

USU EXTENSION  
BOX ELDER  
COUNTY

2023

# Impact Report



Extension  
Utah State University





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# 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

### WiFi *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





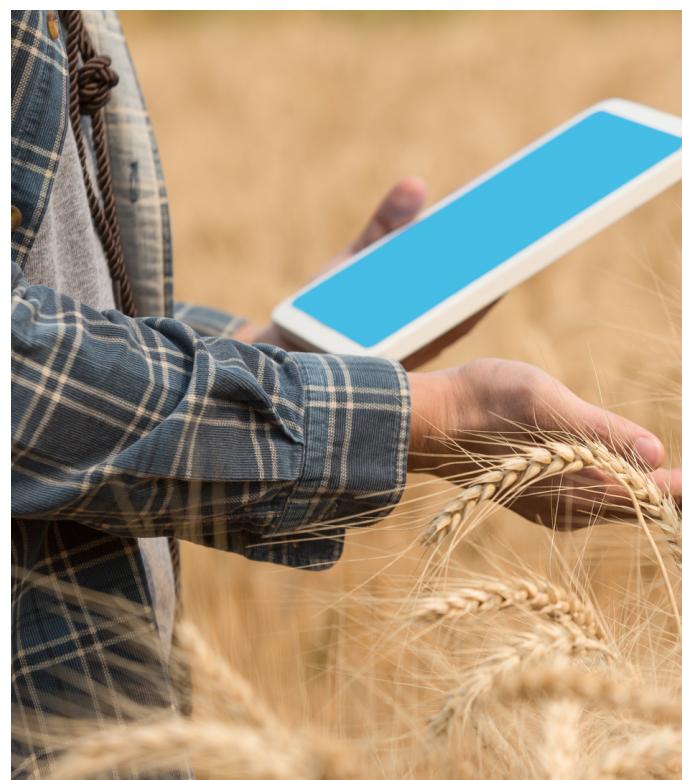
USU Extension - Box Elder County

## 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:

  
**360***attendees*

AT THE HAY AND  
FORAGE  
SYMPOSIUM

**98%**

*of participants*  
HAVE  
CONFIDENCE  
THAT WHAT THEY  
LEARNED WILL  
IMPROVE FARM  
PROFITABILITY

**117***attendees*

AT THE  
PRE-CONFERENCE  
WORKSHOP

**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.

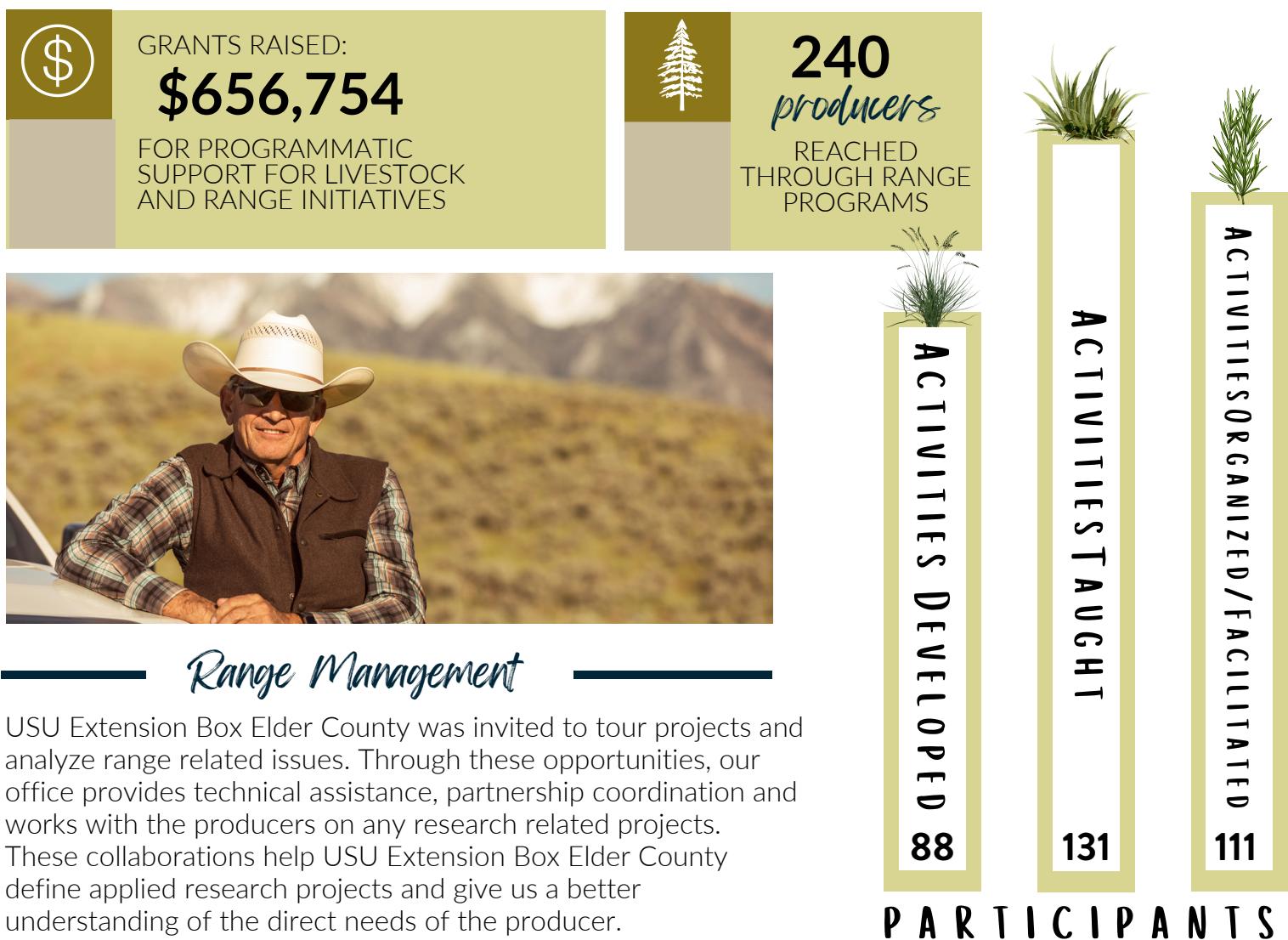


USU Extension - Box Elder County

## 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.





# 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.



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

## 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.





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



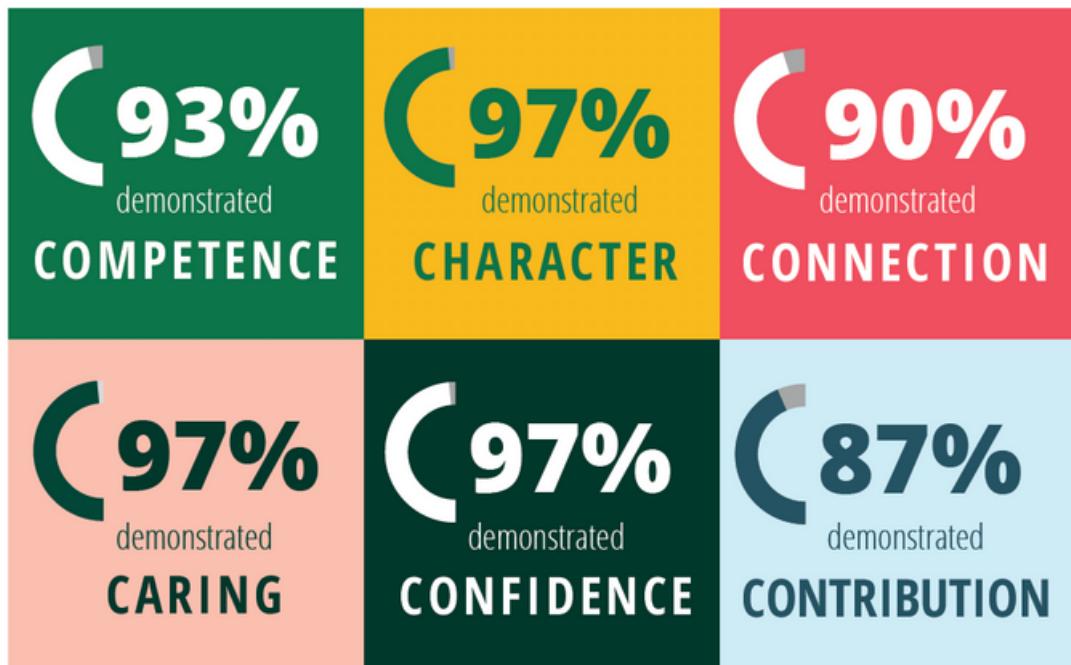
USU Extension - Box Elder County  
**YOUTH AND 4-H  
PROGRAMMING**

**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,

## 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 are held in the Summer

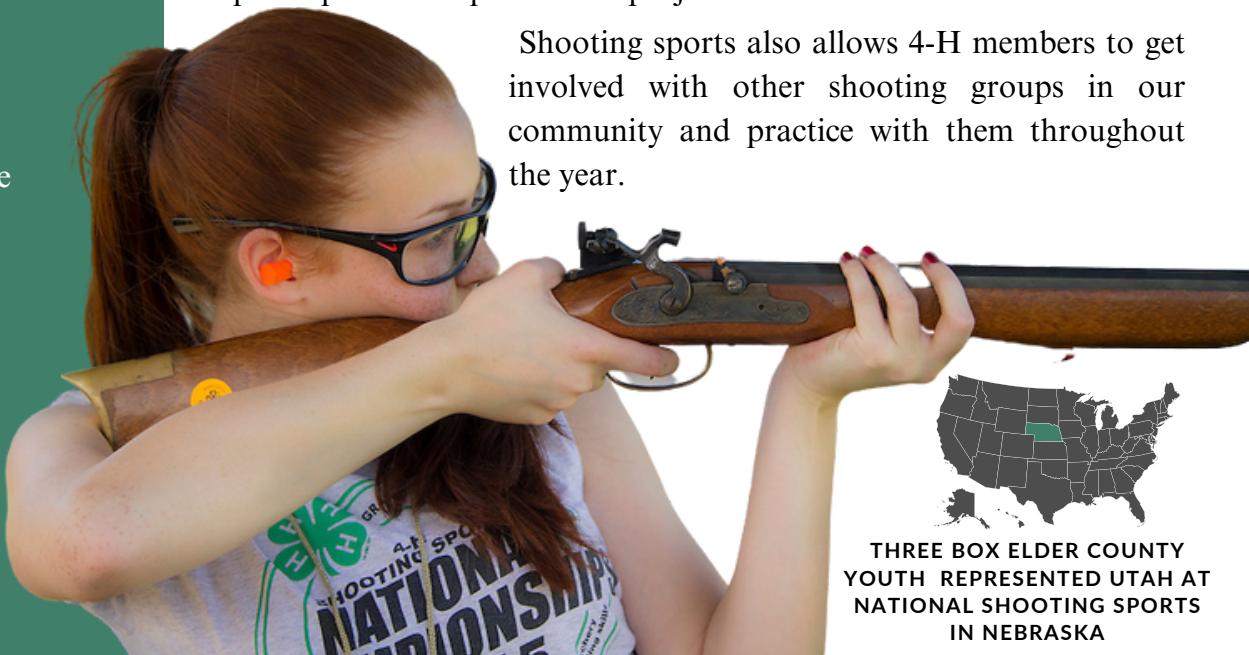
USU Extension offers a wide variety of 4-H programming including STEAM, food science, cooking, pet and dog clubs, horse, livestock, leadership, public speaking, drone education, entrepreneurship courses and more.



## SHOOTING SPORTS 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



**Extension**  
**UtahStateUniversity**



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