

USU EXTENSION

**BOX ELDER
COUNTY**



2023

Impact Report



Extension
UtahStateUniversity





Mike Pace

County Director
Agronomy & Horticulture Faculty
435-695-2541 | mike.pace@usu.edu

April Litchford

Home & Community Faculty
435-695-2544 | april.litchford@usu.edu

Ashley Longmore

Livestock, Range Management & 4-H Faculty
435-695-2545 | ashley.longmore@usu.edu

Marci Borg

4-H Program Coordinator
435-695-2546 | marci.borg@usu.edu

Brielle Smith

4-H Program Coordinator
435-695-2543 | brielle.smith@usu.edu

Cheyenne Capener

Extension Staff Assistant
435-695-2542 | cheyenne.capener@usu.edu



CONTACT US

[EXTENSION.USU.EDU/BOXELDER](https://extension.usu.edu/boxelder)

Box Elder County Courthouse
01 South Main, Room 30
Brigham City, UT 84302



UNDERSTANDING USU EXTENSION

Utah State University Extension provides research-based programs and resources with the goal of improving the lives of individuals, families and communities throughout Utah. USU Extension operates through a cooperative agreement between the United States Department of Agriculture, Utah State University, and county governments.

Founded in 1914 as part of the Smith-Lever Act, USU Extension plays a primary role in helping Utah State University fulfill its land-grant mission. Though more than 100 years old, USU Extension is as vital as ever, and perhaps even more so, due to the increased diversity and complexity of the issues people encounter today. The integration of teaching, research, and public service enables USU Extension to respond to critical and emerging issues with research-based, unbiased information.

BOX ELDER COUNTY

CONNECTING TO OUR COMMUNITY

online presence

Maintaining a robust online presence is essential for USU Extension in today's digitally-driven world. As an organization dedicated to extending the educational resource an online presence significantly amplifies its reach and accessibility.

2,120

*Followers on our
4-H Instagram*

91.2K

*lifetime views on
our youtube channel*

31K

*visits our
website in 2023*

new program areas

USU Extension Box Elder County 4-H has sought out opportunities to grow its youth leadership opportunities through the County Ambassador program. Youth Ambassadors can serve in areas such as livestock, horse, healthy living, and S.T.E.A.M. In addition to leadership, 4-H has developed several new S.T.E.A.M. areas including lego robotics clubs and drone competitions. Read about more of our programs and their impacts in the 4-H section.





USU Extension - Box Elder County

HOME AND COMMUNITY PROGRAMMING IMPACTS



CREATE BETTER HEALTH

Create Better Health provides nutrition education to SNAP recipients and offers a variety of classes to expand participants' knowledge of nutrition, budgeting, cooking, food safety, and physical activity.



67 FACE TO FACE CLASSES

-reaching-

566 PEOPLE



78,951

INDIVIDUALS REACHED THROUGH SOCIAL MEDIA



PROVIDED INFORMATION AT

129 *events*

PROMOTING HEALTHY RECIPES, AND HEALTHY LIFESTYLES



Community Connections

USU Extension - Box Elder County worked with five community partners to change policies, public systems, and the environment. Through these community connections two community gardens were planted and cared for. This resulted in a fresh produce donation of 675 pounds to local food pantries.

MENTAL HEALTH

From weather, to economy, to relationships and family life, the stress faced by agricultural producers on any given day is immense and unique. Our goal is to provide education, help, and resources for agricultural producers and their families so that stress can be managed.



406

INDIVIDUALS REACHED THROUGH PRESENTATIONS



15,334

REACHED THROUGH ONLINE MARKETING



1,200

REACHED AT CROP SCHOOLS



COOKING CLASSES

91 PEOPLE IN ATTENDANCE



FREEZER MEALS



INSTANT POT



GLUTEN FREE BAKING



CHOCOLATE TEMPERING



DIABETES COOK ALONG CLASSES

IN-PERSON - 12 CLASSES
LOCATED IN 9 DIFFERENT COUNTIES
WITH 133 PARTICIPANTS

VIRTUAL COURSES - 10 CLASSES
304 PARTICIPANTS

437 PEOPLE REACHED



YOUTH EDUCATION

145

YOUTH PARTICIPATED IN COOKING CLASSES TO DEVELOP CULINARY KNOWLEDGE AND KITCHEN SAFETY

146

STEM ACTIVITIES INCLUDING ROBOTICS, DRONES, AND OTHER ACTIVITIES.

FOOD PRESERVATION

Our goal is to provide home canning resources so that Box Elder County resident's experience is satisfying and leaves them with the assurance that the food they preserve at home is safe and the highest quality possible.



9

CLASSES TAUGHT



190

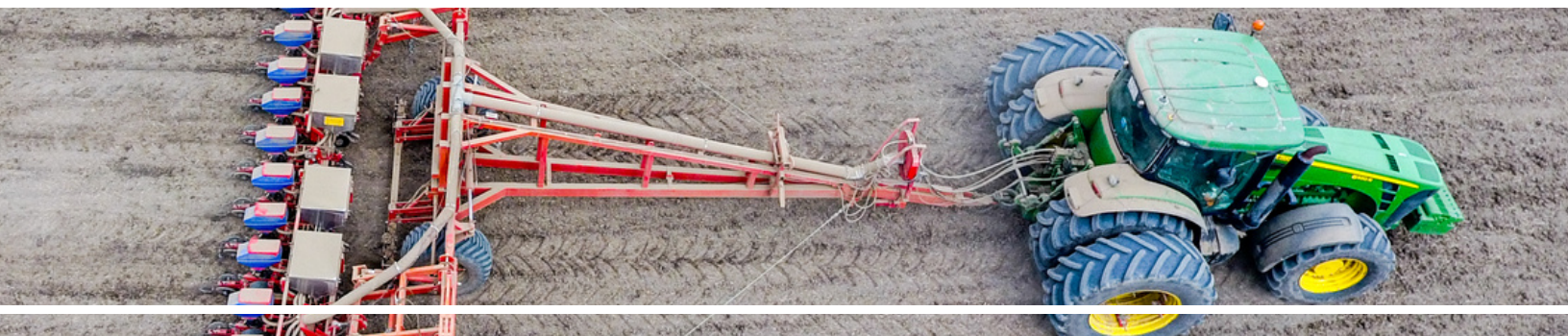
PEOPLE ATTENDED



142

PRIVATE CONSULTATIONS





USU Extension - Box Elder County

AGRONOMY & HORTICULTURE PROGRAMMING IMPACTS



RESEARCHING LIQUID FERTILIZER USE ON WINTER WHEAT

Box Elder County produces between 3 and 4 million bushels of wheat in a given year. Anhydrous ammonia fertilizer has been a common source of nitrogen (N) fertilizer in large-acreage dryland operations for many years. However, due to its disadvantages in safely handling the product, a large number of producers are interested in liquid fertilizer and the benefits of its use. USU Extension is testing the use of liquid fertilizer of Urea and solution 32 on the yield and final end-use quality of soft white and hard red winter wheat. Researchers established plots at the Blue Creek research farm. The application of liquid fertilizer has an advantage in drought conditions in reducing exposure to vapor and increasing available nitrogen to plants that would otherwise be lost due to low soil moisture. Researchers hope to provide information on liquid fertilizer as an alternative option for dryland wheat production in Utah after several more years of testing.



SNOW MOLD RESEARCH ON WINTER WHEAT

The high level of snowpack in the winter of 2022–2023 created a renewed interest in speed-melting snow to prevent snow mold on winter wheat in Northern Utah. Snow mold is a disease caused by fungi growing under snow-covered wheat fields. Applying a darkening agent to increase snowmelt can be highly effective at stopping snow mold growth by melting the snow. On April 7, 2023, humate was applied using a Polaris Ranger UTV with tracks at the Blue Creek Experiment Station on 22.8 inches of snow. The application rates of control (no humate), 100 pounds/acre, and 200 pounds/acre were applied using the UTV. Snow was removed from the treated areas 14 days quicker than the untreated areas in the study. Previous research has shown that after 70 days of continuous snow cover and 12 inches or more of snow still on the fields by early March, growers should be scouting for snow mold and applying a snow-melting product. Ongoing studies are being conducted to measure the impact of snow mold on wheat production losses. The effectiveness, economics of using snow-melting products, application rates, and methods are continuing to be studied this spring.



UTAH HAY AND FORAGE SYMPOSIUM

USU Extension is heavily involved in the planning and development of the Utah Hay and Forage Symposium held in St. George. The 2023 Symposium evaluations showed:



117

attendees

AT THE
PRE-CONFERENCE
WORKSHOP



360

attendees

AT THE HAY AND
FORAGE
SYMPOSIUM



98%

of participants

HAVE
CONFIDENCE
THAT WHAT THEY
LEARNED WILL
IMPROVE FARM
PROFITABILITY



97%

of participants

WILL USE THE
INFORMATION
ON THE FARM

BOX ELDER COUNTY CROP SCHOOL

USU Extension along with Bear River Valley Coop and IFA sponsored a corn grower school in 2023. This event included professional development for local producers as well as multiple pesticide safety and use CEUs. Highly significant knowledge was gained for each presentation



83
attendees

ATTENDED AND LEARNED ABOUT CORN HERBICIDES, FERTILIZER RESEARCH, COVER CROPS INTERSEEDED IN CORN AND CORN OUTLOOK AND BREAK-EVEN PRICES.

78%

OF THE PARTICIPANTS STATED
THEY WOULD USE THE
INFORMATION ON THE FARM.

97%

HAVE CONFIDENCE THAT WHAT
THEY LEARNED WILL IMPROVE
FARM PROFITABILITY.

COMMERCIAL FRUIT PRODUCTION

Utah's fruit has long commanded premium prices in the local fresh market due to better quality and high sugar content. This results from bright sunny days and cool night temperatures that maximize sugar accumulation during fruit ripening. Northern Utah commercial fruit growers are still challenged with ill-timed spring freezes that damage emerging flower buds and wipe out a complete season before it gets started. Despite a warming climate change, the risk of spring freezes continues to be significant as spring temperature fluctuations remain severe. USU Extension is working with commercial tree fruit growers to develop, validate, and refine crop growth models for peach, apple, and cherry trees.



USU Extension - Box Elder County

RANGE AND LIVESTOCK PROGRAMMING IMPACTS



RANGE MANAGEMENT

USU Extension Box Elder County offers resources for managers and educators interested in developing a greater understanding of local rangelands. This program provides science-based information and training that assists landowners and managers in maintaining Utah's rangelands.



GRANTS RAISED:

\$656,754

FOR PROGRAMMATIC
SUPPORT FOR LIVESTOCK
AND RANGE INITIATIVES



240

producers

REACHED
THROUGH RANGE
PROGRAMS



Range Management

USU Extension Box Elder County was invited to tour projects and analyze range related issues. Through these opportunities, our office provides technical assistance, partnership coordination and works with the producers on any research related projects. These collaborations help USU Extension Box Elder County define applied research projects and give us a better understanding of the direct needs of the producer.



PARTICIPANTS



Giving Teachers Tools



Investing in the future of Range Management

Mid summer USU Extension Box Elder County hosted teachers specializing in Agricultural Education for a hands on learning experience where they dove deeper into Range Management strategies and best practices. This event provided teaching materials and gave teachers tools to better prepare upcoming generations for careers within the industry of range management.

Livestock Programming

USU Extension Box Elder County is teaming up with Dr. Rickords at Utah State University to begin looking at genetic markers that help determine carcass grade. These preliminary tests have been successful on University cattle and the next phase is to begin testing larger scale operations and cross-referencing the genetic tests with actual carcass grades. We will be working with producers in Box Elder County to continue this project and look forward to understanding how this can improve herd management.

We have secured funding through partnerships with the Bear River Bird Refuge and Utah's Watershed Restoration Initiative to begin grazing trials on phragmites using virtual fencing systems. Phragmites is an invasive species that reduces habitat quality in riparian areas that are important to many of the migrating bird species we see here in Box Elder County. Livestock have proven to be a successful tool in managing phragmites but managing cattle in these wet areas has been a challenge. We will be using virtual fencing to determine if it can be used as an additional tool in containing cattle to target graze the dense phragmites patches.



Teachers gather with Ashley Longmore during range camp to better understand range ecology, ecological site descriptions, plant physiology, soil health, and more.



"for my club, my community, my country and my world"



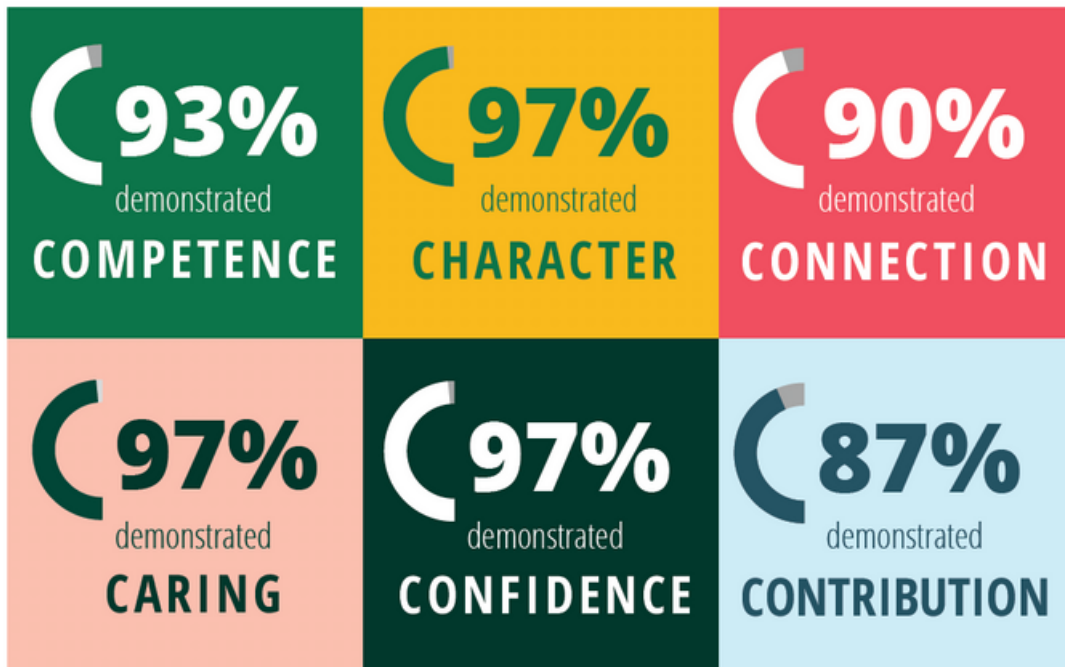
USU Extension - Box Elder County YOUTH AND 4-H PROGRAMMING



1,002 YOUTH MEMBERS
127 ADULT VOLUNTEERS

Role Call

Box Elder County 4-H youth scored highly on the **6C's of Positive Youth Development***. The 2023 impact evaluation showed that Box Elder County 4-H youth had the following competencies:



LIFE SKILLS

Approximately 1,002 youth are enrolled in Box Elder County 4-H*. In Box Elder County, youth had the following life skills:



100%

learned about being
RESPONSIBLE
for their actions

100%

learned how to
WORK IN A TEAM

97%

learned about
**LEADERSHIP
SKILLS**

93%

have learned about ways to
**HELP THEIR
COMMUNITY**

County Highlights



AN AVERAGE OF
360 IN PERSON
contacts with youth each month
AT CLUB MEETINGS, CLINICS AND COUNTY PROGRAMS



LARGEST DIGITAL REACH
174 K
views on a single reel
WITH 1,007 PUBLIC SHARES



AN AVERAGE OF
1,348
reached monthly

THROUGH COMMUNITY EVENTS SUCH AS FARM FIELD DAYS, STEM FAIRS, LIVESTOCK TAGGING, & SCHOOL SUPPORT,

Diverse Program Areas

USU Extension offers a wide variety of 4-H programming including STEAM, food science, cooking, pet and dog clubs, horse, livestock, leadership, public speaking, drone education, entrepreneurship courses and more.



Shooting Sports Project Timeline

County Club Practices

Each Winter local clubs kick off with practices

County Contest

In Spring, join us for a county Shoot Out

State Contest

Utah 4-H hosts State Shooting Sports Contests in Summer

National Contest

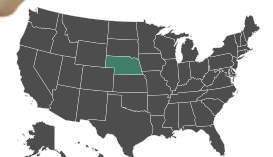
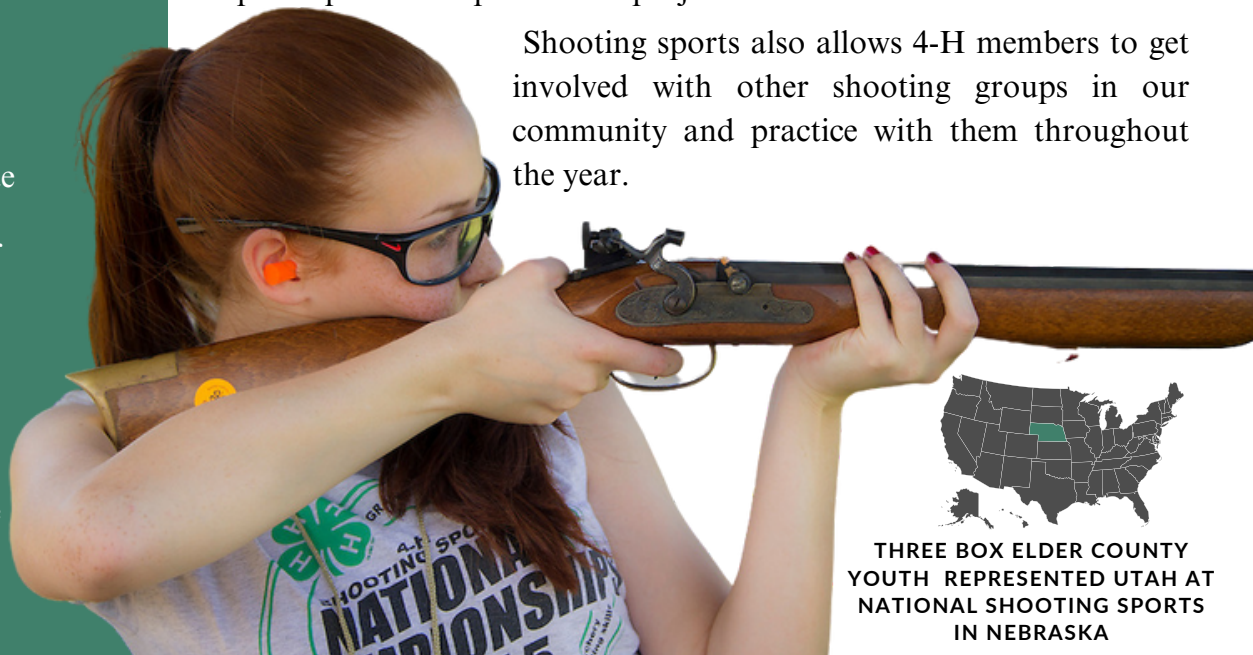
National Shooting Sports in held in the Summer



SHOOTING SPORTS 4-H SPOTLIGHT

In the 4-H Shooting Sports discipline, 4-H members will accomplish the following learning experiences: Follow safety regulations when on the shooting range, including following all the range officer's instructions and care and safety of shooting sports equipment. Youth demonstrate safe use of guns and bows through practice, demonstrations, and exhibits. This program also encourages participants to explore other project areas in 4-H.

Shooting sports also allows 4-H members to get involved with other shooting groups in our community and practice with them throughout the year.



THREE BOX ELDER COUNTY YOUTH REPRESENTED UTAH AT NATIONAL SHOOTING SPORTS IN NEBRASKA



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USU Extension - Box Elder County
01 South Main
Brigham City, Utah 84302
extension.usu.edu/boxelder

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