



HIGH TUNNELS TEACH YOUTHS

healthy eating,
gardening,
entrepreneurial
and
grant writing
skills

SITUATION

The national 4-H mission has the mandate Healthy Living, which is targeted to ensure youths and their families make healthy food and food preparation decisions and the behaviors in which they engage.

The 6,700-foot elevation in Uinta County limited the 4-H gardening group to only raising tomato plants in pots. The county is in USDA planting zone 3 to 4, which limits the number of growing days for gardening. Gardening conditions at high altitudes are quite different from those at lower altitudes. Gardening techniques must be adapted to increase the success of growing produce.

The 4-H gardening group set out to build a high tunnel to grow fruits and vegetables. A high tunnel is similar to a greenhouse but is made out of inexpensive but durable PVC pipe that form “bows” or “ribs” that fit into slightly larger diameter pipes driven 2 or 3 feet into the ground. A UV-resistant greenhouse plastic covers the frame. Cooling is through passive ventilation from the roll-up sides and by opening doors at both ends. Heat is trapped during the day and retained by the covered plastic at night. An irrigation line is often the only external connection.

Youths taught more than 50 individuals how to successfully raise produce in high-altitude environments



The Uinta County gardening group saw gardening as a teaching tool to healthier eating for not only 4-H members and their families but by providing locally grown produce to the local community and sparking additional healthier eating habits for them.

Youths started plants indoors under artificial lights and learned how to use growing aids such as fans, heat controls, and growing mediums, and later transplanted the seedlings outside.

After starting plants inside, the 4-H gardening group built the high tunnel. Youths engaged in grant writing sessions in which they learned how to properly write a grant by doing research and identifying specifics such as implementation timelines, stakeholders, partners, and budgeting. A portion of property was donated for building the high tunnel. The youths, with the help of adults, wrote two grants that secured supplies needed to build the high tunnel. With the assistance of master volunteers, parents, and volunteer leaders, youths worked as a team to not only learn how to design and build their own high tunnel, but what warm and cold crops to plant inside, how to ventilate the tunnel, and maintain moisture levels.

The project culminated in the group taking the produce they raised, both in the high tunnel and in their backyard gardens, to the local farmers market. 4-H members sold fresh tomatoes, egg plants, squash, carrots, kohlrabi, onions, leaf lettuce, and snap beans. The money paid for a water system to the high tunnel this spring.



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IMPACTS

A high tunnel was built, but youths learned many skills that contribute to the core of the National 4-H Healthy Living mission mandate. They grew in the areas of healthier eating, entrepreneurial skills, grant writing, and sharing the learning mission with their families and community members by showing others what can be accomplished by gardening in Uinta County, which many believed could not be accomplished.

Specifically:

- A team of 14 youths secured two grants totaling \$2,209 to build the high tunnel.
- Youths worked, as a team, individual and community plots in the high tunnel to successfully raise fruits and vegetables.
- 100 percent of the youths learned how to start seedlings by using artificial lights and temperature controls then transplanting them outdoors.
- 64 percent of the youths raised produce in their own backyard gardens; this was the first time gardening for 45 percent of the group.
- More than \$150 was raised at the local farmers market from produce raised by the youths.
- Youths taught more than 50 individuals how to successfully raise produce in high-altitude environments.
- 100 percent of the youths' families consumed produce raised in the garden venues.

The success of this project prompted expansion plans that include learning how to assemble a watering system in a high tunnel and an additional high tunnel being built in a neighboring community. Youths who participated in this program will teach other youths how to write a grant, start plants indoors, and build a high tunnel.