#### 2014 Sustainability Report





#### **Our Sustainability Report**

This report provides an overview of FMC's 2014 sustainability highlights. It complements the more detailed information and Global Reporting Initiative (GRI) Index appearing online at fmcsustainability.com/gri\_index. Together, this report and the web-based content fulfill the requirements of GRI's 3.1 Guidelines at a self-declared B Application Level.

FMC operated three businesses as of December 31, 2014 – FMC Agricultural Solutions, FMC Health and Nutrition, and FMC Minerals. Our sustainability results reflect the performance of these businesses and, where indicated, the contract manufacturers working with FMC Agricultural Solutions. In 2014, we announced our intention to purchase Cheminova A/S, a multinational crop protection company based in Denmark, and divest our Alkali Chemicals business. Those transactions were completed in April 2015 and therefore are not reflected in this report.

What's in the Report: Table of Contents



When FMC began formal sustainability

reporting we identified five guiding principles as the foundation of our commitment. In this, our fourth report, we have again structured our discussion of initiatives and results according to these five principles.



What's on the Website: Detail, Data and GRI Index



#### www.fmcsustainability.com



#### Web Link Icons

Links to additional information are interspersed throughout this text. When you see one of these "web link" icons with a number inside, simply visit the URL above and enter the number or click on the link from the PDF version of our report to find the information you're seeking.



#### Online Data Center

The Data Center contains the key performance indicators in this report, plus additional data, graphs and explanatory detail.



#### **Online GRI Index**

The Index incorporates responses to GRI questions as well as web links to specific indicator information. 2



#### **Detailed Information**

Our sustainability website provides more information on a range of topics. We invite you to use these online links for additional details about significant topics. Among the topics you will find online are:

**3** FMC Sustainability Principles

- 4 Major Global Challenges
- 5 Materiality Assessment
- 6 Stakeholder Engagement
- 7 Sustainability Governance Structure
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- **9** Codes of Conduct and Corporate Policies
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For more information about FMC sustainability, please contact Linda Froelich, Global Sustainability Director, at sustainability.info@fmc.com.

# Embracing Opportunities for Tomorrow

When we began our journey to accelerate and broaden our sustainability efforts in 2011, we committed to coordinate them at an enterprise level. As we near the end of our first goalsetting period we have made progress with a more focused approach to sustainability.

Sustainability is integral to FMC's success. Through our Agricultural Solutions and Health and Nutrition businesses we help meet the food and nutrient needs of a growing world population. Our Lithium business addresses climate change concerns through advanced technology for energy storage and lighter weight materials for aircraft manufacturers.

In our fourth sustainability report, we critically evaluate our progress against the goals we set in 2011: Safety - reduce our Total Recordable Incident Rate (TRIR) by at least half; Innovation - invest 50 percent of our research and development spending on projects that deliver a sustainability advantage; and Community - achieve a score of at least 90 on our global Community Engagement index.

Safety continues to be our top priority at FMC. Over the past several years, we have steadily improved our recordable incident rate and have been well on our way to achieving our goal. However, in 2014 we experienced a slight increase in incidents compared to 2013. We will focus this year on returning to the steady progress achieved in 2011-2013.

FMC fosters a culture of innovative thinking. I am pleased to report that in 2014 we surpassed our sustainability innovation goal and invested 74 percent of our R&D dollars on projects that positively impact the major global challenges. The impact of these investments is reflected in the marketplace, which has responded favorably as we recorded a 17 percent increase in sales of products with a sustainability advantage this year.

I am very proud that we exceeded our community engagement goal by achieving an index score of 96 in 2014, a year ahead of schedule. We recognize the importance of being a good neighbor, doing our part as a corporate citizen, and building mutual understanding and solid relationships. I congratulate our many talented employees who took the goal to heart and helped to improve the welfare of the communities where they work and live.

2014 was a pivotal year in the transformation of FMC. Our goal was to achieve a greater focus as an agricultural, health and nutrition company. To accomplish this, we divested our Peroxygens business, prepared to sell our Alkali business and announced plans to acquire Cheminova, a global supplier of quality crop protection products. Cheminova shares our values and commitment to sustainability. We believe that with the completion of these portfolio changes, FMC is well equipped to drive sustainability for the long term. To further emphasize our commitment to human rights, fair labor, the environment and anti-corruption, FMC has become a signatory to the United Nations Global Compact.

Sustainability leadership requires a continuing focus and commitment to integrate sustainability principles into our innovation, operations, and business practices. We thank all of our employees and stakeholders who have contributed to advancing sustainability at FMC. Together we are embracing the opportunities available to us to benefit current and future generations.

Pierre Brondeau President, CEO and Chairman of the Board

#### **Organizational Profile**

FMC Business Groups & Product Lines	FMC Agricultural Solutions	FMC Health and Nutrition	FMC Minerals*
Main Product Lines	Insecticides, herbicides, fungicides, biologicals	Microcrystalline cellulose, carrageenan, alginates, natural colorants, omega-3 fish oil	Soda ash, lithium hydroxide, butyllithium
2014 Revenues	\$2,174 million	\$828 million	\$1,036 million
% of FMC total	54%	21%	25%
2014 Economic Highlights (in millions)		Revenue by Customer Location (in millions)	
Income Stateme	nt Data		



\*FMC Minerals during 2014 was comprised of two businesses: Alkali Chemicals and Lithium. Alkali Chemicals' financial results are included in all data appearing in this 2014 report. The sale of that business was completed on April 1, 2015 and subsequently, FMC Minerals was renamed FMC Lithium.

#### **Major Global Challenges**

FMC embraces the opportunity to influence some of the most profound challenges facing society and our planet. We continually seek ways to apply our advanced technologies, innovative products and scientific capabilities to help make the world a better place today, tomorrow and in the future. Our businesses have a positive impact on:

See page 3 for more on framing our call to action on these major global challenges.

<u>Scarce</u> <u>Resources</u> 18	A growing population is increasing the demand for energy, water and other basic resources.
<u>Climate</u> <u>Change</u> 19	As efforts to cope with greenhouse gas and other emissions become more aggressive, the impact on high-intensity industries will increase.
Environme Conscious 20	ental There is a growing desire for increasingly safe and environmentally benign materials.
<u>Food &amp; Hea</u> Expectatio	A growing population will require increased food production, accessible healthcare and more nutritious foods to meet the rising expectations of an expanding middle class.
<u>Land</u> Competitic	Increased agricultural efficiency will be required to produce crops, biofuels, biotextiles and bioplastics.

**E** See our global challenges in action. **17** 

2 EMBRACING OPPORTUNITIES FOR TOMORROW

## Framing our Call to Action

As the world's population grows rapidly, so does the pressing demand for more food, housing, land and natural resources, including energy and water. We all share the need for more nutritious foods, greater access to healthcare, safe drinking water and a healthy planet. Our urgent call to action is to continually innovate in ways that advance food production, improve human health and nutrition, and respect the environment. Throughout this publication, we report on FMC's progress in addressing global challenges as our sustainability journey continues with our stakeholders.



## Embracing Innovation at FMC

By aligning both product and process R&D with sustainability, we have the potential to positively influence these major global challenges and embrace opportunities for tomorrow. Two of our key innovation drivers are **biologicals** and a **life cycle assessment program**.

#### PRODUCT-BASED INNOVATION

#### Biologicals

Biologicals are materials derived from renewable plant and/or microbial sources that advance agricultural solutions.

Biologicals...



Improve soil health



Increase growth of plants



Increase crop resistance to stressed environmental conditions.

For more information on biologicals, see page 19.

#### PROCESS-BASED INNOVATION

### Life Cycle Assessment (LCA)

An LCA quantifies a specific product's environmental impacts throughout the resource chain.



For more information on LCAs, see pages 18-19.

## **Embracing Our Opportunities**

# FMC is in a unique position to contribute to a more sustainable world.

FMC is dedicated to feeding the world and protecting the health and wellbeing of people while caring for our planet. We are committed to greater transparency about FMC's challenges and accountability for our impacts, which is why we are embedding sustainability deeper into our organizational mindset and metrics. We embrace opportunities for continuous improvement and adding value where it is needed most.

#### **Materiality Process**

The "materiality assessment" is a process for identifying the sustainability issues that are most important for FMC to assess, measure and report. To determine materiality, the cross-functional materiality team – comprised of representatives from our Sustainability, Government Affairs, Internal Audit, Communications, Finance and Legal groups – evaluated the significance of over 60 issues relevant to the chemical, agricultural and mining industries. They assessed the significance of each issue, how the issue affects stakeholders' perceptions and decisions, and how FMC can influence the issue. Each issue was scored according to five categories: financial impact and risk, regulatory and policy drivers, peer-based norms, stakeholder concerns and societal trends, and opportunities for innovation. FMC recognizes that we have an opportunity to improve our materiality assessment by expanding our incorporation of external stakeholder input, which we plan to do in 2015. See the table below for more information on materiality.

#### Stakeholder Engagement

FMC's primary stakeholders are employees and prospective employees, customers, suppliers, investors, communities, non-governmental organizations (NGOs) and governments. We obtained their perspectives through one-on-one interviews conducted by an independent third party. Interviewers sought feedback on our 2013 report and input on concerns from a small sample of Europe- and U.S. based employees, customers, suppliers and NGOs. We undertook a similar review each of the last two years in order to improve the relevance of our sustainability reporting.

Based on stakeholders' input, we continue to add data and details about our performance results when available. We have also made an effort to be more precise about our approach to environmental responsibility, product stewardship and how we address major global challenges.

#### 2014 Materiality Assessment

The chart shows our materiality priorities, changes compared to the previous year, and where they are discussed in this sustainability report. Any issue that scores higher than a 36 is a material issue.

#### Category Key



MATERIAL ISSUE	PAGE #	2013 SCORE	2014 SCORE
Product Environmental Impacts	19	46	48
Product Safety and Effects on Human Health	10-11	48	48
Green Chemistry and Products	16-17	38	46
Global Food Supply	14	43	43
Health and Safety	6-11	43	43
Global Standards and Codes of Conduct	9	42	42
Financial Performance	2	38	41
Innovation in Products and Services	17	38	40
Product Stewardship	10-11	40	40
Public Access/Safety	28-29	40	40
Labor Relations	9	39	39
Sustainable Business Strategy	1	37	39
Climate Change	22-27	38	38
Resource Efficiency	24-27	37	38
Brownfields	24	37	37
Energy Use and Type	26	34	37*
Human Rights	14	37	37
Procurement	14, 23, 27	36	37
Water Use and Type	24	26	37*
Community Relations and Good Neighbor Policies	28-33	36	36
Green Manufacturing	22-27	36	36
Serving Emerging Markets	16-17, 20	36	36
Stakeholder Engagement	4	30	36*
Waste/By-Products/Effluents	25	36	36

\*Asterisks indicate what became newly material in the 2014 assessment

#### **Progress Report: Goals and Targets**



\*\*Our 2014 Annual Report reported that FMC reduced its overall injury rate by half, reflecting the exclusion of Alkali Chemicals.





#### 2015 Targets

- Integrate FMC and Cheminova sustainability programs.
- Train representatives from each Cheminova manufacturing site on FMC sustainability reporting process.
- Establish 2020 sustainability goals and targets for innovation, operations and business practices.
- Conduct Life Cycle Assessments of five additional products; update the previously conducted LCAs.
- Complete social responsibility assessments at four sites.
- Continue to integrate sustainability into FMC by joining Field to Market, a partnership for increasing sustainable agriculture.

- Benchmark leading sustainability practices within and outside the chemical industry.
- Conduct an assurance readiness assessment on our 2014 Sustainability Report to prepare for external assurance on the 2015 Sustainability Report.
- Complete Manufacturing Excellence program at Uberaba, Brazil, FMC Agricultural Solutions site.
- Update Water Risk Assessment conducted in 2013 and include Cheminova sites.
- Conduct an energy assessment by EMCOE at our Cork, Ireland, FMC Health and Nutrition facility.

FMC embraces continuous improvement in safety planning, preparation and implementation. Our systematic approach encourages careful attention to safety in all facets of people's lives.

# Fostering Safety

"Safety to me is all about taking care of people's health and well being, regardless of whether the people are family, friends, colleagues or even people you don't know. FMC has robust procedures, rules and Environmental, Health and Safety standards because ensuring the safety of everyone around us will always be most important to us."

**John Bell,** EHS Operations Manager, FMC Health and Nutrition, Bromborough, United Kingdom

#### **Increasing Safety Awareness**

Building safety skills and maintaining a focused, attentive mindset are the foundation of our approach to providing a sound workplace. All manufacturing sites have adopted "One Plan," our safety excellence framework. It includes effective in-person safety discussions on the shop floor, safety training in life critical standards, hazard and risk avoidance, and on-boarding programs for new employees. The more tangible FMC can make safety, the safer our employees will be. That is why we maintain a sharp focus on safety through our highly visible TH!NK. SAFE. commitment. With frequent messages targeting the risks employees face at work, at home, and on the road, we raise not only their awareness of hazards but also offer practical tips and solutions to avoid many types of incidents.

FMC has steadily improved our recordable incident rate for the last five years. However, in 2014 our recordable incident rate did not decrease. We are taking specific actions to understand how we can continue to drive safety performance in all parts



of our company. Analysis of our mid-year results revealed that the uptick in incidents was attributable in part to unsafe mindsets such as feeling stressed, tired, frustrated, overconfident or rushed. To empower employees to become more aware of their state of mind and the potential risks associated with it, we launched a video and poster series highlighting a range of situations that affect safety and suggesting simple actions that help avoid incidents.

With TH!NK. SAFE. as a springboard for ongoing safety conversations, we believe that our efforts to communicate and implement creative and impactful approaches to safety awareness will lead to better long-term performance.

#### **Sharing Knowledge for Improved Performance**

Strong leadership and increased cooperation across our manufacturing operations have led to greater sharing of experience, skills and successes. This has enabled us to leverage knowledge and incorporate best practices more readily.

Our Minera del Altiplano (MdA), FMC Lithium facility in Argentina dramatically improved safety performance when its leadership focused on developing and implementing a rigorous new safety One Plan. Implementation included:

 A highly disciplined approach to increasing dialogue about human behavior and staying safe. Identification of and communication about the "five critical behaviors" that most frequently lead to incidents – a best practice previously employed at FMC's Green River, Wyoming, site – has raised safety consciousness at every level of the organization.



#### Focused on Reducing our Total Recordable Incident Rate

The Total Recordable Incident Rate (TRIR) is a standard measure of occupational safety that is calculated as the number of injuries divided by the number of man-hours worked, normalized to 200,000 hours per year.

	2011	2012	2013	2014
Total Recordable Incident Rate (TRIR)	0.73	0.59	0.41	0.51
Lost Workday Case Incidence Rate	0.28	0.18	0.11	0.19
Work-related fatalities	1	0	0	0
Number of significant process safety incidents (defined as American Chemistry Council tier 1 & 2)	0	0	0	0



# Our annual survey of TH!NK. SAFE.'s effectiveness showed very positive engagement in the program, including:





In the non-manufacturing workforce, there was an **11 percent increase,** from **71 to 82 percent,** in those who found it relevant. This result indicates the value of FMC's inclusive approach to protection of all employees, contractors and guests at all facilities globally.

#### Safety and Gloves Go Hand in Hand

family.

understood and

were acting on the

safety messages.

The success of the Glove Use Standard is tangible. Designed to reduce hand injuries and guide employees in the selection and use of gloves for specific tasks, the Standard stipulates that gloves must be worn by all personnel, contractors and visitors within all manufacturing process areas, maintenance areas, site work areas, warehouses, and labs.

As part of the initiative, FMC sites evaluated the types of gloves needed for employees to perform specific jobs. For example, working with sharp sheet metal requires thick gloves, while carpenters use more pliable leather gloves that protect against cuts and bruises. In tandem with this Standard, an Open Blade Standard was established to limit employee exposure to cuts.

Together the two initiatives have yielded solid results. In 2013 there were 10 hand injuries out of 31 total recordable injuries. In 2014 there were just three hand injuries out of 38 total recordable injuries.



- Engaging all front line leaders at MdA in a hands-on training program that focused on the principles and culture of a safe workplace. The program was so successful that it was also rolled out at the Bessemer City, North Carolina, facility.
- Cross-fertilization of technical skills and knowledge between operations. Engineers from the Green River, Wyoming, Alkali operation visited MdA to work side by side with FMC Lithium engineers on process engineering and safety assessments. This collaboration led to increased transparency, open communications and improved problem solving across our FMC Minerals organization.
- Analysis of near-miss reporting to identify focus areas before they become recordable injuries.

We emphasize safety best practices throughout FMC.

- Thirteen of FMC Health and Nutrition's 15 manufacturing facilities were injury-free in 2014. Our goal is a perfect record and we are building on best practices from every part of our organization. These include the hands-on interaction of senior leaders with workers within the plant and our emphasis on safety awareness during the integration of acquired companies.
- FMC Agricultural Solutions had the lowest recordable incident rate of all our operating businesses. A major contributing factor was the implementation of six new safety standards and the assessment of non-standard tasks.

Our safety practices dictate that any incident that occurs is followed by a thorough investigation into identifying root causes and future preventative measures.

• We conducted a thorough incident investigation for a fire at the Middleport, New York, facility.

# One Plan







Fortunately, no one was injured in this incident. We are assembling and assessing the learnings from the incident and will implement a plan to avoid any similar event from reoccurring in Middleport or at any of our operations.

 Unfortunately, four FMC employees were injured in 2014 in an automobile accident. The safety standard of the vehicle, as well as seat belt use and good driving practices, minimized injuries, allowing all people to recover fully. As a result, FMC analyzed our entire fleet of company vehicles and found they meet or exceed the safety standards of the vehicle involved in the accident. We are also modifying our travel and safety policies to establish mandates for rental vehicles to ensure that they meet the highest standards established by the National Transportation Safety Board. The goal is to protect our people from unsafe drivers and other road and transportation risks.

We introduced a Risk Tolerance Model on a worldwide basis to enable us to determine where there are unacceptable safety gaps. Every facility is now responsible for assessing safety risk in terms of:

- Identification of a hazard: "Do I recognize the risk?"
- Understanding and evaluating the risk of an incident: "Do I understand the risk?"
- Determining whether the level of risk warrants corrective action: "Do I accept the risk?"

FMC recognizes the right of employees to engage in collective bargaining and works closely with our union partners on safety at several locations globally. For example, at our Middleport, New York, FMC Agricultural Solutions site, union and plant leaders meet monthly as a joint management team and joint EHS team.

#### **Implementing Standards of Excellence**

When establishing safety standards, FMC takes a global perspective and considers the external social and political environment of our people and communities. Even in countries that have fewer regulatory requirements, we apply universal safety requirements for key life critical tasks in our operations.

Our Management of Change Standard requires FMC's manufacturing operations to follow a formal, written protocol when making process, quality or organizational changes. Its purpose is to ensure that changes are properly identified, evaluated, approved, implemented and documented. Implementation of the Standard began in 2014 with gap assessments in site procedures.

We are an active member of the American Chemistry Council (ACC), and in 2014 our CEO, Pierre Brondeau, was selected to serve as president of the organization. He will maintain this board leadership role through 2015.

The new ACC Responsible Care® Process Safety Code includes a "company commitment to set process safety expectations, define accountability for process safety performance and allocate adequate resources to achieve performance expectations."<sup>1</sup> After revising our corporate process safety program in 2014, FMC will conduct a gap assessment in 2015 and develop a plan for each operating site to fill any identified gaps.

FMC wants its sites to be as safe as possible for all workers. We issued a Contractor Safety Standard for the selection and management of contract companies and their employees while working at an FMC facility. Meeting the Standard has been integrated into Capital Deployment Process considerations, and contractors are required to be fully compliant with the requirements by early 2015.



These standards complement the priorities addressed in our upgraded safety programs and ongoing TH!NK. SAFE. awareness campaign. In combination, we expect our multi-faceted efforts to continually drive us toward a safer workplace and lifestyle.

#### **Fostering Product Stewardship**

Responsible product stewardship is a significant facet of FMC's safety commitment. It is integral to our value chain relationships, as we go beyond our own strict protocols to ensure that customers are trained and upto-date on requirements and best practices in handling, usage, transport and disposal of any hazardous product. As partners with our customers, we encourage them to raise questions and bring any issues to our attention so we can promptly address them.

In 2014, FMC confirmed with ACC our implementation of the first three elements of the Product Safety Code of Management Practices: leadership commitment, accountability and management, and prioritization of products. The Product Safety Code provides Management Practices so that companies can "evaluate, demonstrate and continuously improve their product safety performance, while also making information about chemical products available to the public." In conjunction with our Responsible Care commitment, we will implement the remaining management practices in 2015 and 2016.

Our FMC Agricultural Solutions business assesses risks throughout each product's life cycle. All FMC products have undergone significant scientific testing and analysis of possible impacts on public health and the environment. This testing is followed by stringent regulatory approval processes in all countries where our products are sold.

There are some areas where farmers may be less familiar with proper usage protocols. This is why



FMC is committed to proper product stewardship throughout our entire value chain. Here, Elenice Franco, FMC sales representative, works with a potato grower in Brazil.

FMC Agricultural Solutions is expanding training programs in several regions around the world and improving our assessments of exposure incidents. In 2014, we:

- Continued to provide training to approximately 250 distributors and retailers in China, Indonesia, India and several countries in Europe and Latin America on best practices in agriculture and responsible product use.
- Joined the chemical emergency call system for transportation, handling and exposure incidents in China.
- Increased the total number of growers receiving hazardous material training by over 40 percent in Brazil and Mexico, and launched a mobile phone application in Brazil to provide rapid updates on safety data sheets.
- Conducted a Process Risk Analysis and Training program for contract manufacturers on five new products being introduced in Latin America.



#### Nature-Based Carrageenan: Safe for Infants

Carrageenan, a soluble fiber derived from red seaweed, is a natural food ingredient that has been safely consumed for hundreds of years. In 2014, carrageenan reached a milestone when it was identified as an acceptable ingredient in infant foods. The Joint FAO/WHO Expert Committee on Food Additives, an international expert scientific committee under the auspices of the United Nations, concluded that the use of carrageenan in infant formula at concentrations up to 1000mg/L is not of concern. This conclusion shows great confidence in the safety of this substance.

Reinforcing the safety message, the World Health Organization has placed carrageenan in the best possible category for food additives. Regulatory authorities in every region of the world agree about carrageenan's safety. Countries including the U.S. also have approved its use in organic foods.

• Conducted outreach to 18,000 children through various training programs in Latin American farming communities to help them understand that chemicals are not for play and to educate their parents about secure storage and responsible use.

Over the past several years, FMC has reduced the number of countries where Furadan is sold by two thirds. Over the next five years, our plan is to continue to reduce the number of countries where we sell this older broad spectrum insecticide and replace it with newer, more sustainable products. We are also upgrading the stewardship programs in countries that still use Furadan due to a lack of viable alternative products.

In North America we reinforced our product stewardship with commitments including:

- CropLife Stewardship First, an initiative from CropLife America in which FMC has committed to the guiding principles on container management, warehouse accreditation and responsible use education.
- The "Guide to Seed Treatment Stewardship," an industry effort in conjunction with the American Seed Trade Association and CropLife America in which FMC provides support for training materials to promote the safe handling and use of treated seeds.

Product stewardship for the FMC Lithium business involves maintenance of strong regulatory compliance systems and upgrades as well. The newest product in our Lithium pipeline is Stabilized Lithium Metal Powder (SLMP), a highly volatile substance for which we have extensive handling and storage protocols for ourselves and everyone who comes in contact with the product.

Many of our FMC Health and Nutrition products are derived from seaweed. These products connect us closely with the world's oceans and provide a strong business rationale for conscientious resource management. To ensure a healthy marine environment and supply of seaweed, we work with seaweed harvesters and our suppliers on production methods that verify marine life is not disrupted, protect the environment and sustain the community. In Norway we helped launch a trawling rotation system at the start of our seaweed supply chain. We are further developing best practices for sustainable seaweed through a program in partnership with the New England Aquarium.

Our FMC Health and Nutrition business is implementing numerous changes to comply with evolving regulations. These include the requirements of Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Classification, Labeling and Packaging (CLP) and Globally Harmonized System (GHS). In addition to the numerous data sheets and labeling changes needed for our products, we are updating package labels for all products containing combustible dust for 2015 compliance. For more information on FMC's efforts to protect biodiversity, see 24.



Stephen Sutton, Operator Mechanic II at FMC Lithium in Bessemer City, North Carolina, checks proper fit of his aluminized suit and additional personal protective equipment for work in a metal dispersion area.

FMC embraces continual development of a vibrant, well-rounded workforce as we evolve and grow. Ongoing training and involvement in new experiences helps people build the skills needed for success.

# Empomening Talent

"My FMC colleagues were so supportive of my pursuit of an MBA that I couldn't wait to give back! I jumped at the chance to encourage W.B. Saul High School's diverse student population to build careers in the agriculture industry and was delighted by their receptivity to the range of rewarding opportunities in this field."

**Rashida Mark**, Financial Analyst, FMC Agricultural Solutions, Philadelphia, Pennsylvania, United States

#### **Building Competencies, Advancing Expertise**

FMC encourages our people to develop the enhanced skill sets that are required now and in the future. Our global talent management strategy is evolving and incorporates key elements of success to enable development, performance and career satisfaction. We support educational and experiential learning opportunities including participation in industry organizations and conferences, as well as continuing education and certification classes. To facilitate our building talent from within, we piloted three new or enhanced talent management programs in 2014:

• A new approach to Talent Reviews allows us to evaluate the depth and breadth of our employees at every level of our organization. Built to sustain a disciplined and standardized approach globally, we can better identify individual development needs and potential organizational issues, and then take the necessary actions to build solid talent pipelines. The process ensures that we have succession plans in place for leaders and are strengthening our company for the future.



- Strategic Leadership was a two-and-a-half day pilot development program for director-level employees. Participants engaged in group and individual exercises, short lecture sessions, webinars and one-on-one coaching. Topics included leading change, global effectiveness and "authentic" leadership. The program concluded with insights from FMC's CEO. We are assessing the experience and content to improve future leadership development programs.
- The 360° Development Feedback process was also piloted in late 2014 with a small number of employees. This process was used to solicit developmental feedback from diverse stakeholders beyond the supervisor and included peers, direct reports and external customers. Participants received specific development suggestions from approximately 15 colleagues. In 2015 we will explore a broader rollout of this process.

This year, we reinforced our global perspective by harmonizing grade levels around the world. This new, universally consistent approach helps FMC enhance career mobility across geographies.

In addition to the benefits of structured development processes, FMC recognizes that employee learning takes place in everyday, on-the-job situations. As a result of the recent acquisitions, divestitures and other organizational changes at FMC, our employees have been exposed to many new experiences. For some, the changes represent positive opportunities to interact with and learn from new people, functions and organizations. For others, the shifts have been more challenging. We continually work to mitigate the inherent uncertainties that accompany change through multiple broad and targeted channels.



#### **Voluntary Turnover Rate**

Voluntary resignations, divided by average total number of employees

	2012	2013	2014
Globally	5.0%	6.1%	6.2%
Non-Exempt	5.9%	8.4%	7.5%
Hourly	2.3%	2.7%	2.1%
Exempt	5.9%	6.4%	7.4%

Non-exempt population: employees within a specific grade level range who are salaried but eligible for overtime pay.

Hourly population: employees who are paid based on a per-hour rate. Exempt population: employees who are salaried.



#### We Are Connected – 2014 FMC Social Media Review

FMC's increasing social media presence has broadened our appeal and increased our outreach to stakeholders, including prospective employees. FMC job vacancies are posted on LinkedIn, Twitter and Facebook.



twitter.com/fmccorp Launched December 11, 2014



facebook.com/FMCCorporation Gained 2,240 followers in 2014 28





youtube.com/fmccorpcomm Launched June 23, 2014 27

26



linkedin.com/company/fmc-corporation Gained 16,030 followers in 2014

29



#### **Highlighting Diversity and Respect**

Attracting women and minorities to our workforce is a priority. In order to attract and retain this talent pool we must differentiate FMC as an employer of choice and ensure that these constituents feel supported and valued.

FMC is addressing this head on by adding diversity measurements to our success standards. As we analyze the metrics and trends, we are identifying ways to achieve our goal of creating and sustaining a more diverse workforce. Our tracking now includes:

- Quarterly reviews with the executive team and business leaders to measure how many people meeting diversity criteria were interviewed for available positions.
- Measuring the population of women in our exempt (salaried) workforce worldwide on a quarterly basis.
- Tracking the population of people of color in the exempt workforce quarterly in the U.S.

To better serve the needs of our employees, we launched several initiatives that support a more welcoming environment. They include:

- Women's Initiative Network, an affinity group whose purpose is to support women's professional growth and FMC's success (see sidebar on page 15 for more information).
- Lunch with Millennials, an informal opportunity for peer-to-peer knowledge-sharing under the guidance of senior professionals. This initial endeavor reinforces our focus on people at early

stages of their careers. Recruiting and retaining millennial employees is highly competitive and it is an area where FMC is increasing its attention and investment.

• Civil Treatment Training, a program that focuses on diversity sensitivity and harassment avoidance. Launched in the U.S. with all employees being trained in 2014, the curriculum is being adapted for implementation in other regions and will be required of every member of our global workforce.

Our responsibility extends beyond FMC's door, which is why we added a supply chain-focused Human Dignity training program to our curriculum. Our goal is to ensure that FMC only works with responsible suppliers. Employees are being taught how to identify and respond to potential human rights violations in areas such as human trafficking, forced labor and inappropriate wages or working hours. It was rolled out corporate-wide in 2014, with expected completion in first guarter 2015.

To overcome talent shortages in STEM (science, technology, engineering and mathematics) fields, especially in agriculture, several of our community programs and on-site internships foster relationships with students who have potential to enter STEM careers. In the summer of 2014, for example, several college students gained valuable experience as interns in our FMC Agricultural Solutions business.





Part of FMC Lithium's quality assurance team in Bessemer City, North Carolina, are (left to right): Hui-Li Yang, research chemist III; Sandra Wingate, QA lab technician; and Alma Lindsay, senior research chemist.

#### **Women In Management**

<b>**</b> *	2013	2014
Percentage of women employed at FMC	23.7%	25%
Women in professional roles*	25.8%	26.3%
Women in senior management*	21.3%	21.3%

\*Exempt Workforce

Professional roles are defined by certain types of responsibilities or requirements, such as independent judgment and decision making that impact the business.

Senior management roles are those that have significant responsibility to oversee and direct a functional discipline or business area within FMC.

#### FMC Women, WINning Together

FMC's Women's Initiative Network (WIN) was formed in 2014 by women at senior levels of the company and is open to women at all stages of their careers. WIN's purpose is to help women develop leadership skills and share information to drive FMC's success. This affinity group will play an important role in enabling the company to cultivate and advance women in our organization.



WIN is comprised of four working groups, including: Leading Women, Work/Life Integration, Mentoring and Networking, and Career Management. Leveraging the collective knowledge of women across the organization, these groups are developing programs for mentoring, employee recruitment and retention, career development and cultural awareness.

FMC's female workforce in Philadelphia, Pennsylvania; Newark, Delaware; and Ewing, New Jersey, have participated in several WIN sessions. Several members have said that the newly formed network is already facilitating their engagement with people beyond their own functional areas and providing new opportunities to tap into a broader base of knowledge and experience.

In 2015, WIN events will include: a panel discussion with leading women in the organization, a pilot mentoring program, and breakfasts with topics such as networking and work-life integration. Through these and other events, WIN will serve as a development catalyst for female leadership across FMC. Based on our experience in 2015, we will explore ways to help local WIN chapters flourish globally across FMC.





FMC embraces innovations that enable us to make a positive difference. Our technologies help increase crop yields, protect health, enhance nutrition and improve the environment.

# Growing novation

"How does the Latin America Innovation Center help FMC Agricultural Solutions customers? Every day we explore new products and applications to increase productivity and reduce environmental impact. Our criteria require that new FMC products have a sustainability advantage, meet high safety standards and are supported with appropriate training in handling and disposal."

**Fernanda Nobre**, Formulation and Development Analyst, Latin America Innovation Center, Campinas, Brazil

870 million people worldwide, or 1 in 8, suffer from chronic undernourishment



#### Addressing Food Security Concerns

The United Nations estimates that nearly 870 million people, or one in eight, suffer from chronic undernourishment today. Eighty-five percent of these people reside in developing nations. With the global population expected to increase by 25 percent in the next 35 years, not only will many more people need to be fed, but there will be less farmland available for cultivation due to urbanization. Climate change will continue to have significant agricultural implications making the current food scarcity situation even more severe.



Increased agricultural productivity and greater access to nutritious diets are among the solutions needed to address food scarcity issues. Our focus is on understanding the needs and challenges of farmers as well as consumer companies that develop necessary food staples, energy solutions and health care products while preserving scarce environmental resources.

In agriculture, our innovations enable farmers to protect their crops and overcome insects, weeds and fungi that can seriously compromise their harvests. We do this responsibly, with products and processes that allow fruits, vegetables and grain crops to be grown to maturity. More abundant crop growth contributes to greater availability of food, and for many farmers it means a more sustainable livelihood.

FMC's naturally derived food ingredients enhance nutritional value, taste, texture and shelf life of diverse

foods. These characteristics are important in meeting the demands of a more urbanized society and growing middle class by increasing the choice, convenience and longevity of many foods. As the urban middle class grows, FMC is also working on innovative energy solutions that enable fuel-efficient vehicles and a renewable energy supply for an increased population.

#### **Enhancing Food and Nutrient Availability**

#### **FMC Agricultural Solutions**

FMC's Latin America Innovation Center opened in Campinas, Brazil, in 2014. It is our fourth Innovation Center, complementing our existing research and development (R&D) centers in Ewing, New Jersey; Shanghai, China; and Bangalore, India. The Latin America facility is the only center dedicated completely to the FMC Agricultural Solutions business. Over 50 percent of the space is dedicated to state-of-the-art laboratories which will initially

#### **R&D** Spend



In 2014, we had a 17% increase in R&D spend targeted to impact major global challenges.

#### **Sustainable Product Sales**

In 2014, we had a 17.5% increase in sales of sustainable products. A "sustainable product" is one that impacts one or more of the global challenges.





#### FMC Innovation Technology

In 2014, we launched the 3RIVE 3D<sup>™</sup> system which includes a new formulation and a new delivery system. This system allows in-furrow product application, or application directly into the soil with the seed, which provides advantages to farmers, including seedling defense and yield enhancement as well as more efficient use of product. The 3RIVE 3D application, an elastic foam, allows a grower to treat about 480 acres without stopping. This significant improvement in acres treated without stopping results in saving water, fuel, labor and time compared to current systems in the market.



FMC Agricultural Solutions produced a brief video describing the innovative features of 3RIVE 3D, viewable at www.tinyurl.com/nnrs69q.

focus on R&D for pesticides. Within two years we anticipate completing the addition of a microbiology laboratory for research into biological solutions.

FMC is investigating product concepts using standalone biological solutions as well as combinations of biologicals with synthetic chemicals. The use of both solutions in tandem can provide increased plant, pest and/or disease protection, and give farmers access to integrated plant management programs.

New biological product offerings are on the horizon. These products contribute to increased crop yields while reducing environmental impact. One product combines a soil insecticide used in U.S. corn production with a bio-stimulant to improve plant growth. The second product combines a biologically based fungicide to co-exist with synthetic fungicides providing exceptional plant protection. These products will be introduced into the marketplace in the next two years.



Fernanda Teixeira, communication manager, FMC Agricultural Solutions in Brazil, speaks at the inaugural ceremony for the Latin America Innovation Center in Campinas, Brazil – FMC's fourth global facility of its kind and the first devoted solely to agriculture.

FMC Agricultural Solutions launched over 75 new products in 2014 that are defined as sustainable based on our Product Stewardship and Sustainability Assessment (PSSA) evaluation. These products are being used in Asia, Europe, Latin America and North America and contribute significantly to our "sales of sustainable products" metric. Since 2011 we have used this formal PSSA tool to measure the impact of any new product or project under consideration. In 2014, FMC Agricultural Solutions upgraded its assessment tool to improve the rigor of its evaluation process. Based on feedback from the R&D teams that use the tool, questions were modified and improved to enhance the consistency of worldwide analysis.

To monitor the reduction of our products' impact over time, our company conducted Life Cycle Assessments (LCAs) on the active ingredients sulfentrazone and clomazone, which appear in many of our key agricultural products. Evaluation of the LCA results is proceeding throughout 2015 and will inform the direction of future R&D efforts.

#### FMC Health and Nutrition

We are satisfying consumer demand for more natural ingredients in food and health products by continually seeking ways to take the greatest advantage of natural, renewable raw materials. This year we developed and implemented a new process for increasing the yield of the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) extracted from sustainably managed anchovy populations by 15-20 percent. High concentrations of EPA and DHA are desired for their positive impact on cognitive and cardiovascular health. This new process enhances concentration levels of omega-3s and enables FMC to recover more EPA and DHA without generating any additional waste streams.



#### Assessing the Cumulative Impacts Across the Lifespan of Our Products

To better understand the collective impact of our products, FMC is conducting Life Cycle Assessments of its portfolio of customer solutions. By understanding the role of each individual step in the life cycle of each product, from raw materials to manufacture to use, we are better able to address the primary components of the product's overall impact. Such assessments also provide opportunities to collaborate across the value chain. We work with suppliers and customers to understand environmental effects, whether they involve energy efficiency at the manufacturing stage, specific materials used or other key drivers of impact.



#### **Biologicals Explained**

What are biological products? Biologicals are materials derived from renewable plant or microbial sources.

What makes microbes (or bacteria) an ecologically sound starting point for R&D? Bacteria are incredibly abundant in the ground. There are up to 10,000 bacterial species and over 100 million bacterial cells per gram of soil in and around plant roots.<sup>1</sup> Just like the microbes in our bodies, micro-organisms have similar beneficial roles in plants. Micro-organisms live in and on the plants, on the roots and in the soil, where they maintain a synergistic relationship with their "plant hosts." These microbes impart benefits such as faster seed germination, increased root development and uptake of water and nutrients, and increased plant vigor, biomass production, fruit growth, disease protection and resilience against conditions such as frost and drought.

**How does FMC find specific microbes of interest for crop protection?** At FMC's Center of Excellence for Agricultural Biosolutions at Research Triangle Park, North Carolina, we have isolated over 2,100 strains of bacteria for study, determining their potential beneficial performance through the Center's advanced screening process. Strains of interest progress into more extensive field screening before moving into large-scale field trials.

What are the advantages of using biologicals in agricultural chemical products? Biologicals improve soil health, foster seed germination, increase growth of plants, allow for better management of nutrients, fight diseases and insects, and increase crops' resistance under stressed environmental conditions. When certain biological material is combined with smaller doses of one or more chemicals, they can offer multiple modes of action, including the natural ability to respond to specific threats. When used as a part of integrated pest management, biologicals can help to decrease the risk of resistance against major chemical active ingredients.

Why is it necessary to use any crop protection chemicals when planting? Biological and synthetic-based chemicals are highly effective in protecting crops from disease, pests and weeds. Their use can also increase crop quality and yield. This is important because the world's growing population is experiencing food shortages that will only increase in severity as population grows. According to the United Nations World Food Program<sup>2</sup>, feeding a global population that is projected to reach 9 billion by 2050 will require that agricultural yields increase by 70-100 percent.

What is the difference between biologicals and genetic modification? In genetically modified crops, the DNA is modified to introduce a new trait to the plant that does not occur naturally. In the development of FMC's agricultural biologicals, there is no modification of the plant's or the microbe's genetic structure. We are drawing upon nature's natural potential to create solutions to improve plant health and productivity.

**Who stands to gain from the use of biologicals?** Consumers will see safer, more environmentally friendly options. Growers will gain new modes of action, little or no residues and better yields.

What is the future of biologically derived active ingredients in agriculture? Growers of fruits, vegetables, and row crops such as corn, wheat, soybeans, cotton and rice are seeking more environmentally friendly chemical solutions. Biologicals will also be increasingly used in private homes and gardens as well as professional applications including golf courses and landscaping.

<sup>1</sup>Source: American Society for Microbiology, *How Microbes can Help Feed the World* <sup>2</sup>Food and Agriculture Organization of the United Nations, *The State of the World's Land and Water Resources for Food and Agriculture* 



Shane Lewis, process operator at the FMC Health and Nutrition plant in Newark, Delaware, removes a sample of Avicel® for quality assurance testing.

#### **Responding to Consumer Preferences**

FMC Health and Nutrition research technologists leverage food science to help our customers respond to consumer choice and demand. For example, our customers sought to replace palm oil with sunflower oil in their confectionery foods, but faced challenges with texture and stability. FMC research scientists developed a new formulation of our Avicel® texturizers that allow these manufacturers to use sunflower oil while preserving consistency and remaining cost-neutral.

#### **Food Science Matters**

Food science – the study of the physical, biological and chemical composition of food and the practical application of the findings – helps feed a growing population worldwide. It involves maintaining and even enhancing the nutrients, taste, texture and longevity of foods under certain conditions. This, in turn, enables us to address some of the world's most pressing problems, beginning with working to meet the basic nutrition needs of people everywhere.

FMC food technology helps deliver vital nutrients in infant formulas, nut milks, yogurts and other products in a consistent way. It also keeps products stable in fluctuating temperatures, which can be a serious challenge as products are transported to markets in developing economies. Advanced technology behind FMC food science helps feed the world's growing and hungry population.

FMC leverages sound science to take the greatest advantage of available nutrients, enable foods to last longer, make good ingredients better and ensure the safety of every ingredient. Through extensive experimentation, rigorous regulatory reviews and ongoing testing and observation, we control the quality and integrity of our food ingredients to ensure they have broad and safe applications.

Because food matters to everyone, FMC launched a website to explain how research into food enhancements leads to a safe and healthy food supply. Explore food science at: www.foodsciencematters.com. Additionally, FMC is working to enhance nutrient availability in all geographies. In 2014, we began developing a new form of our SeaGel<sup>™</sup> capsules that will be used for pharmaceutical and nutraceutical products that are free of bovine material. This product, available in 2015, makes nutraceuticals and pharmaceuticals available to consumers around the world who choose not to consume bovine materials for religious, dietary or others reasons.

In 2014 we also launched Epax 1050 TGN, a high DHA omega-3 product made from completely tuna-free fish sources. By eliminating tuna oils, this product is responsive to global concerns about the decline of the tuna population.

Our natural food and beverage color business consists of nine different hues. These are blended into many different products for our customers, and approximately 80 percent of those natural colors are derived from agricultural-based materials, such as fruits, vegetables and algae. Used in food products including soups, drinks, gelatin and confectionery items, natural colors not only add aesthetic appeal but also meet consumer desire for products from naturally derived sources.

In 2014, we added a natural color manufacturing line at our Newark, Delaware, facility to answer increasing customer requests for rapid development of proprietary formulations and logistical support for swift delivery. The facility, which will be equipped to develop customized color solutions, enables us to capitalize on our advantage in food color customization. We will be better positioned to serve our worldwide customers through this increased capacity in North America. The Newark natural colors operations began in early 2015.



#### **FMC Lithium Takes Flight**

Our lithium metal is part of the lithium aluminum alloy used to manufacture a popular U.S. commercial airliner, increasing the plane's fuel efficiency by approximately 10 percent, reducing its weight by 6 percent and increasing corrosion resistance. FMC's contributions extend the life of these aircraft and help conserve Earth's finite resources.



#### FMC Minerals Contributes to a Healthier Environment

FMC Minerals' innovations are fostering a lower environmental footprint and, as a result, a healthier community. FMC Lithium, a world leader in Lithium production, and FMC Alkali Chemicals, the largest producer of natural soda ash, partner with customers to develop products with greater sustainability value. Both groups are also investigating and implementing lower impact manufacturing processes.

FMC Lithium's contributions to a more sustainable environment are applications using:

- Lithium metal to develop an aluminum-lithium alloy. We work with major aluminum companies to meet airline manufacturers' stringent materials requirements, and have shown that deployment of this new alloy material is stronger and lighter weight than aluminum alone. By reducing weight and improving corrosive resistance, aircrafts can be approximately 10 percent more fuel efficient.
- Lithium hydroxide to further electric vehicle technology. The use of hydroxide in lithium ion batteries provides extended driving ranges and better battery life while maintaining safety and increasing performance. In addition to its use in electric vehicle batteries, emerging technologies are using lithium hydroxide to develop long-term storage of renewable energy from sources including wind and solar.
- Butyllithium is used to create polymers used for "green tires." Made with our lithium material, these advanced tires reduce fuel use and noise, and improve wet tire traction. We are working hard to reduce production process waste. This year we improved production yields and enhanced manufacturing efficiencies and we will continue to pursue improvements to meet the growing demand for butyllithium.

Our FMC Lithium operations team enhanced energy efficiency with a process innovation that uses a proprietary material to extract lithium. At our Minera del Altiplano, Argentina, plant this selective absorption production process was modified and is already delivering improved efficiency and productivity. This modification should result in a 5 to 10 percent reduction in energy use once fully implemented.

Among environmental innovations piloted by our FMC Alkali Chemical operations in 2014 was testing of in-mine directional drilling. As the first company to apply this technology in a trona mine, we sought to increase the concentration of soda ash in the solutions we extracted, reuse more water and use less energy.



Roger Goforth, material handler, checks the metal in a reactor at the FMC Lithium site in Bessemer City, North Carolina.

FMC embraces and is committed to responsible resource management, environmental impact reduction and mitigation of climate change issues. Each of our businesses is responsible for actively promoting environmental stewardship, which is monitored and reported at a corporate level.

# Minding Our Resources

"My work on technology transfer, manufacturing support and process improvements has contributed to reductions in FMC Agricultural Solutions contract manufacturers' waste water, hazardous waste and greenhouse gas emissions, and to improved yields of several active ingredients. Our proactive data collection and ongoing analysis of sustainability opportunities advance FMC's efforts to work in our supply chain to preserve natural resources for future generations."

> **Henry Han**, Senior Manager of Technology Implementation, API, FMC Agricultural Solutions, Shanghai, China

#### **Improving Operational Performance**

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Over recent years we developed targeted programs to frame operational efficiency projects that have a significant sustainability impact.

- Energy: The Energy Management Center of Excellence selects and works with facilities identified for their high energy intensity<sup>1</sup> and potential for improvement.
- Waste: The Manufacturing Excellence program incorporates safety and environmental considerations including waste

• Water: Our Water Risk Assessment advances visibility into short- and long-term water availability concerns.

Some projects incorporate elements of all these programs. For example, the manufacturing improvement effort at Minera del Altiplano, Argentina, has resulted in substantial declines in operational intensities, including a 23 percent reduction in water intensity, 27 percent reduction in energy intensity and 16 percent reduction in greenhouse gas intensity in 2014 compared to 2013.

<sup>1</sup>Intensity: Total amount of specific operational measure divided by total tonnes of production.



#### **Energy Conservation Highlights**

- Our FMC Health and Nutrition plant in Rockland, Maine, converted from fuel oil to liquefied natural gas in the fall of 2014. This conversion is expected to reduce greenhouse gases (GHG) by 30 percent and particulate emissions by 50 percent in the long term. In 2014, we realized 8 percent GHG reduction and 31 percent particulate emission reduction.
- Our FMC Lithium operation at Minera del Altiplano, Argentina, is continuing to build a natural gas pipeline to stabilize fuel availability, contribute energy resources to local communities, and reduce fuel consumption and safety issues related to trucking natural gas to the plant.
- Our Alkali Chemicals site in Granger, Wyoming, was honored with the ACC's 2014 Responsible Care Energy Efficiency Award for "Significant Improvement in Manufacturing — Project."

This category recognizes the use of technical innovations to reduce energy consumption. FMC engineers optimized the operation of our electrostatic precipitator so that each cell would perform at the most efficient energy level, thereby achieving an overall 30 percent reduction in energy use.

• The Green River, Wyoming, facility partnered with Rocky Mountain Power on a "demand side management" program that reduced electricity consumption when necessary to save an estimated 1,700 megawatt hours of electricity annually, which is enough energy to power 155 homes for one year.

#### Valuing Sustainability Certifications

Our FMC Health and Nutrition business uses sustainability certifications as a factor in screening suppliers. Certification by Friends of the Sea is required for all of our fish oil, and we are working with the New England Aquarium to develop best management practices for sustainable seaweed.

One of our stabilizing food ingredients, microcrystalline cellulose, is derived from wood pulp. To counter the threat of deforestation we ask pulp suppliers to confirm that their forest sources are sustainably managed using a standard such as the Sustainable Forestry Initiative, Forest Stewardship Council or other externally verified, globally accepted standards.











FMC+Active Ingredient Contract Manufacturers Intensity

#### **Global Water Usage**

Analysis: FMC water intensity decreased slightly in 2014. The solution mining process of our Alkali operations is highly waterintensive and the main driver of our water use. The Alkali business, divested in early 2015, made up 47 percent of FMC's water usage. It is important to note that our FMC Lithium business, the second most waterintensive of our businesses, decreased its water intensity by 13 percent.



Action: We will be focusing our efforts in 2015 on our FMC Lithium facilities with opportunities for water minimization. We will continue to monitor our water risk profile, drawing data from the World Resources Institute's Aqueduct tool. Our water risk assessment conducted in 2013 will be updated to re-evaluate our portfolio and include newly acquired sites from Cheminova.

#### **U.S. EPA Honors FMC for** Site Reuse

FMC received the U.S. Environmental Protection Agency's (EPA) first-ever Excellence in Site Reuse Award for its commitment to site cleanup and redevelopment in Front Royal, Virginia.

The Excellence in Site Reuse Award recognizes FMC's effectiveness in converting 240 acres of waste basins into a site that includes a recreational area, nature conservancy and business park. The EPA praised FMC's successful partnership with the Front Royal community and Front Royal Warren County Economic Development Authority (EDA), and our shared commitment to creating a valuable local resource together.

The area has already seen a return of native vegetation, wildflowers, butterflies and birds including the prairie warbler and the great blue heron. FMC also announced philanthropic donations to Friends of the Shenandoah-Front Royal and to the EDA so they can make additional progress in transforming the area for the enjoyment of future generations.



This reclaimed manufacturing site in Front Royal, Virginia, includes an active wildlife habitat where local residents can enjoy nature.

#### Waste and Water Management Highlights

- FMC Health and Nutrition implemented systems to recover byproduct to be sold as biofuel at our Alesund, Norway, site. The improvement decreases the amount of waste discarded and ensures that byproduct is used for beneficial reuse.
- The Alesund site also improved technology to recover additional omega-3 content from our process. This improvement allows us to use 9 percent less crude fish oil to produce the same high-quality omega-3, thereby maximizing this valuable resource.



#### **Global Waste**

Analysis: Our FMC Agricultural Solutions and FMC Health and Nutrition facilities drove the increase in our waste intensity. There were several one-time waste occurrences, such as product rework at our Uberaba, Brazil, facility, the loss of a packaging recycling vendor who exited the business at our Rockland, Maine, facility, and on-site cleanup at our Haugesund, Norway, facility.



Action: Our Rockland plant has identified another recycler to support our waste reduction efforts in 2015. In 2014, we conducted a focused assessment of our waste portfolio and in 2015 we will use the results to inform our long-term waste strategy. At our FMC Agricultural Solutions contract manufacturing sites, a project is underway that will improve the synthesis process of one of our key active ingredients. The project will both reduce waste and increase raw material efficiency by converting from a batch process to a continuous process.

32 Web Access for Global Waste by Type Graph

- FMC Agricultural Solutions developed a significant process improvement for sulfentrazone, one of our major active ingredients. The change, which will be implemented by FMC Agricultural Solutions' contract manufacturers in China in 2015, reduces the use of a sulfuric acid catalyst. It is expected to result in a 5 percent reduction of hazardous waste generated from production of the active ingredient.
- At Minera del Altiplano, Argentina, we continue to be mindful of our water use and are assessing the challenge of our limited water supply. We are currently developing processes and tools to optimize our use of water in a sustainable manner.
- We expanded our water data collection process at Green River, Wyoming, based on a third party recommendation to include rainfall in water use calculations

Our 2015 waste reduction plans include:

- Evaluating technologies at our Middleport, New York, FMC Agricultural Solutions site that will minimize waste generation and reduce the volume of waste disposed.
- Integrate Cheminova sites into our waste assessment project to inform our future minimization strategy.



#### **Lighter Containers** Save Energy

**Our FMC Agricultural Solutions business** reduced the amount of steel used in one type of container drums by 5 percent. We analyzed our drums and realized that a thinner steel drum would be ideal for our product and equally safe.

We shifted nearly 30 stock keeping units (SKUs) at 13 sites to thinner drums that weigh two pounds less than the previous containers. Anticipated benefits include reduced energy and greenhouse gas emissions from shipping lighter drums and lower emissions in our supply chain from less raw material extraction and steel smelting and processing.





FMC Intensity FMC+Active Ingredient Contract Manufacturers Intensity

#### Global Energy Usage Analysis: Energy intensity increased

slightly, with FMC Health and Nutrition facilities driving the increase due to a product mix in 2014 that relied on sites that are high energy users.



Action: Through our Energy Management Center of Excellence (EMCOE), we are implementing actions identified in the energy audit conducted at our Rockland, Maine, site. We will continue to examine our FMC Health and Nutrition operations and are developing an energy improvement roadmap as part of our operational excellence plan. In 2015, the primary focus will be continued improvements in Rockland and a new focus on Cork, Ireland, where we will complete an energy audit and develop an action plan to reduce energy intensity. Energy audits at additional FMC Health and Nutrition sites will be targeted in 2016, with Newark, Delaware, and Haugesund, Norway, as the next priorities.

#### **Selecting Responsible Suppliers**

Our Supplier Code of Conduct requires adherence to sound human rights, labor, environmental and anticorruption standards. Having screened FMC's most significant raw material suppliers for compliance with the Code in 2013, we expanded the process and began re-qualifying our key raw material suppliers and construction contractors in 2014.

Given the large number of suppliers to our company, we have enlisted the services of a third-party auditor to help us with the re-qualification process. We continue to evaluate and qualify all new suppliers.

Going forward, we will leverage our management practices around responsible sourcing to manage supply risk and opportunities, continue to work with our supply chain partners to integrate our processes into site policies, and work closely with suppliers to improve practices and drive innovation.

FMC identified safety as the priority for on-site contractors. Today we measure contractor recordable incidents so that we have the information needed to act on vulnerabilities.



One of the goals of FMC Agricultural Solutions is to help farmers protect crops and achieve abundant yields. Through a complex supply chain that starts with raw materials suppliers and ends with retailers who consult directly with local growers, nothing is more important to FMC than product stewardship, safety and environmental responsibility at each step along the way.



#### **Global GHG Emissions**

**Analysis:** Based on the results of a third party pre-assurance audit conducted in 2014, we updated the emissions factors used in calculating our GHG values to the most current U.S. EPA factors. These factors drove our reported GHG emissions up 4 percent over 2013. It is important to note that while FMC reported an overall increase in intensity, two of our businesses recorded a decline in GHG emissions.



Action: We will monitor our FMC Agricultural Solutions contract manufacturers and work to better understand our greenhouse gas emissions at those sites.

33 Web Access for Global Criteria Pollutants Graph

#### Following the FMC Agricultural Solutions Supply Chain

FMC engages with our partners at all steps of our complex supply chain. In FMC Agricultural Solutions, a product goes through many phases before it reaches the grower. In our unique manufacturing model, we work closely with our active ingredient manufacturers to work toward our sustainability goals, including technology innovation, responsible resource use and community outreach.



FMC embraces collaboration and builds our community relationships. We are passionate about our neighbors' well-being and care deeply about adding value to their lives.

# Cultivating Community

"I love seeing kids excited about science. FMC helps them understand there are plenty of career opportunities when you have a science foundation. It's important that kids develop an interest in science, technology, engineering and math (STEM) subjects when still in middle and high school because it broadens their horizons and opens doors for their future. I have enjoyed being part of the FMC Lithium STEM committee, which has worked on several community events."

**Tina Steppe**, Customer Service and Logistics Manager, STEM Committee Member, FMC Lithium, Charlotte, North Carolina

#### **Expanding Local and Global Relationships**

In 2014 FMC employees continued their involvement in improving the welfare of the communities where they live and work. With an emphasis on four areas of opportunity – education and science, health and human services, arts and culture, and environment and conservation – FMC helped reinforce already strong bonds with schools, advanced much needed healthcare solutions and supported a range of non-governmental organizations (NGOs) that provided community assistance. Our activities at sites around the world included volunteerism, leadership, and financial support. We initiated significant new relationships in 2014 and expanded others. Our U.S. partners include organizations such as the Future Farmers of America, American Red Cross, World Food Prize and United Way. FMC seeks partners to share knowledge and expertise, improve safety and stewardship, and positively impact the community. We encourage stakeholders and their organizations to reach out to FMC people to explore opportunities to make a difference together.

We understand that safety and information about our operations are important to neighbors and employees. According to input from Community Advisory Panels, Chambers of Commerce and local leaders, plant tours



are one of the most popular ways to improve mutual understanding of our role and presence. In 2014 we held plant tours at many of our locations around the world, inviting local students, employee families and other community members to see and learn about FMC. Our Alesund, Norway, site was honored with a visit from Norwegian Prime Minister Erna Solberg.

In October 2014, engagement with the Rockland, Maine, community included a celebration of completing our facility's natural gas clean energy conversion. Nearly every step in the process exemplified one or more of our Community Engagement Index categories that we use to measure each facility's type of local interaction. On the Rockland project, we demonstrated our commitment to:

- Safety by putting it at the forefront of every step in the planning and implementation process. Our goal is always zero injuries; however over the course of approximately 20,000 hours of combined construction time on the project, there was one contractor recordable injury.
- Operational transparency and community partnership by engaging with the Rockland community and its leaders from the start of the project, when it was only in a conceptual phase. The public discussed priorities and concerns during an open meeting and at several Community Advisory Panel sessions, and local stakeholder input was an important factor in our planning.
- Community leadership by implementing Maine's Low Sulfur statute environmental mandate well before the required date of January 2018. We consistently made an effort to hire local, qualified contractors to help support the area's economic development. Additionally, the site team openly shared experiences with other companies interested in converting to natural gas since supply in Rockland is not readily available through a pipeline.

#### **Community Engagement Index Value**



In 2014 we achieved a score of 96, which is 6 points above our goal of reaching an Index value of at least 90 in 2015.



#### Plant tours are one of the most popular ways to improve mutual understanding of our role and impact.

In 2014 we held plant tours at **14 of our locations around the world**, to see and learn about our safety culture, research, operations, and products. Our Alesund, Norway, site was honored with a visit from Norwegian Prime Minister Erna Solberg.



# Rockland and the Community Celebrate

Our FMC Health and Nutrition facility in Rockland, Maine, officially converted from No. 6 fuel oil to cleanburning natural gas. The FMC team in Rockland celebrated the conversion with a Clean Energy and Safety Celebration, which included local government dignitaries.

Converting to natural gas will help the facility significantly lower emissions, increase efficiency, and obtain a reliable and readily available energy source. It is also expected to create substantial savings compared to using fuel oil.



#### Seaweed Barges Enhance Zanzibar Farmers' Safety and Productivity

Harvesting seaweed approximately 800 meters offshore is demanding physical work. It requires a farmer to overcome the challenges of coral reefs, changing tides and choppy waters. FMC's continuing effort to educate farmers about best practices for people's safety while enhancing livelihoods led to the design of a lightweight, durable, low-cost plastic barge for seaweed farmers in Zanzibar, an island off the coast of Tanzania.

We partnered with a small boat manufacturer to develop a vessel that could easily be moved by two people when loaded with seaweed. Previously, farmers carried seaweed on their heads or in boats made from rare tropical hardwoods. Those boats were expensive, heavy and lacked durability.

The recent product of this partnership is newly designed barges that allow farmers to pull large loads over reef flats. They enable the safe hauling of 10 times more seaweed back to shore, a substantial benefit in producing a reliable, steady income for farmers.

FMC's local seaweed suppliers have subsequently purchased hundreds of seaweed barges for use by farmers. In 2014 one supplier partnered with an NGO to develop a microloan method that facilitates the purchase and distribution of the barges. In 2015, as our global expansion continues, we will explore additional partnerships with international service providers that can help us increase FMC's community outreach effectiveness. Our close relationship with the American Red Cross has enabled us to respond rapidly to support emergency relief when a need arises anywhere in the world through its global network of affiliates.

#### **Collaborating to Support Strategic Priorities**

Because dialogue is the essence of FMC's relationships, we encourage site leaders to include community collaboration in their assessment of local needs. As we determine how FMC can have a positive impact in the area, we rely on local constituents who can inform us about potential partners and opportunities.



The harvesting of seaweed in Tanzania has continued to provide sustainable livelihoods for coastal communities. A local farmer (above) transports seaweed from a durable plastic barge, designed and produced in partnership with FMC.



In 2014 we reached 96 on the Community Engagement Index, surpassing our target one year early.

Reaching this significant milestone took extraordinary dedication and effort by FMC people around the world.

A site reaches 100 on the Community Engagement Index by conducting community events in each of four categories:

1 community partnership 3 safety

2 community leadership

4 operational transparency

Thank you for making a difference where you live and work!

#### FMC Supports the Future Generation of Food Producers

The National FFA Organization, a group dedicated to the study of agricultural science, helps high school students gain the leadership skills and knowledge needed to tackle the critical challenges of feeding the world's population. FFA's education programs include many topics, such as plant and animal sciences, horticulture, forestry and agrimarketing. With the potential to enter over 300 different careers in agriculture, students benefit from coursework and from hands-on experience.



In 2014, FMC launched a partnership with FFA on both local and national levels. This partnership enabled students at schools located near four FMC Agricultural Solutions facilities to explore diverse career choices. We provided partner schools with educational grants and support of Career Development Events (CDE), which included live and web-based interactions with FMC scientists. In addition, FMC co-sponsored and judged the national FFA Agriscience Plant Systems Proficiency Award. Awards were made available to every FFA chapter across the country. Five national finalists were awarded for their plant systems research.

FFA chapters supported by FMC in 2014 are:

- Walter Biddle Saul High School in Philadelphia, near our global headquarters. It is one of only two urban schools in the U.S. with an FFA chapter and it is the largest of all chapters in the country. In 2014, FMC sponsored: CDE sessions with our scientists, preparations for an FFA competition held at Pennsylvania State University, participation in a regional science festival, and opportunities for teacher professional education at The Franklin Institute, a major science center in Philadelphia.
- Stark County High School in Toulon, Illinois, near our Wyoming, Illinois, plant. FMC began support of student research in science, business opportunities and leadership experience.
- Royalton-Hartland High School in Middleport, New York, near our FMC Agricultural Solutions plant.
  FMC supported the creation of its student chapter and provided essential tools and instructional materials.
- Northern Burlington County Regional High School in Columbus, New Jersey, near our Ewing Global Innovation Center. FMC funded the addition of hydroponic units, an outdoor irrigation system and greenhouse equipment for the school.



In February 2014, FMC participated in the Advocacy and Legislative Leadership Day hosted by the New Jersey FFA Association. Students had the opportunity to interact with and learn from leaders in agricultural education and innovation.



#### **STEM for the Future**

FMC is company of idea generators. Our ability to provide sustainably advantaged specialty chemical solutions is contingent upon a global workforce that is technically competent and intellectually agile. As idea people, we support the expansion of science, technology, engineering and math (STEM) education initiatives in the communities where we live and work. We look forward to future generations who are able to help tackle global challenges requiring STEM expertise. As part of our outreach to young people, FMC scientist Frank Zawacki, left, demonstrates a chemical structure to students in the classroom.

#### Students Engage with Scientists on Career Options

To inspire young people to continue their studies in Science, Technology, Engineering and Math (STEM), FMC partnered with the Academy of Natural Sciences of Drexel University in Philadelphia on an outreach program for middle school students and their teachers. Called Career Days, the event brought together 1,200 students over the course of two days to learn directly from scientists about their work, education, career paths and professional experiences.

FMC volunteers created tabletop displays that focused on biological systems, information technology, food ingredients and statistics. We emphasized the role that science plays in addressing real life issues and the satisfaction of a STEM career.



FMC hosted STEM Career Days at Drexel University's Academy of Natural Sciences. More than 1,200 middle school students over the course of two days saw science in action with the help of 20 FMC volunteers.

Our strategic framework encourages more informed decision-making at a grassroots operational level. We introduced a pilot grant program in 2014 by providing each business unit with \$55,000 in funds to distribute across its global operations. To apply for funding, employees identified prospective projects. Grantees were required to complete an application that summarized expected community impact and measures of success. To ensure each selected project met its stated goals, an FMC employee "champion" worked closely with the partner organization on implementation. The pilot program was enthusiastically received and resulted in greater participation throughout our global site network. In total, we supported more than a dozen additional educational, community and environmental efforts in addition to our national partnerships.

In 2014, we upgraded and simplified our Corporate Citizenship and Philanthropy grant process with a new partner selection toolkit that focused on:

- Stakeholder consultations to identify the key issues affecting the community.
- Extensive reviews of potential non-profit partners and projects to determine their relevance to stakeholder needs and concerns as well as the organization's track record in achieving desired outcomes.

FMC's process for community support enables us to more effectively build and strengthen long-term, mutually beneficial relationships. In 2015 we will modify our funding allocation to support all regions where FMC is present.



#### Supporting Science and STEM in Gaston County Schools

In late 2014, FMC Lithium provided funding and support for the Gaston (North Carolina) Regional Science and Engineering Fair (GRSEF) for students in grades 4-12. The students were tasked with creating a hypothesis or an engineering design. The resulting projects covered ideas ranging from reducing energy use in homes to issues of local water quality around Gaston County. As part of our commitment to STEM, FMC Lithium donated \$40,000 in support of the GRSEF over the next four years.

#### FMC Employees Address Climate Change in Indonesia

Our employees in Ungaran, Indonesia, decided to use the \$1,500 they were awarded for winning the December 2013 FMC F!NISH Strong Safety Campaign to extend a forest conservation program. The effort had been underway for over two years in Semarang, an area on the coast approximately 20 kilometers north of Ungaran. It is an area of Indonesia that the World Wildlife Fund considers "an Asian pioneer in climate change adaptation and resilience."

FMC collaborated with the Bintari Foundation (the Indonesian Association for Sustainable Development) along with Dipone Goro University, Semarang



State University and the Semarang Municipality on the project. The goal was to expand an environmental sustainability project to address the significant loss of mangrove trees resulting from the severe storms and rising sea levels that have occurred due to climate change.

With fewer mangrove trees to protect the region, the sensitive Semarang coast suffered serious erosion, weakened waste and drainage systems, damaged transportation and housing infrastructure and reduced access to clean water. Residents lost arable land and fishing ponds that became contaminated by seawater.

To reverse the region's land deterioration and rehabilitate the local ecology, the Ungaran FMC facility purchased and helped plant 10,000 mangrove seedlings throughout the course of the project. The mangroves will protect the shoreline and, in turn, contribute to community revitalization.



In October 2014, FMC India adopted a mile of the public road divider in front of its main office and took responsibility for beautification and maintenance for three years. The program aligned with one launched by the Prime Minister of India on cleanliness.

#### Flip Through Our Digital Report

Download the report PDF or experience our interactive digital report flipbook...

# Fostering Safety

Visualize Our Data

reporting of our material

sustainability-related data.

resource use and other

Interact with our data...

We are committed to transparent





#### **Targets and Goals**

Our sustainability journey is guided by continuous improvement and specific targets and goals...



### JOIN US ONLINE TO LEARN MORE

Our online home for all things sustainability at FMC is: www.fmcsustainability.com. We invite you to visit our site and learn more about our efforts across our sustainability platform. Follow the link or QR code...



#### **Explore Our Resources**

Our archive of sustainability and other company resources is available for your exploration...



#### **GRI Index**

FMC uses the Global Reporting Initiative (GRI) to inform our sustainability reporting. GRI has verified that the report is prepared according to the GRI Guidelines, at Application Level B. GRI provides guidance through its comprehensive sustainability reporting framework covering economic, environmental and social sustainability disclosure criteria...

#### Sustainability + You

As a company committed to being a sustainability leader, we invite our communities, employees and stakeholders to help us become more sustainable...

Embracing Jou in Our Sourney for Tomorrow 39

#### FMC Corporate Site

Our corporate website offers detailed, insightful and current information on our global business. Learn more about FMC's work...



#### FMC Social Media Engagement

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As a global business committed to transparency, community engagement and public dialogue, FMC utilizes Facebook, Twitter, Google+, LinkedIn and YouTube. Follow us on each social media platform listed below.

facebook.com/FMCCorporation
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