, they could represent up to 10 percent of the global crop protection market. We have been complementing our chemistry portfolio with biocontrol products for many years to add modes of action that enhance resistance management. We continually scout for new early-stage biocontrol technologies, where we can apply our crop knowledge and product development capabilities to bring new commercial solutions to market.

In 2012, we acquired Pasteuria Bioscience which enabled us to develop CLARIVA™, a breakthrough seed treatment to combat soybean cyst nematodes, and to scale up cost-effective production. In 2017, we launched a combination of CLARIVA™ with CRUISERMAXX® VIBRANCE™ as CLARIVA™ Elite Beans. This next-generation seed treatment is uniquely able to provide season-long activity against soybean cyst nematodes, which today cause annual losses for growers of around \$1.5 billion in the US alone.



## Digitalization

Digital technologies are rapidly transforming agriculture. Farmers are gathering increasing amounts of data about their land, soil and crops from monitoring devices, drones and satellite imaging. In combination with predictive software and artificial intelligence, this will aid decisions that save time and money, and enable unprecedented precision and efficiency in applying our products – increasing both sustainability and effectiveness.

We are developing a growing portfolio of digital solutions and capabilities to support our customers, improve their experience with us, optimize results from our products, document sustainability and compliance for food processors, and increase the effectiveness of our stewardship and loyalty programs.

## Innovating for the future

Over the next few years, we will be bringing an exciting pipeline of chemical and biological crop protection products to market.

In 2018, this will include the launch of new MIRAVis™ products for potatoes and canola in Australia, and potatoes and grapes in New Zealand. SOLVIGO®, a best-in-class insecticide, will launch for bananas in our Latin America North territory.

Our ORONDIS® fungicide is scheduled for 2018 launch in Australia, Guatemala, Mexico and North-East Asia. Applied on vegetables and specialty crops, ORONDIS® offers a new level of control over diseases such as downy mildew and late blight. It can be used at significantly lower rates than other fungicides, and its new mode of action expands our market-leading fungicide portfolio.

Robust biocontrols that can replace chemicals are in increasing demand, to broaden growers' crop protection options. To meet the needs of European fruit and vegetable farmers seeking to enhance the marketability of their products, we have scheduled the European launch of TAEGR0® in 2018. This broad-spectrum biofungicide protects against diseases such as powdery mildew and botrytis. Its biological origin and low application rates have strong appeal to the food chain, and it has an important future as a key building block in fruit and vegetable grower programs worldwide.

In the coming years, farmers must continue to meet the evolving expectations of society and their food-chain customers while sustainably meeting the challenges posed by climate change and pests. We are well positioned to help, by offering them a holistic – and expanding – toolbox of solutions to address their challenges and maximize the potential of their businesses.

We are committed to meeting growers' and consumers' needs in increasingly challenging and dynamic environments. We deliver sustainable innovation and will continue to collaborate through global and local partnerships. We are strengthening our focus on delivering safer products with a smaller environmental footprint, and most importantly we actively encourage dialogue with stakeholders, customers and the communities in which we operate.



Healthy wheat



Wheat infected with septoria

## Better control, higher yield

When a fungus strikes a grower's crop, the consequences can be very severe. One of the most damaging fungal diseases in Europe is septoria, which can cause yield losses as high as 40 percent. A field infected with septoria is visible to even the casual observer.

In wheat, the fungus appears as brown spots on the leaves that over time expand to consume the healthy green leaf area. Warm, damp conditions provide the perfect environment for septoria to develop. Once present, it can rapidly spread and destroy fields of healthy crop. Treating septoria early with an effective fungicide is critical to maintaining a healthy crop and ensuring a good yield for growers.

With resistance proving a challenge for many fungicides currently on the market, finding new solutions for septoria control has been at the forefront of our research. Thanks to our focused team of experts, Syngenta has found an innovative solution with a series of fungicides based on the active ingredient SOLATENOL™.

SOLATENOL™ is an active ingredient in the ELATUS™ family of products. They provide long-lasting control of the most important and damaging diseases of cereals, including septoria and rust. The range of mixtures and co-packs available for ELATUS™ makes it a flexible and adaptable option for growers in their disease control program.

## Our offer

### Seeds

Syngenta is one of the world's three largest developers and producers of seed for farmers and commercial growers. We offer a broad portfolio of crops, with particular strengths in soybean, corn, vegetables, sunflower, barley, wheat, oilseed rape and rice.

Our Vegetables business alone offers around 2,500 varieties across more than 30 crop species. And Syngenta Flowers – one of the few global players – is a market leader in mass-market and value-added plants, ranking in the top two in most key market segments.

#### A dynamic and growing market

The global seed market is worth some \$40 billion a year and has doubled over the last decade. At present, the commercial seed market is dominated by relatively few countries and crops. Over half its value comes from corn and soybean alone, and 57 percent of all sales are made in just three markets: North America, Brazil and China. In the coming years, the market is expected to grow substantially, particularly in Brazil, China and India.

We have ambitious plans to grow Syngenta's share of the global seed market. In 2017, we strengthened the leadership of our Seeds business, recruiting key talent from other leading seeds companies, and significantly restructured the organization to ensure we have the focus and capabilities to execute our growth strategy.

#### A market with complex customer needs

Choosing what seed to plant, and where to plant it, is a complex decision. It is further complicated by the weather and pest pressures that arise after the seed is planted. Farmers need products that will reduce the risk of their investment and provide a predictable outcome. They look for the assurance of higher yields from lower inputs as they strive to control their costs in markets where commodity prices have been depressed for some years. In more developed markets, farmers are also increasingly focused on sustainability, and their ability to demonstrate this to their customers in the value chain.

In the vegetables market, growers must respond to the increasingly stringent demands of processors, retailers and end-consumers. Processors want characteristics that simplify and maximize processing outcomes – for example, seedless peppers or lettuce that doesn't brown when cut. Key considerations for retailers include uniformity, shelf life, product safety and year-round supply, while consumers are particularly concerned with aspects such as flavor, color, shape, convenience and less food waste.

The demands of the flowers market are similar, as growers have to address the practical requirements of the retail channel while meeting consumer demands for innovation and aesthetic performance. Ease of care is also important, as markets are increasingly driven by consumers buying plants in retail outlets to immediately decorate their homes, rather than experienced gardeners shopping in garden centers.

#### Delivering what our customers need

Given the complexity of our customers' needs, we need to deliver constant innovation and performance improvement, and we apply our breeding and biotechnology skills to find the best genetic opportunities and present them in seed form. We have to produce those seeds efficiently and get them to customers in the right quality and quantities at the right time. And, importantly, we also have to support our customers with agronomic advice and expertise to ensure that they plant the right seed for their soil type and weather conditions, and provide the right care to maximize performance and yield. In all these areas, our ability to be the best possible partner depends on putting our customers at the center of our strategy, and working closely with them to understand and meet their needs.

For corn growers in the US – our largest single market and growth opportunity – the most important development of 2017 was China's import approval for AGRISURE DURACADE®, our trait for effective control of corn rootworm. This enables us to offer growers more choice with new hybrids that combine top-quality genetics with the most advanced rootworm control technology. This destructive pest currently costs US growers more than \$1 billion annually in yield losses and control costs.

AGRISURE DURACADE® has been fully approved in the US since 2013, but growers' access to export markets depends on local import approvals. In a global economy, asynchronous registrations across different countries can increase complexity for farmers. We promote realistic, science-based regulation and transnational consistency

on standards so that crops meeting regulatory requirements in one country are not prevented from sale in another.

At the end of 2017, we concluded a deal with Dow AgroSciences LLC and M.S. Technologies, L.L.C to license its Enlist™ and Conkesta™ traits. This further strengthened our soybean trait portfolios in herbicide resistance for the US and insect resistance for Latin America. It gives us the most trait options in the market, enabling us to respond to customer preferences and needs in these key territories.

A major milestone for the Seeds business was the signing of a deal in November to acquire Nidera Seeds, a market leader in Latin America. The deal, which completed in February 2018, significantly strengthens our business in this region. With over 1,000 employees at 18 sites and annual sales of about \$330 million, Nidera is a major force in soybean with strong offers in corn and sunflower. Its products, germplasm pool and R&D complement Syngenta's, and will enable us together to bring more innovation and value to Latin American growers.

#### Innovating to meet emerging needs

Investment in research and development (R&D) and new technologies is essential – not only to maintain improvement in crop yields and input productivity, but also because market needs are constantly changing. Farmers have to address evolving challenges such as climate change, pests and emerging resistance to existing forms of control; they must also respond to the changing demands of the food value chain from food processors to retailers and consumers.



To help them meet these challenges, we invested more than \$0.5 billion in breeding and R&D in 2017. We have been working to accelerate our rate of innovation, applying new technologies, data, analytics and digital tools to bring better products to market faster. Techniques such as molecular markers and molecular breeding are transforming the way we work, and we continue to invest heavily in data and digital technology to extend our capability and shorten development timelines.

The technification of China's seed market is a major growth opportunity for us. So while we maintain our R&D effort in existing areas of strength, we will invest additional resources in areas important to the Chinese market. Technological innovation is at the heart of China's agriculture modernization agenda, and we are strengthening our capabilities at Syngenta's Beijing Innovation Center (SBIC). The SBIC is at the forefront of biotechnology adoption in the country and is leading our global genome editing program. The center is also driving important collaborations with Chinese institutes.

An important strategic priority for the Seeds business is to focus on crops and markets where we have the greatest growth opportunity, where we can get to scale and invest in sustainable innovation. As a consequence, in 2017, we sold our global sugar beet seeds business to a more specialized operator.

Our vegetables business – which celebrated 150 years in 2017 and introduced 160 new varieties that year – has built a strong track record in innovation at its 36 R&D centers. Innovation that adds value depends on working closely with customers to understand emerging needs and deliver new products in response.



Syngenta celebrated its 150<sup>th</sup> anniversary as a leader in vegetable seeds. Launched in 2017, Lullaby delights consumers with its bright red cherry tomatoes on fishbone-shaped clusters.

For example, a significant development in fruit and vegetable retailing has been the rapid growth of fresh-cut fruit as a convenient and healthy snack. In response, we developed the Crisp Fresh line of seedless watermelon varieties, featuring crisp flesh that reduces post-processing liquid loss and extends shelf life. Since the successful launch in the US of Crisp Delight – the first variety in this line – we have rapidly scaled up production and rolled out in markets across the world.

Our flowers business scored an immediate hit with its award-winning new SUNFINITY™ sunflower, launched in 2017. It took almost a decade to develop this innovative variety, designed to extend the retail sales season as a premium product for gardens and patio pots. Close collaboration between R&D,

supply chain and marketing teams resulted in a complete product and branding package, which was designed to add value along the whole chain: from plug producers to brokers, growers, retailers and consumers.

### Innovating for the future

We now have the tools and opportunity to address far-reaching social concerns: to feed growing populations and nourish them better, to enable crops to withstand climate change, and to do so sustainably, with less reliance on chemical pesticides. The key issues will be timely regulatory approval, enabling new products to be grown and marketed, and the adequate protection of intellectual property of new plant varieties, enabling investment in innovation to earn fair returns.

We will continue to put forward science-based views on these issues, to be transparent in demonstrating the safety and efficacy of our innovations, and to publish data that supports open dialogue with stakeholders.

As we develop a deeper understanding of growers' needs, we see the increasing need for new technologies that will bring game-changing innovation for growers. Past examples include a novel range of different cauliflower colors that delight consumers, and ENOGEN® corn enzyme technology that enhances ethanol production from corn. Our scientists are now deploying new breeding technologies such as genome editing and mathematical modeling to bring plant potential to life with unprecedented speed and precision.

On the horizon is an accelerated pipeline for resistance against insects and diseases, breakthrough yield improvements, better climate-change adaptation and tolerance against abiotic stresses and differentiating product quality. By working with partners in academia, start-ups, and institutes, we are poised to translate the newest scientific achievements into winning products for growers.



## The Good Growth Plan

# Measuring our contribution

Sustainability is at the heart of our drive to help farmers feed a fast-growing world population. Humanity now depends on farmers increasing their production substantially, rapidly and sustainably. And we can only play our part if our business, too, is sustainable. The Good Growth Plan is informing the way our products and services contribute to a sustainable agricultural system.





The Good Growth Plan is central to our strategies for both our Crop Protection and Seeds businesses to ensure their success and long-term viability. It defines six commitments in areas that are material to our business, where improvement is essential to secure the future of agriculture and our world. Each commitment sets hard, stretch targets to be achieved by 2020. We are measuring and reporting our progress against these targets each year, and we provide detailed data and definitions in accordance with the Open Data Institute best data practices at [www.data.syngenta.com](http://www.data.syngenta.com).

The Plan's principles and priorities are now deeply embedded in the way we do business. As it has continued, we have begun to assess not only our progress but also the nature and quality of the value we are adding: the impact on people, communities and the environment. As we build what we learn into our commercial offer, we are also compiling the evidence that it delivers real, measurable value for growers and society at large.

The data and insights that we are gaining and sharing have provided the basis for a growing number of partnerships – with governments, academia, NGOs and businesses. These add further value to our efforts and guide the continuing evolution and development of The Good Growth Plan itself.

### Supporting the UN Sustainable Development Goals

In 2015, the United Nations adopted 17 Sustainable Development Goals (SDGs) that define its development agenda up to 2030. These are a universal call to action to end poverty, protect the planet and secure peace and prosperity for all.

We welcome and support the SDGs, which are helping to mobilize the action and innovation necessary to make a better, more sustainable world. This will need new ways of thinking and working, fresh approaches that create new opportunities – and a massive step-up in collaboration among governments, NGOs, businesses, financial and donor institutions, schools and universities. The shared goal should be a future where economic growth goes hand in hand with a healthy environment and respect for human rights.

The SDGs underscore the relevance and significance of our Good Growth Plan. Collectively, the Plan's six commitments contribute towards delivering the SDGs: all six commitments contribute directly to Goal 2 (zero hunger) and Goal 17 (partnerships for sustainability), as well as individually towards a number of other goals.



| The Good Growth Plan  | UN Sustainable Development Goals   |
|---|--|
| Our six commitments help farmers meet the challenge of feeding a fast-growing world population sustainably. | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>2 ZERO HUNGER</b></p> </div> <div style="width: 45%;"> <p><b>Zero hunger</b><br/>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p><b>17 PARTNERSHIPS FOR THE GOALS</b></p> </div> <div style="width: 45%;"> <p><b>Partnerships for the goals</b><br/>Strengthen the means of implementation and revitalize the global partnership for sustainable development</p> </div> </div>                               |
| <p><b>Make crops more efficient</b></p>   | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</b></p> </div> <div style="width: 45%;"> <p><b>Responsible consumption and production</b><br/>Ensure sustainable consumption and production patterns</p> </div> </div>  |
| <p><b>Rescue more farmland</b></p>  | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>13 CLIMATE ACTION</b></p> </div> <div style="width: 45%;"> <p><b>Climate action</b><br/>Take urgent action to combat climate change and its impacts</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p><b>15 LIFE ON LAND</b></p> </div> <div style="width: 45%;"> <p><b>Life on land</b><br/>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p> </div> </div> |
| <p><b>Help biodiversity flourish</b></p>  | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>15 LIFE ON LAND</b></p> </div> <div style="width: 45%;"> <p><b>Life on land</b><br/>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p> </div> </div>  |
| <p><b>Empower smallholders</b></p>  | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>1 NO POVERTY</b></p> </div> <div style="width: 45%;"> <p><b>No poverty</b><br/>End poverty in all its forms everywhere</p> </div> </div>  |
| <p><b>Help people stay safe</b></p>   | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>3 GOOD HEALTH AND WELL-BEING</b></p> </div> <div style="width: 45%;"> <p><b>Good health and well-being</b><br/>Ensure healthy lives and promote well-being for all at all ages</p> </div> </div>  |
| <p><b>Look after every worker</b></p>   | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>8 DECENT WORK AND ECONOMIC GROWTH</b></p> </div> <div style="width: 45%;"> <p><b>Decent work and economic growth</b><br/>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p> </div> </div>   |

# The Good Growth Plan

## Make crops more efficient



Increase the average productivity of the world's major crops by 20 percent without using more land, water or inputs

We're cutting greenhouse gas emissions and showing strong advances in yield, while using resources more efficiently

UN Sustainable Development Goals

2 12 17

### Average land productivity increase<sup>1</sup> %

# 10.9%



<sup>1</sup> On reference farms compared to 2014 baseline

### Farm network

|                        | 2017  | 2016  | 2015  |
|------------------------|-------|-------|-------|
| No. of reference farms | 1,459 | 1,039 | 1,062 |
| No. of benchmark farms | 2,630 | 2,694 | 2,586 |

### Progress and key achievements

- ▶ Greenhouse gas emission efficiency improved by 14 percent
- ▶ Significant productivity uplift on reference farms
- ▶ Smallholders yields up 21.6 percent
- ▶ Pesticide field application efficiency up 14.2 percent on reference farms

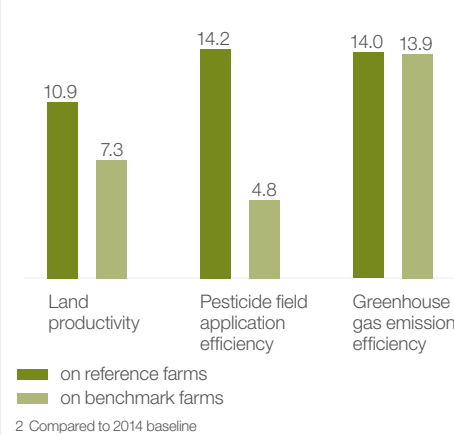
The world needs a step change in crop productivity to “grow more with less” and meet the needs of its growing population. We are targeting a 20 percent increase across the world's most important crops, in partnership with growers who use our products and agronomic advice. We are focusing particular effort on smallholders, who have the greatest potential to increase productivity.

### Measuring the difference we make

To test and measure what's possible, farmers are working with our field experts to share know-how and trial new solutions on over 1,400 reference farms across 22 crops in 41 countries. Over 2,600 additional benchmark farms, many also using Syngenta products, deepen our understanding of what drives productivity and efficiency, and help us track progress over time.

With data gathered on a consistent basis over four successive years, we can now see meaningful trends emerging. Across all our reference farms in 2017, the average land productivity increase over the 2014 baseline was 10.9 percent. The uplift on benchmark farms was 7.3 percent. The 2017 results compare favorably with those of the previous two years when harvests – and therefore the relative efficiency of inputs such as fertilizers and pesticides – were impacted by adverse weather conditions, particularly in Asia and Latin America.

### Average input efficiency in 2017<sup>2</sup> %



Smallholder reference farms are showing particularly encouraging increases in land productivity – up 21.6 percent compared with 5.1 percent for their benchmark counterparts. This reflects the benefit of optimized products, appropriate training and services – including knowledge-sharing networks – to spread good practice.

By improving crop yields per hectare, the majority of reference and benchmark farms used pesticides, fertilizers and other inputs more efficiently in 2017. Detailed analysis of smallholder data found a positive relationship between input use and yields. By judiciously increasing their use of inputs, farmers who used few inputs in 2014 have improved not only their productivity but also their input efficiency. When speaking of input efficiency, we mean, for example, the amount of pesticide applied per kilogram of crop produced.

The UN Food and Agriculture Organization recognizes that sustainable intensification strategies, which conserve and restore resources, are important in addressing climate change. More efficient resource use supports both adaptation to and mitigation of the effects of climate change by improving farm productivity and incomes while reducing emissions per unit of product.

This year, we analyzed greenhouse gas (GHG) footprints from our farm network. We have partnered with two organizations, Field to Market and the Cool Farm Alliance, to bring our growers online tools that calculate GHG footprints from data they are already collecting. This enables them to support their customers' GHG accounting, with evidence that their footprints are reducing as they use inputs more efficiently. Since the launch of The Good Growth Plan, we have seen a 14 percent efficiency increase in GHG emissions across our reference farm network.

### Collaborating to increase sustainability

Sharing what we learn is an essential part of our Good Growth Plan commitments. Our experience of partnering with value chain companies and organizations provides mutual support in making agricultural production and food supply chains more sustainable.

Under our Sustainable Solutions initiative in the US, we develop and monitor appropriate metrics, give growers tools to generate relevant data and provide insight that helps drive improvement on the ground. Our sustainability engagement has contributed to the commercial success of our AGRIEDGE EXCELSIOR® farm management program, which combines Syngenta products with computer-aided management.





We are targeting a 20 percent increase in productivity across the world's most important crops by 2020, and by working together with farmers to maximize their input efficiency.

We also publish detailed Good Growth Plan progress data on [www.data.syngenta.com](http://www.data.syngenta.com) – our open data website. By visualizing and offering data in a wider range of formats, we aim to increase accessibility and help non-specialists to engage with what we are doing. We continued to refine the way we present data to individual growers, to show more clearly the impacts of particular protocols.

### What's next?

In the year ahead, we will analyze drivers of GHG emissions to better understand how we can help climate-change adaptation and mitigation through innovation in seeds and crop protection. An additional year of data will also help us improve our statistical analysis to identify important trends and drivers. And we'll continue to share our data and insights openly, helping companies and organizations to deliver climate-smart agriculture solutions around the world, tailored to local grower needs.

## Rescue more farmland



Improve the fertility of 10 million hectares of farmland on the brink of degradation

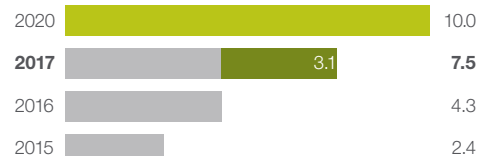
We've sharply increased the pace of progress as we integrate soil conservation into our commercial products and services

UN Sustainable Development Goals



Benefited farmland<sup>1</sup> m ha

# 7.5m



<sup>1</sup> Cumulative since baseline 2014. Differences in totals may occur due to rounding

### Progress and key achievements

- Increased benefited hectares by over 70 percent
- Expanded partnerships and multi-stakeholder platforms that offer a compelling conservation agriculture proposition
- Brought a business perspective on land degradation and conservation issues to policymakers through the Soil Leadership Academy, in partnership with the UNCCD

The UN Convention to Combat Desertification (UNCCD) estimates that over 50 percent of farmland is affected by soil degradation. By working to change farming practices that expose soil to wind and rain erosion, we also help farmers reduce their carbon footprint and adapt to climate change.

This work includes raising awareness of the importance of soil conservation among value chain partners, government institutions and academics, as well as farmers. We are actively promoting the message that conservation agriculture – based on minimum soil disturbance, crop rotation and permanent ground cover – is a viable element of climate-smart agriculture. It helps reduce emissions, prevents land degradation, improves food security and increases farm and community resilience.

### Measuring the difference we make

Four years into the soil commitment, we have implemented 157 projects in 41 countries, benefiting a total of 7.5 million hectares. In 2017, we increased the pace significantly, adding 3.1 million hectares as we optimize our programs around the globe and introduce new programs such as the digital agriculture solutions we have developed with SmartBio in Brazil, described overleaf.

The integration of soil conservation practices into our crop protocols and training is gaining momentum, helping us to differentiate our commercial offer as well as our seed multiplication. Over 70 percent of benefited hectares are making use of our currently available commercial products and services.

# The Good Growth Plan

## Driving positive change

Building collaborations has been crucial, particularly as our strategy is increasingly linked to digitalization of agriculture. To bring farmers really compelling soil conservation propositions, we have been creating multi-stakeholder platforms with partners who provide equipment and machinery, financial solutions and educational support.

In Brazil, for example, our biggest project involves a convergence of satellite imaging, weather data and training – exemplifying the way digital agriculture is transforming farming practices. It uses a digital integrated pest management platform developed by SmartBio with Syngenta, enabling sugar cane mills to map areas susceptible to different stress factors and then optimize crop management and treatment accordingly.

Close collaboration with farmers is essential. We rely on their local knowledge to help identify optimal solutions that build climate-change adaptation and resilience into crop protocols. And, by tailoring solutions to local conditions, we ensure that they offer benefits that motivate adoption by farmers. For example, in Indonesia, our GROMORE™ solution is helping rice smallholders to implement conservation practices in preparing paddy fields. Locally-tailored protocols enable fast and effective land preparation, restore soil organic matter and help to improve resource efficiency.

When sharing what works best, we're working to show the value of adopting practices such as conservation tillage, cover crops, crop rotations and biodiversity habitats.



We actively promote conservation agriculture techniques – such as those used on this farm – to promote healthy soils as part of more resilient, lower-emission, climate-smart agriculture.

We're aided in this by commercial collaborations, which in 2017 included partnering with Premier Crop Systems to help reference farmers in the US experiment with precision nitrogen applications. The facility – built into Land.db<sup>®1</sup>, using Premier Crop Systems software to communicate with farm machinery – is expected to further improve fertilizer efficiency.

Our Sustainable Solutions team in the US was honored to receive – jointly with Kellogg Company and the Nature Conservancy – the 2017 Collaboration of the Year award from Field to Market: The Alliance for Sustainable Agriculture. The award recognizes outstanding partnership in advancing the sustainability of US agriculture.

<sup>1</sup> Land.db<sup>®</sup> is a trademark of Ag Connections

### What's next?

We continue to work with farmers to understand their needs and make our solutions more compelling, with value chain partners to further build on current sustainable sourcing experience, and with our commercial teams to build good practices into our product and service offer. We are encouraging value chain partners in cereals, corn, grapes, potatoes, rice and soybean to consider soil management in their sustainable purchasing criteria. And we will continue working with partners – including the Global Alliance for Climate-Smart Agriculture, the World Business Council for Sustainable Development and the World Economic Forum – to stimulate debate on climate-smart agriculture and encourage national and regional authorities to make their soil policies more effective.

## Help biodiversity flourish



Enhance biodiversity on 5 million hectares of farmland

We've hit our 2020 target three years early – and we'll go on investing to benefit an even wider area

UN Sustainable Development Goals



### Benefited farmland<sup>2</sup> m ha

# 5.6m



<sup>2</sup> Cumulative since baseline 2014. Differences in totals may occur due to rounding

### Progress and key achievements

- ▶ Already well past our 2020 target for benefited acreage
- ▶ 229 projects now implemented in 37 countries
- ▶ Broadened the range of solutions available to farmers
- ▶ Launched Landscape Connectivity: a Call to Action, published in collaboration with the WBCSD, the UNCCD and Bioversity International



The sustainability of agriculture relies on biodiversity – for plant breeding, pollination and food diversity. But biodiversity is declining fast as species habitats are lost, and climate change increases the risks. We are promoting and enabling action to reverse this trend. A key strategy is managing less-productive farmland alongside fields and waterways to reintroduce local species, provide buffers for soil and water, and connect wildlife habitats. This enables sustainable intensification on more productive land.

#### Measuring the difference we make

After four years, we have already met our target for 2020, and we will keep on investing to further improve biodiversity in agriculture. We have now implemented 229 projects in 37 countries, benefiting a total of 5.6 million hectares. Benefits for farmers include reduced soil erosion and better soil nutrient cycling, crop pollination, pest control and water quality regulation. Wider social gains include enhanced genetic diversity, carbon sequestration, flood attenuation and recreation opportunities.

#### Driving positive change

Our research shows not only high farmer awareness of these benefits, but also a disconnect between awareness and implementation. Farmers can still be reluctant to invest in biodiversity conservation if market incentives are missing or difficult to understand. So we aim to foster an ecosystem of partnerships and commercial relationships that makes the investment

case more compelling. For example, we are encouraging value chain companies to consider biodiversity conservation as a standard in their sustainable sourcing.

Integrating proven biodiversity solutions into our product protocols and training, and tailoring to local needs and opportunities, is boosting uptake. We partner with many stakeholders to promote best practices, and over 80 percent of our initiatives include one or more local organizations as implementation partners.

In China's Zhejiang province, for example, smallholders have planted GROMORE™ rice paddies that reduce fertilizer inputs while using field margins for cash crops such as sesame and soybean. These crops attract pollinators and sell well in local markets.

We have been working with Arcadis, a natural assets consultancy, to quantify biodiversity's commercial, socio-economic and environmental value in agricultural landscapes. The evidence from the majority of our biodiversity projects shows that every hectare of managed field margin can deliver combined natural and social capital benefits to farmers and society at large.

In collaboration with the World Business Council for Sustainable Development (WBCSD), the UN Convention to Combat Desertification (UNCCD) and Bioversity International, we have published a paper, Landscape Connectivity – a Call to Action, to raise awareness about conservation and encourage adoption of simple, workable solutions to promote it.



Wildflowers and trees in field margins provide connected habitats for wildlife, protecting biodiversity and enabling sustainable intensification on the cultivated areas.

#### What's next?

The Nature Conservancy has been a key collaborator on several projects, including restoring rainforest in the Brazilian Cerrado and riparian strips in the lower Mississippi River to enhance nutrient cycling while improving wildlife habitat. We are looking to build on this work to improve our programs with farmers and increase our positive impact on biodiversity and soil. We are also partnering with Humanitas Global to create a multi-stakeholder platform addressing pollination issues in Africa.

We plan to make increasing use of satellite imaging for evaluating the ecological infrastructures in our network of reference farms. We continue to work with the conservation community, farmers, value chain companies and our commercial teams to promote biodiversity practices. And we'll continue to leverage our commercial outreach by building biodiversity solutions into our crop protocols, commercial value proposition and loyalty programs.

## The Good Growth Plan

### Empower smallholders



Reach 20 million smallholders and enable them to increase productivity by 50 percent

Strong productivity advances on smallholder reference farms – more than 4 times the increase on benchmark farms

UN Sustainable Development Goals

1 2 17

#### Smallholders reached<sup>1</sup> m

# 13.9m



1 Through sales

#### Average smallholder land productivity increase<sup>2</sup> %

# 21.6%



2. On smallholder reference farms compared to baseline 2014

#### Progress and key achievements

- ▶ Land productivity on smallholder reference farms increased by 21.6 percent
- ▶ Maintained growth in ASEAN and South Asia
- ▶ Completed further social impact assessments in Brazil, Guatemala, Indonesia and Mexico

Over half our sales are made in developing countries dominated by smallholder farmers. As our contact with smallholders is largely through vendors of our products, we use sales volume data to estimate the number of smallholders reached.

#### Measuring the difference we make

Smallholders have a vital role to play in both food security and poverty reduction. They produce more than half the world's calories and over 80 percent of the food consumed in much of the developing world. There is considerable scope to improve their productivity – which, in turn, would significantly reduce poverty. It's estimated that increasing farm yields by just 10 percent could reduce populations living in poverty by 7 percent in Africa and over 5 percent in Asia.

Our network of smallholder reference farms is making strong progress in yield improvement: its 2017 land productivity was 21.6 percent above the 2014 baseline. This is more than four times the increase achieved by our benchmark smallholders and almost double the 10.9 percent achieved by our reference farms overall.



Smallholders matter. They produce half the world's calories and most of the developing world's food. We're finding better ways to interact with them to help raise productivity and income.

It was therefore disappointing to see a fall in the number of smallholders reached through sales – down by 2.7 million to 13.9 million in 2017. The main factor was a sharp drop in corn acreage in China, where the government has been encouraging alternative crops to reduce historic corn stockpiles. Over 40 percent of our smallholder customers are in China, where corn is our principal crop, and the impact was only partially softened by increased sales in other crops such as soybean.

Elsewhere in Asia, we continued to extend our reach. In ASEAN, we achieved significant growth by offering smallholders new alternatives including better seed varieties for optimum productivity. In addition, disease pressures following El Niño-related droughts

drove strong uptake of fungicides among rice smallholders in Vietnam. Along with China and ASEAN, South Asia is our other principal smallholder market – and there, too, we extended our sales and reach in 2017.

#### Driving positive change

The social impact assessments we have been undertaking are deepening our understanding of our interactions with smallholders, helping us to refine go-to-market models to increase the benefits we bring to farmers and communities. From 10 studies completed in 8 countries up to the end of 2017, it is clear that every country and crop presents its own unique combination of challenges and opportunities: our strategies need to be tailored accordingly.



It is also evident that we cannot address all the challenges identified by our impact assessments in isolation. We are actively seeking collaborations to drive and enable broader change.

In Kenya, for example, potato and tomato growers are hampered by poor productivity and weak market structures. In partnership with agricultural business specialists TechnoServe, we are helping to improve productivity and markets by providing quality crop inputs and training, improving access to finance and enhancing the capacity of local market service centers. Since 2016, the partnership has helped over 8,800 farmers to increase their earnings by a total of nearly \$5 million.

In Indonesia, we have helped to build a network of partnerships with banks, insurers, retailers, traders and an NGO. We provide products, protocols and training, while our partners add financial literacy training, micro-loans, crop insurance and buyback guarantees, market access and digital payments.

**What's next?**

We are continuing our program of impact assessments, and in 2018 will have the findings from our first studies in Africa.

As our strong portfolio of products and services earns increasing recognition, we expect this to generate valuable new collaborations and opportunities for us and the farming communities we support, particularly in Asia.

**Help people stay safe**



Train 20 million farm workers on labor safety, especially in developing countries

We're already well past our 2020 target as train-the-trainer programs drive rapid increase in training capacity

UN Sustainable Development Goals



**People trained on safe use<sup>1</sup> m**

25.5m



<sup>1</sup> Cumulative since baseline 2014. Differences in totals may occur due to rounding

**Progress and key achievements**

- ▶ Exceeded our 2020 target by over 25 percent
- ▶ Particularly strong progress in Bangladesh, India, Philippines and Vietnam
- ▶ Adapting award-winning Argentine collaboration for Chile and Paraguay



Using products safely and responsibly also means using no more than is necessary – which minimizes environmental impacts and maximizes farmers' return on investment.

We share a responsibility to help improve occupational safety and health in agriculture. This applies particularly to smallholders, especially in developing countries, who often lack access to guidance on using crop protection efficiently, responsibly and safely.

**Measuring the difference we make**

In 2017, we reached 8.2 million people with safety training and safe-use awareness-raising initiatives linked to commercial activities. This brought the cumulative total since 2014 to 25.5 million, taking us well past the 20 million target we set for 2020. Smallholders make up some 70 percent of the people we train on safe use as part of a broader education on using our products to best effect.

**Enhancing our training capability**

The key to enhancing our training resource has been our train-the-trainer programs: in addition to training delivered by the stewardship teams, we introduced Master Trainers equipped to deliver high-quality training themselves as an integral part of our commercial teams. They are greatly increasing our capacity to ensure that farmers and farm workers understand our recommendations and why they matter. The value for customers comes not only from using our products safely, but also from using only as much as is necessary, so that they minimize environmental impacts and maximize their return on investment.

## The Good Growth Plan

We made significant progress across Asia during 2017. We increased numbers in Bangladesh and had a good response to campaigns targeted to engage more farmers in India. In Vietnam, we benefited from intensified commercial collaboration with distributors, particularly on in-field demonstrations.

And in the Philippines, a strong push to introduce rice growers to the benefits of hybrid varieties gave us substantially increased access to smallholders and opportunities to train them.

In Latin America, the picture was mixed. Training in Brazil was slowed by restructuring of the business there, while in Venezuela we reached more farmers through partnerships with local universities. Collaborations are adding considerable impetus to our efforts. In Argentina, for example, we work in partnership with INTA, the national institute for agricultural technology, and another local organization, FEDIA, to run a training program in agrotechnical high schools. Known as Sembrando Conciencia (Sowing Awareness), this program won a national award in 2017. We are now adapting it for introduction in Chile and Paraguay to reach more than 800 students annually.

### What's next?

Having achieved our 2020 target ahead of schedule, we will continue striving to train more farmers, especially smallholders, and to broaden our capacity-building activity. We'll continue to extend local partnerships wherever we can, to better understand farmers' behaviors and needs. This will help us to drive wider training adoption, and develop programs that most effectively promote positive behavior change towards safer, more responsible use of agrochemicals.

2 [www.fairlabor.org/affiliate/syngenta](http://www.fairlabor.org/affiliate/syngenta)

## Look after every worker



Strive for fair labor conditions throughout our entire supply chain network

All high-risk countries with seed supply farms now covered by our Fair Labor Program – and we can see the benefits

UN Sustainable Development Goals

2 8 17

### Suppliers included in fair labor programs %

86%



<sup>1</sup> This figure only covers seed supply farms in our Fair Labor Program, as full data for other suppliers is not available

### Progress and key achievements

- Nine new countries added to our Fair Labor Program in our seed supply chain
- 90 percent of flower farms now have GLOBALG.A.P. certification, 32 percent with G.R.A.S.P. assessments
- 90 percent of chemical suppliers covered by our Supplier Sustainability Program



In countries such as Turkey (shown here), we benefit from an increasingly experienced seasonal workforce as our fair labor programs attract workers back year after year.

We are committed to ensuring fair labor conditions across our supply chain, and we recognize our responsibility to ensure suppliers meet the highest ethical standards, especially in developing countries.

This poses particular challenges in our seed supply chain of about 30,000 farms. Since 2004, we have partnered with the Fair Labor Association (FLA) to develop and roll out our Fair Labor Program, requiring suppliers to meet labor rights standards in areas such as job contracts and compensation, safe and just working conditions, and dignity and respect.

Each year, we aim to audit compliance on 20 percent of farms in each country and require suppliers to make corrective action where necessary. In higher-risk areas, the FLA

independently audits a further 2 to 5 percent. Its findings – together with all remediation plans and reports on progress against these – are published on the FLA website<sup>2</sup>.

### Measuring the difference we make

In 2017, the Fair Labor Program covered 86 percent of our seed supply farms (2016: 82 percent). We brought nine more countries into the program: Germany, Israel, Italy, Kenya, Morocco, South Africa, Spain, the UK and Zambia. In addition, we included new suppliers contracted to meet increasing demand in India, where the total rose from 11,000 farms in 2016 to 14,000 in 2017.

The program brings benefits for Syngenta, as well as for workers. This is particularly evident in countries – such as Argentina, Brazil and Turkey – where we hire farm



workforces either directly or through local labor brokers. The program fosters loyalty, with workers returning year after year – particularly important where farms rely on migrant labor. A more experienced workforce brings efficiency and quality benefits. And, as workers experience repeated training cycles, we see lower lost-time injury rates, an improved speak-up culture and deepening trust between field workers and Syngenta supervisors.

In India, there are well-documented problems in ensuring that farms meet minimum wage standards and that payments actually reach their workers. We have been promoting action on this across the seeds industry and, in 2017, we launched two pilot projects that have successfully maintained full compliance. We are now seeking to scale up this work and rally the rest of the industry to join us, as it will take concerted effort to drive real change.

In our flower business, we are aiming for all our own and third-party flower farms to have GLOBALG.A.P. certification, covering worker well-being and production quality, with larger farms also meeting the G.R.A.S.P. standard for labor conditions. In 2017, we extended GLOBALG.A.P. certification to 90 percent of flower farms, with 32 percent also undergoing G.R.A.S.P. assessment (2016: 73/24 percent, respectively).

We have been auditing chemicals suppliers' compliance with health, safety and quality standards for many years. Having analyzed the sustainability risk for each supplier, we are working to bring all those in material risk categories into our Supplier Sustainability Program. In 2017, we increased program coverage to 90 percent of suppliers in these categories (2016: 67 percent).

Building on learnings from the program to date, we are now refining it to focus assessment resources where they are most relevant. Where we identify material risks, we will conduct deeper, more tailored audits in areas such as process safety to maximize protection for employees and neighbors. We are broadening our use of the chemical industry's Together for Sustainability (TfS) initiative, which covers a range of areas including labor rights and pools participating companies' resources to optimize audit efficiency and frequency. And for all suppliers, we are requiring EcoVadis self-assessments covering health, safety and labor conditions.

#### What's next?

By the end of 2017, the Fair Labor Program covered 23 of the 34 countries where we have seed supply farms, including all those that we consider high risk. In 2018, the continuing roll out will add the US, the last remaining large country. The final countries are all mature economies where risks of noncompliance are relatively low, but we recognize that even in these countries factors such as reliance on migrant workers can pose particular risks. By 2020, all countries will be included in the program.

In our flower business, it has become clear that G.R.A.S.P. assessment is inappropriate or too costly for smaller farms. For these, we are now planning to introduce our own assessments, using the monitoring protocols that we use in our Fair Labor Program for seed farms.



#### Seeing is believing: how we share what we're learning

Through The Good Growth Plan, we're learning valuable lessons on how to farm productively and profitably while protecting the natural resources on which productivity depends. But the full value of what we learn depends on how widely we can spread that knowledge.

We share knowledge with organizations that can use and disseminate it: research bodies, universities and training colleges. And we take it out into the field: advising farmers through our agronomists and commercial teams, and showing best practice at work.

Across Europe and North Africa, we set up the INTERRA® Farm Network of commercial farms. These function as demonstration and training centers, keeping farmers – as well as policymakers and researchers – up to speed on sustainable agricultural practices and product stewardship.

In the USA and in Canada, our GROW MORE™ Experience sites play a similar role, each highlighting products and techniques most relevant to its local area.

In Asia, we tailored our approach to reach more smallholders – by training individual Lead Farmers, who transfer knowledge to neighboring growers. These Lead Farmer Networks have proved so effective that we're now extending the approach across Africa and the Middle East.



## Our operations

# Working today with tomorrow in mind

Agriculture is an inherently long-term business, not least in the challenges it faces and the solutions it must create. So taking the long view is central to the way we operate. To play our part in safely feeding the world and taking care of the planet, we need to operate sustainably in every sense.



In all our operations, our explicit aim is to ensure that what we do today strengthens both Syngenta and the food chain for tomorrow – economically, environmentally and socially. We invest and innovate for the long term. And we build long-lasting partnerships – with suppliers, channel partners, farmers and with organizations that can help us achieve shared goals.

To ensure we have the necessary skills and leadership, we have renewed our ambition and values, stepped up our investment in training and developing our people, and introduced a new reward and incentive structure. And as well as providing a safe and stimulating working environment for our people, we also aim to protect the security of all our operational assets – facilities, data and products.

Securing the long-term viability of our business means using resources with ever greater efficiency in all our operations. We have been focusing effort on the areas where we see greatest scope for improvement; and as our operating model puts growing emphasis on partnerships and collaboration, we’re taking an increasingly holistic view that includes our full supply chain.

Our ambition to be the most collaborative and trusted team in agriculture depends on the actions and attitudes of every one of us. We are working to build and sustain a culture where leaders and employees live by our values, and we hold one another accountable for keeping our commitments to growers and the planet. We believe it’s not just what we do that matters, but the way we do it.

We strive for transparency, not only doing the right thing but also being seen to do it. And this applies to our relationships with our neighbors, as well. By actively engaging with local communities, we aim to build mutual understanding, protect our reputation and be recognized as a welcome and trusted partner.

## People

Our company can only excel if our people excel. Our culture, leadership quality, organizational effectiveness and employee engagement are all crucial drivers of business success. And in 2017, we made significant advances in all these areas.

### Recordable illness and injury rate

per 200,000 hours



### Developing our people and capabilities

Our people are our competitive advantage. Making their development a priority is one of the commitments we set for our leaders.

Quality of leadership is also more important than ever as we embark on the next stages in Syngenta’s journey – so we are stepping up our investment in our leadership and talent development programs. In 2017, we launched a renewed leadership and talent development program to build the right capabilities for the future. This represents an investment of \$30 million over five years – of which we spent \$4.2 million in 2017.

One in five employees attended classroom courses through our relaunched e-learning platform, and 32 percent of employees completed at least one online course in 2017. In addition, over 1,000 employees participated in functional development programs.

### Engaging and rewarding our people

We refreshed our cultural framework – called the Backbone – to reflect the evolution of the business, including our ambition. This framework defines who we are, where we are heading and our strategies for getting there; it also sets out the cultural values that guide our behavior as individuals and as an organization, as well as the qualities and commitments we expect from our leaders. We have been communicating it through face-to-face engagement workshops for employees at all levels, which are continuing into 2018.

The delisting of Syngenta shares following the ChemChina acquisition brought an end to the Employee Share Purchase Plan, for which 72 percent of employees were eligible. So we reviewed our compensation framework and introduced a competitive new reward and incentive structure open to all Syngenta employees. This has three elements: short-term incentive plan, profit-sharing plan, and Val-You – a peer-to-peer recognition program enabling people to celebrate and reward the great work of colleagues. Facilitated by a global online platform, Val-You enables employees to express their thanks to colleagues across the organization – and award them points exchangeable for a variety of rewards.

## Our operations

To ensure we listen to our people and act on what we learn, we carry out regular employee pulse surveys. In 2017, we implemented action plans resulting from a major survey at the end of 2016, and we carried out an interim survey following the announcement of the ChemChina acquisition. This research shows global average scores for employee engagement continuing at consistently high levels.

Staff attrition maintained its downward trend. The proportion of voluntary leavers – excluding retirement and restructuring – reduced to 5.2 percent in 2017 from 6.0 percent in 2016.

We continue working to bring more women into leadership roles. In 2017, the proportion of women in senior management increased to 17 percent from 16 percent in 2016. The percentage of female employees overall remained unchanged at 30 percent.

Our employment policies and performance consistently earn external recognition in *Science* magazine's annual Top 20 employers list: Syngenta was included for the eighth year running in 2017, with our ranking rising from 14th to 12th.

### Keeping our people safe

We invest continuously to maintain top-tier health and safety standards with an Injury and Illness Rate (IIR) below 0.5. The rate remained low in 2017, at 0.37 recordable incidents per 200,000 hours (2016: 0.39).



By engaging our employees in workshops about our company culture, we ensure that everyone knows what we expect from our colleagues and leaders.

Sadly, there were two fatalities, in Bangladesh and India. Both involved contractors directly supervised by Syngenta. One died when his motorcycle was struck by a heavy commercial vehicle; the other was fatally injured when his motorcycle collided with a truck. In response, we issued comprehensive additional safety guidance for all APAC countries where we use motorcycles.

Driving-related risks today represent our principal employee risk category. Our efforts to reduce them include on-road and online training programs, and the introduction of satellite tracking and telematics for fleet vehicles. This solution is enabling proactive assessment of risks and causes to support preventive and remedial action. In LATAM, we now have full coverage in Brazil, Colombia and Paraguay, with roll-outs continuing in Argentina, Chile and Mexico. The tracking is already live in 11 countries in EAME and APAC, prioritizing higher-risk countries such as Bangladesh, India and Kenya. In 2017, we began US implementation, ahead of forthcoming legislation on electronic logging devices.

Integration of fleet management under a single global service team has enabled us to introduce wider driver safety measures covering vehicle technology, driver training and risk management. Our 2017 incident rate per million kilometers driven was 1.3 – down slightly from 1.5 in 2016.

Our Goal Zero initiative targets zero harm to people and zero safety incidents. It is deepening our understanding of risks and how to mitigate them, and sharing this knowledge globally has underpinned the strong safety performance of our sites.

In 2017, 42 of our production, research and development sites across all regions reported five years without a recordable incident. Sites receiving external recognition for their safety performance included our Crop Protection finished product processing sites in APAC, which won an International Safety Award from the British Safety Council, and our Cartagena plant in Colombia, one of only two sites to receive the country's Safety Excellence Award.



# Sustainable operations

While working to make agriculture more sustainable, we also need to secure the long-term viability of our own business. That means using resources with ever greater efficiency in all our operations – including our supply chain.

## CO<sub>2</sub>e emissions intensity g/\$ sales



## Water usage intensity liters/\$ sales



## Hazardous waste intensity g/\$ sales



Our strategy for reducing our environmental impacts is to focus effort where there is greatest opportunity for improvement. We concentrate on the five focus areas set out in the table “Making our operations more sustainable” on the next page.

Three of these areas concern the way we use resources: energy, water and waste. After focusing attention on them in 2015, we concentrated initially on the implications for our own sites. But as our operating model evolves, with greater emphasis on partnerships and collaboration, a large and growing part of our environmental footprint is now attributable to external suppliers.

We estimate that they now account for the majority of our overall impacts in energy, water, waste and CO<sub>2</sub> emissions. It therefore makes increasing sense to take a holistic view that includes the full supply chain. Hence, our two other focus areas: supplier impacts generally and the CO<sub>2</sub> emissions generated specifically by our distribution logistics.

In 2017, we have been building a clearer picture of our total impacts including suppliers. Working through our whole procurement database, we are calculating our footprint in each of the focus areas and determining baseline levels for our current impacts. Having identified the areas where there is greatest scope for improvement, we can then set targets for our full footprint and measure our progress. We aim to complete this work by the end of 2018.

In addition, Syngenta is a signatory to the World Economic Forum’s Alliance of CEO Climate Leaders – this global network believes that the private sector has a responsibility to cut emissions and help lead the transition to a low-carbon and climate-resilient economy.

## Using resources more efficiently

On the next page, we summarize our 2017 performance in each of the focus areas. For more detailed performance data, see pages 43-44. We report our performance both in absolute terms and as intensity, expressed per dollar of sales. The reduced level of sales in 2017 impacted on our performance in two ways. Lower production levels reduced operational efficiency, adversely affecting some of the absolute figures. And this, as well as the reduced sales value, adversely affected the intensity figures.

## Energy

In 2017, our absolute energy consumption increased by 2 percent to 8,484 TJ, primarily reflecting reduced operational efficiency due to lower production volumes. Together with the reduction in dollar sales, this resulted in a 3 percent increase in energy intensity.

However, we made positive changes in our energy sourcing. Oil use was down 15 percent as we shifted in favor of gas (up 6 percent) and wood/biomass (up 14 percent). We are procuring our electricity supplies from renewable sources where practicable, and all electricity for our Huddersfield site in the UK is now renewably sourced.

We have energy efficiency programs at all our sites. These are continuous and permanent: when targets are met, we will set more demanding ones. We continue to focus on the top 10 sites, which account for 80 percent of our direct energy use, but are now extending increased attention to the others.

## Water

In 2017, our water use was down 3 percent in absolute terms and unchanged in intensity. These figures do not currently include third-party seeds production sites, but the reduction in overall volume was primarily due to the sale of two of our own Seeds production sites in Hawaii, USA, which reduced our consumption for irrigation.

We have completed analysis of our overall water consumption footprint, including data from our own sites and questionnaire-based computation from third-party field sites. Drawing on work at all our own sites to understand water stress, we have identified the most critical sites in water-scarce areas. We are now working on conservation programs to reduce consumption both on our own sites and in co-operation with third-party seeds producers.

We reduced industrial wastewater discharges in both absolute volume and intensity in 2017. A 15 percent reduction in suspended solids was due mainly to wastewater treatment plant improvements at our Monthey site in Switzerland.

## Waste

As well as working to reduce waste generation, we also aim to convert or reuse more of what we do produce. In 2017, we reduced hazardous waste generation by 7 percent to 181,000 tonnes – of which 47 percent was recycled and reused.

## Our operations

### Making our operations more sustainable

These are the principal activities currently underway to ensure sustainable operations and monitor our progress.

#### Action by focus area

#### Progress in 2017

### Energy

Develop energy management plans for all key sites

Plan implementation has begun at sites with the largest energy consumption, while plan development continues at others

### Water

Develop water-use optimization plans for high-risk areas

Developed water scarcity assessments for all catchment areas supplying Syngenta-managed facilities

Completed analysis of water consumption footprint including third-party sites. Started to develop strategies for water minimization and developed reporting tools for tracking and management

### Waste

Rank all current waste management contractors to establish sustainability risks

Completed assessments and identified focus areas

Supported key waste contractors with audits

### Supplier impacts

Support key Crop Protection suppliers and providers with audits and drive continuous improvement

Audit program ongoing at key suppliers and expanding the scope to focus on process safety

Planning underway to expand scope of supplier audits to seeds suppliers and tollers

### CO<sub>2</sub> from distribution

See Annual Report 2016.

Establish baselines for fourth-party logistics (4PL) to cover our global operations in Crop Protection and field crops

Working on opportunities identified in the baselines set for sea logistics and overland in North America – including using optimized route planning systems, which have begun to reduce CO<sub>2</sub> generation

Currently establishing baselines and 4PL operations in LATAM

We are currently undertaking risk assessments of all our waste contractors and auditing their processes. We continue to fine-tune our own processes to minimize waste and to make waste optimization a critical consideration when we introduce new products.

### Air emissions

A 2 percent reduction in CO<sub>2</sub>e emissions resulted in slightly lower CO<sub>2</sub>e emissions intensity. Although higher use of natural gas led to CO<sub>2</sub>e emissions increases at St. Gabriel in the US and Huddersfield in the UK, this was offset by a 7 percent reduction in emissions from purchased energy as we increased our use of electricity from renewable sources. Our Paulinia site in Brazil switched from heavy fuel oil to gas for its boilers, reducing our total SO<sub>2</sub> emissions by 24 percent.

### Supplier impacts

In our drive to secure sustainable procurement, we have so far focused on our chemicals suppliers. We are now making extensive use of Together for Sustainability (TfS), the chemical industry's pooled assessment and audit initiative, which we joined in 2015. Initially our involvement focused on health and safety assessments, as discussed in "Look after every worker" on page 26. But TfS also covers other sustainability criteria, and we will make fuller use of it to deepen our sustainability reporting and to collect supply chain data that supports better management of our environmental footprint.





Over 80 percent of our sunflower seed suppliers in Russia are using data from soil moisture probes like this one to reduce water use and optimize irrigation.

We plan to extend supplier sustainability audits to broaden our successful Fair Labor Program on seeds farms and seed processing and treatment plants. Preparations for this began in 2017, and implementation will begin in 2018.

**CO<sub>2</sub> from distribution**

We are committed to long-term CO<sub>2</sub> intensity reduction for all our distribution logistics – by air, sea and overland. We are currently working to improve energy- and cost-efficiency, while reducing CO<sub>2</sub> emissions by standardizing and optimizing processes and gaining economies of scale. This is supported by a global program of outsourcing that creates synergies with “fourth-party logistics” partners who integrate and coordinate all logistics operations across supply chains.

We had intended this approach to cover over 50 percent of our logistics footprint by the end of 2017, with a focus on North America and Europe. While we completed the program in North America, work on overland distribution in Europe is continuing into 2018.

In the meantime, better logistics coordination, route planning, tracking and monitoring have begun to reduce both operating costs and CO<sub>2</sub> emissions. In 2017, our CO<sub>2</sub> emissions from distribution reduced by 1 percent, and a shared online platform linking suppliers’ systems with ours is allowing much greater transparency and closer cooperation.

## Business integrity

Integrity is crucial to growing a sustainably successful business. By fostering a culture of doing the right thing, we aim to manage risk and be seen as a trustworthy and collaborative partner. We strive to preserve the security and integrity of our organization, operations and products, and to engage actively with the communities in which we operate, building mutual understanding and benefit.

**Compliance cases reported**



**Corporate community investment \$m**



**Building our industry’s most trusted team**

Farmers, research bodies, governments and other organizations want to collaborate with companies whose leaders and employees have a reputation for working ethically.

Our ambition to be the most collaborative and trusted team in agriculture depends on each and every one of us. Trust helps us build the long-term partnerships we need to achieve our goals. We build trust when our leaders and employees live by our values, work transparently and hold one another accountable to keep our commitments to growers and the planet.

Our Code of Conduct sets out clear ethical, environmental and social responsibilities for all employees, and “We live by our Code of Conduct” is one of our Leadership Commitments. But a Code of Conduct can only go so far. To meet society’s constantly evolving expectations, we need a culture of doing the right thing – where everyone can be the best version of themselves and feel safe speaking up to flag and address ethical concerns.

To foster this culture, we hold annual leader-led compliance sessions throughout the organization, in which managers discuss relevant compliance topics with their teams. In 2017, we increased the number of participating team leaders by 30 percent to 2,263. The 2017 sessions focused on avoiding conflicts of interest, understanding and tackling cybercrime, and overcoming barriers that could prevent us from making the right decisions. Teams discussed relevant real-life scenarios from around the organization and, to focus attention on how

## Our operations

business integrity issues relate to their working lives, many teams drew up their own commitment to compliance for colleagues to sign.

Regular discussions like these encourage employees to raise concerns. They can do this through their managers or through our confidential compliance helpline, which we promote regularly to maintain high awareness. In 2017, the total number of cases raised was 215 (2016: 214).

One of our values is a belief that “How matters” – it’s not just what we do that’s important, but the way we do it. To enable greater transparency, we have developed a compliance dashboard to share data across Syngenta, so that colleagues can see the state of compliance throughout the organization. This will be published regularly within the business from 2018 onwards.

We expect our suppliers to meet the standards set out in our Code of Conduct – as well as relevant external regulations on issues such as health and safety, the environment, fair labor practices and animal welfare – and we monitor their compliance. As part of the appointment process, we are planning to phase-in a new process to screen third-party service providers for compliance risks during 2018.

### Protecting our critical assets

Our security team works across the organization to protect people, assets, information and products.

As part of our duty of care, we respond to employees’ security exposures 24/7 when they are traveling on Syngenta business. A specialist contractor responds to security incidents worldwide, locating travelers who may be at risk to ensure their safety. The frequency of alerts is increasing, to around one a week in 2017, and we are currently reviewing the scope for extending the program to cover employees where they live and work.

Our Security 360° program assesses all our locations, ensuring we take appropriate measures to protect people and sites. We evaluated 129 sites under this program in 2017 (2016: 122), reflecting a further increase in sites classified as risk-relevant.

Cybercrime is a growing threat as its prevalence increases and our business becomes more reliant on the digital sphere. We have strengthened our security capability to make it harder for criminals to disrupt our operations or access our digital assets: under our new anti-cybercrime team, a security center managed by the IT department monitors all our systems to detect anomalies.

Counterfeits of our products can harm users and the public, and compromise our reputation in the marketplace. Our “big fish” protection strategy – targeting higher-value cases and criminals further up the distribution chain to maximize disruption of possible criminal activities – delivered encouraging results in 2017. While the number of cases pursued fell slightly to 723, seizures of fake and illegal chemicals rose sharply to 541 tonnes (2016: 326 tonnes). Counterfeit seed seizures totaled 93 tonnes – marginally above the 2015 level – following an exceptional haul in 2016 resulting from one major case. We continue to develop countermeasures, such as making packaging harder to forge and easier to authenticate, and to collaborate with relevant authorities and enforcement agencies.

### Earning the support of our neighbors

To achieve our corporate goals, we’ve declared an ambition to be “the most collaborative and trusted team in agriculture”. This includes our relationships with our neighbors. By actively engaging with local communities, we build mutual understanding, protect our reputation and become a welcome and trusted partner.

Fostering open and constructive dialogue with local communities is part of every site manager’s job. It’s in our interests to understand the communities’ needs, protect our common environment and play our part in enhancing their safety and prosperity. We also support our employees’ direct engagement by matching their humanitarian relief fundraising – which in 2017 focused on combating poverty and providing natural disaster relief in Africa, Asia and the US.

Each year we report our total “corporate community investment”. This was \$23 million in 2017 – down from \$24 million in 2016. The investment figure understates the value we bring to communities because it does not include the non-cash contributions we make by sharing our practical skills and expertise – for example in improving farming practices, keeping communities and schools free from disease-spreading insects, and managing waste.





### It's working together that makes the difference

At our Seeds site in Zambia, we've been piloting a new approach to community engagement for the region. It's about working in a more strategic, joined-up way: listening to local communities and understanding their concerns, then working together on long-term solutions where everyone has a sense of ownership.

"We didn't want to give the impression that Syngenta will bring out the checkbook and all problems would be solved," says Andrew Chanda, our local Health Safety Environment Security Manager. "It's important that this is a joint effort between Syngenta, the school and the community."

He's talking about the new block of classrooms at Chainda Primary School, attended by children of employees at our Seeds site. The school had been struggling to teach over 1,000 pupils in just 12 classrooms. Parents were buying bricks for an extension block – so we matched their donations and the community built the block. "And everyone takes ownership," says Andrew.

The school is 25km from our farm, and most children had to walk there. So we bought a community bus to transport them – school attendance is up, and the bus is much safer than taking a ride in the back of a truck.

Syngenta believes it is important to engage local communities and work with them. We respond to concerns, contribute to local needs and look to partner with them.



This involves listening, sharing value, protecting the environment, promoting health and improving quality of life.

The community also tapped into our expertise to address the challenge of waste disposal. Due to lack of infrastructure and local waste companies, together with a surfeit of plastic bags, waste was often dealt with by burning – creating pollution and a risk of crop fires in the dry season.

We formed a partnership with a South African recycling company that now collects the plastic waste and is also helping to educate the community on better ways to dispose of other waste.

Community-driven projects like these reflect a long-term view of community engagement, where we join with our neighbors in achieving positive and lasting social impacts while also reducing risk to farm operations. "We're very fortunate to be able to do this," says Bryan Pinkney, Head of Farming Operations. "This is something I really appreciate about working for Syngenta – that we care."

## Board of Directors at December 31, 2017



### Jianxin Ren

**Chairman of the Board, non-executive Director  
Chairperson of the Governance &  
Nomination Committee**

Born: 1958  
Nationality: Chinese  
Initial appointment: 2017

#### Professional background

Jianxin Ren is Chairman of China National Chemical Corporation (ChemChina) since 2014. Previously, he served as President of ChemChina (2004–2014). Before ChemChina was founded, he was President of China Bluestar Group (1989–2004). During this time, he assumed other parallel positions such as Vice President of China Haohua Group (1995–1998) and Vice President of China Chemical Equipment Company (1993–1995). From 1982 to 1989, he worked as Youth League President in the Chemical Machinery Institute affiliated to the Chinese Ministry of Chemical Industries and also as President of the Chemical Cleaning Company. Apart from his functions in Syngenta, Jianxin Ren is currently holding the following Board memberships:

– Listed companies: Chairman of Pirelli.

He holds a Master Degree in Economics for Business and Management from Lanzhou University in China.



### Michel Demaré

**Vice-Chairman of the Board, non-executive  
Director and Lead Independent Director  
Member of the Governance &  
Nomination Committee and Corporate  
Responsibility Committee**

**He is also Chairman of the Syngenta Foundation  
for Sustainable Agriculture.**

Born: 1956  
Nationality: Belgian/Swiss  
Initial appointment: 2012

#### Professional background

Michel Demaré was Chief Financial Officer and Executive Vice President of ABB from 2005 to February 2013, serving in addition, between late 2008 and March 2011, as the company's President of Global Markets. Between February and September 2008, he was ABB's acting Chief Executive Officer. Previously he had been Chief Financial Officer Europe for Baxter International Inc. He joined Baxter in 2002 after 18 years at the Dow Chemical Company, where he held various treasury and division CFO positions in Europe (including Switzerland) and the USA. He joined the Board of Directors of Syngenta in 2012, and was appointed Chairman in 2013 until the sale of the company. Apart from his functions in Syngenta, Michel Demaré currently holds the following Board memberships:

– Listed companies: Vice Chairman of UBS Group AG

– Non-listed companies: Member of the Supervisory Board of Louis Dreyfus Company Holdings B.V.

In addition, he is Vice-Chairman of the Supervisory Board of IMD Business School in Lausanne and a member of the Advisory Board at the Institute of Banking and Finance at the University of Zurich.

Michel Demaré holds a License in Applied Economics from the Université Catholique de Louvain (UCL) and an MBA from the Katholieke Universiteit Leuven (KUL) in Belgium.



### Hongbo Chen

**Non-executive Director  
Member of the Corporate Responsibility Committee**

Born: 1973  
Nationality: Chinese  
Initial appointment: 2017

#### Professional background

Hongbo Chen is Executive Director of China National Agrochemical Company Limited (CNAC) since 2017.

After joining CNAC in 2005, he held various senior positions, including Deputy Secretary of Communist Party of China, Assistant President and Chief Strategy Officer (2014–2017), Assistant President and Chief Strategy Officer (2011–2014) and Assistant President and Director of the Planning Department (2008–2011), Director of the Planning Department (2005–2008). From 2000 to 2005 he was Senior Engineer and Project Manager at the China National Petroleum and Chemical Planning Institute. From 1998 to 2000 he worked at the Planning Department of China National Petroleum Administration Authority. From 1994 to 1998, he worked at the Chinese Ministry of Chemical Industries, holding positions in the Planning Department and the Planning Institute.

He holds a Bachelor Degree in Fine Chemicals and Engineering Management from Tianjin University and an MBA from Tsinghua University in China.



### Olivier T. de Clermont-Tonnerre

**Non-executive Director  
Chairperson of the Compensation Committee  
and the Corporate Responsibility Committee**

Born: 1951  
Nationality: French  
Initial appointment: 2017

#### Professional background

Olivier T. de Clermont-Tonnerre is Chief Strategy and Corporate Development Officer at China National Bluestar (Bluestar), a subsidiary of China National Chemical Corporation (ChemChina). Previously, he was Chief Executive Officer of Bluestar Silicones from 2007 to 2011. Before joining Bluestar, he was (2001–2007) a member of the Rhodia Executive Committee and CEO of Rhodia Silcea grouping three Rhodia Enterprises (Silicones, Silica and Rare-Earth). Most of his early professional experience has been in the Rhône-Poulenc Group, based in France or in the USA, among others as CEO Surfactant and Specialties, CEO Food Additives and member of the Rhône-Poulenc Inc. Operational and M&A Committees. Apart from his functions in Syngenta, Olivier T. de Clermont-Tonnerre currently holds the following Board memberships:

– Non-listed companies: Member of the Board of Directors of Bluestar and its two subsidiaries Elkem and REC Solar (ChemChina Group).

He is also a member of the Board of Directors of the Nouvel Institut Franco-Chinois de Lyon.

He holds a degree in Chemical Engineering from Toulouse University, a License in Economics from Paris-Nanterre University and an MBA from INSEAD in Fontainebleau.





### Dieter Gericke

**Non-executive Director**  
**Member of the Governance & Nomination Committee, Audit Committee and Compensation Committee**

Born: 1965  
Nationality: Swiss  
Initial appointment: 2017

#### Professional background

Dieter Gericke is a partner at the law firm Homburger AG in Zurich since 2004, where he heads the Corporate/M&A practice team as well as the China Focus Group. Before joining Homburger in 2000, he worked as a foreign associate with Hale and Dorr LLP in Boston. Previously, he held positions as a law clerk at the district court of Meilen (Zurich) and in another Zurich law firm. Apart from his functions in Syngenta, Dieter Gericke currently holds the following Board memberships:

- Non-listed companies: Member of the Board of Directors of Homburger AG and Gericke Holding AG.

He is a member of the International Bar Association's Corporate/M&A and Securities Law Committees.

He obtained a law degree and a doctorate degree from the University of Zurich and an LL.M. from Harvard Law School. He is an attorney-at-law admitted to all courts of Switzerland.



### Jürg Witmer

**Non-executive Director and Lead Independent Director**  
**Member of the Compensation Committee and Nomination & Governance Committee**

Born: 1948  
Nationality: Swiss  
Initial appointment: 2006

#### Professional background

Jürg Witmer joined Hoffmann-La Roche in Basel in 1978 and subsequently held a number of positions including Legal Counsel, Assistant to the CEO, General Manager and China Project Manager of Roche Far East based in Hong Kong, Head of Corporate Communications and Public Affairs at Roche headquarters in Basel, Switzerland, and General Manager of Roche Austria. From 1999 to 2005, he acted as Chief Executive Officer of the Givaudan Group in Vernier/Geneva. From 2008 to 2012, he was also Chairman of Clariant AG, Basel. Apart from his functions in Syngenta, Jürg Witmer currently holds the following Board memberships:

- Listed companies: Chairman of Givaudan Group
- Non-listed companies: Non-executive Director of A. Menarini IFR Florence.

Jürg Witmer has a doctorate in Law from the University of Zurich, as well as a degree in International Studies from the Graduate Institute of the University of Geneva.



### Gunnar Brock

**Non-executive Director and Independent Director**  
**Chairperson of the Audit Committee**

Born: 1950  
Nationality: Swedish  
Initial appointment: 2012

#### Professional background

Gunnar Brock worked for the Tetra Pak Group for many years, with spells in Asia, Australia and Europe, returning – after a period as President and Chief Executive Officer of Alfa Laval – to become President and Chief Executive Officer of the Tetra Pak Group, headquartered in Switzerland. From 2002 to 2009, he served as President and Chief Executive Officer of the Atlas Copco Group. Apart from his functions in Syngenta, Gunnar Brock currently holds the following Board memberships:

- Listed companies: Non-executive Director of Investor AB
- Non-listed companies: Chairman of Mölnlycke Health Care and non-executive Director of Patricia Industries (both 100 percent affiliates of Investor AB), and Chairman of Stena AB.

Gunnar Brock holds an MBA from the Stockholm School of Economics.



### Eveline Saupper

**Non-executive Director and Independent Director**  
**Member of the Audit Committee**

Born: 1958  
Nationality: Swiss  
Initial appointment: 2013

#### Professional background

Eveline Saupper was a partner at the commercial law firm Homburger AG in Zurich until June 2014 and thereafter Of Counsel at this law firm until March 2017. Before joining Homburger in 1985, she worked as a tax specialist with Peat Marwick Mitchell (today KPMG) in Zurich (1983–1985). Apart from her functions in Syngenta, Eveline Saupper currently holds the following Board memberships:

- Listed companies: Non-executive Director of Flughafen Zürich AG, Georg Fischer AG and Clariant AG
- Non-listed companies: Chairman of Mentex Holding AG, non-executive Director of Stäubli Holding AG and Hoval Group.

Eveline Saupper holds a degree and PhD in Law from the University of St. Gallen. She is admitted to the Bar of Grison and is a certified tax expert.

## Executive Team at December 31, 2017



### J. Erik Fyrwald

**Chief Executive Officer**  
**Member of the Corporate Responsibility Committee**

Born: 1959  
Nationality: American  
Appointment: 2016

#### Professional background

J. Erik Fyrwald was previously President and Chief Executive Officer of Univar, a leading distributor of chemistry and related products and services (2012–2016); President of Ecolab, a cleaning and sanitation, water treatment, and oil and gas products and services provider (2011–2012); and Chairman, President and Chief Executive Officer of Nalco, a water treatment and oil and gas products and services company (2008–2011). He was Group Vice President of the Agriculture and Nutrition Division of the E. I. du Pont de Nemours and Company – DuPont (2003–2008). Apart from his functions in Syngenta, J. Erik Fyrwald serves on the Board of Directors for Eli Lilly and Company (including their Science and Technology Committee), CropLife International and the Swiss-American Chamber of Commerce.

He holds a Bachelor's degree in Chemical Engineering from the University of Delaware and completed the Advanced Management Program at Harvard Business School.



### Christoph Mäder

**Head Legal & Taxes and Company Secretary**

Born: 1959  
Nationality: Swiss  
Appointment: 2000

#### Professional background

Christoph Mäder was Head of Legal & Public Affairs for Novartis Crop Protection (1999–2000) and Senior Corporate Counsel for Novartis International AG (1992–1998). He is Vice Chairman of *economiesuisse*, the main umbrella organization representing Swiss economy. He is also a non-executive Director of Lonza AG (listed company), a member of the Board of scienceindustries, the association of Swiss chemical, pharmaceutical and biotech industries, and a member of the Board of the Basel Chamber of Commerce.

He graduated from Basel University Law School, and is admitted to the Bar in Switzerland.



### Jonathan Parr

**President Global Crop Protection and EAME, LATAM and APAC**

Born: 1961  
Nationality: British  
Appointment: 2015

#### Professional background

Prior to his current function as President Global Crop Protection and EAME, LATAM and APAC, Jonathan Parr was Chief Operating Officer (COO) EAME & Latin America (2015–2016). Before that, he was Head of Global Crops & Assets for Syngenta (2014), Regional Director for EAME (2009–2013), Head of Syngenta Flowers (2007–2008), Head of Marketing and Strategy (2004–2007) and European Manufacturing Manager (2000–2003). Before joining Syngenta, he worked for AstraZeneca as a Factory Manager (1998–2000), Global Product Manager Fungicides (1996–1998) and Supply Chain Project Manager (1994–1996). From 1987 to 1994, he held Project and Engineering Management functions at Imperial Chemical Industries (ICI). Apart from his function in Syngenta, Jonathan Parr holds no other mandates in the supreme executive bodies of listed or non-listed companies.

Jonathan Parr is a Chartered Engineer and also holds an honors Bachelor degree in Civil Engineering from the University of Southampton as well as a Master in Management from the University of McGill, Canada, and a diploma in International Management from the INSEAD Institute.





### Mark Patrick

#### Chief Financial Officer

Born: 1969  
Nationality: British  
Appointment: 2016

#### Professional background

Prior to his appointment as Chief Financial Officer, Mark Patrick was Head Commercial Finance at Syngenta (2011–2016). Prior to that, he was Head Crop Protection Finance (2008–2011 and 2005–2006), Head Finance North America Crop Protection (2006–2008), Head Business Reporting (2003–2005) and APAC Regional Supply Finance Head Syngenta in Hong Kong. He joined AstraZeneca in 1993. Mark Patrick holds no other mandates in the supreme executive bodies of listed or non-listed companies.

He is a Chartered Management Accountant and also holds an honors degree in Quantity Surveying and a Post Graduate degree in Economics.



### Laure Roberts

#### Head Human Resources

Born: 1963  
Nationality: French  
Initial appointment: 2016

#### Professional background

Prior to her appointment as Head Human Resources, Laure Roberts was Head Global HR Business Partners (2013–2016) and Head Human Resources for the region EAME (2011–2013). Before joining Syngenta, she held a number of different HR leadership functions at Air Products and Chemicals, Inc., a worldwide industrial gases company where her last role was Vice President, Human Resources, Europe and Middle East (2004–2010). Laure Roberts started her career in 1988 with Valeo, a leading automotive supplier. She holds no other mandates in the supreme executive bodies of listed or non-listed companies.

Laure Roberts holds a Master from the Ecole Supérieure de Commerce de Paris and an MBA from the University of Aston in Birmingham.



### Jeff Rowe

#### President Global Seeds and North America

Born: 1973  
Nationality: American  
Appointment: 2016

#### Professional background

Prior to his current function as President Seeds, North America and China, Jeff Rowe was Vice President, Strategic Services and Planning at DuPont Pioneer (2015–2016) and also sat on the company's Leadership Team (DPLT). Before, he was Regional Director for DuPont Pioneer Europe (2011–2015), Vice President Biotech Affairs and Regulatory (2008–2011) and Corporate Counsel (2001–2008). Jeff Rowe started his career with Pioneer in 1995 in Supply Management. Apart from his function in Syngenta, he has been a member of the U.S.-Ukraine Business Council (USUBC) Executive Committee since 2003. Jeff Rowe holds no other mandates in the supreme executive bodies of listed or non-listed companies.

He has a Bachelor of Science in Agricultural Economics from the Iowa State University, a Juris Doctorate from Drake Law School, and a Global Executive MBA from the NYU Stern School of Business and the London School of Economics.

## Non-financial information

**At Syngenta, non-financial information refers to quantitative and qualitative information on strategies, policies or activities pursued towards our business, environmental and social goals.**

We regularly assess stakeholder concerns and expectations, as well as the issues that we believe present the greatest risks and opportunities for our business. Our materiality matrix helps us identify where we can provide the most value, drive our strategy, allocate effort and resources, and direct our external communication and reporting.

The Non-financial performance summary on pages 41 to 44 presents data on our progress towards four goals:

► **The Good Growth Plan**

Help shape the future sustainability of agriculture, and deliver solutions that are better, more productive and more beneficial to rural economies

► **People**

Attract and retain talent while creating an environment that stimulates innovation and personal performance and development

► **Sustainable operations**

Manage our environmental footprint and maintain the highest standards in our operations

► **Business integrity**

Maintain the highest standards across our entire business and go beyond regulatory compliance, while benefiting the communities and economies wherever we operate

Our non-financial reporting covers the operations of Syngenta Group, including material interactions with selected third parties as reported in the Non-financial performance summary. It is guided by the Global Reporting Initiative principles and is externally assured (see page 45). The non-financial reporting period is October 1 to September 30.

The information in the Non-financial performance summary was approved by the Board of Directors on February 6, 2018. Syngenta's internal controls over non-

financial reporting were designed to provide assurance to Syngenta's Board of Directors and management regarding the reliability of non-financial reporting and the preparation and fair presentation of the information published in the Non-financial performance summary. All internal controls, no matter how well designed, have inherent limitations and therefore may not prevent or detect misstatements. In designing internal controls over non-financial reporting, Syngenta used the criteria established in COSO's Internal Control – Integrated Framework (2013).

Syngenta is a signatory to the United Nations Global Compact. Syngenta's Sustainable Business Report serves as our Communication on Progress (COP) in implementing these principles.

Read more on:  
[www.cr.syngenta.com](http://www.cr.syngenta.com)  
[www.gri.syngenta.com](http://www.gri.syngenta.com)  
[www.questions.syngenta.com](http://www.questions.syngenta.com)



### Materiality matrix

|  | Importance to stakeholders ↑ | Focus areas  | Monitored activities   | Positions   |
|--|------------------------------|--|--|---|
|  |                              | <p><b>Focus areas</b></p> <p>We share our views, we measure and evaluate performance, and we have set or plan to set goals or quantitative targets on the most important issues, in particular our contribution to food security.</p> <ul style="list-style-type: none"> <li>► Biodiversity in agriculture</li> <li>► Climate change and greenhouse gas emissions</li> <li>► Employee well-being</li> <li>► Energy, hazardous waste and water use</li> <li>► Health and safety</li> <li>► Human rights and fair labor practices</li> <li>► Innovation in agriculture</li> <li>► Land productivity</li> <li>► Pollinators and pesticide use</li> <li>► Safe and sustainable use of our products</li> <li>► Smallholder empowerment</li> <li>► Soil conservation</li> <li>► Supply chain sustainability</li> <li>► Sustainable agriculture practices</li> <li>► Talent attraction and retention</li> <li>► Water in agriculture</li> </ul> | <p><b>Monitored activities</b></p> <p>We share our views, and we measure and evaluate performance on these issues to sustain the trust and confidence of our stakeholders, and for us to be a responsible business.</p> <ul style="list-style-type: none"> <li>► Animals in research</li> <li>► Community relations and stakeholder engagement</li> <li>► Corporate conduct</li> <li>► Corporate governance</li> <li>► Economic value shared</li> <li>► Environmental compliance and liabilities</li> <li>► Other air emissions</li> <li>► Product compliance</li> <li>► Security practices</li> </ul> | <p><b>Positions</b></p> <p>We share our views on the issues that engage public interest and have a bearing on our business.</p> <ul style="list-style-type: none"> <li>► Access to technology</li> <li>► Biofuels</li> <li>► ChemChina ownership</li> <li>► Chemicals of concern</li> <li>► Consolidation in the industry</li> <li>► Diminishing crop diversity and monoculture practices</li> <li>► Food availability, affordability and waste</li> <li>► Food safety</li> <li>► Foreign investments in farmland</li> <li>► Marketing practices</li> <li>► Product registration</li> <li>► Public policy and advocacy</li> <li>► Rural development</li> <li>► Tax transparency</li> <li>► Trade</li> </ul> |
|  |                              | <p><b>Monitored activities</b></p>   |  |   |
|  |                              | <p><b>Positions</b></p>  |  |   |

Importance to Syngenta →

*We have three levels of disclosure based on the importance of the issues to our stakeholders and to Syngenta.*



# Non-financial performance summary

## The Good Growth Plan

| Reporting period October 1 – September 30          | Cumulative since baseline 2014 | 2017  | 2016   | 2015  |
|--|--------------------------------|-------|--------|-------|
| <b>Make crops more efficient<sup>1</sup></b>       |                                |       |        |       |
| Total number of reference farms                    |                                | 1,459 | 1,039  | 1,062 |
| Total number of benchmark farms                    |                                | 2,630 | 2,694  | 2,586 |
| Average increase on reference farms <sup>2</sup> : |                                |       |        |       |
| Land productivity                                  |                                | 10.9% | 1.2%   | 1.9%  |
| Land productivity of smallholders                  |                                | 21.6% | 8.0%   | –     |
| Nutrient efficiency                                |                                | 20.3% | 1.5%   | –     |
| Pesticide field application efficiency             |                                | 14.2% | -16.2% | –     |
| Greenhouse gas emission efficiency <sup>3</sup>    |                                | 14.0% | 7.0%   | 1.1%  |
| Average increase on benchmark farms <sup>2</sup> : |                                |       |        |       |
| Land productivity                                  |                                | 7.3%  | -2.6%  | –     |
| Land productivity of smallholders                  |                                | 5.1%  | 1.6%   | –     |
| Nutrient efficiency                                |                                | 28.1% | 5.3%   | –     |
| Pesticide field application efficiency             |                                | 4.8%  | -19.3% | –     |
| Greenhouse gas emission efficiency <sup>3</sup>    |                                | 13.9% | 3.9%   | 0.2%  |
| <b>Rescue more farmland</b>                        |                                |       |        |       |
| Hectares of benefited farmland (m)                 | 7.5                            | 3.1   | 1.9    | 1.6   |
| <b>Help biodiversity flourish</b>                  |                                |       |        |       |
| Hectares of benefited farmland (m)                 | 5.6                            | 0.7   | 3.3    | 0.9   |
| <b>Empower smallholders</b>                        |                                |       |        |       |
| Smallholders reached (m) <sup>4</sup>              |                                | 13.9  | 16.6   | 17.2  |

1 Reference farms were selected by Syngenta and are recommended to use Syngenta products and follow optimized protocols. Benchmark farms were randomly selected by a third-party research agency and represent grower practice. Reference and benchmark farms are grouped in clusters. A cluster presents homogeneous agro-climatic conditions and contains reference and/or benchmark farms with similar grower characteristics

2 Policy on land productivity and efficiency reporting was revised in 2017. Starting 2017, the aggregation of the farm data is aligned with harvest seasons to ensure more timely reporting of results. The latest available progress data is 2016 for clusters located in the Northern hemisphere and 2017 for clusters located in the Southern hemisphere. Evolutions are reported for clusters with an established baseline and at least one year of progress data. Details on aggregation, calculation of evolutions and other adjustments can be found on [www.data.syngenta.com](http://www.data.syngenta.com)

3 New KPI introduced in 2017. Greenhouse gas emissions are calculated consistent with Cool Farm Tool methodology using available farm data and proxies where farm data was not available. For USA farm data, calculation methodology is consistent with Field to Market: The Alliance for Sustainable Agriculture. Details on data inputs, methodology, assumptions and limitations can be found on [www.data.syngenta.com](http://www.data.syngenta.com)

4 Number of smallholders reached through sales per year

| Reporting period October 1 – September 30  | Cumulative since baseline 2014 | 2017 | 2016 | 2015 |
|--|--------------------------------|------|------|------|
| <b>Help people stay safe</b>   |                                |      |      |      |
| People trained on safe use (m)   | 25.5                           | 8.2  | 6.8  | 5.7  |
| Of which: % of smallholders  | 70%                            | 68%  | 68%  | 71%  |
| Countries with established Syngenta product toxicovigilance programs                             |                                | 100  | 100  | 100  |
| Crop Protection sales represented  |                                | 94%  | 94%  | 93%  |
| <b>Look after every worker</b>   |                                |      |      |      |
| Suppliers included in fair labor programs <sup>5</sup>   |                                | 86%  | 82%  | –    |
| Syngenta seed producing countries included in Syngenta Fair Labor Program                        |                                | 68%  | 41%  | 33%  |
| Seed supply farms included in Syngenta Fair Labor Program  |                                | 86%  | 82%  | 84%  |
| Of which: farms in Fair Labor Association (FLA)'s audit scope                                    |                                | 67%  | 62%  | 69%  |
| Of which: seed supply farms monitored <sup>6</sup>   |                                | 20%  | 18%  | –    |
| Chemical suppliers included in Supplier Sustainability Program <sup>6,7</sup>                    |                                | 90%  | 67%  | –    |
| HSE audits at chemical suppliers <sup>8</sup>  |                                | 46   | 67   | 84   |
| HSE audits at formulation, fill and packaging suppliers and seed toll manufacturing <sup>8</sup> |                                | 31   | 48   | 34   |
| HSE audits at warehouse/logistics service providers  |                                | 117  | 137  | 118  |
| Commercial flowers farms with valid GlobalG.A.P. certification <sup>6</sup>                      |                                | 90%  | 73%  | –    |
| Commercial flowers farms with valid G.R.A.S.P. assessment <sup>6</sup>                           |                                | 32%  | 24%  | –    |

5 New KPI introduced in 2016 to capture overall participation of seed supply farms, chemical suppliers and commercial flowers farms in fair labor programs

6 New KPI introduced in 2016

7 Includes only chemical suppliers categorized as posing a high or medium sustainability risk

8 Policy on HSE audit reporting was revised in 2016. Starting 2016, HSE screening assessments are excluded

Read more about how we are measuring The Good Growth Plan on [www.data.syngenta.com](http://www.data.syngenta.com)



## Non-financial performance summary

### People

| Reporting period October 1 – September 30   | 2017   | 2016   | 2015   |
|---|--------|--------|--------|
| <b>Employment</b>                           |        |        |        |
| Employees <sup>1</sup>                      | 27,669 | 27,810 | 28,704 |
| Europe, Africa and Middle East <sup>2</sup> | 12,372 | 12,429 | 13,047 |
| North America                               | 4,092  | 4,176  | 4,335  |
| Latin America                               | 4,907  | 5,161  | 4,962  |
| Asia Pacific                                | 6,298  | 6,044  | 6,360  |
| Part-time employees                         | 927    | 919    | 984    |
| Turnover rate <sup>3</sup>                  | 11.3%  | 12.2%  | 12.5%  |
| of which: <35 years                         | 42%    | 38%    | 41%    |
| 35–50 years                                 | 43%    | 44%    | 43%    |
| >50 years                                   | 15%    | 18%    | 16%    |
| Attrition rate <sup>4</sup>                 | 5.2%   | 6.0%   | 6.1%   |
| Senior managers                             | 339    | 334    | 332    |
| Headquarters                                | 43%    | 42%    | 44%    |
| Europe, Africa and Middle East              | 19%    | 19%    | 16%    |
| North America                               | 17%    | 18%    | 18%    |
| Latin America                               | 11%    | 11%    | 12%    |
| Asia Pacific                                | 10%    | 10%    | 10%    |
| <b>Diversity</b>                            |        |        |        |
| Nationalities in senior management          | 33     | 34     | 33     |
| Female employees                            | 30%    | 30%    | 30%    |
| Female employees in management roles        | 23%    | 23%    | 22%    |
| Female employees in senior management       | 17%    | 16%    | 14%    |

1 Permanent full-time equivalent (FTE)

2 Including headquarters (Switzerland)

3 Includes voluntary and involuntary leavers and restructuring

4 Includes only voluntary leavers

5 According to US OSHA definition for injuries and illness

| Reporting period October 1 – September 30                               | 2017 | 2016 | 2015 |
|---|------|------|------|
| <b>Employee development</b>   |      |      |      |
| Leadership and talent development investment (\$m)                      | 4.2  | 3.7  | 4.1  |
| <b>Health, safety and well-being</b>                                    |      |      |      |
| Recordable injury and illness rate (IIR) per 200,000 hours <sup>5</sup> | 0.37 | 0.39 | 0.38 |
| Recordable injury rate per 200,000 hours <sup>5</sup>                   | 0.34 | 0.33 | 0.35 |
| Europe, Africa and Middle East <sup>2</sup>                             | 0.43 | 0.47 | 0.48 |
| North America   | 0.64 | 0.72 | 0.69 |
| Latin America   | 0.30 | 0.23 | 0.24 |
| Asia Pacific  | 0.16 | 0.10 | 0.11 |
| Recordable occupational illness rate per 200,000 hours <sup>5</sup>     | 0.03 | 0.06 | 0.03 |
| Europe, Africa and Middle East <sup>2</sup>                             | 0.02 | 0.03 | 0.04 |
| North America   | 0.08 | 0.16 | 0.04 |
| Latin America   | 0.04 | 0.10 | 0.06 |
| Asia Pacific  | 0.00 | 0.04 | 0.01 |
| First aid cases   | 382  | 387  | 413  |
| Recordable injuries   | 151  | 152  | 154  |
| Bruise, strain, sprain and dislocation                                  | 36%  | 39%  | 39%  |
| Cut and abrasion  | 25%  | 20%  | 31%  |
| Bone fracture   | 15%  | 20%  | 13%  |
| Concussion and internal injury  | 3%   | 4%   | 3%   |
| Multiple injuries   | 6%   | 1%   | 1%   |
| Other   | 15%  | 16%  | 13%  |
| Cases of recordable occupational illness                                | 12   | 28   | 14   |
| Cases of work-related stress  | 7    | 9    | 26   |



## Sustainable operations

| Reporting period October 1 – September 30                       | 2017         | 2016  | 2015  |
|---|--------------|-------|-------|
| <b>Energy</b>   |              |       |       |
| <b>Energy intensity (MJ/\$sales)</b>                            | <b>0.67</b>  | 0.65  | 0.69  |
| Energy (TJ)   | <b>8,484</b> | 8,341 | 9,222 |
| Gas (TJ)  | <b>3,405</b> | 3,207 | 3,840 |
| Electricity (TJ)  | <b>2,387</b> | 2,400 | 2,349 |
| Steam (TJ)  | <b>1,450</b> | 1,503 | 1,547 |
| Oil (TJ)  | <b>287</b>   | 336   | 536   |
| Other (TJ)  | <b>955</b>   | 895   | 950   |
| <b>Greenhouse gases</b>   |              |       |       |
| <b>Total CO<sub>2</sub>e emissions intensity (g/\$sales)</b>    | <b>120</b>   | 121   | 124   |
| Total CO <sub>2</sub> e emissions (000s tonnes)                 | <b>1,515</b> | 1,551 | 1,660 |
| Within direct control:  |              |       |       |
| CO <sub>2</sub> e emissions from own operations (000s tonnes)   | <b>443</b>   | 445   | 574   |
| CO <sub>2</sub> emissions from company vehicles (000s tonnes)   | <b>70</b>    | 71    | 70    |
| Within indirect control:  |              |       |       |
| CO <sub>2</sub> e emissions from purchased energy (000s tonnes) | <b>353</b>   | 381   | 400   |
| CO <sub>2</sub> emissions from business trips (000s tonnes)     | <b>46</b>    | 43    | 36    |
| CO <sub>2</sub> emissions from distribution (000s tonnes)       | <b>603</b>   | 611   | 580   |
| <b>Other air emissions</b>                                      |              |       |       |
| <b>Other air emissions intensity (g/\$sales)</b>                | <b>0.070</b> | 0.071 | 0.088 |
| Other air emissions (tonnes)                                    | <b>884</b>   | 914   | 1,176 |
| NO <sub>x</sub> (tonnes)  | <b>410</b>   | 402   | 462   |
| Non-halogenated VOCs (tonnes)                                   | <b>322</b>   | 354   | 384   |
| Halogenated VOCs (tonnes)                                       | <b>17</b>    | 17    | 26    |
| Particulates (tonnes)   | <b>88</b>    | 84    | 79    |
| SO <sub>2</sub> (tonnes)  | <b>32</b>    | 42    | 210   |
| NH <sub>3</sub> (tonnes)  | <b>5</b>     | 5     | 6     |
| HCl (tonnes)  | <b>10</b>    | 10    | 9     |

| Reporting period October 1 – September 30                               | 2017         | 2016  | 2015  |
|---|--------------|-------|-------|
| <b>Water</b>  |              |       |       |
| <b>Water usage intensity (liters/\$sales)</b>                           | <b>2.5</b>   | 2.5   | 2.6   |
| Water usage (million cubic meters)                                      | <b>31.7</b>  | 32.6  | 35.0  |
| Cooling (million cubic meters)  | <b>19.1</b>  | 19.0  | 20.8  |
| Irrigation (million cubic meters)                                       | <b>4.9</b>   | 6.5   | 6.8   |
| Processing and washing (million cubic meters)                           | <b>5.8</b>   | 5.2   | 5.3   |
| Product ingredient (million cubic meters)                               | <b>0.2</b>   | 0.2   | 0.2   |
| Sewage and sanitary (million cubic meters)                              | <b>1.0</b>   | 0.9   | 1.1   |
| Other (million cubic meters)  | <b>0.7</b>   | 0.8   | 0.8   |
| Origin of water:  |              |       |       |
| Surface fresh water (million cubic meters)                              | <b>21.3</b>  | 22.6  | 24.4  |
| Underground water (million cubic meters)                                | <b>7.5</b>   | 7.2   | 7.8   |
| Drinking water from municipal network (million cubic meters)            | <b>2.8</b>   | 2.7   | 2.7   |
| Recovered rain water (million cubic meters)                             | <b>0.1</b>   | 0.1   | 0.1   |
| <b>Wastewater effluents</b>   |              |       |       |
| <b>Industrial wastewater discharge intensity (liters/\$sales)</b>       | <b>0.72</b>  | 0.79  | 0.70  |
| Industrial wastewater discharge (million cubic meters)                  | <b>9.1</b>   | 10.1  | 9.4   |
| Total organic carbon (TOC) (tonnes)                                     | <b>499</b>   | 504   | 649   |
| Chemical oxygen demand (COD) (tonnes)                                   | <b>1,522</b> | 1,556 | 1,953 |
| Biological oxygen demand (BOD) (tonnes)                                 | <b>154</b>   | 165   | 189   |
| Total suspended solids (tonnes)   | <b>252</b>   | 295   | 294   |
| Soluble salts discharged (000s tonnes)                                  | <b>122</b>   | 118   | 125   |
| Direct discharge of uncontaminated cooling water (million cubic meters) | <b>19.1</b>  | 19.0  | 20.5  |

## Non-financial performance summary

### Sustainable operations continued

| Reporting period October 1 – September 30        | 2017        | 2016 | 2015 |
|--|-------------|------|------|
| <b>Waste</b>                                     |             |      |      |
| <b>Hazardous waste intensity (g/\$sales)</b>     | <b>14.3</b> | 15.2 | 14.4 |
| Hazardous waste (000s tonnes)                    | 181         | 195  | 193  |
| Recycled and re-used (000s tonnes)               | 85          | 88   | 95   |
| Incinerated (000s tonnes)                        | 81          | 83   | 83   |
| Landfill (000s tonnes)                           | 1           | 10   | 1    |
| Other (000s tonnes)                              | 14          | 14   | 14   |
| Hazardous waste by type:                         |             |      |      |
| Chemical   | 58%         | 56%  | 55%  |
| Solvents   | 36%         | 36%  | 36%  |
| Other  | 6%          | 8%   | 9%   |
| <b>Non-hazardous waste intensity (g/\$sales)</b> | <b>9.4</b>  | 9.1  | 9.7  |
| Non-hazardous waste (000s tonnes)                | 119         | 117  | 130  |
| Recycled and re-used (000s tonnes)               | 87          | 87   | 96   |
| Incinerated (000s tonnes)                        | 4           | 5    | 3    |
| Landfill (000s tonnes)                           | 19          | 17   | 21   |
| Other (000s tonnes)                              | 9           | 8    | 10   |
| Non-hazardous waste by type:                     |             |      |      |
| Plant and seed waste from seed sites             | 63%         | 58%  | 58%  |
| Inerts   | 5%          | 9%   | 8%   |
| Packaging materials                              | 5%          | 5%   | 6%   |
| Household  | 5%          | 5%   | 4%   |
| Other  | 22%         | 23%  | 24%  |

### Environmental compliance

|   |   |   |   |
|---|---|---|---|
| Significant unplanned releases <sup>1</sup> | 0 | 0 | 3 |
|---|---|---|---|

- <sup>1</sup> Releases that escape beyond the site boundary and cause either environmental impact and/or concern from neighbors and regulators  
<sup>2</sup> New KPI introduced in 2016 to capture compliance training  
<sup>3</sup> Policy on biotechnology and regulatory compliance reporting was revised in 2017. New KPI represents all trail locations covered by country specific regulatory compliance programs whether they require a permit or not  
<sup>4</sup> Increase in Employee wages and benefits mainly reflects payments to settle share incentive plans in accordance with the terms of the ChemChina takeover transaction  
<sup>5</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). The decrease in Payments to governments mainly reflects lower income tax payments during the period  
<sup>6</sup> Consists of expenditures for dividends, share repurchases (excluding those for employee share plans) and interest on debt. The reduction in Payments to providers of capital mainly reflects lower dividends payments. The dividend paid in the current period was a special dividend as a result of the ChemChina Tender Offer being declared successful  
<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

### Business integrity

| Reporting period October 1 – September 30                      | 2017  | 2016  | 2015 |
|--|-------|-------|------|
| <b>Corporate conduct</b>                                       |       |       |      |
| Compliance cases reported                                      | 215   | 214   | 196  |
| Leaders engaged in Leader-Led Compliance Sessions <sup>2</sup> | 2,263 | 1,741 | –    |
| Completion rate <sup>2</sup>                                   | 95%   | 95%   | –    |

### Security management

|  |     |     |     |
|--|-----|-----|-----|
| Sites included in Syngenta Security 360° Program                           | 129 | 122 | 117 |
| Product Security cases   | 723 | 761 | 677 |
| Suspect counterfeit Crop Protection product seized by authorities (tonnes) | 541 | 326 | 323 |
| Suspect counterfeit Seed product seized by authorities (tonnes)            | 93  | 615 | 91  |

### Animal testing compliance

|   |    |    |    |
|---|----|----|----|
| Management system audits performed in contract laboratories | 17 | 14 | 13 |
| Management system non-compliances found                     | 0  | 0  | 0  |

### Biotechnology and regulatory compliance

|   |       |       |       |
|---|-------|-------|-------|
| Employees completing trial regulatory compliance training                               | 1,426 | 1,378 | 1,627 |
| Field trial locations planted under country regulatory compliance programs <sup>3</sup> | 299   | 307   | 375   |

### Economic value shared

|   |        |        |        |
|---|--------|--------|--------|
| Economic value shared (\$m)                   | 12,095 | 12,350 | 13,440 |
| Payments to suppliers                         | 7,508  | 7,301  | 8,453  |
| Employee wages and benefits <sup>4</sup>      | 3,099  | 2,801  | 2,725  |
| Payments to governments (taxes) <sup>5</sup>  | 241    | 400    | 432    |
| Payments to providers of capital <sup>6</sup> | 593    | 1,263  | 1,223  |
| Capital expenditure                           | 631    | 561    | 583    |
| Corporate community investment <sup>7</sup>   | 23     | 24     | 24     |

# Independent Assurance Report on the Syngenta Non-financial Reporting 2017

To the Board of Directors of Syngenta AG, Basel  
We have been engaged to perform assurance procedures to provide assurance on the Non-financial performance summary of Syngenta AG ('Syngenta') included in the Sustainable Business Report 2017 ('Report').

## Scope and Subject matter

Our assurance engagement and the related levels of assurance focused on the data and information disclosed in the aggregated non-financial reporting of Syngenta for the financial year ended December 31, 2017.

## Reasonable Assurance

The following subject matter contained in the Report is within the scope of the reasonable assurance:

- ▶ The application of the Syngenta reporting guidelines for the non-financial reporting published on The Good Growth Plan Progress Data website; and
- ▶ The internal reporting system and procedures to collect and aggregate the non-financial data for the six Good Growth Plan commitments on page 41; and
- ▶ The data and information in the Non-financial performance summary, in all material aspects, on page 41, of the Report.

## Limited Assurance

The related Non-financial performance summary disclosed, in all material aspects, on pages 42 to 44 of the Report is within the scope of the limited assurance.

Our assurance procedures do not cover the indicators on payments to suppliers, employee wages and benefits, payments to governments and providers of capital, and capital expenditure presented in the related Non-financial performance summary on page 44 of the Report.

## Criteria

The reporting criteria used by Syngenta are described and disclosed on The Good Growth Plan Progress Data website and in the internal non-financial reporting guidelines.

These define those procedures based on the Standards of the Global Reporting Initiative (GRI) published in 2016, by which the non-financial performance data are internally gathered, collated and aggregated.

## Inherent Limitations

The accuracy and completeness of non-financial performance indicators are subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. Accordingly, our assurance report should therefore be read together with the related reporting criteria.

## Syngenta's Responsibilities

The Board of Directors of Syngenta AG is responsible for both the subject matter and the reporting criteria as well as for the entire reporting process of the selected information in accordance with the criteria. This responsibility includes the design, implementation and maintenance of related internal control relevant to this reporting process that is free from material misstatement, whether due to fraud or error.

## Our Responsibility

Our responsibility is to perform a limited or reasonable assurance engagement to express an opinion on positions in the related Non-financial performance summary on pages 41 to 44.

We planned and conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE 3000) (revised) 'Assurance engagements other than audits or reviews of historical financial information'. This standard requires that we plan and perform the assurance engagement to obtain reasonable or limited assurance on the identified sustainability information prepared, in all material aspects, in accordance with Syngenta's internal policies and procedures.

A limited assurance engagement under ISAE 3000 (revised) is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the

assessed risks. Consequently, the nature, timing and extent of procedures for gathering sufficient appropriate evidence are deliberately limited relative to a reasonable assurance engagement and therefore less assurance is obtained with a limited assurance engagement than for a reasonable assurance engagement. The procedures selected depend on the assurance practitioner's judgment.

## Our Independence and Quality Control

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.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

## Summary of work performed

Our assurance procedures included the following work but are not limited to:

- ▶ Evaluation of the application of group guidelines;
- ▶ Visits of different sites and offices for various areas in India, South Korea and Switzerland selected based on quantitative and qualitative criteria;
- ▶ Testing the specified performance indicators on a sample basis for evidence supporting the Non-financial performance summary relative to completeness, accuracy, adequacy and consistency;
- ▶ Reviewing the documentation supporting relevant data on a sample basis, including management and reporting structures and documentation;
- ▶ Reviewing the management and reporting processes. Assessing the consolidation process of data at the group level.

We have not conducted any work on data other than outlined in the subject matter as defined above. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusions.

## Reasonable assurance conclusion

In our opinion,

- ▶ The Good Growth Plan guidelines as published on The Good Growth Plan Progress Data website are applied, in all material aspects; and
- ▶ The internal reporting systems to collect and aggregate The Good Growth Plan data are functioning as designed and provide an appropriate basis for the reporting on page 41; and
- ▶ The data and information disclosed in the Non-financial performance summary in the Report on page 41 give a fair picture of Syngenta's non-financial performance.

## Limited assurance conclusion

Based on our work performed on the related Non-financial performance summary nothing has come to our attention causing us to believe that the disclosed data and information in the related Non-financial performance summary in the Report on pages 42 to 44 does not give a fair picture of Syngenta's non-financial performance, in all material aspects, in accordance with the reporting criteria.



PricewaterhouseCoopers AG  
Zurich, 16 April 2018  
Gerd Tritschler  
Konstantin Meier



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For the business year 2017, Syngenta has published the Sustainable Business Report 2017 which includes information about our non-financial performance.

The Sustainable Business Report was originally published in English.

This publication is available on the Internet:  
[www.syngenta.com](http://www.syngenta.com)

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Syngenta supports the 10 principles of the United Nations Global Compact through an established commitment to Corporate Responsibility and ongoing implementation of policies on human rights, fair labor, environmental protection and anti-corruption.



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