



# USU EXTENSION

BOX ELDER COUNTY  
2025 IMPACT REPORT

## YOUTH

OVER A DECADE OF  
THE 4-H DOG CLUB

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## PRODUCERS

RESEARCH AND  
ADVOCACY IN BOX  
ELDER COUNTY

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## COMMUNITY

FOOD DONATIONS  
AND DEDICATION TO  
MENTAL HEALTH



UtahStateUniversity



## Mike Pace

County Director  
Agronomy & Horticulture Faculty  
435-695-2541 | [mike.pace@usu.edu](mailto:mike.pace@usu.edu)

## Kristen Koci

Home & Community Faculty  
435-695-2544 | [kristen.koci@usu.edu](mailto:kristen.koci@usu.edu)

## Ashley Longmore

Livestock, Range Management & 4-H Faculty  
435-695-2545 | [ashley.longmore@usu.edu](mailto:ashley.longmore@usu.edu)

## Marci Borg

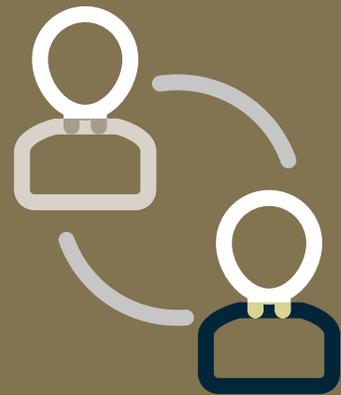
4-H Program Coordinator  
435-695-2546 | [marci.borg@usu.edu](mailto:marci.borg@usu.edu)

## Brielle Smith

4-H Program Coordinator  
435-695-2543 | [brielle.smith@usu.edu](mailto:brielle.smith@usu.edu)

## Cheyenne Capener

Extension Staff Assistant  
435-695-2542 | [cheyenne.capener@usu.edu](mailto: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



# USU EXTENSION

## 📍 BOX ELDER COUNTY

### MEETING LOCAL PRIORITIES

#### AGRICULTURAL HERITAGE & EVOLVING CHALLENGES

With farmland, orchards, and livestock production long-standing in the county, USU Extension's research-based guidance helps local farmers, ranchers, and small-acreage landowners adapt to modern challenges (water, pests, soil, climate, etc.). This keeps local agriculture sustainable and productive.

#### GROWING POPULATION & SHIFTING SOCIAL NEEDS

As Box Elder grows and ages, community members need support in areas beyond traditional agriculture: nutrition, family wellness, mental health, youth development, and more. Extension's broad programming meets those emerging needs.

#### BRIDGING EDUCATION, RESEARCH, & COMMUNITY OUTREACH

USU Extension's model of "teaching + research + public service" is well suited to a county that spans rural, small-town, and growing suburban populations. Extension is reaching diverse audiences with relevant, science-based resources and helping to connect them to Utah State University's broader network.

**Box Elder County remains a place where both traditional agricultural roots and growing community needs intersect. By grounding programming in local context and data, Extension's work remains relevant and custom to our area.**

**This foundation underscores why this report isn't just about listing programs, but showing how Extension meets real, evolving community needs.**





## Strengthening Local Agriculture Through Unified Producer Leadership

In 2025, USU Extension in Box Elder County launched a new initiative to support the formation of the Box Elder County Beef Producers Association— a producer-led coalition designed to strengthen leadership, advocacy, and communication among local livestock producers. This effort emerged directly from producer feedback and countywide needs assessments, which highlighted the lack of a unified voice for ranchers facing growing challenges related to water allocation, Great Salt Lake conservation, Bear River watershed management, and public-land grazing access.

USU Extension Box Elder County played a central role in organizing the association by coordinating meetings, guiding leadership development, and helping define a clear mission for the group. This work was carried out in collaboration with local cattle producers, the Utah Farm Bureau, the Utah Legislature, Utah Cattlemen’s Association, and the Utah Department of Agriculture and Food.

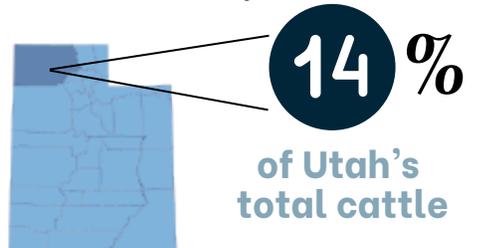
As Utah’s largest cattle-producing county, Box Elder’s 80,926 head of cattle—representing nearly 14% of the state’s total inventory—position the county as a critical contributor to statewide agricultural policy. Through the new association, ranchers now have a unified and recognized platform to engage directly with policymakers, local governments, and resource-management agencies. This collaboration ensures that decisions about land, grazing, and water resources reflect both economic realities and the on-the-ground experience of producers.



RESTORING THE  
CATTLEMAN'S  
ASSOCIATION  
GIVES VOICE TO  
SEVERAL  
DIFFERENT  
CATTLE SECTORS  
REPRESENTED IN  
BOX ELDER

### why it matters...

Box Elder County accounted for



The cattle sector has a  
**\$117 MILLION**  
economic footprint  
in Box Elder County



# RESTORING WETLANDS THROUGH INNOVATION AND COLLABORATION

USU Extension in Box Elder County is leading a pioneering effort to improve wetland health and support local producers through innovative grazing strategies. With phragmites spreading across major Utah waterbodies—including the Great Salt Lake and Bear River—new tools are needed to manage this invasive plant. In response, USU Extension launched the first U.S. study evaluating whether virtual fencing can guide cattle to target-graze phragmites, improving both rangeland productivity and restoration outcomes. This work is strengthening partnerships, supporting producers, and transforming management of Utah’s wetland resources.

## RESEARCH DEVELOPMENT

USU Extension is testing virtual fencing technology as a practical tool for invasive species control. Virtual fencing collars allow cattle movement to be managed digitally, improving access and grazing distribution in wetland areas that are otherwise difficult to reach. What began in 2023 with one producer on 150 acres has expanded to more than **ten producers** using virtual fencing on over **17,000 acres** across Box Elder, Cache, and Rich counties. With **1,500 head of cattle** now involved, the project is demonstrating meaningful reductions in phragmites while increasing usable grazing land.

The success of these Extension-led demonstrations has prompted interest from state agencies exploring broader implementation on publicly managed wetlands. USU Extension is also partnering with USU Agricultural Economist Dr. Ryan Larsen to compare the economics of virtual fencing to traditional treatments such as herbicide, fire, and mechanical removal, with results being prepared for publication.

## FUNDS RAISED

This virtual fencing research is part of a larger Bear River Watershed Restoration effort supported by an extensive network of partners, including the U.S. Fish and Wildlife Service, The Nature Conservancy, Utah Division of Wildlife Resources, Utah Watershed Restoration Initiative, Utah Department of Agriculture and Food, and local producers and landowners.

Together, the team has secured \$2,159,242 to restore wetlands, support invasive species management, and expand virtual fencing trials. The project is now in its second year, with plans to add **300 additional collars** and three new producers in 2026, further increasing the impact of this innovative work.

**\$2,159,242** RAISED



## PROGRAM SPOTLIGHT: PAWS FOR APPLAUSE 4-H DOG CLUB Over a Decade of Dedication and Learning

For over a decade, the Paws for Applause 4-H Dog Club in Box Elder County has been helping youth and their canine companions learn, grow, and shine together. Under the dedicated leadership of Lanette Sorensen, the club provides hands-on experiences that teach responsibility, patience, teamwork, and the joy of working with animals. Members of Paws for Applause participate in a variety of activities that help strengthen the bond between youth and their dogs. Throughout the year, club members practice obedience and agility training, preparing for both county and state level shows. These events not only showcase the hard work and skill of the participants but also highlight the confidence and respect that comes from positive animal handling.



Beyond the ring, the club emphasizes important 4-H life skills such as communication, leadership, and community service. Youth learn to set goals, problem-solve when challenges arise, and celebrate progress step by step. For many members, the club is more than just a place to train dogs—it's a place to connect with friends, share successes, and build lifelong memories while giving back to the community.

Under Lanette's guidance, Paws for Applause has become a cornerstone of the Box Elder County 4-H Dog program, fostering not only skilled handlers and well-trained dogs but also kind, capable young people. As the club celebrates this milestone, it continues to inspire youth to work hard, have fun, and give their best, earning plenty of "applause" along the way.



## Diverse 4-H Program Areas

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



## What non-profit really means...

4-H's nonprofit structure is one of its greatest strengths, ensuring that every program, workshop, and event is offered at true cost rather than for profit. This means families pay only what it takes to run the activity—not inflated fees—making hands-on learning, leadership development, and youth enrichment accessible to more young people across Box Elder County.

"4-H has taught me how to improve myself and serve others, and I will continue to use skills learned from 4-H through the rest of my life"

*-Sarah Pace*

2025 Community Service Award Recipient



## Building a Ready Generation

4-H has launched a nationwide initiative called Beyond Ready - helping youth become ready for work and ready for life. This effort strengthens our focus on preparing young people to grow into healthy, capable, and productive adults. Youth in Box Elder County responded to a survey illustrating career readiness.

**91%**

of our youth understand the importance of a strong work ethic

**83%**

of our youth demonstrate problem solving skills

**82%**

of our youth understand the importance of goal setting



## Box Elder County 4-H Roll Call

**1,011** Registered Members

**110** Registered Volunteers



THAT IS A  
**1:10**  
ADULT TO  
YOUTH RATIO

OVER 180 YOUTH ATTENDED SUMMER CAMPS IN BOX ELDER COUNTY EXPLORING A VARIETY OF TOPICS

**\$7,000**

RAISED THROUGH COMMUNITY GRANTS

Thanks to the Kiwanis Club and The National Rifle Association



# Mental Health

**IN BOX ELDER COUNTY, 1 IN 4 ADULTS EXPERIENCE MENTAL HEALTH CHALLENGES, SUICIDE IS THE LEADING CAUSE OF DEATH FOR YOUTH AGES 10-24 AND ADULT MALES AGES 35-44.**



A focused effort was made to increase community awareness about mental health and reduce stigma through social media outreach. This effort helped spark important conversations about mental health in the county and provided timely coping strategies and mental health support and resources. Approximately **3,266 individuals** were reached through this effort, expanding access to mental health information and promoting resilience.

A youth Confidence Camp was piloted on July 21-22, 2025. This camp included engaging activities that allowed youth to explore self-esteem, resilience, body image, positive friendships, and personal strengths. Following participation in the Confidence Camp, youth participants expressed a clearer understanding of what confidence feels like and how thoughts and relationships shape their wellbeing. The Confidence Camp strengthened protective factors and supported positive mental health and wellbeing in youth participants, offering a promising model for future programming.

A mental health career exploration activity was piloted at the Box Elder County Fair. This activity educated youth on mental health and careers in the field and taught healthy coping strategies, along with providing opportunities for tactile engagement with a breathing/meditation device, a weighted stuffed animal, silicone magnetic balls (fidget toy), and a handheld neuro-control anxiety device. The mental health career exploration activity was set up for three days at the fair, from August 21-23, 2025, and 79 youth were reached through this activity.

# HEALTHY CHOICES CREATE BETTER HEALTH.

Create Better Health provides education to SNAP recipients in Box Elder County. Through a variety of classes on nutrition, budgeting, cooking, food safety, and physical activity, participants learn valuable skills that contribute positively to their overall health and wellbeing. In 2025, Box Elder County's Create Better Health program provided 183 classes to 1,451 participants. Additionally, 80,175 individuals were reached through social media.

Box Elder County's Create Better Health Program worked with 18 community partners to change policies, public systems, and the environment. Partnerships with the community gardens, local farmers, and the local food pantry resulted in approximately 1,200 pounds of fresh produce being donated to the local food pantry. Create Better Health also piloted the NourishEd program in the county, which resulted in 315 pounds of fresh produce being donated to families at the Boys & Girls Club of Northern Utah.

Create Better Health efforts in Box Elder County generate many benefits. By reaching more than a thousand individuals of all ages, and tens of thousands of community members through social media, the program contributes to healthier norms around nutrition, physical activity, and food resource management. Increased produce donations and partnerships with local agencies strengthen the county's food system, ensuring that more families have access to fresh, nutritious foods while reducing food insecurity community wide. Through coordinated supervision, community partnerships, and high-quality education, Create Better Health helps cultivate a more informed and health-conscious population, ultimately reducing risk factors associated with chronic disease, obesity, and poor mental health.



**1200** LBS

  
-of fresh produce-  
**DONATED TO THE  
LOCAL FOOD PANTRY  
THAT IS 300 POUNDS  
MORE THAN LAST  
YEAR'S DONATION**

THE FIRST YEAR HOSTING  
**NOURISHED**  
IN BOX ELDER COUNTY  
RESULTED IN  
**315**  
**POUNDS**  
OF FRESH LOCAL  
PRODUCE DONATED TO  
**THE BOYS & GIRLS CLUB**



# USU Extension Dryland Alfalfa Variety Evaluation

Alfalfa is a key forage crop for Utah's livestock and dairy industries, but dryland production faces significant challenges compared to irrigated systems. Limited soil moisture, high evapotranspiration, variable soils, and a greater risk of stand loss often reduce dryland yields to a fraction of those achieved under irrigation. Utah's diverse topography complicates production further, as elevation affects growing degree days, winter severity, and dormancy needs; a variety that thrives in low-elevation valleys may fail at higher elevations. Factors such as fall dormancy, winter hardiness, soil type, salinity, forage use, and water-use efficiency all play critical roles in selecting a suitable alfalfa variety.

Variety selection is one of the most important decisions for producers, influencing yield, forage quality, persistence, pest resistance, and long-term economic return. Studies have shown yield differences of up to 30% among varieties grown under identical conditions, and because stands last for years, these differences accumulate over time. Despite this importance, Utah has lacked dryland alfalfa variety trials since the 1990s, leaving producers without current, location-specific data. To fill this gap USU Extension in Box Elder County, established new dryland trials in 2024 at the Blue Creek Dryland Research Farm in Box Elder County to provide updated information and support more informed decision-making.

The inclusion of both traditional and yellow-flowering alfalfa types in Utah's first dryland variety trials in more than two decades will allow researchers to assess persistence, drought tolerance, and long-term yield under dryland conditions. Although Year 1 data mainly reflect establishment vigor, early productivity, and responses to extreme drought, the 3–5 years of planned data collection are essential for capturing multi-year trends in persistence, yield stability, and drought recovery, since some varieties decline after establishment while others improve over time. As results accumulate, these trials will help USU Extension and producers identify varieties best suited to different elevations and soil types, filling a critical knowledge gap and supporting more informed, long-term, and economically sound variety selection decisions for Utah's dryland alfalfa industry.

A total of 30 different alfalfa varieties were planted

30  
varieties

9 of the 30 varieties produced between 2.25 and 1.50 tons/acre (T/A) in first cutting in 2025.

Field Standards included in the trial are Ranger & Vernal

Two yellow-flowering (*sativa* × *falcata*-type) varieties, Don and Sholty are in the trial

Data will be collected for 3 to 5 years

# Evaluating Subsurface Drip Irrigation in Agronomic Crops

## *In Box Elder County*

Utah's record-setting drought has intensified the need for long-term water-use solutions, even after a few years of strong snowpack. Agriculture drives most freshwater demand in the state, prompting major efforts to improve irrigation efficiency without sacrificing yields or profitability. USU Extension faculty in Box Elder County along with university specialists are looking at subsurface drip irrigation (SDI) to conserve water. SDI delivers water to the plant roots through buried drip lines 18 to 30 inches deep in the soil. It has emerged as a promising tool because it virtually eliminates evaporation losses from the soil surface and during application, unlike sprinkler or surface irrigation systems.

Although SDI is widely used in places like California and is common in high-value fruit and vegetable crops, it remains rare and costly in Utah. Interest is growing, however, especially among producers of forage crops such as alfalfa and pasture, which dominate the state's irrigated acreage. New SDI installations in several Utah counties – including Box Elder County, now offer researchers and USU Extension the chance to measure how much water forage crops consume under this system and how yields compare with those from more traditional sprinkler and flood irrigation systems.

This research project aims to quantify both applied and consumptive water use in SDI-irrigated alfalfa and pasture across multiple field sites, paired with neighboring sprinkler and flood-irrigated fields for direct comparison. By evaluating system performance, water savings, and crop yields, the project will help producers and policymakers assess whether the high upfront cost of SDI is justified by long-term benefits. Findings will be shared at future USU Extension Crop Management Schools in Box Elder County and through Extension programs across the state, filling a critical knowledge gap about SDI's potential in Utah's soils, climate, and agricultural economy.



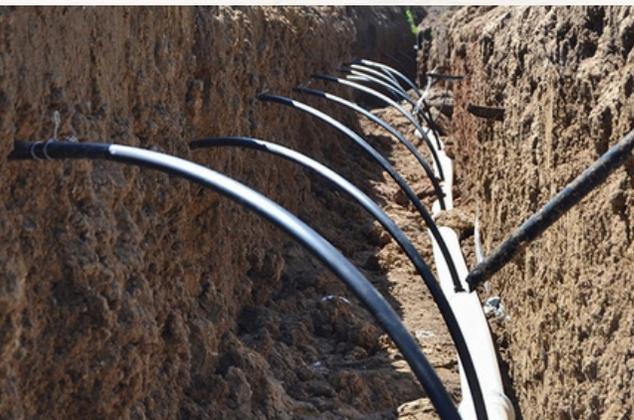
**TUBES CAN  
LAST 15-25  
YEARS IF  
MAINTAINED**



**WATER  
SAVINGS OF  
25-50% BY  
ELIMINATING  
EVAPORATION  
AND RUNOFF**



**LOW PRESSURE  
SYSTEM  
OPERATING  
BETWEEN  
5 TO 15 PSI**





**Extension**  
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USU Extension - Box Elder County  
01 South Main  
Brigham City, Utah 84302  
[extension.usu.edu/boxelder](http://extension.usu.edu/boxelder)

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