

# Sustaining Generations Through Bioscience™





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**About the Cover Art** The artwork on the cover of this year’s Sustainability Report reflects how Valent BioSciences’ solutions maximize the performance of every acre and help sustain future generations.



## About Us

### We Are

A global leader in the development, commercialization, and manufacturing of biorational products and technologies used in the agriculture, public health, and forest health markets.

### Guiding Pillars

We look to sustainability, innovation, research and development, and corporate social value as our guiding pillars to create solutions that make a positive difference in the world.

### What We Do

We take biological science to a new level with a biorational approach that helps sustain global food production and human health—for today and future generations.

### How We Do It

Through our expertise in bioscience, we identify, develop, and introduce new products and solutions that help growers profitably sustain their land, protect the public from insect-borne disease, and preserve our forests.

### Unmatched Expertise

We leverage our unmatched expertise in microbial science and fermentation to develop sustainable biorational technologies that complement traditional chemistries.

### Inherently Sustainable

Typically derived from biological origins, our biorational products are used in sustainable, organic, and conventional operations in more than 95 countries.

### Six Decades

With more than 100 different brands, we offer the world’s broadest biorational portfolio and pipeline backed by more than 60 years of market-leading performance.

### Our Parent Company

We are a wholly owned subsidiary of Sumitomo Chemical Co., Ltd., a global leader in creative solutions for health and crop science.





## A Message from Our CEO



Salman Mir

**Among the main challenges we face as a global community is feeding a growing world population.** The current population of eight billion people is projected to reach or surpass nine billion people in the next twenty-five years, and we will have approximately the same amount of land available for cultivation. To meet the challenge ahead, we need to increase food production yield significantly to meet the above challenge while navigating the headwinds from climate change.

This path ahead has placed sustainable and regenerative agriculture front and center in the agricultural and food production, protection, and management communities.

At Valent BioSciences, as part of the agricultural community, we are aware of the magnitude of this challenge: a generational challenge. With sixty-plus years of history as a leader in the development, introduction, and commercialization of innovative biorational products and technologies, we are responding to this challenge by:

- Investing in expanding our world-class production facility, the world’s largest dedicated site for agricultural, public, and forest health products in Osage, Iowa
- Breaking ground on a new facility for production of arbuscular mycorrhizal fungi (AMF) in Oregon
- Broadening the scope and scale of Valent BioSciences’ central research and development facility in Illinois

Each of our new expansions and facilities have been designed around the sustainable use of resources and efficient energy management. We are constantly working to improve sustainable practices at all of our sites.

In addition to these activities, we are continually increasing our collaboration with partners who are considered centers of excellence in the areas of biological protection, crop enhancement, biostimulants, and nutrient use efficiency product and technology development.

We believe our response to the global population challenge is in line with Sumitomo Chemical Company’s and our guiding principle of “Jiri-Rita Koushi-Ichinyo,” which states, “Our businesses must benefit society, not just our own interests.” These actions, along with our focus on transferring technology and providing sustainable solutions to our customers, will allow us to remain a trusted and respected partner as a newer generation of farmers take position in the industry.

Valent BioSciences’ business is uniquely positioned to face other challenges related to population growth. We recognize that rapid urbanization often creates an environment for vector-borne disease and can impact the capacity to address issues related to climate change or the health of our forests. Our public health and forest health business provides a platform for Valent BioSciences to be a positive contributor to the communities responding to these issues effectively.

Our optimism and confidence for the future reflects the past results and current work of the Valent BioSciences team. Comprised of skilled, dedicated, and passionate individuals, our team is dedicated to the successful implementation of our plans. We continue to focus on providing a safe and compliant environment to our team, with diversity and inclusion as key values, so that all can contribute to the combined mission of sustaining agricultural production and health, generation after generation.

Lastly, we seek to make continuous improvements in the reporting of our sustainability activities and initiatives to all our stakeholders, as you will see in this report. Clear reporting is key for tracking progress, gathering feedback, and sharing information, so we are all aligned and inspired to continue pursuing our mission and leaving a legacy for the next generation.

Salman Mir



# Sustainability Goals, Impacts, and Direction



## 2030 Carbon Reduction

In lockstep with our parent company, Sumitomo Chemical, we are committed to reducing our carbon footprint by 50% in Scope 1 and 2 emissions by 2030 through operational initiatives and development of new biorational solutions and technologies. Scope 1 emissions are generated directly by company facilities, while Scope 2 emissions are indirect emissions generated at utilities.

## 2050 Carbon Neutrality

Sumitomo Chemical has pledged to achieve net carbon neutrality by 2050, aiming to reduce the amount of greenhouse gas emitted by production and business activities.

## Our Impact

Our work and biorational solutions directly impact many of the United Nations' 17 Sustainable Development Goals (SDGs). These goals are the heart of the UN's 2030 Agenda for Sustainable Development to end poverty, improve health and education, reduce inequality, and spur economic growth, all while tackling climate change and working to preserve our oceans and forests.



# Global Reporting Initiative (GRI) Overview

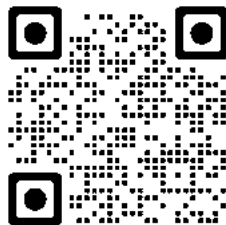
Since our founding, sustainability has been core to Valent BioSciences and our culture. We look to the Sumitomo Spirit of Harmony between individuals, society, and nature as a key guiding principle, and together, we operate with a “Jiri-Rita Koushi-Ichinyo” mindset. This means, “Our business must benefit society, not just our own interests.”

To strengthen and elevate our efforts to strategically embed sustainability across all facets of our business, teams, and functions, we created and installed a new sustainability team in 2023.

This team began to bring more consistency, clarity, and rigor to our sustainability strategies, goal setting, performance monitoring, and reporting. Toward that end, the sustainability team has initiated the due diligence and analysis required to transition our future sustainability communications so that it aligns with the GRI framework.

GRI standards are the most widely used set of standards for sustainability reporting worldwide. GRI helps organizations assess and take actions that create economic, environmental, and social benefits while providing a common global language to communicate progress and impacts.

Please visit [www.valentbiosciences.com/gri-index](http://www.valentbiosciences.com/gri-index) or scan the QR code below to review the GRI standards and related data initially identified as most relevant to Valent BioSciences’ business and operations.



Scan to access GRI content index.

# Sustainable Development Goals

Of the 17 United Nations SDGs, Valent BioSciences selected eight to focus on, as we find these to be the ones we can most strongly shape due to our work in agriculture, public health, and forest health.



**1** NO POVERTY

No Poverty



**2** ZERO HUNGER

Zero Hunger



**3** GOOD HEALTH AND WELL-BEING

Good Health and Well-Being



**4** QUALITY EDUCATION

Quality Education



**5** GENDER EQUALITY

Gender Equality



**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

Responsible Consumption and Production



**13** CLIMATE ACTION

Climate Action



**15** LIFE ON LAND

Life on Land



# Solutions

## Research and Innovation

Our legacy of leadership and innovation is rooted in research, development, and collaboration. With a team of world-class experts in entomology, plant pathology, soil health, fermentation, chemistry, and formulation, we are dedicated to discovering the next generation of biorational technologies.

The Melnik and Shafer Biorational Research Center (BRC), located in Libertyville, Illinois, serves as the hub of our global research and development endeavors. Opened in 2018, the BRC was renamed in 2023 to honor our past President and CEO Ted Melnik and former Vice President, Global R&D and Regulatory Affairs, Dr. Warren Shafer, who is now a Senior Advisor to Valent BioSciences.

In 2024, we will open a new BRC expansion named after Dr. Greg Venburg, Senior Director of Global Research at Valent BioSciences. The Venburg Wing will feature new laboratories and pilot plant areas that increase the amount of space devoted to fermentation and recovery by 50%. Additionally, we will be starting construction on a new greenhouse that will double the amount of greenhouse space at the BRC.

We also opened the new Journey of Innovation welcome center designed to offer BRC visitors an immersive introduction to Valent BioSciences. Using virtual reality technology, guests can visit our research labs and production facilities across the country to learn more about our work. More than 30 tour groups visited the BRC in 2023, including government leaders, industry executives, customers, and students of all ages.

Through our 2023 acquisition of FBSciences, we expanded our research team and efforts focused on biostimulants, one of the fastest-growing segments of the agriculture market. We launched more than 155 research trials globally this past year to explore how biostimulants independently and in combination with other Valent BioSciences solutions can transform plant and soil health. These trials are an important next step in expanding biostimulant use and benefits worldwide.

### Essential Collaboration

We continued to seek opportunities to forge new relationships and expand our partnerships this year with the world's top universities, organizations, and research entities at the forefront of accelerating sustainable agriculture and innovation.

One example of this is our partnership with the University & Industry Consortium. In 2023, we hosted the UIC Fall Conference, welcoming 90 leaders from academia, agricultural companies, associations, and government agencies. Together, as an active member and supporter of the UIC and other industry organizations, we're shaping the future of agriculture.



# 125

patents

issued in U.S. since 2000

# 1,000+

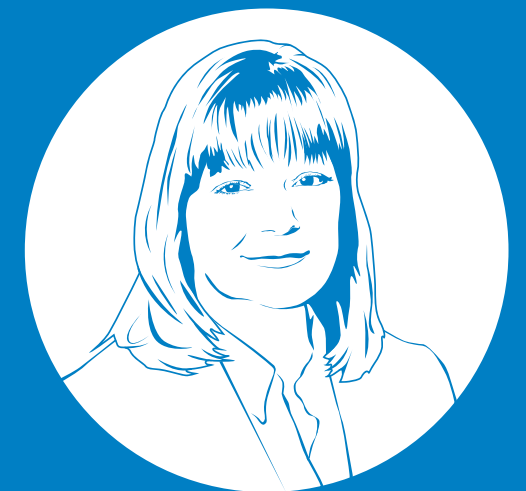
product  
registrations

in 95+ countries

# 30+

BRC tours

in 2023



### Honors for Research Leader

Valent BioSciences' Dr. Sarah McHatton, Vice President, Global R&D and Regulatory Affairs, was named one of the Top 25 Women Leaders in Biotechnology of 2023 by the Healthcare Technology Report. The publication noted, "The women featured on the list stand as a driving force, ensuring diverse perspectives on scientific breakthroughs."



# Agriculture

We help growers feed the world and continue to serve as stewards of their land, resources, and surroundings. Our biorational portfolio provides highly specific, sustainable solutions that deliver distinct benefits to help growers get the most out of every acre.

The challenges growers face have never been greater. From fuel to fertilizer, production costs have soared. Heat, drought, and other weather events, as well as the spread of invasive species and growing resistance to some traditional pesticides, increasingly put crops at risk. Meanwhile, consumer demand for sustainably or organically produced food continues to rise. Longer term, massive global population growth will necessitate a projected 70% increase in food production.

Our proven biorational solutions help growers remain productive and profitable as they face these demanding challenges and meet changing needs.





Biostimulants

Our robust and growing portfolio of biostimulant solutions drives plant health at every crop stage. Available in soil, foliar, and seed treatment formulations, biostimulants provide powerful plant and soil health benefits. These next-generation biorational solutions stimulate natural processes that help crops better access and use vital resources, including water and nutrients, while increasing their ability to tolerate drought, heat, and other stresses.

Biostimulants help growers improve crop quality, more efficiently utilize resources, maximize yield, and increase return on investment. With our 2023 acquisition of FBSciences, we now offer more than 40 biostimulant and bionutrition products. Our robust portfolio allows us to provide a broad range of biostimulant options for both specialty and row crops, whether conventionally, sustainably, or organically grown.

We also expanded the global reach of our biostimulant portfolio, launching several brands outside of the U.S. in 2023. We will continue to introduce these products in select countries in Europe, South Africa, Asia Pacific, and Latin America during 2024 and beyond.



Biostimulants hold great promise in advancing sustainable agriculture and meeting industry challenges. Our technical experts collaborate closely with farmers, growers, agronomists, and other sector leaders to share knowledge, use cases, and resources to foster further adoption. In 2023, in addition to hosting a series of regional educational meetings for growers and agronomists in the Western U.S., our experts also presented on several topics at the Biostimulants World Congress in Milan, Italy, and showcased our solutions at Commodity Classic, the largest farmer conference in the U.S.



27%  
of growers  
used a biostimulant in 2023



Mycorrhizal Applications

Our Mycorrhizal Applications subsidiary is an industry leader in the research and development of mycorrhizal fungi biorational solutions that improve and accelerate soil health and plant vigor. We are the world’s largest supplier of arbuscular mycorrhizal fungi (AMF) products, which promote root system growth, nutrient efficiency, and water absorption.

“Myco” and “rhiza” translate to “fungus” and “root” and describe the mutually beneficial relationship between the plant and root fungus. Mycorrhizal fungal filaments extend deep into the soil, serving as a true extension of root systems and improving the roots’ ability to absorb and more efficiently use water and nutrients. This leads to a healthier root system while also increasing the soil’s ability to effectively sequester carbon. Additional AMF benefits include improved soil structure, increased stress tolerance, and reduced nutrient runoff.

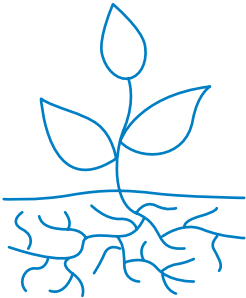


Farmers, nursery professionals, restoration and erosion control specialists, horticulturalists, landscapers, and other related professionals rely on our portfolio of AMF solutions to maximize plant success.

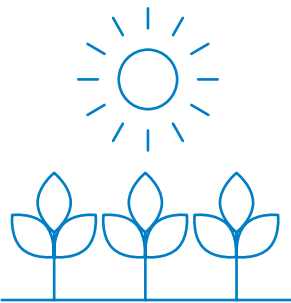
To meet increasing demand and projected growth for our proprietary MycoApply® portfolio, we broke ground in 2023 on a new manufacturing facility in White City, Oregon, that will complement Mycorrhizal Applications’ existing headquarters and manufacturing operations in Grants Pass, Oregon. The new plant is scheduled to open in 2025.



Valent BioSciences broke ground in 2023 on a new manufacturing facility in White City, Oregon. Mycorrhizal Applications’ new plant is scheduled to open in 2025.



“Myco” and “rhiza” translate to “fungus” and “root” and describe the mutually beneficial relationship between the plant and root fungus.



AMF benefits include root mass expansion, improved water acquisition, nutrient uptake efficiency, and improved soil structure.





Growers worldwide use our industry-leading PGR portfolio to address challenges while growing healthy crops.

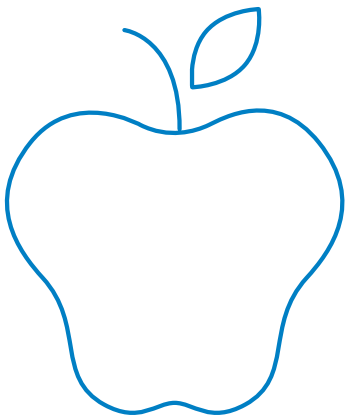
Plant Growth Regulators

Our plant growth regulator (PGR) portfolio helps growers unlock the full genetic potential of their crops and overcome environmental stresses. PGRs use cutting-edge biochemistry to stimulate and regulate plant growth and development.

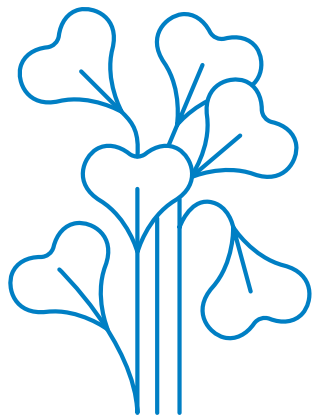
Growers worldwide use our industry-leading PGR portfolio to address challenges while growing healthy crops. Depending on the crop, our PGRs help growers extend the harvest window, promote branching and flowering, delay ripening and fruit drop, prevent russetting, optimize crop size, and improve crop quality.

These actions can increase crop yields, reduce food waste, and help maximize efficient use of labor, energy, fuel, other crop inputs, and water. With our revolutionary PGR portfolio, we continue to provide growers with new ways to precisely manage crops and control their operations.

We actively look for new crops and regions where growers can apply our PGRs and celebrated two major brand expansions in 2023. We launched Accede® in Brazil, and this product, introduced in 2021 in the U.S., was the first PGR developed specifically for thinning apples and other stone fruits. In Europe, we launched Proliant®, a PGR that helps growers boost row crop yields by promoting early-season plant development or extending late-season plant growth.



Accede®, a PGR tool for thinning, was launched in Brazil in 2023.



Proliant®, a PGR for extending the growing season, was launched in Europe in 2023.





Crop Protection

Growers use our biorational solutions to help protect crops from harmful, invasive pests and as part of an integrated pest management (IPM) strategy. IPM is a programmatic approach rooted in science to help prevent pests or minimize their damage.

As much as 40% of the world’s crops are lost to pests each year, and resistance to some traditional insecticides is a growing concern, which threatens global food security and agricultural sustainability. Our portfolio of bioinsecticides effectively controls pests and mitigates the risk of resistance development.

For example, two of our flagship products, DiPel® and XenTari®, harness naturally occurring bacteria to target specific pest species with little to no impact on surroundings, animals, beneficial insects, or people. These products are easily incorporated into an IPM program that uses multiple pest control methods to minimize environmental impact and promote the sustainable use of pest management technologies.

Effective IPM programs use all available methods, including biological and conventional solutions. With increasing governmental regulations, expanding pest resistance, and more instances of extreme weather events, our biorational products equip growers with effective options for their IPM programs. Further, as a global leader in sustainable and IPM solutions, we actively promote best practices in biorational crop protection through educational initiatives and industry collaborations.



DiPel® and XenTari® target specific pest species with little to no impact on surroundings, animals, beneficial insects, or people.



40%

of the world’s crops are lost to pests each year.

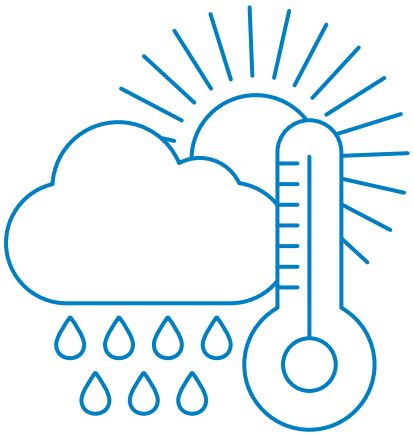


Public Health

Mosquito-borne diseases are a growing public health threat worldwide. Climate change, including rising temperatures and changing rainfall patterns, and human activity continue to spread deadly outbreaks, with more than 700,000 deaths annually caused by vector-borne diseases.

We’re a global leader in public health committed to protecting people from nuisance insects and vector-borne diseases with biorational solutions trusted and used worldwide. Our proprietary formulations provide sustainable biological control across a broad range of mosquito species and habitats while minimizing the impact on people, the environment, and non-target insects.

In a significant stride toward sustainable public health solutions, we launched ReMoa Tri®, an innovative biorational adulticide, globally at the American Mosquito Control Association’s annual meeting. This space spray is marked by its triple mode of action, designed to effectively target both resistant and susceptible adult mosquitoes.



Climate change, including rising temperatures and changing rainfall patterns, and human activity continue to spread deadly outbreaks, with more than 700,000 deaths annually caused by vector-borne diseases.



Global Voice

We also actively fostered global collaboration in the fight against malaria through participation in several international gatherings. As a meeting sponsor at the 2023 Pan-African Mosquito Control Association Annual Conference, we led a symposium that emphasized the importance of outdoor mosquito management in Africa for malaria prevention. The symposium featured compelling presentations on larval source management and the financial burden of malaria from an African perspective.

We also hosted more than 50 global delegates, predominantly from Africa, at the Melnik and Shafer Biorational Research Center during the annual meeting of the American Society of Tropical Medicine and Hygiene. With a focus on larval source management, we provided attendees with a comprehensive tour of our research and development facilities. We explored the intricacies of formulations, fermentation, and chemistry that support the success of biological larvicides, such as our VectoBac® solution, that are crucial to the worldwide fight against vector-borne diseases.

Our innovative products and major involvement in global events emphasize our role as thought and solution leaders in mosquito control and public health issues.





Forest Health

As global temperatures rise, the threats to our forests intensify, putting the worldwide forest landscape at risk. These threats include deforestation, an increase in forest fires, and insect outbreaks. Insects are among the foremost dangers to forests, causing significant stress, increased disease susceptibility, and even death in urban and forested areas.

Our Foray® and Mimic® biorational solutions help combat insect challenges. These target-specific products are invaluable in protecting forests from leaf-defoliating insects. We offer multiple formulations globally to safeguard forests in different countries. Our commitment to forest health is pivotal to ensuring tree vitality globally, enabling trees to continue their critical role in carbon sequestration and soil carbon protection.

Sustainable Transportation

Rail transport has become the preferred method to transport bulk volumes of our Forest Health solutions, highlighting our dedication to sustainable practices. During this past year, we continued to increase railcar use, replacing 4.4 truckload shipments with a single railcar. In 2023, we used 14 railcars to ship Foray to Canada, compared to eight during the previous year. This reduced the number of trucks on roads by 61.

Using railcars to transport Foray from our Osage, Iowa, manufacturing facility to the key market of Quebec City, Quebec, a journey spanning over 1,300 miles, significantly reduces carbon emissions. Through these strategic actions, we continue to lead in sustainable forest health management, aligning our operations with the broader goal of protecting and nurturing our world’s forests.

Foray and Mimic use in 2023:

1.2  
million+  
hectares

of protected forests in 10 countries

3.8  
million+  
metric tons

of sequestered carbon

61.8  
million+  
metric tons

of protected soil carbon stock



# Company

## Employee Safety

Responsible care is at the forefront of all we do at Valent BioSciences. Safety and compliance are our first priorities and everyone’s responsibility. Each of our employees has safety goals as part of a Responsible Care Scorecard, which requires them to track progress and engagement in safety-related activities each year, from training and education to taking a safety walk and noting risks and issues.

With our Responsible Care software platform, we give employees an easy way to quickly report concerns, near misses, incidents, and accidents through an online portal or mobile app. Reports are sent to the relevant location’s environmental, health, safety, and security teams for review and, if required, a corrective action or other tasks are assigned to the individuals responsible. We then track actions and tasks to completion.

In 2023, employees throughout the Valent group of companies logged more than 1,200 safety observations. Additionally, since the Valent group of companies first implemented the software platform in 2019, the number of safety reports entered by employees has increased annually, with 400 reports submitted in 2023. It’s an important indicator that reflects our employees’ growing engagement with Responsible Care.

The Valent group of companies continued to add new resources this past year to keep our employees safe. With the Regroup Mass Notification® system, we can notify employees of emergency issues and next steps with a single text message, email, or phone call. The Valent group of companies also joined Global Guardian to improve the safety and support of our employees when they’re traveling more than 150 miles from home. The firm is a leading provider of medical and security services for corporate travelers.

100%  
of employees

enrolled in the Regroup Mass  
Notification® system

100%  
of employees

covered by Global Guardian when  
traveling 150+ miles from home  
for business purposes

92%  
of days

without incidents across the Valent  
group of companies in 2023







1,200  
safety  
observations

# Facility Safety

## Osage, Iowa

At our Osage, Iowa, manufacturing plant, which is the world’s largest biorational production facility, we use a behavior-based Safety Training Observation Program (STOP) as part of our efforts to keep safety top of mind for employees at all levels.

Each month, Osage managers and supervisors average more than 100 safety observations in which they interact with employees and contractors in their workspaces. They note safety behaviors, discuss best practices and procedures, and identify actions for improvement.

The team in Osage also conducted a series of safety courses on important topics, including confined space entry and rescue. Confined spaces are common in many industrial settings. These spaces, such as the interiors of our fermenters, are not designed for continuous human occupancy and have limited means for entry and exit. They may also have other types of hazards requiring a permit to be issued for entry.

Occasionally, employees need to enter confined spaces for maintenance or inspection purposes. To ensure the safety of entrants and attendants, we utilize non-entry rescue techniques. In many cases, we use a Davit Arm System and Self Retracting Lifeline to enable employees that are tied off with a harness to perform their work, but still be rescued from outside of the confined space if there’s an emergency. In conjunction with confined space training, Osage also held First Aid, CPR, and AED training through the American Heart Association.

Additionally in 2023, the facility hosted the Sumitomo Chemical Responsible Care Regional Meeting for the Americas, bringing together safety and quality colleagues from our sister companies in North and South America. The gathering included a facility tour, team-building activities, and informative presentations on a range of Responsible Care topics that were shared globally through a virtual broadcast.



## Grants Pass, Oregon

In Grants Pass, Oregon, our Mycorrhizal Applications facility has made numerous upgrades to its production processes, policies, and equipment that enhance worker safety, as well as product quality. This includes a new bulk bag unloading system that reduces exposure to silica dust and other particulates and reduces ergonomic injury risk by minimizing the need for manual handling.

Mycorrhizal Applications’ new manufacturing facility under construction in White City will also feature technology and equipment designed to protect employees. For example, robotics will eliminate the repetitive motions of some production processes and warehouse automation for pallet loading and tracking will eliminate the need to use forklifts to perform those tasks.

400  
reports  
submitted





# Employee Engagement and DE&I

We believe we do our best work when all employees have the opportunity to grow, thrive, and succeed. In 2023, we sought to further strengthen our employee experience with increased communication and connection to help colleagues better understand how their roles align with our core values and goals.

We hosted monthly town hall meetings with our new President and CEO, Salman Mir, who was promoted to his role in the summer of 2023. These sessions provided the opportunity to connect directly with Salman to hear the latest updates about strategic priorities, information from Sumitomo Chemical, business progress, customer needs, and how each of us can contribute to company objectives.

We also launched a quarterly Pulse Survey to gather ongoing employee feedback. The goal each quarter is to randomly sample a different segment of employees. We ask three questions on a 1-to-4-point rating scale about safety and compliance, employee engagement, and the likelihood of recommending employment at Valent BioSciences to others.



Fostering Community and Belonging

Building and fostering a diverse, equitable, and inclusive (DE&I) organization is a strategic business priority for us. When we embrace our differences and champion diversity at all levels, employees feel valued, respected, and supported.

A 2023 McKinsey & Company and LeanIn.org report found companies that prioritize diversity and inclusion tend to outperform their peers and demonstrate higher levels of innovation, employee engagement, and financial performance. The Valent group of companies' growing Employee Resource Group (ERG) network is core to expanding our DE&I infrastructure, which includes accelerating inclusion and belonging. ERGs provide forums for our employees to connect with others who share similar backgrounds and interests, both in and outside of the organization. They also offer an opportunity for members to provide insights that directly influence positive change. In addition, ERGs expose employees to other functions/ departments in the company that may not be familiar to them.



In 2023, we introduced our 10th ERG, SERV, which stands for Service Men and Women of Valent. SERV is for veterans who have served both in the past and present, their families, and allies. Because veterans as a group are also diverse, SERV partners with other ERGs, such as AAVAL (African Americans at Valent), to put on activities such as its toiletry drive to help meet the needs of homeless veterans.

We also held our first annual virtual Employee Resource Group Fair to share with employees the many ways to engage with our ERGs. Each group highlighted its purpose and vision in support of our greater DE&I mission. Additionally, the ERGs hosted a monthly Minorities in Agriculture series featuring industry speakers from a variety of diverse backgrounds and experiences.

To broaden our ability to meet diverse students and professionals with an interest in agriculture and dialogue on relevant issues and challenges, we actively partner with industry associations, including MANRRS (Minorities in Agriculture, Natural Resources, and Related Sciences). In 2023, our employees also attended the MANRRS national conference and regional clusters.





# Environmental Stewardship

We continued to reduce the environmental impact of our operations this past year in support of Sumitomo Chemical's 2030 carbon reduction goal and to better protect the communities where we live and work. Our facilities focus on more efficient use of resources, eliminating waste, and pursuing partnerships that improve the quality of surrounding areas, including land, water, and air.



## Water and Wastewater Quality

We also expanded our partnerships to improve water and wastewater quality and management. Since 2018, we've staffed, managed, and assumed the costs of the Mitchell County Wastewater Pretreatment Plant for the City of Osage. In 2023, we also started supporting the City's Municipal Wastewater Treatment Plant, with our engineering staff programming the plant's operating controls, performing weekly reviews, and adjusting the system as needed.

Additionally, we started a new initiative to help farmers fund and implement conservation practices that will reduce nitrogen and phosphorus runoff into the Cedar River and Osage-area waterways. Guided by the non-profit Sand County Foundation, we entered into a Municipal Watershed Partnership with the City of Osage and AgOutcomes. This subsidiary of the Iowa Soybean Association provides farmers with agronomic and technical assistance in pursuit of sustainable agriculture outcomes.

The goal is to enroll more than 5,000 acres of local farmland into the program. As runoff amounts are reduced, we'll earn nutrient credits, or offsets, that we'll transfer to the City of Osage to help achieve its clean water discharge requirements. We're the first and only private Iowa company to participate in such a transfer with a municipal entity. It's an innovative partnership that we estimate will save the City more than \$300,000 annually, providing both environmental and economic benefits to the region.

## Solar Field and Native Prairie

Our Maple City Solar Field in Osage, Iowa, produces about 3.5 million kilowatt hours of solar-generated electricity a year for our biorational manufacturing facility. The 1.5-megawatt alternating current solar field spans 12 acres next to the plant and its Jiri-Rita Prairie Park. The prairie's 32 acres feature an ecosystem of native grasses, flowering plants, trees, and shrubs that provide a natural habitat for a variety of wildlife species and insects. We also use the reconstructed prairie as a living laboratory to study the impact of our MycoApply technology on soil health and carbon sequestration.

Together, the solar field and prairie eliminate nearly 2,600 metric tons of carbon dioxide annually. These two initiatives contribute to the facility's ongoing efforts to use less energy through digital technologies, process and system upgrades, and other best practices. Overall, in 2023, the Osage plant continued to reduce its annual electricity and natural gas consumption.







Minimizing Waste

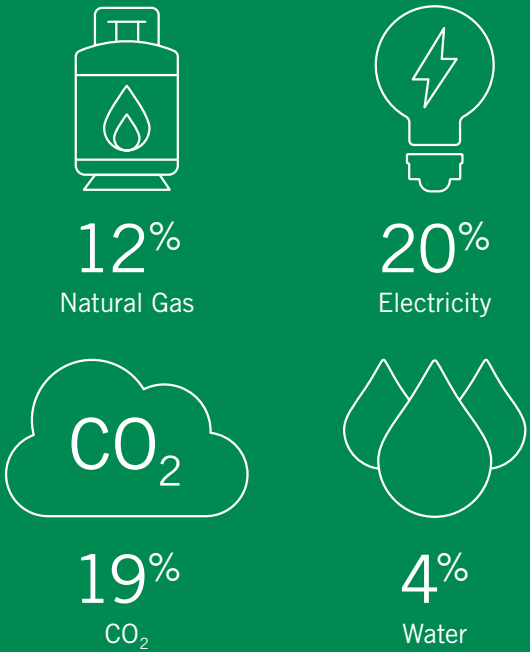
To help reduce waste at our Mycorrhizal Applications plant in Grants Pass, Oregon, we implemented a new recycling program for single-use gloves in our quality control and technology departments. It’s estimated that billions of such gloves are thrown away in the U.S. each year. Instead of the plant sending these gloves for disposal to landfills, we now ship them to a facility that specializes in recycling this type of material for reuse in furniture, pottery, and other useful products. The glove program complements the plant’s existing recycling efforts, including those focused on paper, cardboard, plastics, and batteries.

Designed for Sustainability

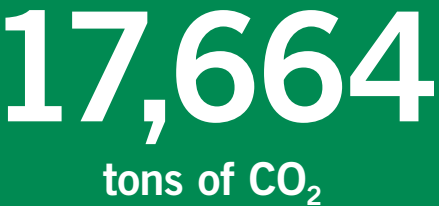
Mycorrhizal Applications’ new White City facility will include a variety of sustainable design elements and processes. A bioswale with native plants will collect and filter stormwater, protecting area waterways from pollution. Landscaping will also include native groundcover and plants. Inside, energy-efficient insulation, HVAC equipment, LED and natural lighting, and sensors will help reduce electricity usage. Steam condensate, generated during production, will be recovered and returned to the boiler for energy and water savings. Electric forklifts will be used for material handling instead of propane-powered machinery.

Osage Environmental Performance

Resource reductions per batch since 2017



Emissions reduced per batch since 2017

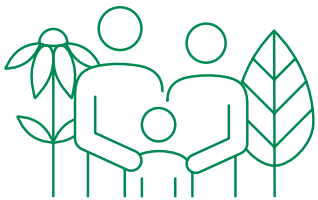


Energy savings per batch in 2023



Community Joins Sustainability Celebration

We welcomed more than 1,000 guests, including state and local leaders, to help us celebrate the opening and officially dedicate the Maple City Solar Field and Jiri-Rita Prairie Park adjacent to our Osage, Iowa, manufacturing plant.



Honoring Our Sustainability Champions

We dedicated four walking trails in the new Jiri-Rita Prairie Park to the memory of sustainability champions who made valuable contributions to Valent BioSciences and our sister companies, including Osage, Iowa, natives Shane Wiltse and Royce Tack. The prairie is open to the public and the prairie trails will be connected to the Osage community trail system for widespread access.



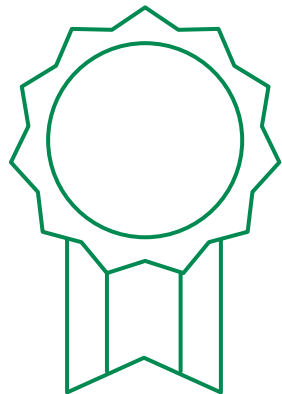


# Sustainable Sourcing

We align with global suppliers who share our commitment to Responsible Care practices, including driving sustainability performance. To that end, we started to conduct in-depth business reviews during 2023 with a select group of our vendors that represent the top 80% of our overall supply spend. These reviews include confirming our top suppliers have an up-to-date EcoVadis rating.

EcoVadis is the world's largest and most trusted provider of business sustainability ratings and assesses suppliers based on internationally recognized sustainability standards in four areas: Environment, Labor and Human Rights, Ethics, and Sustainable Procurement. We've used EcoVadis since 2019 to evaluate how well our suppliers have integrated sustainability into their business and management practices and systems.

Overall, EcoVadis has audited 129 of our suppliers, up from 110 last year. At year's end, another 41 assessments were in progress. EcoVadis also re-evaluates suppliers every two years. Of the 113 who have been reassessed, 66 improved their average



Our parent company, Sumitomo Chemical, earned a Committed badge from EcoVadis representing good performance in the EcoVadis methodology.

scores by 2.8 points. These suppliers have shown the most improvement in Sustainable Procurement and Environment scores, with an average increase of 3.8 and 3.0 points, respectively.

Additionally, we use EcoVadis's Carbon Action Module (CAM) to better understand our suppliers' carbon emissions risk and performance. CAM tools include a Carbon Rating and Carbon Calculator. Nearly 60% of our suppliers have been assessed since we started using CAM in 2022. Of these, nearly one-third are rated as leaders (10%) or advanced (19%) in their industries and 38% are rated as intermediate. Their progress overall will help us lower the environmental impact of our supply chain and move toward our parent company's 2050 net carbon neutrality pledge.

Sumitomo Chemical is also evaluated as a supplier by EcoVadis and was awarded a Committed badge representing good performance in the EcoVadis methodology.

Continuing efforts are under way to improve our sustainable sourcing efforts, including a procurement initiative that will leverage category management to drive comprehensive and sustainability strategies at the category level. Additional improvements include process implementation for faster execution of key compliance activities and automation of manual processes for stakeholders.

129  
evaluated

Valent BioSciences suppliers evaluated

113  
re-assessed

Valent BioSciences suppliers re-assessed

66  
total

improved average scores



# Community

## Corporate Social Value

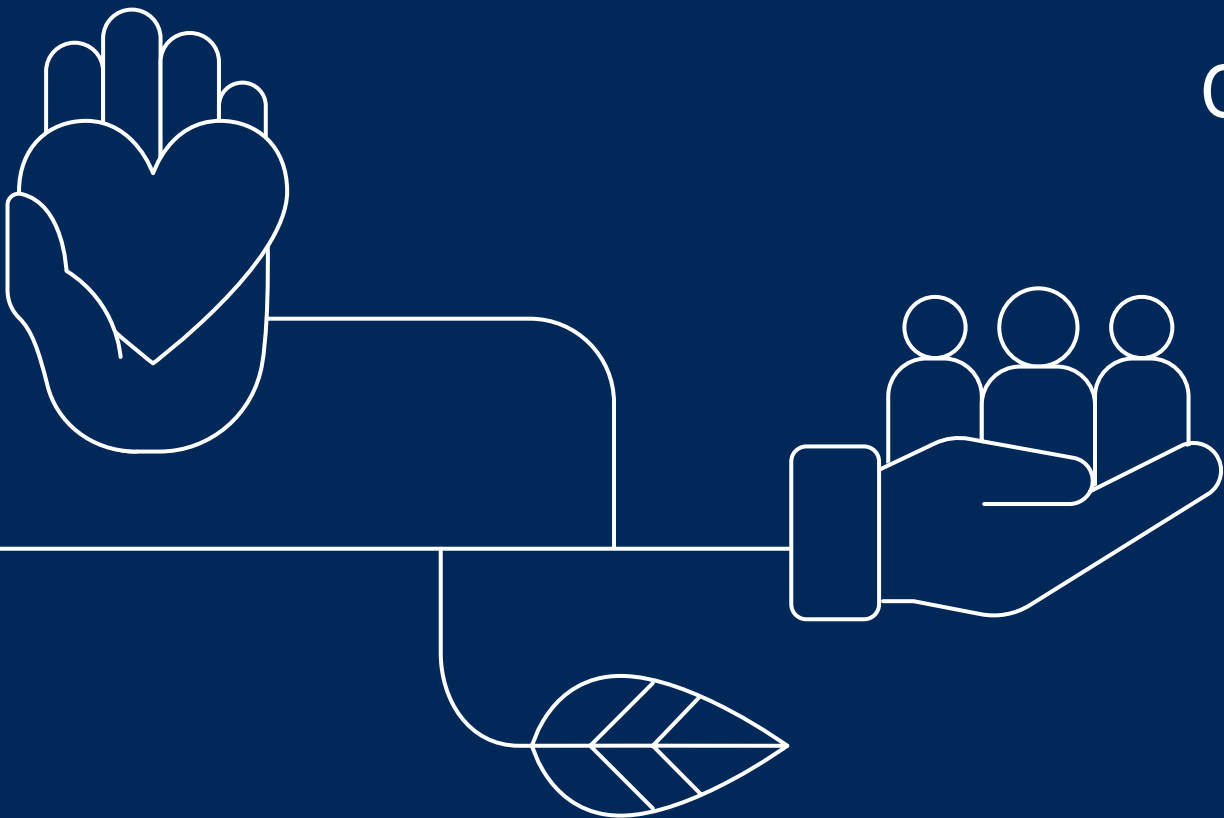
We go beyond the work we do each day to make a difference in our communities with in-kind, financial, and volunteer support. We prioritize the nonprofits and programs that share our business interests in protecting the environment, advancing food security and health, increasing access to STEM education and careers, and meeting local needs. To support our employees' concern for these and other issues important to them, we offer a matching gifts program and eight hours of paid time off for volunteer service.

3,624  
hours

paid time off for employees  
(8 hours eligible annually, per employee)

60+  
nonprofit  
organizations

supported by Valent BioSciences annually







*Mitchell County, Iowa*

As part of the celebration of our new Osage solar field and native prairie park and in appreciation of our ongoing local partnerships, we made several donations to area organizations during 2023. Together with OneEnergy Renewables, we funded the purchase of 18 solar panels for the Osage Community School District. The panels will be used to help sustainably power the district’s school bus maintenance facility. We also donated funds to Mitchell County 4-H, the Mitchell County Conservation Board, Osage FFA, and the Osage High School Industrial Technology Program.

We began a new relationship with Osage Community Day Care, a nonprofit provider serving 50 to 70 Mitchell County children daily. In 2023, we contributed funds to help construct a new building that will allow the organization to expand its services. Adequate day care is an important community need to recruit and retain our employees.

We made other donations in 2023 to the Iowa State University Extension and Outreach Farm Safety Day Camp, where students learned how to identify hazards on the farm and around their homes. In addition, we made contributions to the city fire and police departments to help fund their youth safety education efforts, and we provided funding to Osage Parks and Recreation to improve facilities and grounds and supported the Mitchell County Food Bank.

We participated in Mitchell County’s first job fair and throughout the year, we host high school and college students onsite for job shadowing opportunities, mock interviews, and other opportunities to expose them to STEM careers. Overall, Osage supported more than 40 nonprofit organizations or programs this past year.

*Lake County, Illinois*

We continued our long-standing support of the Lake County Forest Preserves (LCFP), where this year, employees removed large amounts of invasive buckthorn and honeydew at the Rollins Savanna preserve in Grayslake. Rollins Savanna is one of the county’s largest prairie restoration projects designed to create a natural habitat for grassland birds, waterfowl, and other wildlife.

We also held our eighth annual seed collection initiative. Each year, we help harvest rare and hard-to-collect seeds at Rollins Savanna that are used as part of the LCFP’s various native habitat restoration projects. Elsewhere, we donated more than 300 seedlings and built new gardening beds for GreenTOWN Grows, a nonprofit community garden in Waukegan that has been providing local food pantries with fresh produce since 2007.

Our scientists joined a Lake County STEM for Girls event for hands-on experiences. From using microscopes to exploring thumbprints, we introduced students in 6th to 8th grades to concepts about fermented foods, microbes, and agricultural pests. In support of the Special Education District of Lake County, many of our employees also participated in our annual charity walk.

Additionally, we volunteered to pack meals for Feed My Starving Children, collected donations, and purchased children’s toys during the holidays in partnership with CASA Lake County, and hosted a blood drive.

300+  
seedlings  
donated

more than 300 seedlings were donated for GreenTOWN Grows, a nonprofit community garden in Waukegan.



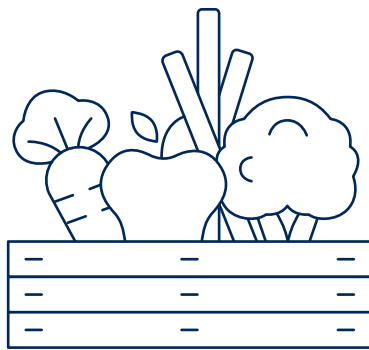


Josephine County, Oregon

Our Mycorrhizal Applications colleagues have several ongoing community relationships. One of those is with the Josephine County Food Bank, whose network of local agencies provides meals to more than 18,000 people monthly.

We participate in several of the food bank’s programs and events, including Plant-A-Row, seed swaps, and food drives. As part of our most recent Earth Day observance, we volunteered at its Community Garden assisting with garden bed maintenance and other needs.

Through our Adopt-A-Street partnership, employees keep the facility’s surrounding blocks clean with quarterly trash pickups. Removing litter from our city streets keeps it out of local stormwater systems, creeks, and rivers and helps contribute to cleaner, healthier communities.



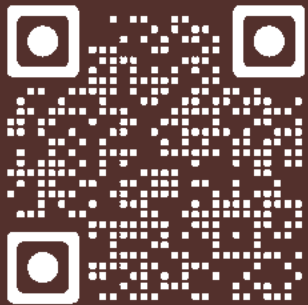
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# Sustainability Reporting Data

## 2023 Global Reporting Initiative (GRI) Standards

In 2023, Valent BioSciences embarked on an important journey related to our sustainability reporting metrics, aligning with the GRI standards. Please scan the QR code below to access our 2023 GRI Content Index online, or visit [www.valentbiosciences.com/gri-index](http://www.valentbiosciences.com/gri-index). We look forward to continuing to establish baseline reporting metrics and communicating our progress toward our important global sustainability goals.







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