



December 2016 | Member Newsletter

Phil Kozera

Letter from the Executive Director



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We're Looking Ahead At Exciting New Opportunities

I hope that everyone had a joyous weekend with family and friends.

As I reflect on 2016, I'm very appreciative of our work together making it a tremendous year for the life sciences. A quick recap: Nebraska's bioscience industry was highlighted during the Governor's Ag Conference; a biotech start-up discussion was featured during Big Omaha; hosted the inaugural Animal Health in the Heartland Conference; exhibited our companies at the National State Departments of Agriculture annual meeting in Nebraska; and facilitated a biotech industry study designed to strengthen our life-science ecosystem.

In addition, Bio Nebraska introduced and supported legislation that eliminated the Intern NE residency requirements and created the bioscience steering committee, as well as biosimilars legislation. Over the year, we actively strengthened and advanced our biotech community.

I'm very proud of the contributions our biotech companies and researchers are making to improve outcomes in healthcare, feed a growing global population, protect our food supply, and produce renewable fuels, among other things.

"Collectively, we are working to make our industry stronger, the ecosystem more supportive, and our economy enhanced with more high-wage jobs."

I'm also grateful to the many champions of our industry from Bio Nebraska board of directors, to our member companies, to the NU system and Southeast Community College, and our partners in government. A special thank you to Sen. Morfeld, chair of the bioscience steering committee, along with Senators Mello, Kuehn, Schumacher and Johnson for leading the recent bioscience study. Collectively, we are working to make our industry stronger, the ecosystem more supportive, and our economy enhanced with more high-wage jobs.

Earlier this month we made proposals to the bioscience steering committee based on an in-depth review from SRI International. We outline these ideas below, and we urge you to contact your elected officials with support for ideas important to our state's economic future.

As we look forward to 2017, we have many goals, including: continual engagement of our biotech community with our elected officials; promoting industry workforce opportunities; revising the Nebraska Advantage to reward high-wage job creation; opening the Biotech Connect Incubator on Nebraska Innovation Campus; and strengthening our brand of biotechnology in Nebraska. See more at [Bio Science Report](#).

Thank you for your continued support and participation. Have a happy New Year and I am looking forward to seeing you at our Bio & Beers on January 26 at the Upstream in the Old Market. In the meantime, please call to discuss ways Bio Nebraska can assist your company or organization.

Best regards,



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Upcoming Events



[Bio & Beers](#)

January 26
Upstream
Omaha, NE



[BIO CEO & Investor Conference](#)

February 13-14
New York, NY



[Partnering for Growth](#)

March 21-22
FFA Enrichment Center
Ankeny, IA

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Bioscience Leader Spotlight



Evonik, the creative industrial group from Germany, a leader in specialty chemicals

Today let's have a conversation with Nicole Rudningen of Evonik. Thank you for stepping into the bio spotlight. Evonik is active in over 100 countries around the world. In fiscal 2015 more than 33,500 employees generated sales of around €13.5 billion.

Q: Please tell us a bit about Evonik as a global specialty chemical company.

A: Evonik is active in many industry segments from animal nutrition, healthcare (pharma API's), baby care (super absorbers), high-performance polymers (your cell phone screen), oil additives, silica and many more.

Q: What is your focus in Nebraska and how long have you operated here?

A: For the past 16 years, Evonik has been producing lysine (trade name Biolys) in Blair, where we run Evonik's largest industrial biotechnology facility. In Nebraska, we're part of Evonik's nutrition and care segment in its animal-nutrition business line. Why is animal nutrition so important? The global population is growing - and with it, the demand for meat, fish, milk and eggs. To meet demand, without overstraining natural resources, depends on optimizing animal feed. Key components in making this possible are essential amino acids, which cannot be made by the body itself and must be fed to animals. With a balanced amino acid content, the total protein in feed can be reduced. Less land and water is necessary to produce animal protein. It also drastically reduces nitrogen penetration into the environment as manure production is reduced.

Q: Please share a little on your background?

A: I grew up on a dairy farm in Minnesota, so agriculture has always been a part of my life. I received a bachelor's degree in microbiology at St. Cloud State University and started at Cargill in Blair as a quality assurance chemist. The plant was originally a JV between Cargill and Evonik. When I transferred to the lysine plant, I worked in process development. In 2003, Evonik acquired full shares of the plant. In 2005, I moved to Germany to work at Evonik's R&D facility, and two years later I returned to Blair, managing fermentation operations. In 2012, I became the site manager for the lysine plant.

"It is up to companies like Evonik to be innovation solution providers. Without innovations in sustainability, then meeting basic human demand for protein in say, 2050, will not be possible. The world needs healthy, sustainable nutrition for a growing population."

Q: Evonik has a very strong brand focus on innovation in sustainability. Is this a reflection of your European roots?

A: Europe is more sensitive to sustainability topics, because they already face land mass and natural resource limitations that are less obvious in the United States. It is very important that Evonik is focusing on these central sustainability topics, because the world's population is already taxing our natural resources. It is up to companies like Evonik to be innovation solution providers. Without innovations in sustainability, then meeting basic human demand for protein in say, 2050, will not be possible. The world needs healthy, sustainable nutrition for a growing population. I like going to work and knowing what I do every day positively impacts the environment.

Q: How does the Blair bio industrial "cluster" help your business?

A: We are a part of a bio-industrial complex where the businesses on site support each other in many ways. We use products, which are produced on site, as raw materials for further processing of additional products. We create a nice critical mass for needs each business would otherwise have to meet on their own. This spans things from joint safety and emergency response teams to having enough work to keep skilled contractors and labor on site.

Q: With Blair being Evonik's largest industrial bio facility, what scale is that?

A: The plant has a capacity of 280,000 metric tons for L-lysine. We have about 100 people working in Blair.

Q: How are your essential amino acids sold?

A: They are feed additives sold to fully integrated poultry and swine producers. Amino acids are also becoming more important in the aquaculture industry. Evonik does produce some amino acids for human nutrition, but not at our Blair facility.

Q: Does Evonik like doing business in Nebraska?

A: I think Nebraska has a great workforce, and this is noticed and appreciated by Evonik leadership. Nebraska's corn production and outstanding agriculture programs make it a prime location for biotechnology.

Q: State leaders are assessing ideas to grow our industrial bio base. Any advice for them?

A: The State of Nebraska needs to focus on making sure investment incentives keep it ahead of other corn-producing states. Energy prices and renewable energy strategies also are important for bio processes. Has the state considered offering a special incentive category for industrial bio? This can be a win, win, win. It promotes the agricultural backbone of Nebraska by creating high-value products from local corn, brings new business and technology to the state, and in many cases, offers more environmentally sustainable solutions.

Thank you to Nicole and Evonik for your contributions to our life science community and the state of Nebraska.

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State News

Bio Nebraska unveils policy strategies

Nebraska is home to an emerging biotechnology sector that yields important innovations in healthcare, energy, agriculture and other fields. Biotechnology can be a big part of a new economy based on innovation and meaningful careers in dynamic sectors, creating high-wage, high-skills jobs all across the state. These were findings in a new report by Bio Nebraska and policy consulting firm SRI that assessed how to grow Nebraska's biotech industry. See more at [Bio Science Report](#).

Actions include shifts in existing state policies and creation of new programs. They range from general support of high-tech jobs to targeted actions for biotechnology. Here are summaries of policies Bio Nebraska covered with the Legislature's bioscience steering committee:

Business Recruitment Strategy

- Coordinate biotech business recruitment along related industry clusters and common inputs, outputs, and shared infrastructure

Tax Credits

- Expand the Angel Investment Tax Credit, and prioritize businesses in strategic industries
- Revise Nebraska Advantage Act tax credits to reward high-wage job creation and investment, and remove minimum job and investment thresholds
- Establish location-based "innovation zone" tax credit for companies locating into designated areas for university-industry collaboration
- Create a credit for the production of high-value chemicals from biomass feedstocks

Innovation Programs

- Increase appropriation for Business Innovation Act (BIA) financing programs
- Pilot a "block grant" program that provides flexible, multi-year funding for biotechnology startups

Networking & Marketing

- Develop a brand for Nebraska's biotechnology sector, supported by a dedicated organization focused on marketing and networking

Job Training

- Create a state organization to provide customized bioscience workforce training to companies locating to and expanding within the state

Venture Funding

- Establish a state Nebraska Biotechnology Venture Fund

Lawmakers weigh business incentives

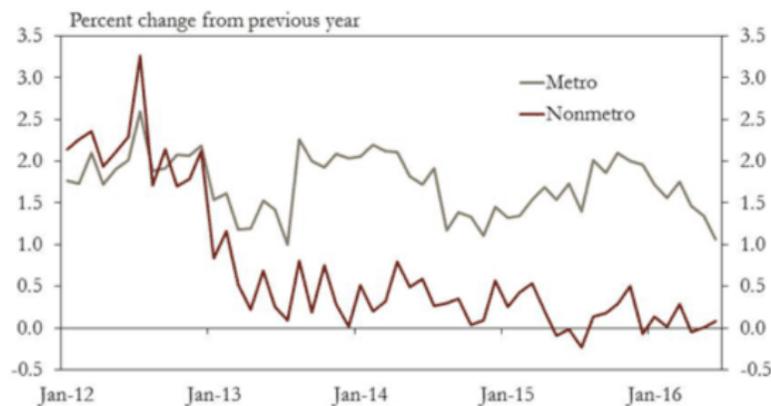
A recent audit of business incentives recommends simplifying the Nebraska Advantage Act and clarifying

its goals, according to the *Omaha World-Herald*. Sen. Dan Watermeier, chair of the performance audit committee, said the report is inconclusive but offers a starting evaluation. The incentive program encouraged 69 existing businesses to add jobs and increase investment. Businesses that got incentives added more and better-paying jobs. Gov. Ricketts said Nebraska Advantage has worked well and that reforms to target high-paying jobs would help growth. Sen. Jim Smith of Papillion said incentives help overcome an uncompetitive tax climate.

Nebraska brain drain continues

Census Bureau figures confirm that Nebraska is once again losing more college graduates than it attracts, according to the *Omaha World-Herald*. The new data said 2,300 people with bachelor's degree or more had moved away than moved into Nebraska. Meanwhile, the state is steadily increasing its percentage and numbers of people with bachelor's and graduate degrees.

Chart 6: Employment Growth in Nebraska
by Region Type



Source: Bureau of Labor Statistics.

KC Fed reports metro areas leading state's growth

A report from the Kansas City Federal Reserve Bank shows Nebraska's economy has continued to move forward, but not all regions are growing at the same pace. Driven by ongoing strength in Omaha and Lincoln, Nebraska's economy in metro areas has propelled the state forward, even as other areas dealt with a weaker ag commodity economy.

ADM adding feed facility at its complex in Columbus

Archer Daniels Midland will build a new, state-of-the-art feed facility to replace its current plant in Columbus. "Columbus is a key location for our U.S. business and is perfectly situated for a new, modern plant to serve our customers throughout the region," said Brent Fenton, president of ADM Animal Nutrition. The company's massive Columbus complex employs hundreds in the processing of grain into fuels, chemicals and feed, as well as creating a large market for corn grown in surrounding counties.

UNMC, UNO form new institute to help start-ups

UNMC and UNO are partnering on a new institute called UneTech to help fledgling firms get going. It will be directed by Rod Markin, M.D., Ph.D., UNMC's chief technology officer and associate vice chancellor for business development. UNeTech hopes to have three start-up companies on board in January and can house up to 12.

Leadership, momentum, opportunity at UNL

The year 2016 was pivotal for UNL. As the university continued its momentum in research and scholarship, growth, programming and collaboration, it has aimed for new levels of excellence. "I could not be more excited about our opportunities ahead and how we grow the impact of the university," said Ronnie Green, chancellor. [Read](#) about all the opportunities and changes in leadership, expansions and institutes.



Stephen Baenziger, UNL professor of agronomy and horticulture.

Team gains USDA grant for higher-yielding hybrid wheat

A UNL team has earned a three-year USDA-NIFA grant to develop hybrid wheat to feed a growing world. Stephen Baenziger, professor of agronomy and horticulture, will lead the project with teams from Texas A&M, Kansas State and the International Maize and Wheat Improvement Center. Their goal is to boost genetic yield potential of wheat by up to 50 percent in the next 20 years.

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National News

Opinion: Biotech crops aid in conservation tillage

Herbicide-tolerant biotech crops have reduced tillage - easing erosion, improving soil health and reducing greenhouse gasses, writes Council for Biotechnology Information Managing Director Kate Hall. Biotechnology shifted of millions of acres into conservation tillage systems that reduce loss of topsoil, usage of energy, pesticides and labor, and pollution of air and water.

Trump thanked for biofuels support

Iowa, Nebraska and South Dakota's governors sent a letter thanking President-elect Donald Trump for statements supporting the Renewable Fuel Standard and biofuels. "The nation's biofuels industry has generated thousands of jobs throughout the nation, and biofuels will continue to grow our state's economies with your help," they wrote.

21st Century Cures Act signed into law

The 21st Century Cures Act, a \$6.3 billion legislative package designed to speed approval of medical devices and drugs and boost funding for medical research, was signed into law by President Barack Obama. The package authorizes \$1 billion in funding to cure opioid abuse and puts \$4.8 billion into research on cancer, Alzheimer's and other initiatives.

Eczema ointment from Pfizer has FDA OK

Pfizer's twice-daily topical ointment Eucrisa received FDA approval to treat mild to moderate atopic dermatitis in patients at least 2 years old, based on results of two placebo-controlled trials.

Ziarco Group purchased by Novartis

Swiss drug maker Novartis is acquiring UK-based Ziarco Group, giving it access to drug candidate ZPL-389, an oral H4 receptor antagonist under development for eczema.

Del Monte's biotech pink pineapple wins FDA nod

The FDA has approved Del Monte Fresh Produce's biotech pink pineapple Rosé, deeming it as safe and nutritious as conventional pineapples. Rosé has lower levels of an enzyme that converts reddish lycopene into yellowish beta carotene. (Lycopene makes tomatoes red and watermelon pink.)

UCLA experts defend biotech food

The use of biotechnology in food production should not be controversial, said UCLA legal scholar Edward Parson and molecular biologist Robert Goldberg. Parson noted that no adverse effects have been detected in North America, where biotech crops have been grown for more than 25 years, while Goldberg explained that adding a gene is no different than manipulating genes through breeding.

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