

# BEYOND THE NUMBERS

THE SAMUEL ROBERTS NOBLE FOUNDATION 2014 ANNUAL REPORT

**“ ... THE ONLY TRUE HAPPINESS MUST COME FROM NOT ONLY UNDERSTANDING  
YOUR OWN NEEDS, BUT AN UNDERSTANDING AND WILLINGNESS TO SECURE  
THE SAME THINGS FOR YOUR FELLOW MAN.”**

— LLOYD NOBLE, 1948



Seth Pratt, 2014 Lloyd Noble Scholar in Agriculture

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## PRESIDENT'S MESSAGE: BEYOND THE NUMBERS

To our readers:

Numbers can seduce you. Add them together, and they offer concrete proof of achievement. Compare them year to year, and they illustrate growth and progress. But focus on them too long, and you've completely missed the real benchmark of success.

The Noble Foundation's greatest accomplishments have been and always will be determined by our people and the outcomes of their work. You can't measure dedication. You can't quantify heart on the bottom of a spreadsheet. You can't capture the intangible value of benefiting someone's life. But you can see it.

When a wave of employee volunteers sweeps into the local Veterans Center and offers friendship to our aging heroes, you realize the triumph of compassion.

When our scientists invest countless hours into an experiment, finally breaking through the unknown to seize their answer, you understand the power of discovery.

When our agricultural consultants stand side-by-side with a farmer and improve a multigenerational operation, there in his thank-you handshake you see a mission fulfilled.

So when we assembled this year's annual report, we included all the numbers you expect to see. They are black-and-white examples of accomplishment, and we're proud of each one. We want you to see them all with this understanding: Numbers may not lie, but often they do not tell the whole story.

Throughout this report, we pause eight times to go *Beyond the Numbers* and tell the tales behind the data. It is only there in human-to-human bonds – with their unmeasurable outcomes and intangible emotions – that you can fully comprehend the fullness and depth of the Noble Foundation's effect.

Each number holds a remarkable story, and each story is rooted in the effort and ingenuity of our people, who pour themselves out to achieve our mission.

What began with one man's vision to benefit agriculture now extends almost seven decades and is realized in the 345 men and women who have become a living legacy. They are individuals – each unique in their perspectives and backgrounds – but they are united by a shared vision and the hope of contributing to a purpose greater than themselves.

Together we will go beyond the numbers and seek new ways to benefit the lives around us. That's the only lasting measure of success, and we'll pursue it with all our energy.

You can count on it.

Sincerely,

Bill Buckner

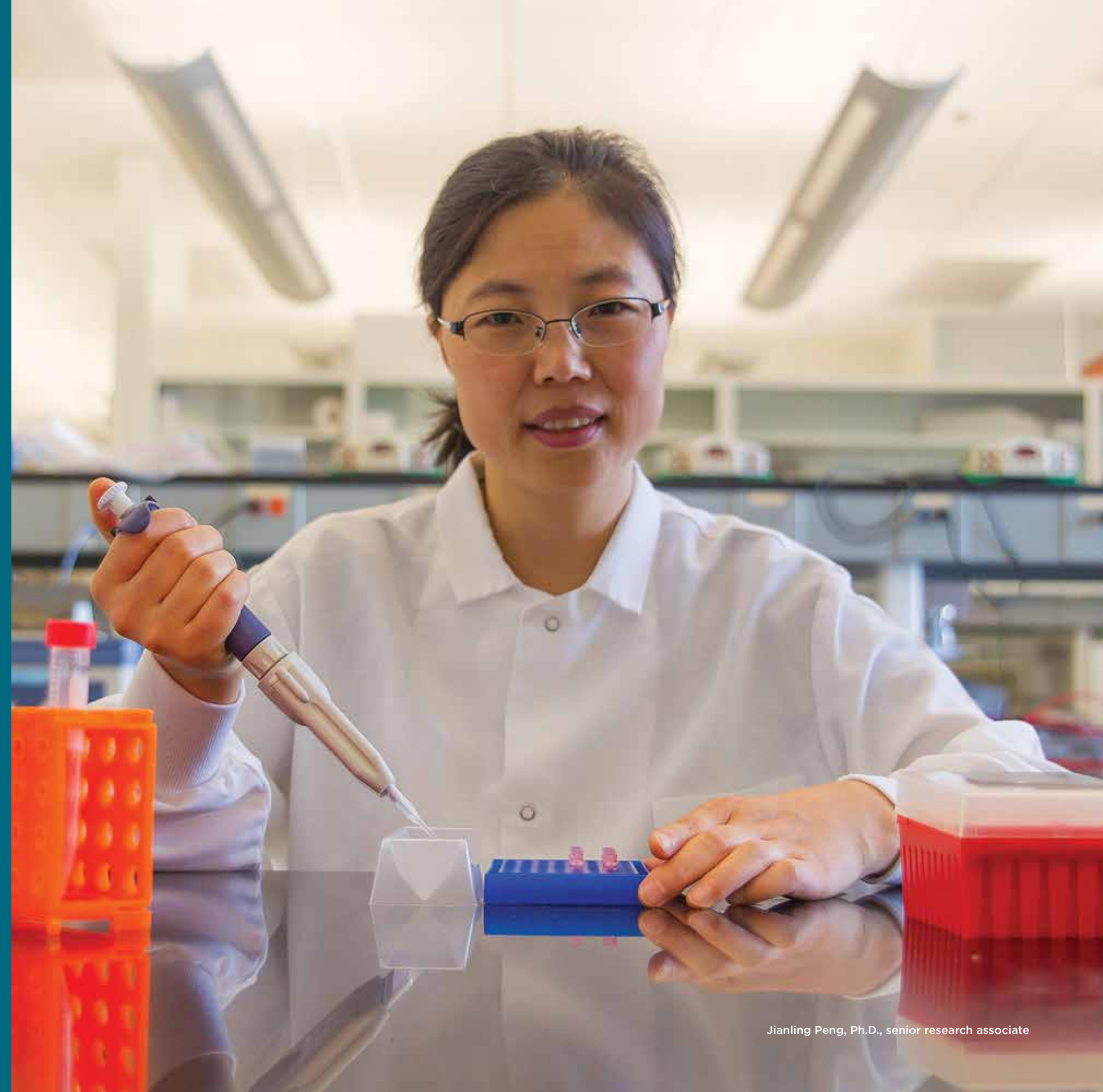
A man with a full brown beard and glasses, wearing a white lab coat over a dark shirt, is smiling. He is positioned on the right side of the frame. The background is a dense, out-of-focus wall of green leaves.

# 1 YEAR.

**365 CHANCES TO BETTER A LIFE. UNLOCK  
A DISCOVERY. TRANSFORM AGRICULTURE  
FROM THE SOIL TO THE DINNER TABLE.**

David McSweeney, biosafety and  
greenhouse research manager

**2014** BROUGHT NEW  
CHALLENGES, AND THE 345 MEN AND  
WOMEN OF THE NOBLE FOUNDATION  
MATCHED EACH ONE WITH INGENUITY  
AND THE SHARED BELIEF THAT  
UNITED WE ARE GREATER THAN  
THE SUM OF OUR PARTS.



Bryan Nichols, livestock consultant



WITHIN THESE 84 PAGES, WE ENUMERATE OUR ACCOMPLISHMENTS AND DETAIL EIGHT STORIES THAT REVEAL THE PEOPLE AND PASSION WITHIN EACH SUCCESS.

OUR TRIUMPHS GO FAR **BEYOND THE NUMBERS**. THEY LIVE IN THE CHILDREN WE EDUCATE, THE FARMERS WE SUPPORT AND THE BREAKTHROUGHS THAT STREAM FROM OUR LABORATORIES TO THE REST OF THE WORLD.

AND EACH ACHIEVEMENT CAN BE TRACED BACK TO ...

# 1 FOUNDER

Lloyd Noble, founder and philanthropist







# LLOYD NOBLE'S VISION CONTINUES TO BENEFIT AGRICULTURE 70 YEARS LATER

One man can change the world. Lloyd Noble did – twice.

In the 1920s and '30s, Noble helped revolutionize the oil and gas drilling industry. He capitalized on highly organized crews and the latest technology to drill deeper and faster than his contemporaries. Speed and skill resulted in rapid growth; within 15 years, Noble's swath of drilling rigs spread across North America.

His thriving businesses defied the Great Depression, and he achieved significant financial success, which he used to benefit agriculture and the Southern Great Plains.

Poor farming practices of the early 20th century combined with a decade-long drought to produce the Dust Bowl, which, by the early 1940s, had ravaged Oklahoma and the surrounding states' once productive land.

The loss of the agricultural foundation eroded the economy, disrupted the social order and threatened the long-term viability of the region.

In May 1943, Noble spoke to these issues when he contributed a column to the 50th anniversary edition of his hometown newspaper, the Daily Ardmoreite. He wrote: "What are we in the present generation going to do with this heritage? Are we going to encourage the terracing, conservation and up-building of our soil so it will support a growing, healthy and prosperous livestock and agrarian industry, or are we going to allow our soils to be depleted and our population shifted to other areas as we read about it in the newspapers?"

Noble became a founding father of the sustainability movement, focusing his energy and resources on bolstering land management and soil conservation. Though an esteemed oilman, Noble realized Oklahoma's future prosperity hinged on the revitalization of agriculture. "We believe that while at times we have felt the overshadowing presence of oil," he said, "we are living in an area that is essentially agricultural. ... The land must continue to provide for our food, clothing and shelter long after the oil is gone."

He offered a permanent resource for the agricultural community and helped spark an agricultural renaissance when he established The Samuel Roberts Noble Foundation in 1945.

Noble charged the new organization with benefiting mankind by assisting farmers and ranchers, advancing agriculture, and improving the soil. The Noble Foundation's early efforts focused on educating and encouraging area farmers and ranchers to practice proper management techniques. Early agricultural consultants taught the value of soil testing,

thus promoting the return of nutrients to the ground. Noble knew renewal of the soil would help prevent another Dust Bowl and ultimately secure the land for future generations.

At the age of 53, Lloyd Noble suffered a fatal heart attack on Feb. 14, 1950 – Valentine's Day. Though he passed away less than five years into the Noble Foundation's existence, his vision had been cemented. Through almost seven decades, the stewards of the Noble Foundation – largely comprised of his descendants – have continued to pursue his vision.

Today, the Noble Foundation is the largest independent, nonprofit agricultural research institution in the United States.

The organization conducts plant science research, delving into the genetic and molecular level of plants to answer fundamental questions about how plants grow and interact with the microbial world around them. Advancing this basic research into practical application, Noble Foundation plant breeders work to develop hardier varieties of forage crops with improved traits such as better drought tolerance and disease resistance, while agricultural researchers seek new technologies and sustainable practices to improve land management. The full spectrum of research underscores a producer relations program that continues the organization's rich heritage of providing no-cost consultation and educational programs to farmers, ranchers and land managers.

Additionally, the Noble Foundation offers a wealth of philanthropic activities that range from direct grants to worthy nonprofit organizations and an employee volunteer program that builds a stronger local community to Noble Academy, a youth education program focused on seventh- to 12th-grade students, that delivers agricultural and hands-on educational activities to the classroom.

While Lloyd Noble could have never foreseen the impact of his organization, he believed in its limitless possibilities to meet the challenges of coming generations. In January 1948, just two years before his death, Noble wrote, "As I look around at the strides that have been made in our research laboratories, as I look at the things undreamed of a few years ago ... the only degree to which we have reached the end of the road of opportunity is the degree to which we have exhausted the imaginative capacity of the human mind."

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**Noble Foundation founder Lloyd Noble, right of center in boots, poses with Noble Drilling staff in 1932. Building strong teams was one of the cornerstones of Noble's success.**

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2

PRINCIPAL INVESTIGATORS NAMED TO THE “THOMSON REUTERS HIGHLY CITED RESEARCHERS” LIST. MICHAEL UDVARDI, PH.D., AND WOLF SCHEIBLE, PH.D., WERE RECOGNIZED AMONG THE TOP 1 % OF RESEARCHERS IN THE WORLD.

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4

*PROFILES AND PERSPECTIVES COMMUNITY ENRICHMENT SERIES* PROGRAMS HOSTED FOR THE SOUTHERN OKLAHOMA COMMUNITY, FEATURING NATIONALLY RECOGNIZED SPEAKERS LIKE ASTRONAUT KOICHI WAKATA, PH.D., AND “MR. EVEREST” PETE ATHANS.

CENTERS OF EXCELLENCE ESTABLISHED IN THE AGRICULTURAL DIVISION, EACH DESIGNED TO BENEFIT AGRICULTURAL PRODUCERS. THE CENTERS ARE FOCUSED ON AGRICULTURAL SYSTEMS AND TECHNOLOGY, ECONOMICS, PECANS AND SPECIALTY CROPS, AND PRIVATE LAND STEWARDSHIP.

NEW FORAGES DEVELOPED AND RELEASED BY THE NOBLE FOUNDATION’S PLANT BREEDERS, INCLUDING HARDIER VARIETIES OF WHEAT, RYE, OAT AND TRITICALE.

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5

RESEARCH CLUSTERS ESTABLISHED TO HARNESS AND COMBINE THE EXPERTISE OF NOBLE FOUNDATION RESEARCHERS ACROSS EACH OF THE THREE OPERATING DIVISIONS. THE CLUSTERS’ SUBJECT AREAS INCLUDE PLANT GROWTH AND DEVELOPMENT, LOW-INPUT AGRICULTURE, BREEDER’S TOOLBOX, PLANT-ANIMAL INTERACTION, AND PLANT-MICROBE INTERACTION.

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7

PATENTS ISSUED FOR DISCOVERIES, RANGING FROM IMPROVING ALUMINUM TOLERANCE IN ALFALFA TO REGULATING NUTRIENT ALLOCATIONS IN PLANTS.



# 6 TO 8

**INCHES OF TOPSOIL  
ARE RESPONSIBLE FOR GROWING THE  
PLANTS NEEDED TO FEED THE WORLD.**

Dillon Payne, cartographer and irrigation associate, shows his son Kaden, 7, how to check for healthy root systems in a field of alfalfa.



Katrice Hernandez, agricultural services and resource assistant, prepares a regional farmer's soil sample to be analyzed for nutrient content by an outside company.

# SOIL RENAISSANCE SEEKS ANSWERS TO IMPROVE SOIL HEALTH, PRODUCTIVITY

Dan DeSutter and his father watched as heavy rains washed away precious topsoil from their crop fields in Indiana. Gone was a portion of their most fundamental asset: soil, the substance from which sprouts their livelihood and the world's basic necessities. They knew they had to do something.

Every year erosion, knowledge gaps in production practices and public policies, and urban development take more soil away from the world's landscape. Soil is disappearing at an alarming rate - 10 to 40 times faster than it can naturally be replenished. With the top 6 to 8 inches of soil responsible for growing the plants needed to feed the world, its degradation puts pressure on what remains to sustain the world's growing population. Soil is overworked and underappreciated.

To help reverse this trend, the Noble Foundation and Farm Foundation initiated Soil Renaissance, a movement to make soil health the cornerstone of land use management decisions and celebrate its centrality to life. Soil Renaissance brings the best and brightest minds together to tackle issues facing the field, fostering progress and setting the stage for a nation and world abundant with healthy soil.

"There are more microorganisms in a tablespoon of soil than people on the planet, yet we know virtually nothing about the soil that we didn't know 50 years ago," said Bill Buckner, president and CEO of the Noble Foundation. "Through the Soil Renaissance, we are reawakening the conversation about the value of this exhaustible resource."

In 2014, DeSutter joined the renaissance. Having experienced erosion's detrimental impacts firsthand and worked for decades to correct problems and further build soil, DeSutter knows the value of generating more knowledge about soil.

"As public investment in land-grant research has declined, a funding vacuum has occurred," DeSutter said. "Systems-oriented soil health research dollars are in short supply, and I'm thankful that organizations like the Noble Foundation have stepped up."

Soil Renaissance participants come from all corners of the agriculture and soil health spectrum - production agriculture, industry, academia, research and governmental agencies. They come from conventional and organic backgrounds, and they are united by their desire to see soil flourish.

"We really have found common ground around this idea of creating healthy soil," said Jeff Moyer, farm director of Rodale Institute, who

contributes his experiences with cover crops and organic no-till research.

"We need to understand the impact of any one management system on the overall system. It doesn't help to tell farmers, 'You should improve the soil.' You must give them practical tools or it doesn't do them any good. Developing those tools and measuring sticks requires some on-the-ground science and some observation from farmers."

Richard Teague, Ph.D., is the associate resident director of the Texas A&M AgriLife Research and Extension Center at Vernon. In 2011, he published one of the first rangeland papers incorporating soil health after studying the operations of the top range managers in a three-county area of Texas. "I was thrilled when I heard about Soil Renaissance," Teague said. "I thought this was absolutely the way to rejuvenate soil health and the ecosystem."

In 2014, the Soil Renaissance's four working groups focused on core areas related to the advancement of soil health, including measurement, economics, education and research.

The Soil Renaissance working groups have formulated a two-tiered system that will serve as a base for regionalized standardization of soil health measurement. Having an agreed upon soil health measurement test is the linchpin to advancing the economics of soil health for agricultural producers and landowners. The working groups have also developed and prioritized dozens of research projects related to soil health.

Through the coming year, Soil Renaissance will focus on finalizing these projects and securing funding to launch several of the research projects with the continued focus to provide necessary breakthroughs and empower agricultural producers to continue cultivating the soil for generations to come.

"We don't see that there's really any other option than building the soil," said Dorn Cox, Ph.D., another farmer collaborating with Soil Renaissance. Cox's family runs a 250-acre diversified organic operation in New Hampshire, and he has worked on soil health projects for eight to 10 years.

"I believe one of the most fundamental human values is the desire to make things a little better," Cox said. "If we can leave topsoil to our children, we're leaving something that can be built on. I can't imagine anything more valuable."

# 13TH WINNER

OF THE LEONARD WYATT MEMORIAL OUTSTANDING COOPERATOR AWARD, KENT DONICA, HONORED AS THE TOP FARMER OR RANCHER WHO PARTICIPATES IN THE ORGANIZATION'S NO-COST CONSULTATION PROGRAM. DONICA RECEIVED THE AWARD FOR HIS LAND STEWARDSHIP PRACTICES, COMMUNITY SERVICE AND WILLINGNESS TO ASSIST OTHER PRODUCERS.

# 17

THE CLASS NUMBER THAT LIVESTOCK CONSULTANT BRYAN NICHOLS AND FIELD PLOT OPERATIONS MANAGER SHAWN NORTON WERE SELECTED TO PARTICIPATE IN AS PART OF THE OKLAHOMA AG LEADERSHIP PROGRAM.

# 18

GIANT BOXES SENT TO TROOPS STATIONED IN AFGHANISTAN BY THE EMPLOYEE TEAM. THESE CARE PACKAGES WERE FILLED WITH PERSONAL CARE ITEMS, ENTERTAINMENT ITEMS AND SNACKS AS A SMALL TOKEN OF APPRECIATION FOR THEIR SERVICE.

**20 COUNTRIES  
REPRESENTED IN THE  
NOBLE FOUNDATION'S  
EMPLOYEE BASE OF 345.**

**28**

**DAYS SPENT AT THE KENNEDY AND JOHNSON  
SPACE CENTERS BY PRINCIPAL INVESTIGATOR  
ELISON BLANCAFLOR, PH.D., AND HIS TEAM AS  
THEY PREPARED PLANT EXPERIMENTS TO BE  
CONDUCTED BY ASTRONAUTS AT THE  
INTERNATIONAL SPACE STATION.**

**30%**

**REDUCTION IN FACILITY  
MAINTENANCE AND  
REPAIR COSTS.**



Feral hogs, an invasive species, cause more than \$1.5 billion in damages every year in at least 39 states.



# 39

**STATES AFFECTED BY FERAL HOGS.**

# RESEARCH AND INGENUITY YIELDS SOLUTION TO FERAL HOG EPIDEMIC

Josh Gaskamp peered out from behind tall glass windows to the grassy carpet two stories below. Flanked by representatives from W-W Livestock Systems, the Noble Foundation wildlife and range consultant pointed to a circular trap set up in the middle of the Noble Foundation campus especially for this meeting. He paused a second to build anticipation, then pushed a button on his computer.

From the window, the group watched as the rigid metal cage, suspended 3 feet above the ground, remotely deployed and dropped to the ground. There was a moment of silence, then clapping and questions. For Gaskamp, this day was the culmination of four years of research into the best methods for controlling and trapping feral hogs.

Farmers, ranchers and land managers needed a new weapon in the battle against the nonnative species that causes \$1.5 billion in damages every year and competes against native wildlife for food and water in 39 states.

In 2012, after two years of initial research, Gaskamp and other Noble Foundation researchers built the first BoarBuster prototype. The system draws on the advantages of both drop-nets and traditional corral traps, and incorporates novel communication components.

Over time, adjustments were made to make the trap more effective. The initial square design was rounded, mimicking hog herding behaviors and cutting metal usage and costs. Electrical components and communication equipment were improved to enhance reliability in remote locations and expand trap site options. “We wanted to make BoarBuster usable for anyone,” Gaskamp said. “As the project progressed, everyone grew more and more excited. We knew we were onto something great.”

While the Noble Foundation is in the business of generating ideas and information that create solutions for farmers and ranchers, the organization is not in the manufacturing and product sales business. “Like many other research institutions, we have to engage commercial entities or our research efforts would never benefit those we were intended to help,” said Jeff Moen, business development director.

So while the researchers continued to refine the product – tweaking it for improved effectiveness and consistency – the search began for manufacturers who could turn BoarBuster into something available for widespread usage.

First, in 2013, Tactical Electronics, a company in Broken Arrow, Oklahoma, was identified to develop the camera and communication components. Unlike traditional game cameras, BoarBuster uses live streaming technology that allows the trap to be monitored and dropped from a cellphone or computer with the operator off-site, even thousands of miles away.

Research with the new trap showed it to be among the most effective on the market. BoarBuster was able to catch up to 44 hogs at one time and enables removal of about 88 percent of the identifiable hog population, meeting the 70 percent capture rate needed to keep hog numbers from growing.

As the cage dropped on the front lawn that midsummer day in 2014, the end drew near for the search for that final piece – a manufacturer and distributor. Having an excellent reputation in the farm and ranch equipment sector, W-W Livestock provided both manufacturing and nationwide distribution. A visit to their facilities in Thomas, Oklahoma, a few months later solidified the relationship.

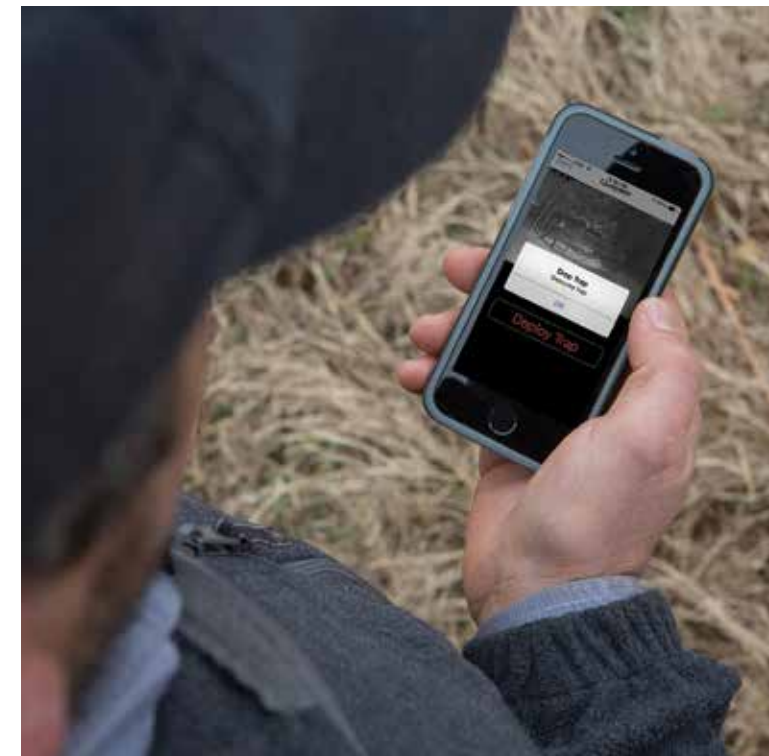
By the end of 2014, all the pieces to bring BoarBuster to market had been put in place. “BoarBuster has a chance to give land managers and agricultural producers a new tool to combat this invasive species,” Gaskamp said. “What began as a research project and a wild idea is now going to benefit real people in the real world. That’s what the Noble Foundation is all about.”

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**Top: BoarBuster stands ready to trap feral hogs.**

**Left: Josh Gaskamp, wildlife and range consultant, uses a cellphone to monitor and drop the trap remotely.**

**Right: A feral hog is trapped in the BoarBuster trap.**





# 40

THE “ACHIEVERS UNDER 40” LIST, PRODUCED ANNUALLY BY OKLAHOMA’S JOURNAL RECORD PUBLICATION, INCLUDED HUMAN RESOURCES ADMINISTRATOR EMILY BYNUM BECAUSE OF HER CONTRIBUTIONS TO THE ORGANIZATION AND HER EXTENSIVE COMMUNITY SERVICE.

# 77

SCHOLARSHIPS GIVEN TO UNDERGRADUATE AND GRADUATE STUDENTS.

EMPLOYEES IN THE FORAGE IMPROVEMENT DIVISION, WHICH ZENGYU WANG, PH.D., WAS SELECTED TO LEAD AS THE NEW SENIOR VICE PRESIDENT AND DIVISION DIRECTOR. WANG HAS ALMOST 25 YEARS OF RESEARCH EXPERIENCE AND IS RECOGNIZED AS ONE OF THE TOP RESEARCHERS IN HIS FIELD.

# 47

# 82

DAYS SPENT IN ARDMORE, OKLAHOMA, BY THE 13 NOBLE SUMMER RESEARCH SCHOLARS IN PLANT SCIENCE AND LLOYD NOBLE SCHOLARS IN AGRICULTURE. THE TWO SCHOLAR PROGRAMS PROVIDE ELITE COLLEGE STUDENTS FROM ACROSS THE UNITED STATES WITH AN OPPORTUNITY TO CONDUCT REAL RESEARCH PROJECTS AND RECEIVE MENTORSHIP FROM PROFESSIONALS.

# 49

NEW EMPLOYEES JOINED THE NOBLE FOUNDATION.

**94 JOURNAL PAPERS PUBLISHED  
BY RESEARCHERS.**

**96 PAGES IN *HIGH TUNNEL HOOP  
HOUSE CONSTRUCTION GUIDE*,  
AVAILABLE ON AMAZON.COM.**

**101 PH.D. SCIENTISTS AND RESEARCHERS  
WORKING IN LABORATORIES.**

**102 EMPLOYEE**

TEAM ACTIVITIES THAT INCLUDE  
EVERYTHING FROM COMMUNITY  
SERVICE PROJECTS TO EMPLOYEE  
DEVELOPMENT OPPORTUNITIES.

**130 EMPLOYEES**

COMPLETED CPR CERTIFICATION OR  
DEFENSIVE DRIVING AS PART OF THE  
NOBLE FOUNDATION'S COMMITMENT  
TO SAFETY AND PERSONAL  
DEVELOPMENT.

**162 TOURS**

GIVEN TO STUDENTS, ORGANIZATIONS  
AND VISITORS.

**350 PIECES**

OF FIELD EQUIPMENT USED AND  
MAINTAINED.

**361 CALVES**

BORN INTO THE  
NOBLE FOUNDATION HERD.

# 365 DAYS

TIME TO WHICH FORAGE 365 HOPES  
TO EXTEND THE GRAZING SEASON.

Each of these Noble Foundation researchers lead projects ranging from fundamental plant science to applied agricultural research in an effort to enable year-round grazing. From left: Rujin Chen, Ph.D.; Marija Monteros, Ph.D.; Elison Blancaflor, Ph.D.; Malay Saha, Ph.D.; and James Rogers, Ph.D.



# RESEARCH INITIATIVE UNDERTAKES YEAR-ROUND GRAZING CHALLENGE

Craig Watson's cattle tentatively meander through the opened hot wire gate separating two grazing paddocks. "Woo, woo!" he calls to them, and their ears perk up. They see tall, fresh grass waiting in the new paddock and move a little faster. The leaders leap into fresh forage and stop to turn around and watch the others, beckoning them to join.

"This is my favorite time of year – no bawling, just sounds of eating," Watson said, enjoying his cattle's frolic. "This is the best time to be a cow. There's lots of fresh, nutritious grass."

Come winter, the green won't be so plentiful. And though it's only May, Watson's preparations for that time have already begun.

A few hours prior, Watson dashed from his home near Sherman, Texas, and climbed onto his John Deere tractor, a hay rake attached. Weather was on his mind. The forecast said storms would be rolling in soon, and he had hay down that needed to be raked and baled.

Racing against the weather at tractor speed, Watson crept past one paddock of grazing heifers and turned into another earmarked for hay. Rounding the field, he looked back as the rake pulled loose, sun-dried forages together into long rows. Later, a custom baler would go over the windrows, rolling them up into large round hay bales that Watson will feed to his cattle this winter, along with some supplemental grain.

Feeding hay – whether bought or made – is expensive, and the vast majority of ranchers do it. "I have to keep high quality food in front of my heifers to help them grow," Watson said. In the winter months, when fresh forage goes dormant, that means making sure he has nutritious hay available.

Watson and other producers dedicate hours and energy to making hay: cutting, tedding, raking and baling. They spend time and money managing weeds and fertilizing to ensure its quality. Then, when it is time to feed, some of the hay inevitably ends up wasted.

In 2014, the Noble Foundation launched a new research initiative to alleviate these inefficiencies and reduce ranchers' need for hay. Forage 365's goal is to enable year-round grazing by focusing on four pillar species: alfalfa, bermudagrass, tall fescue and winter wheat.

Forage 365 brings together Noble Foundation researchers from across the three divisions, combining their resources and expertise to tackle the overall issue from various perspectives. They study plants at

the molecular level, learning how they might breed improved varieties that can produce more and better quality forages with limited soil nutrients and water, as well as withstand pathogens, drought and cold. They also study management practices and economics.

"In essence, we are stretching these four pillar species beyond their usual growing seasons," said Michael Udvardi, Ph.D., director of the Plant Biology Division. "We want them to grow earlier in the spring, through the summer and/or later into the fall, thus extending each species' growing season and creating continuous forage for livestock."

Beyond the obvious outcomes, the nine projects that make up Forage 365 will not only improve forage system productivity and profitability; they will also demonstrate how the system can improve sustainability.

"Forage 365 focuses on the improvement of the four pillar species in a unified system, but it also capitalizes on the advantages of cover crops," said Zengyu Wang, Ph.D., director of the Forage Improvement Division. "This whole-system approach benefits from proven land stewardship practices used by ranchers for decades, advanced research and new thinking. The end result is enhanced sustainability of grazing lands that supports sound environmental practices and producers' needs."

As Watson watches his cattle munch the lush hillside pasture, the sun begins to set. It's 8 p.m., and his hay is raked, but the night is not over. He still needs to check the custom baler's progress. With rains coming in, Watson says there are several other fields he is trying to get baled.

"Every year I hope to feed less hay and grain," Watson said. "It is much more affordable if I can get my cattle to harvest their own feed. I've worked with the Noble Foundation and appreciate all the advice I get from them. I wouldn't be near as close to accomplishing my goals without them. If they can create a year-round grazing system, then they'd change ranching forever."



Top left: Forage 365 aims to help ranchers like Craig Watson decrease their need for hay.

Top right: Craig Watson's cattle graze as the sun sets.

Bottom: Craig Watson rakes hay to be baled for winter.

# 427

**CONSECUTIVE DAYS  
WITHOUT A LOST-  
TIME INJURY,  
AS OF DEC. 31, 2014.**

# 799

**ACRES TREATED WITH PRESCRIBED FIRE  
ON NOBLE FOUNDATION PROPERTIES.  
THE NOBLE FOUNDATION ACTIVELY  
PROMOTES USING PRESCRIBED FIRE AS  
A LAND MANAGEMENT TOOL THROUGH  
HANDS-ON WORKSHOPS, SUPPORT OF  
THE OKLAHOMA PRESCRIBED BURN  
ASSOCIATION AND THE MOVEMENT TO  
SECURE INSURANCE OPTIONS FOR THE  
STATE'S LANDOWNERS.**

# 1,185

**TOTAL INTERACTIONS SUPPORTED  
THROUGH THE AG HELPLINE. FARMERS,  
RANCHERS AND LANDOWNERS CAN  
ASK QUESTIONS AND LEARN ABOUT  
NOBLE FOUNDATION AGRICULTURAL  
SERVICES BY CALLING 580.224.6500.**

# 1,550

**E-LEARNING ACTIVITIES  
COMPLETED BY EMPLOYEES AS  
PART OF THE ORGANIZATION'S  
CORE VALUE OF EMPLOYEE  
DEVELOPMENT.**

**1,644** FARMERS AND RANCHERS SERVED  
BY THE NOBLE FOUNDATION'S  
CONSULTATION STAFF.



Greg Spears works with the Noble Foundation's consultants to improve his ranch near Ada, Oklahoma.



Greg Spears studies a map of his ranch, which he received after joining the Noble Foundation's consultation program in 2014.

# NOBLE FOUNDATION HELPS PRODUCERS ACHIEVE THEIR GOALS, LEAVE LEGACY

Greg Spears unfolds a map of his ranch. Its edges are frayed; the centerfold has nearly split in half from wear. Sticky notes with recommendations from the Noble Foundation are scattered on its surface. This map is the first Spears received from the Noble Foundation's consultation program when he became a cooperator in July 2014.

"The consultants laugh when I come in now," Spears said, grinning. "They say, 'Can't we make you a new map?' and I tell them, 'Oh, no. I like this one.' Maybe someday I can hang it on the wall for my great-grandchildren."

Five years ago, Spears entered the agriculture industry for the first time. He and his wife, Kathy, had moved from the city to Graham, Texas, when their children were born about 20 years prior. They'd started their own marina business, and Spears decided to retire after they sold out. Within six months, he was looking for something to do.

He came across an opportunity to buy a local feed mill, FMC Feeds. Kelley Adair, one of the original feed mill partners, became Spears' mentor as he entered unfamiliar territory.

"I knew beef comes from beef cattle and milk comes from dairy cows, but beyond that I didn't know a thing about agriculture," he said. "I told Kelley that if I was going to be in this business, I wanted to understand my customers."

So he started working on the dock at the feed mill. Ranchers came to pick up feed, and Spears asked questions. Then he decided to jump into production himself. With Adair's guidance and the support of his team at the mill, Spears started a ranch.

In the evenings, Spears would go home and Google agricultural terms and practices until 2 a.m. One night, he stumbled upon the Noble Foundation's website. He spent hours immersed in the resources, gleaning information and advice. In the process, he discovered the Noble Foundation and American Angus Association would be hosting Cattleman's Boot Camp in Ardmore, Oklahoma. He signed up that night. In 2013, Spears and his team began looking to expand again. Drought ravaged the Texas plains, including their ranch, so they looked for areas with more rainfall. They found a place near Ada, Oklahoma, less than one and a half hours from the Noble Foundation.

Spears reached out to the organization's consultation program for

help in assessing the ranch before buying it with two partners, Jack Little and Randy Cantin.

"When Greg first came down to discuss the ranch, he had already been using our educational resources and was eager to learn more," said Hugh Aljoe, producer relations manager. "He's a thinker. He listens and asks really good questions, and he makes decisions based on information. Our role is to build on these natural abilities by providing insight and counsel so that we can help him achieve his goals."

In the first year of Allen Angus Ranch, there have been many decisions to make. The ranch's goal is to produce high quality breeding stock for commercial cow-calf operations. In the consultants' first visit, they outlined ways to work toward that goal.

One major issue needing to be addressed was poor forage quality. The consultants walked Spears and his team, including ranch manager James McWilliams, through the whole process of developing and executing a plan to fertilize; then they helped adapt it when 45 days of rain came.

Giant ragweed – 8 to 10 feet tall – plagued some of the most productive ground. Taking into account various factors from economics to cattle nutrition, the consultants explained options to manage the infestation. Spears remains actively engaged with the consultants and calls them his "chess partner." They're always there to help him analyze the strategy needed to make the best management decisions on the ranch, he said.

"The Noble Foundation is the big brother you'd like to have," Spears said. "They help me stay disciplined in achieving my goals. Whenever they're around, I'm taking notes."

Ten months into the operation, on a rainy spring day, water drops splash off the black hair of a group of heifers Spears feeds from his hand. "I didn't grow up in this, but I love it," he said.

His children enjoy it, too. His 16-month-old granddaughter has started learning to mimic Grandpa's cattle call. "I want to leave a legacy of this land to them," he said. "I don't expect the Noble Foundation to be able to predict the future, but they do the best at setting us up for success regardless of the markets. Thanks to them, we've already made huge strides, and I know we'll continue to improve."

---

# \$2,000

EARNED BY THE FIRST PLACE WINNER IN THE NOBLE FOUNDATION'S JUNIOR BEEF PROGRAM. THE ANNUAL CARCASS MERIT PROGRAM AWARDED \$9,650 TO ITS TOP 10 FINISHERS.

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# 2,150

SAFETY MEETINGS AND TRAININGS COMPLETED BY EMPLOYEES.

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# 2,357

HEAD OF CATTLE IN THE NOBLE FOUNDATION HERD.

---

# 3,149

YEARS OF COMBINED SERVICE BY NOBLE FOUNDATION'S EMPLOYEES, MAKING THE AVERAGE TENURE 9 YEARS.

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TOYS FOR TOTS

# 3,400

**VOLUNTEER HOURS COMPLETED BY  
236 EMPLOYEES IN THE FIRST YEAR OF  
THE “NOBLE IN THE COMMUNITY” EFFORT.**

Two Team Noble members: Kevin Newton, electrician, (left)  
and Will Moseley, wildlife and fisheries consultant

# TEAM NOBLE SUPPORTS COMMUNITY THROUGH HANDS-ON SERVICE

Joyce Davenport didn't know what to do. She had coordinated southern Oklahoma's Toys for Tots drive for 13 years, but 2014 had brought more struggles than ever before. The site her committee typically used as warehouse space had been unavailable that year, so the nonprofit moved locations. Unfortunately the new site was storage-space deficient, and by the end of the season Davenport still needed a place to store any last-minute toy donations to jumpstart the next year's collection.

Davenport had fought the good fight on behalf of Toys for Tots for years and was reconsidering leading the drive.

Then Julie Barrick called.

Months previously, Barrick, a project management assistant, and Cheryl Gee, administrative assistant, had stepped up to co-champion the Noble Foundation's part in Toys for Tots.

Davenport was overwhelmed with relief when Barrick said the Noble Foundation could store any extra toys.

"I got off the phone, and I was near tears," Davenport said. "It was like God had answered my prayers."

That small offering helped close a successful, though challenge-fraught, Toys for Tots season that provided more than 1,600 children in southern Oklahoma with new toys for Christmas.

Like in past years, Noble Foundation employees collectively donated money to buy nearly 350 items. Unlike past years, they were asked to help in a more hands-on way.

Throughout the campaign, a group of more than 45 Noble Foundation employees helped Davenport and the rest of the Toys for Tots committee with behind-the-scenes work.

The crew assisted during the 37th annual Toys for Tots Southern Oklahoma Children's Christmas Parade, which collects toys as float entries. Then they helped set up the warehouse space and divided into three-hour shifts to work daily for two weeks helping sort and distribute toys, all the while clad in their green "Team Noble" T-shirts.

In past years, Davenport and her fellow committee members would have had to spend many late-night and weekend hours at the warehouse in order to get everything accomplished. In 2014, extra hands helped move the process along faster. "It was wonderful to have the Noble workers be able to come during the workday," Davenport said. "We didn't have to spend many evenings and weekends working this year. With all the moving and extra challenges, I do not know how we would have done it without the Noble Foundation's help."

The Toys for Tots volunteers were just a small part of the organization's "Noble in the Community" program, which encourages employees to join together and donate their time, energy and talents to amplify the Noble Foundation's service to the community.

Noble in the Community encompasses all the ways the Noble Foundation engages with the community - educational programs through Noble Academy, the speaker series *Profiles and Perspectives*, and grants to the community and other educational and philanthropic organizations. Team Noble is the hands-on approach to community engagement through service.

"Our founder, Lloyd Noble, believed ideas only had impact when they were accompanied with action," said Mary Kate Wilson, director of philanthropy, engagement and project management. "That's the idea behind Team Noble. We are taking the love and appreciation we have for our local community and putting those words into action through our service. When a sea of green Team Noble T-shirts appears on the horizon, we want everyone to know that we're there to help."

In 2014, the program's first year, 236 employees logged more than 3,400 volunteer hours as a part of more than 25 events.

Team Noble was everywhere. Volunteers constructed a privacy fence and installed countertops and flooring for the first home in Ardmore's Habitat for Humanity Hope Avenue project. They helped clean up Lake Murray's shores and played dominoes with residents of the local Veterans Center. Care packages were sent to troops overseas, and meals were served to children in the Cities in Schools program and to families at the Ardmore Soup Kitchen. There were laps walked in support of cancer research at Relay for Life; encouraging words and refreshing water given to runners in the Arbuckles to Ardmore Race for Mercy benefiting the local Cancer Center.

"We all have something that motivates us," said Xin Ding, Ph.D., a research scientist in the Plant Biology Division who volunteered with Toys for Tots. "I believe strongly in doing what I can do to help our younger generation and our community. I'm proud to work at an organization that believes in service, too. Regardless of the cause, it is enjoyable to be out serving the community with coworkers."

**Team Noble helps build a Habitat for Humanity home (top left), prepares care packages for troops overseas (top right) and cleans the shores of Lake Murray (bottom).**





Frank Hardin, Ph.D., educational outreach manager, makes science and agriculture relatable and fun for students through Noble Academy.

# 5,516

**STUDENT IMPRESSIONS MADE BY**



Noble Academy

# NOBLE ACADEMY ENGAGES STUDENTS IN SCIENCE LESSONS BROUGHT TO LIFE

Murmurs of excitement buzz through the classroom as students pull on white laboratory coats and secure safety glasses to their faces. Today, these 25 sixth-graders are breaking away from routine to experience their lesson.

Each pupil finds a station, drops a strawberry into a zip-close bag and purposefully mashes the fruit to pulp. They pour a carefully mixed water-Woolite-salt solution into the bag and knead it, breaking open the strawberry's cells.

Then they filter the bag's contents, separating leftover pulp and seeds from the liquid containing strawberry-cell-insides. When they reach the next step, adding ethanol, the anticipation is as palpable as the aroma of strawberries.

A white cloudy layer has risen to the top of the liquid – it is the strawberry's DNA.

These students have read about DNA – the blueprint of life – and they have heard the lecture. They have the knowledge, but today the lesson comes to life.

As they pull out the stringy DNA and hold it in their hands, feeling its gooey texture, DNA moves from an abstract concept to reality. This is the power and purpose of Noble Academy.

"It's never too early to develop students' love for science," said Terri Cloyde, a sixth-grade teacher at Plainview Middle School. "That is what teachers set out to do every day. Having Noble Academy in our state provides us this additional avenue to help our students experience science and agriculture like never before."

In its second official year, Noble Academy – the Noble Foundation's youth education program – made 5,516 student impressions, helping teachers engage their students with hands-on science lessons. While Noble Academy's reach stretches as far as the Dallas Arboretum and Oklahoma School of Science and Mathematics in Oklahoma City, and even to Uganda, Africa, through a fellowship program, the impact starts at home in classrooms around the region.

For Tammy Sherfield, Noble Academy stepped in as a valuable resource during her first year as a sixth-grade science teacher. Sherfield moved from New Mexico to Ardmore and joined the Ardmore Middle School science faculty for the 2013-2014 school year. Four out of the five teachers were new to Ardmore at the time.

Enter Frank Hardin, Ph.D., educational outreach manager. Hardin has worked with Ardmore schools since Noble Academy's inception, and he reached out to the reorganized faculty to see how he could help.

"I was mesmerized that we have one of the country's top research centers right in our hometown willing to come in and show our kids science," Sherfield said. "Instead of us telling the students about science, Noble Academy helps build understanding through activities that seem simple and fun but have a deep educational message."

Coordinating with teachers' lesson plans, Hardin brings all the materials needed to teach hands-on science lessons that incorporate the importance of agriculture and the potential of science as a career.

"Noble Academy's mission is simple – make agriculture and science more than just words on a page," Hardin said. "Every lesson is specifically designed to help open students' eyes to the critical roles agriculture and science play in the world around them and in their lives."

Lessons range from extracting strawberry DNA and elements found in cereal to investigating the carbon cycle and identifying macromolecules in milk. "This is a valuable resource for teachers in a time crunch," said Cody Bynum, an eighth-grade teacher at Dickson Middle School. "These labs give the students a chance to see and experience science in a way that I think is more common at the college level. It's also more practical. They see how it relates to the world around them."

Kelly Goff's relationship with Noble Academy began through a simple tour. She had driven by the Noble Foundation campus in Ardmore, Oklahoma, for years before bringing her students to campus to see the labs and have a field day with Noble Academy. Goff, who teaches biology and environmental science at Madill High School, was ecstatic to share real-world science research with her high school biology and environmental science students.

"Months later they still remember what they've learned through Noble Academy," Goff said. "As a teacher, that's the whole point. You want to equip them with knowledge and information that will serve them the rest of their lives. Noble Academy helps us do that better."

**Noble Academy, the Noble Foundation's youth education program, offers students hands-on learning experiences focused on agriculture and science.**



# 7,800 SQUARE FEET

IN THE NEWLY REMODELED EMPLOYEE WELLNESS CENTER.

# 12,429 PEOPLE

IMPACTED THROUGH AGRICULTURAL EDUCATION EVENTS,  
SEMINARS, TOURS AND INTERNAL EVENTS.

# 13,588 ACRES

OF RESEARCH AND DEMONSTRATION LAND ON 7 NOBLE  
FOUNDATION FARMS.

# 17,631 PEOPLE

REACHED THROUGH 353 AGRICULTURAL PRESENTATIONS.

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# 23,611

FORAGE SAMPLES ANALYZED  
FOR NOBLE FOUNDATION  
RESEARCHERS AND PRODUCERS  
IN THE SOUTHERN GREAT PLAINS.

---

# 30,530 MILES

WALKED BY EMPLOYEES AS PART OF THE HEALTH IMPROVEMENT PLAN.

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# 35,600 PEOPLE

INTERACTED WITH THE *GROWN FOR YOU* MOBILE CLASSROOM, WHICH IS CO-SPONSORED BY THE NOBLE FOUNDATION AND THE OKLAHOMA FARM BUREAU. THE MOBILE CLASSROOM WAS ON THE ROAD 85 DAYS IN 2014, VISITING 36 DIFFERENT EVENTS TO TEACH STUDENTS AND ADULTS ABOUT AGRICULTURE AND SCIENCE.

# 47,280 SQUARE FEET

IN THE NOBLE FOUNDATION GREENHOUSE, MAKING IT ONE OF THE LARGEST SINGLE-UNIT RESEARCH GREENHOUSES IN NORTH AMERICA.

---

# 50,000 TO 60,000 GENES

(ESTIMATE) IN *MEDICAGO TRANCATULA*. NOBLE FOUNDATION RESEARCHERS CONTINUE TO ADVANCE THE STUDY OF LEGUMES BY USING THIS MODEL PLANT AND APPLYING THEIR RESEARCH TO OTHER AGRICULTURALLY SIGNIFICANT LEGUMES LIKE ALFALFA AND CLOVER.

# 313,285

MINUTES WATCHED BY VISITORS TO THE NOBLE FOUNDATION'S YOUTUBE CHANNEL OR ROUGHLY 217 DAYS OF NONSTOP VIEWING.

---

# 1.8 MILLION

REDUCTION IN KILOWATT HOURS USED OR A 10 PERCENT DROP IN ELECTRICITY USAGE.



Laura Nelson (left) and Raman Saha received scholarships from the Noble Foundation. Scholarships are one part of the organization's overall philanthropic effort.

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# \$2,379,841

**TOTAL AMOUNT GIVEN TO WORTHY  
NONPROFIT ORGANIZATIONS AND  
IN SCHOLARSHIPS.**

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# NOBLE FOUNDATION GRANTS ENABLE NONPROFITS TO SUPPORT FAMILIES

Music drifts from within a care unit at The Children's Center Rehabilitation Hospital in Bethany, Oklahoma. "The mommies on the bus go shh, shh, shh ...." Sixteen-month-old Kaylee Edgar's eyes light up, and she smiles from her stroller wheelchair close to her mother, Tarah Edgar.

"She smiles every time," Edgar said, a smile on her face, too. "You like the momma on the bus, don't you, Kaylee?" Edgar holds the music maker in her daughter's lap and leans in close to brush a loose wisp of hair aside and kiss her forehead.

While the music brings joy, Kaylee's first year of life has been a struggle.

Kaylee was born Jan. 6, 2014, joining the Edgar family – parents, Erik and Tarah, and big sister, 3-year-old Emory – but something was wrong. She was limp and quiet, not what they expected after a normal pregnancy. Kaylee was flown from Stillwater to the University of Oklahoma Medical Center where she spent the next three months. After many tests, doctors finally came to a conclusion. Kaylee has congenital fiber-type disproportion myopathy, a rare condition affecting the muscles that control movement, including breathing.

The Children's Center Rehabilitation Hospital specializes in caring for children with complex medical disorders like Kaylee's. In April 2014, she was admitted to their care, and the staff immediately began working to wean her off the ventilator and train the Edgars in her care.

"The first year was rough," Edgar said, "but we try to stay positive. We can't imagine what it would have been like if The Children's Center Rehabilitation Hospital wasn't here."

Every day, Edgar drives more than an hour each way to see Kaylee. With training from The Children's Center Rehabilitation Hospital, the Edgars are able to take Kaylee home for monthly weekend visits, which means being up every three hours. For now, with Kaylee's critical need for constant care, her corner of the care unit is her home away from home, a pink paradise complete with dozens of hair bows and personal touches.

Just down the hall from Kaylee is a door. Right now, it leads outside. In the future, this door will open to another hallway leading to a four-story expansion, which will include a new education center and

40 additional patient beds. As part of a \$30 million expansion, The Children's Center Rehabilitation Hospital will also renovate existing space into the "Activities of Daily Living Center," which will train patients to do everyday activities like walking and riding in a car in a simulated "real-world" environment.

A long-time supporter of The Children's Center Rehabilitation Hospital, the Noble Foundation donated \$250,000 toward the expansion. The grant was part of the Noble Foundation's overall philanthropy effort that awarded \$2,379,841 in 2014 through scholarships and grants to nonprofits, including the Ardmore Family YMCA and Boy Scouts of America. "The Children's Center Rehabilitation Hospital and Noble Foundation have shared goals of making life better for those in our communities," said Mary Kate Wilson, director of philanthropy, engagement and project management. "This is about Oklahoma helping Oklahoma, and the trustees are pleased to be part of it."

The expansion will help The Children's Center Rehabilitation Hospital serve 33 percent more patients, many of whom, including the Edgars, are from rural Oklahoma. One of the expansion's highlights is the 24 private rooms, which will help accommodate family time and training. Kaylee shares her care unit with eight to 10 other patients, and patients like her typically stay two years. "This is like her home," Edgar said. "Being able to have that privacy would be one of the few improvements you could make to such a caring hospital."

When Kaylee first came to The Children's Center Rehabilitation Hospital, she was not moving on her own at all. After nearly a year of rehabilitation, surrounded by her family's love and The Children's Center Rehabilitation Hospital staff's support, Kaylee is making progress. "Can you get my hand, Kaylee?" Edgar asked, leaning over to Kaylee lying on a play mat. Edgar wiggles her hand in front of Kaylee's, and slowly but surely Kaylee reaches her little hand up to touch it. "There's your proud smile," Edgar beamed.

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**Kaylee Edgar, 1, looks up at her mother, Tarah, at The Children's Center Rehabilitation Hospital. The Edgars are one of many families assisted by nonprofits that receive Noble Foundation grants.**



**\$2,647,576 WORTH OF CALVES SOLD  
AS PART OF THE INTEGRITY BEEF  
PROGRAM, WHICH EMPHASIZES  
PROGRESSIVE MANAGEMENT  
METHODS, RANCH STEWARDSHIP  
AND HUMANE CARE OF LIVESTOCK.**

**4,552,028**

**TOTAL IMPRESSIONS THROUGH  
THE NOBLE FOUNDATION'S  
FACEBOOK PAGE.**

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**\$4,750,118**

**DISBURSED FROM EXTERNAL GRANTS  
FOR RESEARCH PURPOSES.**



A blanket of stars wraps the sky over center pivot irrigation equipment on the Noble Foundation's Red River Farm.

**WHEN ALL THE NUMBERS HAVE BEEN TALLIED AND ALL THE STORIES TOLD,  
2014 WILL BE REMEMBERED AS A SUCCESS BECAUSE WE HELPED OTHERS  
BE SUCCESSFUL.**

**WHICH LEAVES ONE NUMBER LEFT TO BE SHARED.**

**IN 69 YEARS, THE NOBLE FOUNDATION HAS OFFERED**

**\$1.2 BILLION**

**IN TOTAL CHARITABLE EXPENDITURES.**

**AND, TO THINK, ALL OF THE DISCOVERIES, ALL OF  
THE LIVES BENEFITED, ALL OF IT STARTED WITH ...**



Zeno McMillan uses the Noble Foundation's voice of advice and confirmation as he works to care for his cattle and land to produce beef and provide for his family.



# 1 MAN,

WHO LOOKED BEYOND THE NUMBERS  
AND ENVISIONED SOMETHING  
GREATER THAN HIMSELF.



# 2014 GRANTING REPORT

An Oklahoma School of Science and Mathematics (OSSM) teacher helps students solve an equation. The Noble Foundation provided a grant to OSSM in 2014.

ORGANIZATION	GRANT AMOUNT	ORGANIZATION	GRANT AMOUNT	ORGANIZATION	GRANT AMOUNT
<b>A Chance To Change Foundation</b> <i>Oklahoma City, Oklahoma</i> Support for the Chance to Succeed program	\$25,000	<b>Diabetes Solutions - OK Inc.</b> <i>Oklahoma City, Oklahoma</i> Support for Camp Endres	\$7,500	<b>Oklahoma Arts Institute</b> <i>Oklahoma City, Oklahoma</i> Support for Summer Arts Institute	\$10,000
<b>Arbuckle Life Solutions Inc.</b> <i>Ardmore, Oklahoma</i> Renewed operating support	\$30,000	<b>Family Shelter of Southern Oklahoma for Victims of Domestic Violence</b> <i>Ardmore, Oklahoma</i> Shelter program and shelter advocate	\$35,000	<b>Oklahoma Blood Institute</b> <i>Oklahoma City, Oklahoma</i> Therapeutic phlebotomy program	\$24,915
<b>Association of Professional Oklahoma Educators Foundation</b> <i>Norman, Oklahoma</i> Renewed operating support	\$20,000	<b>George West Mental Health Foundation Inc.</b> <i>Atlanta, Georgia</i> Capital campaign for Thrive Wellness Center and Young Adult Campus	\$200,000	<b>Oklahoma State University Foundation</b> <i>Stillwater, Oklahoma</i> Support for the Oklahoma Agricultural Leadership Program Agriculture scholarships	\$20,000 \$10,000
<b>Atlanta Union Mission Corporation</b> <i>Atlanta, Georgia</i> Support for the men's and women's programs	\$20,000	<b>Gloria Ainsworth Child Care &amp; Learning Center Inc.</b> <i>Ardmore, Oklahoma</i> Renewed operating support	\$40,000	<b>Panhandle State Foundation</b> <i>Goodwell, Oklahoma</i> Agriculture scholarships	\$8,000
<b>Board of County Commissioners of Love County</b> <i>Marietta, Oklahoma</i> Fairgrounds show arena improvements	\$30,000	<b>Good Shepherd Community Clinic Inc.</b> <i>Ardmore, Oklahoma</i> Support for patient care navigator position	\$50,000	<b>Philanthropy Roundtable</b> <i>Washington, D.C.</i> Renewed operating support	\$10,000
<b>Boy Scouts of America, Arbuckle Area Council</b> <i>Ardmore, Oklahoma</i> Tornado shelter for Camp Simpson	\$60,000	<b>Grace Center of Southern Oklahoma Inc.</b> <i>Ardmore, Oklahoma</i> Operating support	\$10,000	<b>Reading Room Inc.</b> <i>Ardmore, Oklahoma</i> Reading therapists' salaries	\$15,000
<b>Carter County CASA Inc.</b> <i>Ardmore, Oklahoma</i> Renewed operating support	\$10,000	<b>Great Expectations Foundation</b> <i>Tahlequah, Oklahoma</i> Renewed operating support	\$15,000	<b>Regional Food Bank of Oklahoma Inc.</b> <i>Oklahoma City, Oklahoma</i> Purchase and distribution of fresh/ nonperishable foods	\$20,000
<b>Charles B. Goddard Center for Visual and Performing Arts Inc.</b> <i>Ardmore, Oklahoma</i> Renewed operating support, art education outreach program and Art Studios scholarships	\$31,000	<b>Intercollegiate Studies Institute Inc.</b> <i>Wilmington, Delaware</i> ISI Society Initiative at the University of Oklahoma	\$25,000	<b>Southern Oklahoma Technology Center</b> <i>Ardmore, Oklahoma</i> Biotechnology lab countertops Scholarships	\$20,000 \$4,600
<b>Children's Center Inc.</b> <i>Bethany, Oklahoma</i> Capital campaign	\$250,000	<b>Leadership Institute</b> <i>Arlington, Virginia</i> Renewed operating support	\$5,000	<b>Sunshine Industries Inc.</b> <i>Ardmore, Oklahoma</i> Capital campaign for Adult Day Services	\$200,000
<b>Cities In Schools Inc.</b> <i>Ardmore, Oklahoma</i> 2015 Summer Day Camp	\$35,000	<b>Mercy Memorial Health Center Foundation</b> <i>Ardmore, Oklahoma</i> Equipment replacement/upgrades	\$30,000	<b>United Way of South Central Oklahoma Inc.</b> <i>Ardmore, Oklahoma</i> Match employee contributions	\$25,045
<b>Colonial Williamsburg Foundation</b> <i>Williamsburg, Virginia</i> 2014 Oklahoma Teachers Institute	\$11,200	<b>The MORE Foundation</b> <i>Ardmore, Oklahoma</i> Distribution from the Pettitt Educational Fund	\$63,533	<b>Washington Legal Foundation</b> <i>Washington, D.C.</i> Renewed operating support	\$10,000
<b>Community Children's Shelter and Family Services Center Inc.</b> <i>Ardmore, Oklahoma</i> CARF accreditation for shelter	\$7,500	<b>Murray State College Foundation Inc.</b> <i>Tishomingo, Oklahoma</i> Agriculture scholarships	\$5,000	<b>YMCA of Ardmore</b> <i>Ardmore, Oklahoma</i> Capital campaign for new entrance and office space Renewed operating support	\$300,000 \$30,000
<b>Cystic Fibrosis Foundation</b> <i>Bethany, Oklahoma</i> Operating support for Sooner Chapter	\$25,000	<b>Oak Hall</b> <i>Ardmore, Oklahoma</i> Microscopes and science curriculum for upper elementary and middle school	\$11,000		

## EMPLOYEE MATCHING GRANTS AND SCHOLARSHIPS

### Employee Matching Grants

To match dollar-for-dollar contributions made by employees and trustees of the Noble Foundation, and employees of Noble Energy Inc. and Noble Corporation to qualifying educational institutions ..... \$326,173

### Noble Educational Fund Scholarships

To provide a maximum of 10 \$20,000 four-year awards to children of employees of Noble companies ..... \$187,500

### Sam Noble Scholarships

To provide scholarships in the fields of agriculture and technology to southern Oklahoma students ..... \$106,875

# TOTAL GRANTS PAID IN 2014 \$2,379,841



Forage-based beef production continues to be a major focus of the Noble Foundation's research efforts.

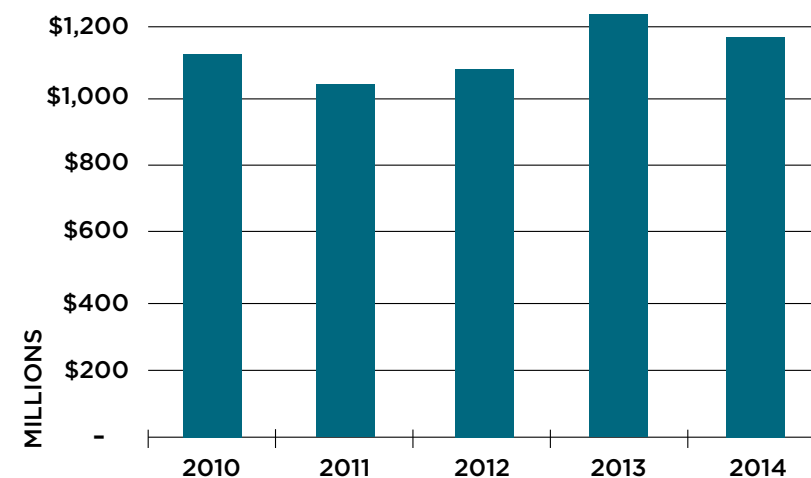
# 2014 FINANCIAL REPORT

# STATEMENTS OF FINANCIAL POSITION

DECEMBER 31	2014	2013
<b>ASSETS</b>		
Cash	185,440	51,608
Short-term investments	9,699,394	8,617,603
Accrued interest and dividends receivable	1,021,371	993,021
Due from brokers for securities sold	43,370	610,132
Accounts receivable and other assets	1,686,072	1,760,625
Prepaid expenses	704,321	735,560
Limited partnerships	237,829,961	216,120,872
U.S. government securities	18,621,016	17,483,797
Corporate securities	77,168,526	55,921,502
Corporate stock	457,293,755	534,489,444
Mutual and commingled funds	229,426,222	273,774,822
<b>Total marketable securities, at fair value</b>	<b>782,509,519</b>	<b>881,669,565</b>
Other investments	388,557	388,557
Property and equipment	209,413,238	207,222,902
Accumulated depreciation	(88,088,080)	(80,807,912)
<b>Net property and equipment</b>	<b>121,325,158</b>	<b>126,414,990</b>
<b>TOTAL ASSETS</b>	<b>\$1,155,393,163</b>	<b>\$1,237,362,533</b>

DECEMBER 31	2014	2013
<b>LIABILITIES</b>		
Accounts payable and accrued expenses	4,823,327	4,834,272
Due to brokers for securities purchased	383,344	502,726
Grants payable, current	576,875	585,000
Liability for deferred taxes	5,100,000	7,000,000
Liability for pension and post-retirement medical benefits	31,373,453	12,680,197
<b>Total liabilities</b>	<b>42,256,999</b>	<b>25,602,195</b>
<b>NET ASSETS</b>		
Unrestricted	1,110,666,047	1,209,436,056
Permanently restricted	2,470,117	2,324,282
<b>Total net assets</b>	<b>1,113,136,164</b>	<b>1,211,760,338</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>1,155,393,163</b>	<b>1,237,362,533</b>

## TOTAL ASSETS



This information was derived from the Noble Foundation's annual financial statements for 2014, which were audited by the independent accounting firm of Grant Thornton LLP. A complete picture of the Noble Foundation's financial position and results of operations can only be obtained by reviewing the annual financial statements in their entirety. Please contact the Noble Foundation office if you would like a copy of the complete financial statements.

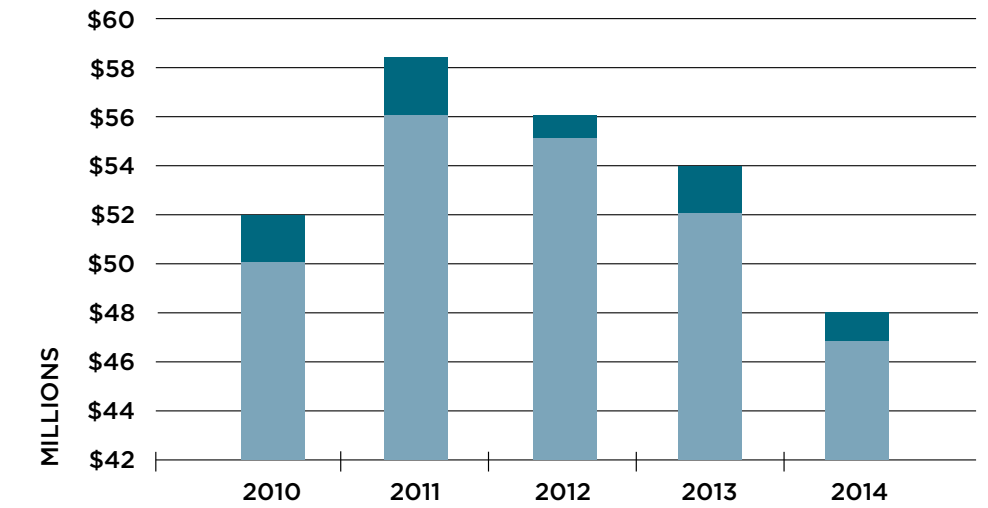


# STATEMENTS OF ACTIVITIES

DECEMBER 31	YEAR ENDED 2014	YEAR ENDED 2013
<b>REVENUES, GAINS AND LOSSES:</b>		
Interest	2,955,734	3,053,218
Dividends	12,977,636	10,398,124
Net realized and unrealized (losses) gains on investments	(45,880,928)	183,078,826
Other miscellaneous program and royalty income	6,179,078	6,694,803
<b>Total revenues, gains and losses</b>	<b>(23,768,480)</b>	<b>203,224,971</b>
<b>EXPENSES:</b>		
Operations (Agricultural, Plant Biology and Forage Improvement)	45,606,907	51,323,515
Grants	2,368,616	1,989,149
Management and administrative	7,144,423	7,881,093
Provision for federal excise taxes	(463,918)	8,126,026
<b>Total expenses</b>	<b>54,656,028</b>	<b>69,319,783</b>
<b>Revenues, gains and losses (less than) in excess of expenses</b>	<b>(78,424,508)</b>	<b>133,905,188</b>
Pension and post-retirement medical-related changes other than net periodic costs	(20,345,501)	42,237,781
<b>Change in unrestricted net assets</b>	<b>(98,770,009)</b>	<b>176,142,969</b>
<b>Change in permanently restricted net assets</b>	<b>145,835</b>	<b>241,401</b>
<b>Change in net assets</b>	<b>(98,624,174)</b>	<b>176,384,370</b>
<b>NET ASSETS, BEGINNING OF YEAR</b>	<b>\$1,211,760,338</b>	<b>\$1,035,375,968</b>
<b>NET ASSETS, END OF YEAR</b>	<b>\$1,113,136,164</b>	<b>\$1,211,760,338</b>

## OPERATING EXPENDITURES AND GRANTING

■ OPERATIONS  
■ GRANTS AND SCHOLARSHIPS





The sun sets on the Noble Foundation, the largest independent, nonprofit agricultural research institution in the United States.

# INSTITUTIONAL GOVERNANCE

The Noble Foundation Board of Trustees endeavors to have the highest standards of corporate governance practice and ethical conduct by all trustees and employees. Consistent with these intentions, the Board adopted the following Statement of Principles:

We, the Board of Trustees and the employees of The Samuel Roberts Noble Foundation, acknowledge and agree that the following principles apply to our association with the Noble Foundation and the activities we conduct on behalf of the Noble Foundation:

1. The Noble Foundation exists because of the vision and generosity of our founder, Lloyd Noble.
2. We are stewards of the resources and the vision of Lloyd Noble.
3. Our conduct will be fair and honest, and our activities will adhere to the purposes for which the Noble Foundation was established.

## ROLE OF THE BOARD OF TRUSTEES

The Board charts the strategic direction of the institution, focuses the organization to carry out its charitable purposes, serves as stewards of the Noble Foundation's resources, and conducts and supports activities in accordance with the vision of Lloyd Noble.

The Board is responsible for the appointment and evaluation of the president and chief executive officer. The president and chief executive officer is responsible for the conduct of the day-to-day affairs of the organization. Moreover, this position is charged with implementing and executing operations to support the Board's strategy.

## BOARD COMMITTEES

The Board includes five committees: executive, audit, compensation, investment and strategic planning.

## INDEPENDENT PROFESSIONAL ADVICE

The Board, each Board committee and each trustee has the right to seek independent legal counsel and other professional advice at the Noble Foundation's expense, concerning any aspect of the organization's operations or undertakings.

## BOARD EDUCATION

The Board encourages each trustee to continue his or her education.

The Noble Foundation hosts seminars, programs and other events to assist in continuing trustee education. Each trustee also is encouraged to attend external educational programs that concern exempt organizations, corporate governance, grantmaking and administration as well as other programs relevant to the Noble Foundation's operations and research objectives.

## CONFLICT OF INTEREST

The Board's conflict of interest policy outlines a procedure to disclose, identify and address the potential intersection between external interests and the interests of the institution. The Board, in adopting such policy, acknowledges and agrees that each trustee must at all times act with transparency and in the best interest of the Noble Foundation.

## BOARD EVALUATION

Each year, the Board completes a Board evaluation, and each Board committee completes a committee evaluation. The results of all evaluations are compiled and presented to the full Board for review and discussion.

## "WHISTLEBLOWER" POLICY

The Board established a system for the confidential, anonymous submission of employee reports concerning any known or suspected violation of statutory, regulatory or internal requirements as well as questions or concerns regarding Foundation accounting, internal accounting controls or audit matters. This system further includes processes for the receipt, treatment and reporting (to the Board) of any such reports.

## 990-PF INFORMATIONAL RETURN

The Noble Foundation annually files a 990-PF informational return with the Internal Revenue Service. The Noble Foundation's current 990-PF may be downloaded at [www.noble.org/about/governance](http://www.noble.org/about/governance). Historical returns for the Noble Foundation are available at [www.guidestar.org](http://www.guidestar.org).

## ADDITIONAL GOVERNANCE INFORMATION

Noble Foundation governance information, including policies and procedures, may be found at [www.noble.org/about/governance](http://www.noble.org/about/governance).

# BOARD OF TRUSTEES

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Dallas, Texas

Jim Day  
Sugar Land, Texas

James Day\*  
Houston, Texas

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Vivian Noble DuBose  
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Vancouver, British Columbia, Canada

Jessie Nance  
Ardmore, Oklahoma

Cody Noble\*  
Ardmore, Oklahoma

Russell Noble  
Ardmore, Oklahoma

Marianne Rooney  
Oklahoma City, Oklahoma

Patrick Rooney\*  
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Jack Waldo\*  
Little Rock, ARkansas

Stephen F. Young  
Oklahoma City, Oklahoma

\* Advisory Trustee

# LEADERSHIP TEAM

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Zengyu Wang, Ph.D.  
Senior Vice President and Director,  
Forage Improvement Division

Mary Kate Wilson  
Director of Philanthropy, Engagement  
and Project Management

# NONRESIDENT FELLOWS

The Nonresident Fellows program brings together a distinguished panel of scientists, researchers and industry leaders to assist the Noble Foundation's three operating divisions - Agricultural, Forage Improvement and Plant Biology - and the Department of Computing Services. These outside reviewers perform candid examinations of their division's programs, offer objective advice and guidance, and provide fresh perspectives.

## AGRICULTURAL DIVISION

Mary Sue Butler Clyne, *Accel Consulting Solutions*  
Floyd P. Horn, Ph.D., *USDA-Agricultural Research Service (retired)*  
Jimmy W. Kinder, *Kinder Farms*  
Tom Woodward, Ph.D., *Woodward Cattle Company*

## COMPUTING SERVICES

Henry Neeman, Ph.D., *University of Oklahoma*

## FORAGE IMPROVEMENT DIVISION

Shawn Kaeppeler, Ph.D., *University of Wisconsin-Madison*  
Kendall R. Lamkey, Ph.D., *Iowa State University*  
Lynn Sollenberger, Ph.D., *University of Florida*

## PLANT BIOLOGY DIVISION

Jonathan Lynch, Ph.D., *Penn State University*  
Barbara Valent, Ph.D., *Kansas State University*  
Carroll P. Vance, Ph.D., *U.S. Department of Agriculture*

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