

UW SHEEP PROGRAM & WYOMING WOOL INITIATIVE



ANNUAL REPORT

JULY 2024-JULY 2025



UNIVERSITY
OF WYOMING

College of Agriculture,
Life Sciences, and
Natural Resources



WELCOME

The University of Wyoming Sheep Program and Wyoming Wool Initiative are honored to share our 2024-2025 Impact Report—a reflection of the growth, partnerships, advocacy, and progress we've achieved together for Wyoming's sheep and wool industry. This work happens because of you. Through your generosity, we're able to offer hands-on education, lead applied research, extend statewide outreach, and create global exchange opportunities that serve producers, inspire students, and strengthen the future of Wyoming wool. Your support sustains more than programs—it preserves a legacy. Together, we invest in the people, places, and traditions that keep this remarkable industry and community thriving for generations to come.

OUR MISSION & VISION

The UW Sheep Program and Wyoming Wool Initiative enhance the sheep and wool industry through student-centered education, producer-driven research, and community-based outreach. We equip stakeholders with the knowledge, tools, and resources needed to thrive.

Our goal is to be a leader in the sheep and wool industry by promoting sustainable practices, driving innovation, and supporting the next generation of sheep producers.

ABOUT US

Sustaining and Growing Wyoming's Sheep and Wool Industry

SOME FACTORS THAT MOTIVATE US TO WORK FOR THE SHEEP AND WOOL INDUSTRY:

► WY IS NO. 1 IN THE U.S. FOR WOOL VALUE

According to the 2025 USDA NASS Sheep and Goat Report, Wyoming leads the nation in wool value, with 2.18 million pounds shorn. The state also holds the 4th spot in both breeding sheep and total sheep numbers. Much of this wool is sent out of state, where it undergoes further processing and manufacturing.





► **UNTAPPED POTENTIAL OF WYOMING WOOL**

The UW Sheep Program and Wyoming Wool Initiative are dedicated to strengthening Wyoming's sheep and wool industries by creating opportunities that add value across the entire supply chain. Our mission is to support producers and entrepreneurs by developing resources, fostering innovation, and providing pathways for value-added opportunities so that more of the value from Wyoming's sheep and wool stays in Wyoming.

► **HONOR HERITAGE & EMBRACE INNOVATION**

As we work to grow and modernize these industries, we also celebrate the traditions rooted in Wyoming's open spaces—ensuring that the legacy of sheep production thrives while leading the way toward a more innovative and resilient future.

HIGHLIGHTS OF THE YEAR

- » **STUDENT TRAINING & SUCCESS:** Expanded student training in live animal and carcass evaluation. Student-led lamb promotional tailgate at UW Football game.
- » **OUTREACH:** Record field outreach, producer education, and industry collaboration
- » **WOOL SHIRT FEASIBILITY STUDY:** Wyoming's first traceable, value-added wool shirt
- » **UW SHEEP TASK FORCE:** Awarded the UW Extension Team Excellence Award
- » **FUNDRAISING AND DEVELOPMENT:** 126 Lambs Donated from 26 producers through the Lamb-a-Year program.
- » **RESEARCH:** Published research in targeted grazing systems, prevention of ewe metabolic diseases, and nutritional causes of bent leg in lambs. Wool Shirt Feasibility Study launches Wyoming's first traceable, value-added wool shirt



This year marked the 5th anniversary of our signature Wool Evaluation Contest—and our largest yet—with more than 130 students from across the country competing.



STUDENT TRAINING & SUCCESS

Academic Courses

- » **ANSC 3535 (INTRO TO WOOL EVALUATION):** 6 students (Fall 2024)
- » **ANSC 4230 (ADV. SHEEP PRODUCTION MGMT):** 13 students (Spring 2025)

7220 National Wool Judging Contest

This year marked the 5th anniversary of our signature Wool Evaluation Contest—and our largest yet—with more than 130 students from across the country competing. To showcase

and represent the Wyoming sheep industry, we added a live-animal wool class featuring performance data, giving students the opportunity to evaluate not only some of the finest wool in the country but also high-quality, production-focused Rambouillet sheep. Held just two days before the National Western Wool Judging Contest, this event has become a hallmark of our program and a celebrated highlight for participants nationwide.

Lamb-a-Year in the Classroom

Donated lambs for the Lamb-A-Year (LAY) program continue to advance all aspects of our land-grant mission in research, extension, and teaching—and this year was no exception. The University of Wyoming Collegiate Lamb Growers Club met regularly to coordinate lamb processing and weigh-in events, while students were actively engaged in research and data collection on lamb performance. This year, we look forward to bringing undergraduate research students into the program; meanwhile, we're proud that last year's LAY lambs played a central role in the Principles of Meat Animal Evaluation (FDSC 2040) course. In this class, students learned to estimate carcass traits from live lambs, then followed those same lambs through processing to collect carcass data and compare results. At semester's end, students participated in a mock auction using LAY lamb videos—applying market strategy and budgeting skills in a hands-on, real-world learning experience.

LAMB-A-YEAR: A WORKING MODEL FOR TEACHING & PRODUCER FEEDBACK



Thanks to the generous support of 26 producers, 126 lambs were donated in 2024. These lambs were raised, tracked, and evaluated by UW students and faculty, providing:

- » Individualized lamb performance reports
- » Feed-to-gain ratios and average daily gain (0.23–0.97 lb/day)
- » Carcass quality metrics (HCW, LEA, %BCTRC)

The program continues to integrate all pillars of the land-grant mission—teaching, research, and outreach—and provides actionable performance data back to producers.





2024-2025 Lamb-A-Year Award Winners:

LEGACY AWARD

This award honors the donor with the greatest impact through the number of lambs donated or monetary contributions.

Brad and Ryan Boner, M Diamond Angus Ranch, Glenrock, WY

TOP HAND AWARD

For exceptional volunteering and outstanding support in gathering lambs and coordinating logistics.

Kalli Koepke, Laramie Research Extension Center, Laramie WY

FEED EFFICIENCY AWARD

For most efficient lambs, achieving the lowest cost per pound of gain during the feed efficiency trial.

Regan and Wendy Smith, Smith Sheep and Stuff, Powell, WY

GROWTH PERFORMANCE AWARD

For the lambs with the greatest average daily gain across the entire test period.

Regan and Wendy Smith, Smith Sheep and Stuff, Powell, WY

CARCASS MERIT AWARD

For achieving outstanding results in lamb carcass quality.

Trent Boner, TJ Livestock, Douglas, WY

MOST CONSISTENT PEN OF LAMBS

Recognizing excellence in achieving uniformity in growth, health, and quality in lamb production.

John and Randy Marton, Marton Ranch, Casper, WY

OUTREACH

UW SHEEP TASK FORCE

Extension Team Excellence Award Winner

Launched in October 2023, the UW Extension Sheep Task Force has become a statewide leader in sheep education. Throughout the year, this cross-functional team conducted producer needs assessments and delivered:

- » Enhanced Digital Access: Revamped the Sheep Extension website, now offering structured, topic-based resource access.
- » Ongoing Applied Research Communications: Continued delivery of monthly SheepSense briefs on critical production topics including, and not limited too – quarantine, feed management, risk mitigation, and colostrum.
- » Applied Producer Feedback: Organized predator management webinars featuring burros, guardian dogs, and economic discussions in direct response to statewide survey findings.

The Task Force includes Extension educators from across Wyoming, UW faculty, and Sheep Program staff. Their collective work ensures practical, timely, and accessible information reaches every corner of the state.

“The purpose of the Sheep Task Force is to combine evidence-based research with on-the-ground implementation dedicated to serving Wyoming’s sheep ranchers.”

– UW AgNews



INTERNATIONAL EXCHANGES: WYOMING TO NEW ZEALAND

Building Global Perspective Through Two Distinct Programs

In 2025, the UW Sheep Program coordinated two back-to-back international exchanges to New Zealand. These programs provided participants with hands-on learning, global collaboration, and strategic insight into pasture-based production systems, wool and meat marketing, and extension integration.



UW Extension Educator Exchange

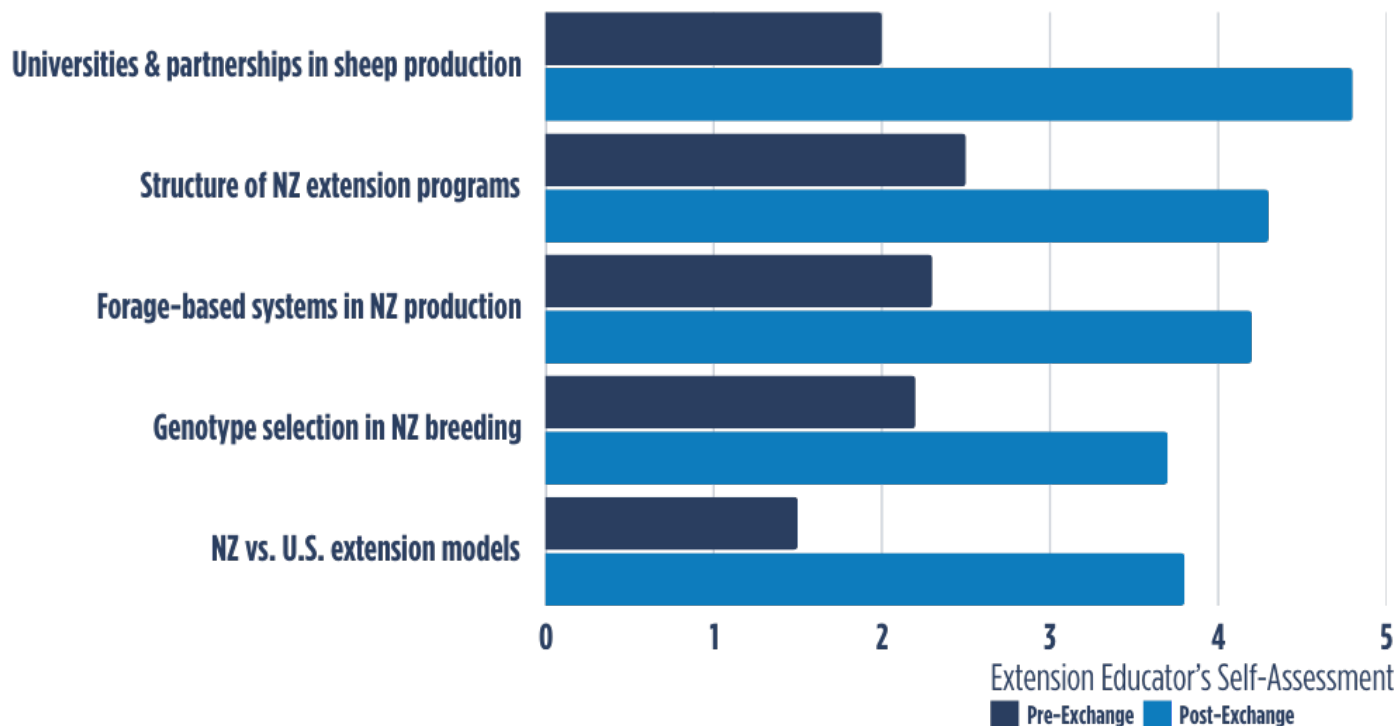
Wyoming Extension professionals demonstrated significant growth through the Sheep Extension Innovators Exchange in New Zealand. Participants reported stronger confidence in shaping Wyoming-specific curricula (4.8/5) and deepened awareness of integrated extension programs (5.0/5), with an average rating of 4.3 across all learning areas. Knowledge gains were evident in every category, including universities' role in production (2.0 to 4.8), forage systems (2.3 to 4.2), and extension models (1.5 to 3.8).

The experience broadened perspectives and inspired new approaches to outreach. As one participant reflected, "Being immersed in a new context and production system has expanded my thinking for what could be possible in Wyoming and the novel approaches to extension education that support New Zealand agriculturists."

By connecting with peers abroad, Wyoming educators returned with fresh ideas, renewed vision, and practical tools to strengthen local sheep production and producer wellbeing.



Knowledge Gains Among Extension Educators: Pre & Post Exchange Survey



“Every day was amazing and made an impact in my thoughts and plans for the future. Our discussions with Beef + Lamb and NZ Merino inspired me and has made me think about how we can improve how UW Extension connects with our producers.”

“It became clear that data collection, and reporting is extremely important — it’s not just a family farm but rather a multi million dollar operation that we are dealing with. Treating it as such makes for a more successful model.”



“The opportunity to expand my current mindset through international travel was revolutionary. Too often we are stuck in the same echo chamber, and hearing other narratives is important to have a better perception.”

Sheep Innovators Exchange

The Wyoming-to-New Zealand exchange connected producers and industry leaders in exploring marketing strategies, production efficiencies, and labor models. Participants found the program highly impactful—100% would recommend it, 75% reported they are “very likely” to implement new practices, and 88% expressed interest in hosting international producers. Top-rated learning areas included infrastructure comparisons (5.0/5), premium product positioning (4.75/5), and breeding value selection (4.62/5).

Producers highlighted the value of seeing affordable technologies that could open new opportunities in wool, the importance of treating operations with a business-minded approach, and the strength of building community for long-term wellbeing. One participant shared, “What I gained here will be directly applicable to efforts we are making with the WY Food Coalition to establish a local market for Wyoming foods.



“The most valuable insight during the exchange was seeing the strength in building a community that can assist in the overall well-being of the individual producer. Life needs to be in balance, and by becoming more efficient through a variety of tools, we can maximize not only livestock production goals but overall health goals.”

UW Sheep Innovators Exchange: Participant Learning Assessment



RESEARCH

Wool Shirt Feasibility Research:

Five years after the successful launch of our Wyoming wool blanket, the UW Sheep Program has continued to push the boundaries of value-added agriculture. In collaboration with Mountain Meadow Wool, American Woolen Company, and Ferrara Manufacturing, we embarked on a groundbreaking initiative to create a fully traceable, ranch-to-consumer wool shirt made entirely from Wyoming-grown wool.

This pilot project served as a model for how rural states can capture more value locally by linking premium agricultural products directly to consumers. Our research examined every stage of the process—supply chain logistics, infrastructure gaps, and consumer willingness to pay for high-end, Wyoming-branded apparel.

The results demonstrate the potential for Wyoming to expand its wool industry beyond commodity markets, positioning our state as a leader in sustainable, high-quality, and locally-branded textiles. Proceeds from this initiative directly strengthen the Sheep Program's teaching and outreach, ensuring the next generation of producers is ready to innovate and lead.

Survey results confirm strong market potential for Wyoming-grown wool apparel:

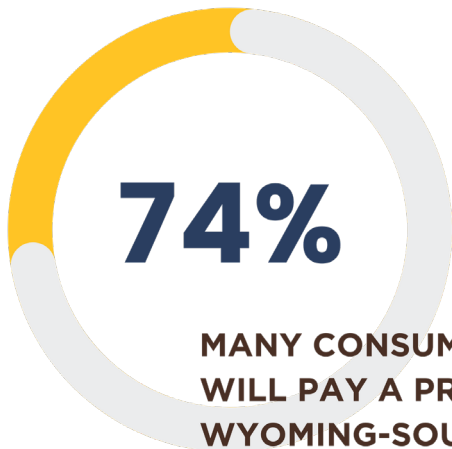
- » Most consumers are familiar with wool and value sustainable, American-made products.
- » More than 90% prefer shirts that support local ranchers.
- » Many are willing to pay \$225-\$270, above typical pricing, for Wyoming-sourced shirts.
- » Traceability to specific ranches is highly appealing.

These insights validate the demand for premium, locally branded textiles, reinforcing Wyoming's opportunity to lead in sustainable, value-added wool production.



WOOL CONSUMER SURVEY

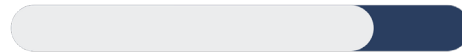
KEY INFORMATION



**MANY CONSUMERS
WILL PAY A PREMIUM FOR
WYOMING-SOURCED WOOL**
74% WOULD PAY \$200-\$225 OR MORE

SUSTAINABILITY IMPORTANCE

Sustainability and U.S. Production
Are Highly Important to Consumers



79%

SUPPORT LOCAL RANCHERS

Consumers Are More Likely to Buy
When Wyoming Ranchers Benefit



49%

TRACEABILITY APPEALING

Traceability to Specific Ranches
Appeals to Over Half of Consumers



52%

**The survey results
highlight just how much
people value quality,
sustainability, and
Wyoming ranchers.
Add your voice by
filling out our Wool
Consumer Survey.**



**Scan here or
visit: bit.ly/3UYUEHn to
complete the survey!**



Production Research

Challenges, Opportunities, and Unknowns of Solar Grazing

By now, you've heard of solar grazing and its growing relevance to the sheep industry. Research led by Dr. Whit Stewart, in collaboration with Ohio State, Oregon State University, USDA-ARS, and the American Lamb Board, presents one of the most in-depth evaluations to date. This open-access review, published in *Small Ruminant Research*, confirms that integrating sheep into utility-scale solar installations can be an effective vegetation management strategy—offering both ecological and economic efficiencies. Sheep help reduce wildfire risk, manage forage growth beneath panels, and avoid damaging solar infrastructure.

Importantly, the paper also identifies critical knowledge gaps, including long-term impacts on native plant communities, optimal stocking densities, and the growing disconnect between solar expansion and the capacity of the U.S. sheep industry. The authors stress the need for region-specific strategies and thoughtful infrastructure planning to ensure grazing remains viable in these settings. Ongoing research here in Wyoming is focused on ensuring that where solar development occurs, we can take advantage of these spaces for dual use—supporting agriculture without sacrificing productivity.

Scan and learn more here: bit.ly/4nlqTN5



Integrating sheep into utility-scale solar installations can be an effective vegetation management strategy—offering both ecological and economic efficiencies.

Structural Soundness is Critical for Range Ram Longevity and Performance

A recent collaborative study between the University of Wyoming, North Dakota State University's Hettinger Ram Test, and the University of Idaho has taken a major step forward in understanding the causes of angular limb deformities (ALD) in Rambouillet sheep. Building on earlier research, this study identified key genetic markers associated with increased risk for ALD, particularly in the front limbs.

Specifically, rams carrying one or more alternate alleles at certain markers—rs160736723, rs427563170, or rs416810983—were found to be 3.5 to 4.8 times more likely to develop ALD compared to those with the reference alleles. These markers are located within or near genes involved in ossification, cartilage development, and bone growth regulation—all critical processes for normal limb formation. In essence, these genes help control how bones form and harden during growth, and when they don't function properly, the result can be misaligned or deformed limbs. This work provides a foundation for genetic selection tools that can help breeders reduce the incidence of ALD, improving structural integrity and long-term productivity in flocks across the western range sheep industry.

Scan and learn more here:
go.nature.com/4no6VBn



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In follow-up research, we studied mineral metabolism in UW ram test rams with and without ALD. They discovered that affected animals had higher vitamin D and magnesium levels, and lower copper, late in the performance testing period—indicating a potential disruption in how key minerals are regulated in the body. Notably, growth rate was not significantly different between affected and unaffected rams, challenging the idea that rapid weight gain is the main driver of the condition. Together, these findings offer promising leads for improving ram selection using both genetic markers and mineral health indicators to support long-term leg soundness in Western sheep production systems.

Scan and learn more here: bit.ly/4p98dlj





COLLABORATORS & INDUSTRY PARTNERS

We continued our strong partnerships across campus and with manufacturers and industry leaders. They include:

Public Sector & On-Campus Collaborators

- » Department of Animal Science - Meat Science
- » Laramie Research & Extension Center
- » UW Extension Sheep Task Force
- » College of Agriculture, Life Sciences & Natural Resources
- » USDA-ARS Meat Animal Research Center, Clay Center, NE

Allied Industry Partners

- » American Sheep Industry Association
- » American Woolen Company
- » American Wool Council
- » Mountain Meadow Wool
- » Wyoming Wool Growers Association
- » Weather Wool
- » Wyoming Business Council



THANK YOU

We extend our heartfelt thanks to the individuals and organizations whose generosity made a lasting impact this year. Your support comes in many forms—through donations, volunteering, and even sharing our story with others. Every act of support helps sustain the UW Sheep Program and Wyoming Wool Initiative. The donors listed below represent just some of the many people who stand with us in advancing Wyoming's sheep and wool industry.

2024-2025 Donors

7K Ranch, Inc.
Alicia Cosner-Patik
Andrea Leonard
Andrea Sun-Zink
Barney Cosner
Berry Bauer
Bob & Kate Harlan
Borcher Sheep Company
Camino & Son
Cana McNerney
Cat & Jim Urbigkit
Craig Russow
Curuchet Ranch
Dylan Laverell
Elisabeth Dooley
Frederick Stormshak

Hamilton Ranch
Ivan Laird
Jay Butler
Jim Forbes
Julian Lank and Livestock
Julie
Kathleen Bertoncelj
Kelly K Crane
Kestrel Ridge Pellet
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Richard Deenke
Round Rock Ranch
Scott & Myra Johnson
Sherri Tams
Spearhead Ranch
Susan Samuelson
TLE Ranch, Inc.
Todd & Lynnette Taylor
Tom Murphy
Trent Boner
Wayne Lewis

Fundraising and Development: Why it Matters

The continued success of the Lamb-a-Year program, Giving Day, Annual Donations and targeted outreach efforts have strengthened the financial foundation of the UW Sheep Program. Support from donors directly funds: Student Internships, Collegiate Wool Judging Team, Research, Statewide Producer Education, and More.

Your support helps ensure the next generation of leaders, research, and innovation in Wyoming's sheep and wool industry. Learn how you can get involved below.

Make a Gift Online:
bit.ly/4ngXUtG



Lamb-a-Year Donor Program:
bit.ly/lay-2025



FROM DR. WHIT STEWART

Reflections on the Past Year



I'm writing at the close of another busy year—one that seems to have moved faster than I'm entirely comfortable with. Part of that year was spent halfway around the world, immersed in landscapes where sheep are just as much a part of the fabric of life as they are here at home. I look forward to sharing insights from those experiences—ranging from lamb quality to wool innovations, from practical management strategies to new ways of thinking about our industry.

Working with sheep producers across the globe has reinforced for me that stewardship is a universal value. While it's easy to get caught up in the idea of "competition," I've found that collaboration is where the real solutions lie. The challenges we face—promoting sustainably produced lamb and wool, sharing the eco-friendly story of the food and fiber grown on our pastures—are shared across borders. It's a story that an increasingly disconnected consumer needs to hear, and it's one we must all tell together.

Regardless of where we call home, the realities remain the same: rising input costs, unpredictable precipitation, aging industry infrastructure, and a host of production challenges. And yet, what keeps me inspired—what truly unites us—is a deep love for the animals and the land we care for. That shared passion continues to leave me in awe.

None of what we accomplish would be possible without your support, and for that, we are deeply grateful.

On a personal note, I'd like to recognize Dylan Laverell, who led the program with excellence during my absence. Dylan is continuing his Ph.D. in sheep science with the same New Zealand colleagues I had the privilege of working alongside this past year. He has been an invaluable part of our program for six years, and we are proud to call him a Cowboy. He embodies the kind of graduate we aspire to produce—one who will no doubt make a lasting impact in the sheep industry.

Eat lamb. Wear wool. Go Pokes!
Sincerely,

Whit Stewart, Ph.D.

Associate Professor and Extension Sheep Specialist University of Wyoming
Department of Animal Science
College of Agriculture, Life Sciences, and Natural Resources

IN THE MEDIA



NorthernAg Network
*UW's Lamb-a-Year Program
Sees Record Engagement*
<https://bit.ly/41B3vTh>



UW AgNews
*Webinar on Innovation in the
Lambing Barn*
<https://bit.ly/3xvgmKs>



Sheep Industry News (ASI)
*Where Performance Meets
Progress: Lessons from the
Wyoming Ram Test*
<https://bit.ly/4gamZEh>



UW AgNews
*UW Extension Celebrates
Outstanding Educators*
<https://bit.ly/45OP0Oe>



UW AgNews
*Wyoming Wool Initiative's
Lamb-a-Year Program
launches fourth year*
<https://bit.ly/4gb62tr>



UW Foundation YouTube
All About Lamb-a-Year
bit.ly/3JVPglT



UW AgNews
*UW Sheep Program Launches
Sheep Innovators Exchange to
New Zealand*
<https://bit.ly/41213G1>



Wyoming Livestock Roundup
*Ag education: UW Extension
Sheep Task Force delivers new
programming and resources*
<https://bit.ly/45RfP4o>



UW AgNews
*UW Extension Sheep Task
Force to Offer Webinar Series
on Predator Management*
<https://bit.ly/484Thyl>

STAY CONNECTED

Our story doesn't end here. Explore more on the UW Sheep Program website and join the conversation on social media. Together, we can advance Wyoming's sheep and wool industry for generations to come.



Join our newsletter!
bit.ly/4ng8XTP

You can also find us at:

UW Extension Sheep Website: bit.ly/4brsdsC
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To donate or learn more about how to support Wyoming Wool Initiative, please scan the QR code or contact our Program Coordinator, Lindsay Conley-Stewart, at lstewar9@uwyo.edu.

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