**Mosca-Hooper Conservation District**

**Bringing Farmers Together:**

 **Implementing a Peer-to-Peer Learning Network in the San Luis Valley**

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The Mosca Hooper Conservation District's Bringing Farmers Together project aimed to address pressing water and soil-health issues in the San Luis Valley (SLV). Over-appropriation of water resources combined with a twenty-year drought has led to the threat of mandated shut-offs for agricultural wells. While significant reductions in groundwater use have been made in recent years, more progress must be made in the coming years to avoid major detrimental impacts to the region's agricultural economy and community.

Mosca-Hooper Conservation District (MHCD) focused on helping address these problems with an educational program of peer-to-peer shared learning. The project held the philosophy that farmers and ranchers learn best from each other, and that developing peer relationships promotes the cooperative exchange of producer-based ideas and interventions to improve soil health and water conservation.

To foster these learning relationships, MHCD sponsored two training sessions, six small group sessions, and one field day in 2024. MHCD worked with 3 Host Producers (soil health-oriented producers), who in-turn, created and led three small learning groups of SLV farmers and ranchers (guest producers) who sought improvements in soil and water conservation.

Through these events, farmers were able to share practical methods for reducing agricultural water use while enhancing soil conservation, and maintain economically viable agricultural operations despite declining irrigation water supplies. Long term, this project was a step in the right direction toward empowering producers to control the future of local agriculture and improve their quality of life.

Water availability remained the primary resource concern of the project. Decades of widespread groundwater pumping for center-pivot irrigation have led to a decline of the Valley’s groundwater resources, and farmers and ranchers have been tasked with recharging the aquifer across broad areas. State-mandated shutoffs for agricultural wells remain a major concern, and they have occurred previously in parts of the Valley with insufficient augmentation plans. To this end, it is conceivable that many agricultural wells may be voluntarily retired in coming years. However, to keep the region’s rural economy and agricultural heritage intact, many farmers and ranchers have been adapting to use less water and keep agricultural operations viable. While many of these adaptations have been water-focused (sprinkler automation, water-saving crops, reducing overall acreage in production), farmers and ranchers have also recognized the important relationship between healthy soil and water conservation.

The challenges of maintaining healthy soils in an arid environment remained a primary resource concern throughout the project. Soil health practices vary dramatically across the San Luis Valley. Often, the desire is simply to keep soil from blowing away. Farmers and ranchers often struggle to implement principles of soil health, due to timing, cost, and knowledge gaps. Nevertheless, some farmers and ranchers have been leading the way in maintaining healthy soils, and tying these efforts into water conservation. Project participants exchanged a wide range of ideas such as: implementing animals in systems which typically lack them, utilizing info from soil moisture sensors to make real-time irrigation decisions, experimenting with new amendments like wool pellets and mycorrhizal compost, water-saving crop rotations and marketing new products, and intensive prescribed grazing on the Valley floor in the summer. Farmers recognize the importance of building organic matter to keep water in the soil, and the majority of ideas throughout the project focused on soil as the means for water conservation.

The ideas exchanged as a result of the project’s design and implementation:

* Two winter training sessions helped the three host producers understand farmer-to-farmer learning networks. Peter Donovan, Technical Advisor, provided resources and guidance on participatory learning networks, facilitation, and experimental design and monitoring. Producers explored the use of soilhealth.app as well. After these two initial training sessions, Project Coordinator, Seth Armentrout, and Peter Donovan met with host producers individually to help prepare for hosting small group sessions.
* One producer hosted two educational sessions in which producers explored various water-saving and soil-building techniques used within potato rotations.
* Another producer hosted two educational sessions which bridged farmers and ranchers, with insights that apply far beyond potato and cattle country.
* A third producer hosted two sessions which brought a small group of diverse producers together to discuss experimental projects.
* Project leadership hosted an August Field Day where producers and stakeholders could come together to see ideas in practice on three farms and one ranch. Patrick O’Neill, Agricultural Technical Advisor, who consulted at some of the small group sessions, provided user friendly demonstrations of water infiltration, soil temperatures, and soil moisture meter operation.

The six total small group sessions saw participation from 30 guest producers. The project did not solicit written evaluation from these participants, which could be considered as the project matures. For the small groups, enthusiasm and engagement to continue the project remained high, which helped the project gauge success. One enterprising participant from this group served as the fourth host in the August Field Day.

The August Field Day saw full participation from 32 participants, including 18 producers. The Field Day featured practices on three farms and one ranch designed to improve soil health and conserve water, ideas which had been discussed at the previous six small group sessions. As this was the culminating event for the project, participants were given a survey at the end of the day. All participants found the tour valuable and learned something, and a few key insights from the survey emerged:

* The few participants had already been working toward water conservation and soil health. Twelve survey respondents indicated a *desire* to try new techniques learned at the Field Day, and three had already stated they *planned* to implement a new practice.
* Time and time again, participants pointed out the need to bridge the gap between farmers and ranchers who are currently *not* as committed to addressing the resource concerns, which will be crucial to accomplish valley-wide goals of aquifer recovery.
* A few participants were not necessarily looking to *try* new ideas, but were anxious to see how others were implementing a similar idea to what they were already trying. For example, one participant learned more about how to incorporate soil moisture data into production decisions. Another was able to glean insight about bale grazing for soil recovery. And yet another was inspired by the idea of mobile grazing on center pivots and wanted to learn how this idea could be implemented.

The Field Day catalyzed **five** partnerships in the realm of peer-to-peer learning. The Salazar Center del Norte at Adams State University saw the potential to bridge connections between undergraduate students and water conservation efforts. The Sangre de Cristo Acequia Association gained valuable knowledge about water-scarce ranching and the mechanics of hosting peer-to-peer learning and a Field Day. CSU Extension was able to see how producer-led experimentation can be compatible with their own studies, and they even shared one of their pilot projects (wool pellets for water-holding) as part of the Field Day. Perhaps most crucially, MHCD partnered with Center and Rio Grande Conservation Districts, which hosted an event the evening prior to the Field Day and provided logistical support. This greatly amplified public outreach for the project. Marketing efforts included: flyers/posters, sharing the event(s) through email and newsletters, and placing ads on the District’s Facebook page, website, radio and in local newspapers. Of the 16 participants who filled out the survey and were asked how they heard about the event: the majority responded that they heard about the event through email, flyers/posters, and by word of mouth.

Overall, the project helped connect producers across the San Luis Valley. This project was primarily educational in nature. In some cases, long-time neighbors were able to frame conversations in new ways. In other cases, completely new connections were made across the Valley. Forty-one people (this includes counting landowner couples as one, otherwise there were 53 individuals) received quality education as a result of the project. For small groups sessions, 16 landowners/managers and 6 “students” participated. An additional 13 unique landowners/managers and 6 unique “students” attended the complete Field Day (5 “repeat” guest producers/host producers attended for the entire day). In total, the Field Day hosted 24 participants for the whole day, as well as *at least* ten more attendees who dropped in for just one or two sites. Host-producer projects alone occurred on over 750 acres, and guest producers discussed ideas they have been trying on a much larger scale. As most folks had concluded their seasonal planning by the time small group sessions ended, the extent of the impact of “new” practices or techniques remains difficult to grasp.

The impact of this educational event largely remains to be seen. In the first year, folks were collecting ideas on potential projects, techniques, and management principles. This project helped with the effective diffusion of information - what’s working and what’s not working to address critical water and soil resource concerns. Generally, host producers resisted showcasing soilhealth.app in their small group sessions or utilizing it for producer-led projects. Technological barriers aside, a workshop on a new digital medium did not fit neatly into conversations which require person-to-person focus and vulnerability. Another lesson learned is that small group sessions should start sooner in the Calendar Year, well before irrigation season renders producer schedules unpredictable.

MHCD received funding from Colorado State Conservation Board (CSCB) to continue this project for 2025. In 2025, MHCD plans to work with 4 Host Producers and offer 8 small group sessions. There will also be another summer Field Day to share projects, ask questions, and grow the peer-to-peer learning network in the Valley.

 MHCD was awarded $13,151.00 from CSCB with a one-to-one match from MHCD of $13,151.00. Award amount expended on the project was $22,447.98.