4-H Youth Programing
Seeing the Country starts in Box Elder County

Agronomy & Horticulture
Growing crops and community at home

Home & Community
Teaching and reaching families through food

Livestock & Range
Battling bugs and funding farmers
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INTERSEEDING RESEARCH

The utilization of cover crops to improve soil sustainability has become a topic of interest among agriculture producers across the nation. To encourage the use of this practice, many Federal and State agricultural agencies have provided financial assistance to farmers to adopt cover crop strategies. While the strategy behind interseeding cover crops is well-founded, research and data are lacking in the Intermountain West. Producers and conservation districts across the State have approached Utah State University Extension about providing research to help get a better understanding of the effectiveness of interseeding cover crops between rows of corn. The strategy is to interseed cover crops between corn rows after corn has begun growing vertically, but before the corn canopy is established. By planting during this period, cover crops can establish but will not grow large enough to aggressively compete with corn. This project aims to research the effects of cover crop seeding times, interseeded between rows of corn, on overall corn and cover crop yields. This was the first year for evaluating corn interseeded with cover crops at different growth stages. Data collected data from the 2021 growing season from six different fields in Sevier, Weber, Box Elder, and Cache counties and will be presented at upcoming crop schools.

PESTICIDE SAFETY AND EDUCATION

The USU Extension office in Box Elder County organized a face-to-face Pesticide Safety Education and Applicator Training workshop for local agriculture producers to earn Pesticide Continuing Education Units (CEU’s) towards license renewal. Fifty-four growers from Box Elder, Cache and Weber counties each received 3 Pesticide CEU’s or 162 total CEU’s for attending the 3-hour workshop.

UTAH STATE RECORD FOR CORN CONTEST

According to the Utah Agriculture Statistics, Utah planted over 29,000 acres of grain corn in 2020. Box Elder County had several growers that participate in the National Corn Growers Association (NCGA) contest last fall. USU Extension verifies the grower’s yields and assists with the paperwork. The average for 15 irrigated cornfields was 305.25 bushels per acre which is higher than last year’s average by about 22 bushels. Corn yields and test weights were higher this year and growers were able to harvest earlier as a result of the corn reaching maturity earlier due to warm summer temperatures. Gardner’s Dairy from Honeyville set a new Utah record this year with a yield of 343.1 bushels of corn per acre.

6 FIELD DAYS  246 PARTICIPANTS  3 VIRTUAL GROWER MEETINGS  375 PARTICIPANTS

IN 2021 7 SHORT VIDEOS WERE PUBLISHED REACHING 8,125 PEOPLE
It is estimated that over 65 percent of the residents in Box Elder County have a garden (raised bed, container gardening, or regular garden) and over 85% of the residents have turfgrass, annual and perennial flowers, and trees and shrubs. USU Extension in Box Elder County offers programs and services to help in these endeavors. Each year the local Extension office provides gardening classes, pruning workshops, and gardening presentations to groups that request them. Insects continue to be a problem for homeowners who are trying to grow fruit. If the fruit is not protected with insecticides, bagging, or another method, it will drop from the tree prematurely and increase the number of insects available in the next generation.

Insect and disease spray dates were made available to the public via the USU Pest Advisory throughout the spring, summer, and fall months directing them when to protect fruit trees from insect pests. By spraying at the correct time and using the correct insecticides, homeowners have better quality fruit with less insect damage. Research has shown that if sprays are applied at the correct time, insecticide applications can be reduced by 2 to 4 applications and still have quality fruit with minimal insect damage.
USU Extension - Box Elder County hosts 4-H County Contests that pave the way for Utah 4-H State Contests. From there, qualifying youth advance to National competitions. 2021 was inundated with youth from Box Elder County qualifying for National Contests. The 4-H National Shooting Sports Contest was held in Nebraska, and the Western National Roundup was hosted in Denver, Colorado. This years qualifying youth were:

Utah 4-H Livestock Judging Team: Brinley Baldwin, Valerie Skidmore, McKayla Morris, and Shaylee Rose

FCS Presentation and Impromptu Speech : Katie Hewlett

Fashion Revue: Trinity Hale

Representing Utah in Shooting Sports: Hayden Kotter, Hunter Kotter, and Dylan Munns
This Summer provided a great opportunity to resume meeting together in the great outdoors, with plenty of room to socially distance. After advertising to all the municipalities in Box Elder County, 4-H camps opened for registration. A few of our Summer Camps included a STEM Mars Activity, Canoe Camp, Astronomy Camp, Soldering, Drama Theater Camp, and Horse Camp.
LIVESTOCK & RANGE

RANGE MANAGEMENT EXTENSION CONTRIBUTION HIGHLIGHTS

PUBLIC NEED

Leased federal grazing land alone totals nearly 700,000 acres. This land, paired with private and state rangelands, total acreages over one million. Program creation and development has been based from expressed need from federal/state partners, rangeland operators, and livestock producers.

MAJOR PROGRAMS DEVELOPED

- BLACK GRASS BUG RESEARCH PROGRAM
- BLACK GRASS BUG, GRASSHOPPER, AND MORMON CRICKET COST SHARE CONTROL PROGRAM
- FARM SERVICE AGENCY PARTNERSHIP FOR COST ASSISTANCE
- WATER QUALITY AND WASTE MANAGEMENT PROGRAM
- PRODUCER RANGE COLLABORATIONS

SUMMARIZED IMPACTS

- Breakthrough discoveries in black grass bug research. Life cycles, egg production, egg location, and potential treatment/control.
  - In just 2021 alone, over 35 ranches served, combating over 80,000 acres of rangeland against grasshoppers, and seeing an estimated $400,000 in chemical cost returned from the Utah Department of Agriculture and Food to producers.

- Thousands of dollars paid to producers through Farm Service Agency assistance programs.

- Over $175,000 in grants received to assist producers in improving water quality and overall waste management practices on rangelands, small farms, and ranches. 2021 State Award in Environmental Quality, Forestry, and Natural Resources from the National Association of County Agricultural Agents.

LIVESTOCK EXTENSION CONTRIBUTION HIGHLIGHTS

PUBLIC NEED

Box Elder County ranks first in the state for total cattle numbers (=90,000 head) and second in sheep numbers (=36,000 head). Program creation and development has been based from expressed need from livestock producers.

MAJOR PROGRAMS DEVELOPED

- BEEF PRODUCER EDUCATION SERIES
- FARM AND RANCH SUCCESSION TR.
- HOG GENETICS EDUCATION PROGRAM
- SHEEP EDUCATION PROGRAM

SUMMARIZED IMPACTS

- Nationally recognized for livestock expertise and education.
  - Served and taught over 30,000 individuals over the past 4 years.

- Over 100 individuals served with over $240,000.000 potential agricultural assets secured for transition during farm and ranch succession training. Recognized by the National Association of County Agricultural Agents as a State Winner, Regional Winner, and a National Finalist Program for Farm and Ranch Business Management.

- Increased awareness of mental health issues and suicide prevention strategies for hundreds of individuals served across the state.

DEVELOPED WITH A COMBINED TOTAL OF $860,000 EXTERNAL FUNDS
For the past few years, black grass bugs have desecrated the rangelands of Box Elder County. I have been coined by my colleagues as one of the foremost experts with the black grass bug. Through petitions and research proposals, I championed permission from the National Farm Service Agency to perform five complete years of research on 640 acres of heavily restricted Conservation Reserve Program (CRP) ground. In collaboration with Extension specialists, as the principle investigator I obtained over $13,000 of funding for research studies to better understand the most effective treatment strategies. In 2021, we discovered breakthrough findings of black grass bug egg locations and habits never discovered before. With this cutting-edge knowledge, we have new research strategies in an effort to control the devastation these bugs cause producers.

In addition to black grass bugs, I also address grasshopper issues. Working closely with the Utah Department of Agriculture and Food, I obtained unique permission to assist producers in Box Elder County to qualify for financial assistance to control grasshoppers on our rangelands. In 2021 alone, I had my boots on the ground visiting with over 35 producers on ranches totaling over 80,000 acres. Through my efforts, producers controlled grasshopper populations and saw an estimated return of nearly $400,000 in chemical cost savings. Combating the grasshoppers with this cost-share program also helped to leave valuable feed resources for fall livestock range.

-Joshua Dallin
USU Extension Agent

Recognizing the need to promote water quality and waste management principles on our small farms, rangelands, and ranches, USU Extension Box Elder County applied for and received a special grant from the Utah Division of Water Quality-to improve overall water quality and waste management practices. We awarded funding to 16 qualified recipients. The Division of Water Quality director noted the results of the projects as some of the “most impactful water quality projects to date.”

$175,000 award to local producers

WATER QUALITY GRANT

“most impactful water quality projects to date”

-DWQ Director
Food is a necessity that every individual must address multiple times throughout their day. Because of this need there is a large demand in Box Elder County for classes and educational experiences involving food. Food preparation classes for adults and youth help teach basic food preparation skills that will encourage more home meal preparation. Home food preparation is associated with reduced expense for families and a higher exposure to a variety of foods which improve nutrient intake for individuals.

Currently Box Elder County has a high rate of 1 in 4 adults reporting some type of mental health issue. The adult male population and youth ages 13-18 are significantly susceptible to death by suicide in our county. To help reduce this issue in our community and provide help for those afflicted, a campaign was started to reduce the stigma that stops people from talking about mental health. Current research indicates that talking about mental health problems can reduce the intensity of episodes and give people other options for relief.

| Counter Top Cooking Reached 96 People | Social Media Tips Reached 3,141 People |
| Green Apron Classes Reached 161 People | Food Preservation Classes Reached 278 People |
| 4-H Food Camp Reached 31 People | Food Preservation Consultations Reached 78 People |

**Mental Health**

6,185 PEOPLE REACHED VIA SOCIAL MEDIA, WEBSITE, AND IN PERSON EVENTS
CREATE BETTER HEALTH

The Create Better Health Program focuses on increasing nutrition education opportunities in Box Elder County. The main purpose of Create Better Health is to educate individuals and help them gain the skills needed to improve their food and lifestyle choices. Ultimately, this work empowers county residents to make changes that will improve their health for the better. USU Extension provides education on our social media sites, in county schools, senior centers, community gardens, county food pantries, farmer’s markets, and many other county venues.

44,118 REACHED THROUGH SOCIAL MEDIA

2,649 REACHED THROUGH FOOD PANTRY EVENTS

500 REACHED THROUGH DIRECT EDUCATION AND PUBLIC EVENTS
Social media is more than just social. USU Extension Box Elder County has combined our media marketing with our education programs. As a result, we have curated a wide variety of education videos on our YouTube channel. In addition to the YouTube channel, USU Extension Box Elder County manages two Instagram accounts and two Facebook Accounts serving the 4-H youth population as well as agricultural producers, backyard gardeners, home and family communities. This year's most popular media projects have been:

- **Meet 4-H Members**
  - Instagram Reel
  - 3,205 VIEWS

- **4-H Turkey Auction**
  - Facebook Post
  - 3,400 VIEWS

- **BBQ Safety Tips**
  - Instagram Reel
  - 1,774 VIEWS

Lifetime YouTube Impressions: 261,300

**Community Recognition**

Box Elder County 4-H is a volunteer-based program. Community support and 4-H Club Leaders are the reason 4-H programs succeed. Recognizing these crucial players has become a Box Elder County tradition. Each year we award a 4-H Club of the Year, 4-H Family of the Year, 4-H Member of the Year, 4-H Volunteer of the Year, 4-H Inspiring Leader, 4-H Community Service, and the Friend of 4-H award given to local businesses or municipalities that do an exceptional job in supporting youth programming. In addition to a special catered dinner, our award winners host a yard sign acknowledging their award and are spotlighted on social media. This allows the community at large to join us in thanking them and congratulating them.

This campaign reached 6,161 on Facebook.
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