

The William H. Miner Agricultural Research Institute

*Carrying on William Miner's
vision of science
in the service of agriculture.*



2022-23
Annual Report
www.whminer.org

MESSAGE FROM THE CHAIR

As I reflect on our Institute, I'd like to paraphrase comments made by Chris Morris who portrayed Justin Morgan in the 2021 PBS production on the American horse.

"There is something almost intangible about Miner. The people who daily hum around the Miner campus, are powered by something that if pressed, they call the *Miner Spirit*. It is an upper octane of purpose in keeping with William Miner's call to his utopian vision of hosting research, demonstration and education in loving service to agriculture ..."

This speaks volumes about our wonderful organization.

— Rod Giltz
Chair, Miner Institute Board of Trustees



"Leadership is not wielding authority – it's empowering people."

— Becky Brodin



PRESIDENT'S MESSAGE

Highlighting the Institute's accomplishments always fills me with tremendous satisfaction and gratitude for our Miner team and our mission. In our post-pandemic world, carrying on William Miner's vision of science in the service of agriculture has never been more important.

In 2022 over 2,700 people attended 40 different events at the Institute. And we finally held a summer Open House that had been postponed since 2020 by Covid with about 700 people attending! Nearly 50 students participated in our educational programs including undergraduates, graduate students, and interns. Graduates remain our most impactful product as they enter the dairy and equine industries at all levels.

Our dairy herd remained highly productive; kudos to our farm and crops staff for keeping the herd in the top echelon of US dairy farms. Conducting research and education programs with our high-performing dairy herd remains one of our biggest assets.

Planning has begun on a multi-purpose riding arena to allow our equine program to meet the changing needs of horse enthusiasts. We envision an active learning environment for horses and students alike, available year-round – stay tuned.

Our staff garnered \$1.2 million in grants and contracts to support research. Funding remained strong in our core areas of forages; dairy cattle nutrition and management; and environmental and nutrient management aspects of dairy farming. While conducting all this research, our staff made 55 presentations and wrote numerous articles for various scientific and industry groups. That is a large footprint for a small and talented staff!

As always, the full story for any organization lies behind the year-end statistics. But our education, research, and demonstration programs tell me that the Institute is on-track, and our staff does an outstanding job. We have a lot planned for 2023 – and if you have questions about the range of Miner Institute programs – please contact us. On a personal note, I will be retiring as president at the end of 2023 and am enormously grateful for the past 20 years and the wonderful team I have been fortunate to be a part of!



– Dr. Rick Grant
President, Miner Institute



EDUCATION

In 2022, 49 students participated in our educational programs. This includes four Advanced Dairy Management students; 16 summer experience students; 16 Applied Environmental Science students; six year-long interns who have finished their undergraduate degrees; three undergraduate students doing independent study projects, and three graduate students.

To learn more about our education programs visit <https://www.whminer.org/about-education>

Advanced Dairy Management Program



Students from L to R: Khaled Said, Emily Surrell, Katherine Rowley, and Hannah Roberts.



Applied Environmental Science Program



Pictured in back row from L to R: Dr. Ed Romanowicz, Dr. Mark Lesser, Ian Mahoney, Riley Stone, Zach Hart, Shannon Cooper, Dr. Danielle Garneau, Dr. Colin Fuss. **Front row L to R:** Caley Doell, Devan Bushey, Dr. Mary Alldred.



Summer Experience Programs

Miner Institute hosts four Summer Experience programs for college undergraduates: Farm Management, Equine Management, Agricultural Research, and Water Quality Research. Additionally, we take one student as a Burke history intern - a shared intern between Miner Institute and The Alice T. Miner Museum.



Students pictured from L to R: Joe Kelly from Benedictine College, Mara Beck from University of Massachusetts-Amherst, Alora Brown from The Ohio State University, Liz Nuss from University of Rhode Island, Ariel Kuhl from University of Connecticut, Nora Allen from Cazenovia College, Jen Ward from University of Rhode Island, Hailey Vanden Branden from University of Wisconsin-River Falls, Timothy Ladd from University of Massachusetts-Amherst, Kayla Francis from SUNY Cobleskill, Jana Owen from University of Tennessee-Knoxville, Katya Lammey from Johnson & Wales University, Quinlan Kelly from University of Connecticut, Mary Skulan-Toran from SUNY Plattsburgh. Missing: Morgan Terry from SUNY Cobleskill.



Flanagan Scholarship



Nicole Stover, left, and Taylor Turney are 2022-23 Flanagan Scholarship recipients.

A \$1.3 million donation from the late Stephen Flanagan in 2015 established a scholarship fund to help support Miner Institute's education programs. The scholarship is named after Mr. Flanagan and his parents, Stephen S. Flanagan and Frances B. Flanagan.

Graduate student Taylor Turney is pursuing her Master's degree at the University of Vermont in ruminant nutrition. Nicole Stover is the yearlong dairy intern and hopes to pursue a career in farm management or extension.

RESEARCH

In 1928, William Miner's vision for Heart's Delight Farm was to provide "opportunities ...for experimental and research work in order that it may serve to advance the science of agriculture." Miner Institute continues this noble mission with a highly-regarded professional staff, exceptional technical staff and well-managed dairy herd and crop program combining to support a unique research model focusing on the interface of crops, animals, and nutrient management.



Dairy nutrition research is conducted in our 16-cow tiestall and Calan Broadbent feeding system in our freestall barn. The flexibility of the Calan system in Miner Institute's facility allows feeding bins to be placed anywhere in our dry cow (shown above) and lactating barn as we conduct research on the critical period of time when cows transition from their dry period to lactation.



Graduate student Taylor Turney and Research Technician Salim Jones weigh and measure growth in calves enrolled on a research project in the calf housing facility built in 2021.



Research technician Jack Heikens helps sample corn at different maturity stages to characterize the yield and quality changes during the maturation process.



Surface run-off during non-growing season is being measured from one of four edge-of-field sites that Miner Institute operates to quantify long-term agronomic and water quality impacts of tile drainage. Surface and sub-surface (tile drain) flow of nutrients are monitored over multiple years to better understand field management systems that will enable dairy farmers to retain nutrients on fields and minimize the impact on the Lake Champlain watershed.



Research studies are being conducted investigating nutritional strategies to reduce methane emissions by dairy cows. Methane and other greenhouse gases are measured while cows eat a tasty grain in the Green Feed system shown in this picture.



Weather station at an edge-of-field water quality monitoring site records data hourly including precipitation, temperature, and humidity, among others.



Summer intern, Joe Kelly, collects soil nitrate samples in plots treated with biological products that are targeted to improve the nutrient use efficiency of corn.

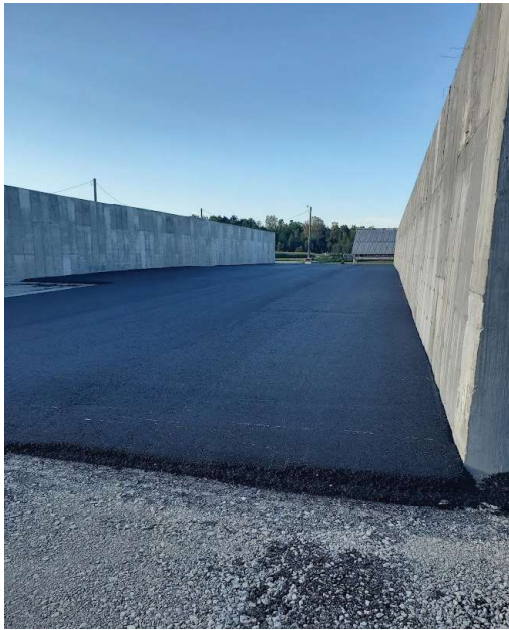
DAIRY

Our highly productive dairy herd underpins our research and education programs, keeping them relevant to the innovative segment of the dairy industry. The herd performance metrics summarized in the table place the herd in the top echelon of Holstein herds in the US. In 2022 we finished construction of a transition heifer facility designed to house animals from weaning until 7 months of age. As with the new calf building built in 2021, this facility will allow us to effectively manage our heifers and conduct cutting-edge research. We have now completed two of three phases for upgrading the dairy youngstock facilities as part of the 2025 Strategic Plan: phase 1 (calf research barn) and phase 2 (transition heifer research barn). Phase 3 comprising housing for the oldest heifers (8 months to 23 months of age) will occur in the coming years.

Performance measure	2/2023 test
Daily milk production, lb/cow/d	97.4
150-day milk, lb/d	99.5
Days in milk	158
Test-day fat, %	4.1
Test-day true protein, %	3.1
Rolling herd average milk, lb/cow/yr	31,069
Total cows in herd (milking and dry)	593



The new transition heifer research barn under construction in early August. Images below show the completed barn which now houses heifers from weaning until 7 months old.



Along with the new calf transition barn we also added more forage storage in 2022: two 45 x 200 open-ended bunkers. The new bunks allow us to feed from both ends and will hold our conventional corn in the fall.



As an educational activity for both students and staff, we try to visit area farms each year. This year we visited a nearby poultry farm and a local apple packing house. The image above was taken during a visit to a large dairy farm two hours south of us.

EQUINE

Miner Institute has a Morgan Horse herd of about 25 horses, including stallions, broodmares, and young stock in various stages of training; these are the core of the educational program. All horses owned by the Institute are donated, home bred, or the result of a donated stallion service.



The Heart's Delight Spring Premier Open Horse Show was held in May at the Clinton County Fairgrounds. Miner faculty, staff, and friends of the program worked to put on a show bringing the equine community together. Morgans and a variety of other breeds were exhibited in a wide variety of disciplines and proved to be fun for all ages of horses and humans alike.



Two colts were born in 2022, one out of our mature broodmare, UVM Loyalty and by Privilege and the other by Canon out of our own home-bred young mare, HD Villenova. They will grow up through the program being handled and trained by interns as they all learn more about equine management and training. Pictured above are HD Villenova and HD Venice with equine intern Megan Green.



The nation-wide premier of the PBS Nature documentary titled "American Horses" in April was a kickoff to a year full of celebrating Morgan Horses. One of our resident stallions and sire of many Heart's Delight foals, Privilege, was one of the horses selected to portray "Figure" also known as the "Justin Morgan Horse" – the foundation of the Morgan breed.



HD Providence (Privilege x UVM Kimberly) was a special colt from birth and continued to improve as he matured. As a 4-year-old, "Vinny" went to Dustin Freiheit Performance Horses in Minnesota to get him in the Western Pleasure show arena. A successful year with some nice ribbons was rounded out with a 4th out of 16 in Four Year Old Western Pleasure at the Morgan Grand National Horse Show. He caught the eye and then the heart of his new owner, Nancy Yuhasz of Fort Drum, NY. HD Providence will be Nancy's new show mount and we are excited for his return to the North Country where we can cheer them on in person.

OUTREACH



Fifth graders from Mooers Elementary School learn about Miner Institute's equine program during Farm Days for Fifth Graders in June. The long-standing event returned after a two-year hiatus during the pandemic.



Amy Bedard, left, and Karen Lassell show off the booth they helped arrange at the Clinton County Fair. Fairgoers were able to visit the space and learn about Miner Institute programs.



Miner Institute collaborated with The Alice T. Miner Museum to host a holiday ornament making workshop in December.



Research Technician Maggie Carter talks to students at Saranac Middle School about careers in agriculture and her job at Miner Institute in particular.



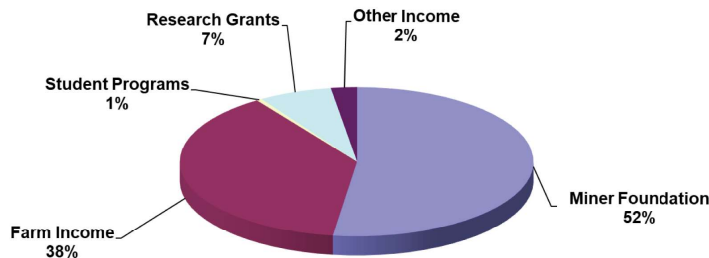
An Open House originally planned for 2020 finally happened in 2022! We welcomed around 700 visitors for a hot, yet fun-filled day on the farm in August.

Visitors enjoyed wagon rides around the farm, an equine demonstration, tours through the Heritage Exhibit, refreshments from local food truck vendors, and were able to engage with our staff volunteers at numerous interactive stations around the farm.

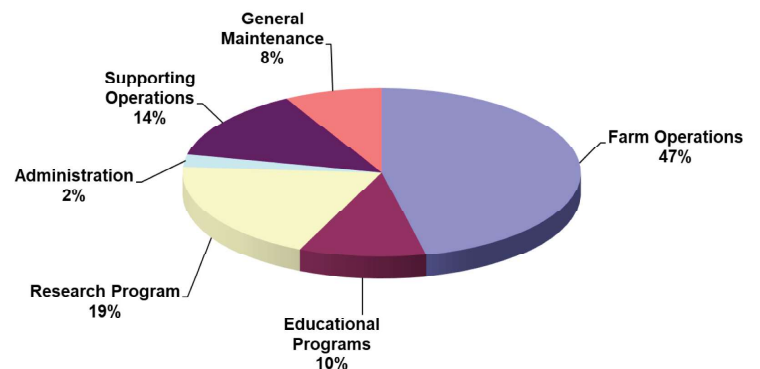


FINANCIAL SUMMARY

The William H. Miner Agricultural Research Institute 2022 Revenue



The William H. Miner Agricultural Research Institute 2022 Expenditures



COMMUNITY CONTRIBUTIONS

"Experience proves that pursuit of pleasure is utterly fruitless because happiness cannot be captured even by limitless outlay of money or strenuous self-seeking. Happiness can only come through service."

-- William Miner, 1924



We teamed up with the United Way of the Adirondack Region in February for a cow kissing campaign which raised more than \$8,300 and then again in July for a Comedy for a Cause event which raised more than \$1,500. Money raised at both events was targeted for youth mental health programs.

In October, we partnered with The Alice T. Miner Museum to host a fundraiser for local nonprofit, Healing Grace, an organization that supports families who have suffered the death of an infant during pregnancy and within the first year of life. The event brought in \$1,550 for Healing Grace.

On March 16, 1902, Alice and William Miner welcomed a long-awaited child. Sadly, William Henry Miner Jr. died two weeks later. The partnership with Healing Grace is especially meaningful as it fits so nicely into the Miner story. Another fundraising event is planned for October 2023.



CONGRATULATIONS TO ...



- photo by Christopher Crosby Morris

MEGAN GREEN

Megan did an extended yearlong equine internship from January 2021 until October 2022. Before trekking cross country to Miner Institute, Megan earned an Animal Science degree from Washington State University. Megan is now working at Spy Coast Farms, a breeding and development farm for performance horses in Lexington, KY. She spends most of her time caring for and monitoring foals and mares pre- and post-foaling and helps to track mares cycles and manage breeding.



EMILY YOUNGMARK

Emily graduated from the University of Missouri-Columbia with a Bachelor of Science degree in animal science in 2020. She came to Miner for a yearlong research internship in January 2021. In June of 2022, Emily started work on her Master's degree at the University of Vermont. She is working with Dr. Sabrina Greenwood and Dr. Jana Kraft on a project correlating milk proteins and fatty acids to enteric methane emissions.



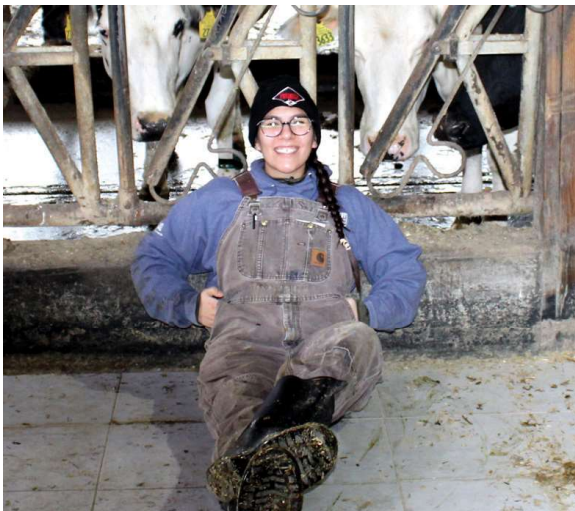
EMILY FREAD

Emily participated in the Summer Experience in Agricultural Research in 2018. After completing her Bachelors in Animal Science from North Carolina State, she returned to Miner in May 2020 to start a graduate assistantship at the University of Vermont. She completed her Masters degree in November 2022 and is now working as a dairy educator with Penn State Extension.



KELSEY HEFTER

Kelsey earned a Bachelor's degree in Dairy Science from the University of Wisconsin-River Falls before coming to Miner Institute as a yearlong research intern in September 2021. In July 2022 Kelsey was promoted to a full-time research technician. She started a new position as a technical ruminant specialist with the Novus International, Inc. Cow Comfort, Oxidative Balance, Well-Being, and Sustainability (C.O.W.S.) program in March 2023. She lives in Syracuse, NY and covers the Northeast and Upper Midwest in her position.



LIANARA MORCIGLIO-MATIAS

Lianara earned an animal science degree from the University of Puerto Rico at Mayagüez. She began a yearlong dairy internship at Miner in October of 2021, while still working on completing her Bachelors degree. Lianara will begin a Masters program in animal biology at the University of California-Davis in May 2023.

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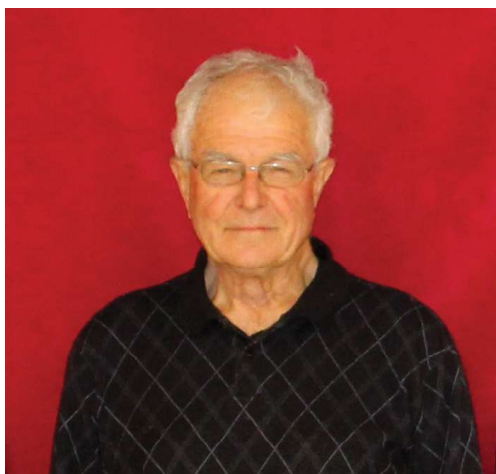
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Nutrition Consultant
Holtz-Nelson Dairy Consultants

Mark McCullough
Environmental, Health, and
Safety Engineer



GRATITUDE AND BEST WISHES

Bernard Leerkes stepped down as a trustee on Miner Institute's board in December after serving for nearly 20 years.

We appreciate Bernard's time and commitment to Miner Institute and wish him all the best!

EMPLOYEES & YEARS OF SERVICE

FACULTY/RESEARCH

Katie Ballard, M.S.	35
Amy Bedard, M.L.S.	16
Maggie Carter	26
Shaun Castine	13
Bridget Craig	1
Heather Dann, Ph.D.	18
Jeffrey Darrah	20
Wanda Emerich, M.Ext.Ed.	35
Heather Gauthier	22
Jered Green	6
Stephanie Green	4
Mark Haney	4
Kelsey Hefter	1
Salim Jones	1
Matthew Kelting, M.S.	<1
Laura Klaiber, M.S.	14
Lisa Klaiber	14
Stephen Kramer, M.S.	28
Sarah Morrison, Ph.D.	4
Sheila Mousseau	10
Robert Navaroli	3
Alexander Pape, M.S.	5
Morgan Terry	<1
Allen Wilder, M.S.	2

ADMINISTRATION

Kirk Beattie	22
Rachel Dutil	13
Rick Grant, Ph.D.	19
Dannielle Steady	<1

AGRICULTURE

Mackenzie Abbati	<1
Shawn Bechard	17
Bethann Buskey	19
Shawn Cormier	<1
Steve Couture	17
Carlos Fernandez Gonzalez	<1
Luis Antonio Flandes	<1
Kristup Kalvaitis	15
Leonard King	4
Randy Manor	<1
Joshua Mc.Sweeney	2
Henry Meseck	38
Sergio Perez Roblero	<1
Lee Provost, Jr.	3
Tomas Sesena Rendon	<1
Rebecca Sprang	<1
Dave Sweeney	4
Kevin Tobey, DVM	3
Enoc Zapon Tiu	<1
Herberth Zapon Tiu	<1

EQUINE

Karen Lassell	27
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PHYSICAL PLANT

Jared Ashline	15
Daniel Belrose	20
David Boulerville	34
Mark Gonyo	22
Adam LaCount	13
Michael Lemza	3
Gary Morrison	3

FOOD SERVICE / HOUSEKEEPING

Karri Collins	<1
Hope LaForest	24
Michelle Miller	10

GRADUATE STUDENTS

Cari Reynolds
Taylor Turney

INTERNS

Nicole Stover, Dairy
Kourtnei Curry, Research
Emily Bourdeau, Research

Congratulations Laurie Miller!

In June, Laurie Miller retired after 39 years as Miner Institute's accounting clerk. Laurie was the welcoming face in the Farm Office for visitors, staff, and delivery folks alike!

Congratulations, Laurie!



The William H. Miner Agricultural Research Institute



Research • Education • Demonstration

Miner Institute uses its farm, facilities, and staff to conduct fully integrated education, research, and demonstration programs.



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