

COMET QUARTERLY

COMET-Farm Newsletter



Photo by Ashlee Frank

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By: Haley Nagle, Outreach & Education Specialist

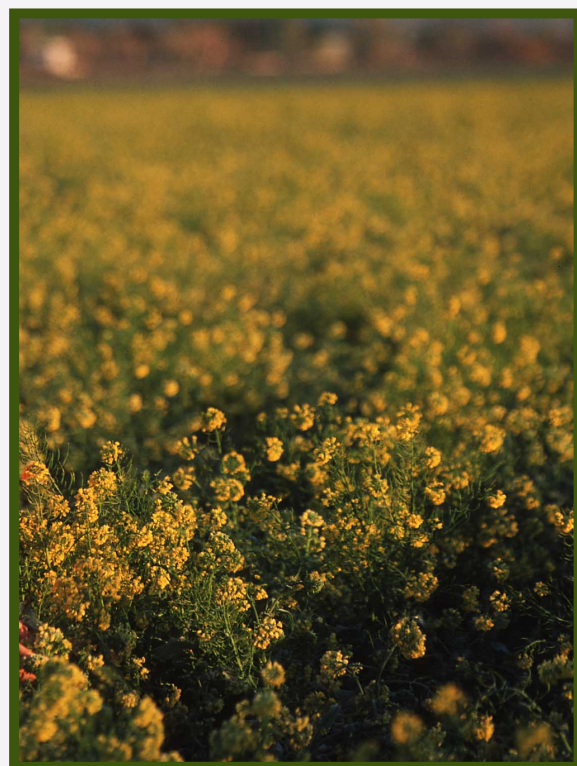
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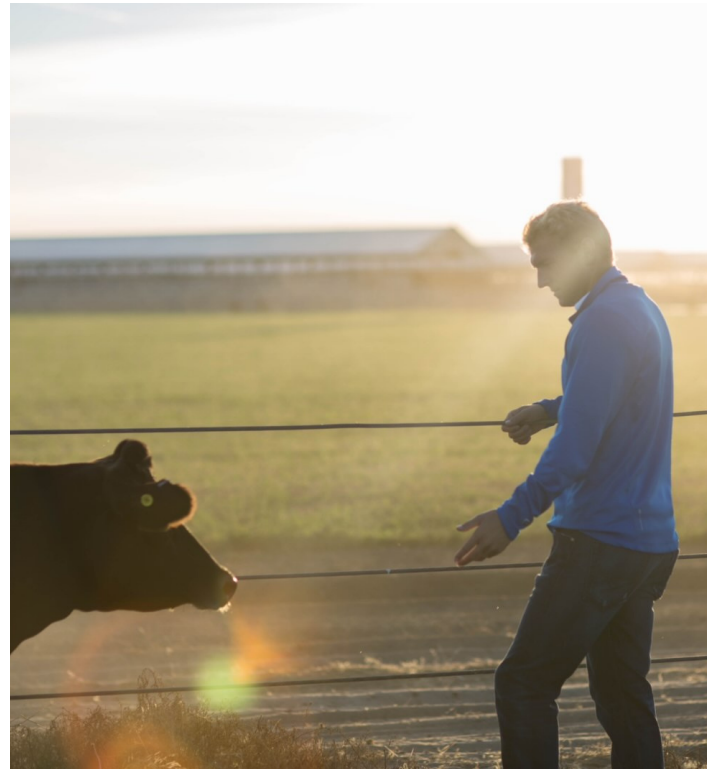
CARBON AS THE KEYSTONE

by Haley Nagle

As Austin, Shaina, and Tyson reminisced on 4 AM tractor rides with their dad or the hours spent hand weeding row crops as kids only to have a machine finish the job, they reflected on their hands-on learning experience by watching and mirroring what their father, and grandfather before him, did on the farm.

More than half a century and three generations later, the Allred siblings continue their family legacy as stewards of the land as they strive to implement best practices across multiple fronts: Mountain View Acres Farm and Orchard, and Royal Dairy and Feedlot.

Within the last twenty years, they made the switch to reducing their tillage intensity. Aside from the greenhouse gas reduction benefits that Shaina discovered through running multiple COMET-Farm projects, Tyson described other benefits from reduced soil loss due to erosion, reduced soil disturbance, and even less weeds. In addition to the cropland conservation practices like growing green manure crops and integrating AgSense®, a weather, irrigation, and soil moisture motoring system that closely manages the efficiency of irrigation on row crops, Austin wanted to improve their waste management and emissions at the dairy operation, too. Royal Dairy's solid waste is destined for compost which is eventually returned to the farm and orchard as a soil amendment. Liquid waste, however, posed a greater challenge. Enter Biofiltro®, a worm powered waste water solution. With this system, Royal Dairy is home to five acres of worm beds where green water is filtered through mulch, rocks, and, of course, worms. The resulting filtered water and removed worm castings are then land applied back on the row crops at Mountain View Acres Farm. The addition of worm beds is just one big step Royal Dairy is taking to mitigate the effects of climate change, and the COMET-Tools are encouraging even more.



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We have our environment, and we have our soil.



Photos by Ashlee Frank

"The COMET-Tools have inspired us to stay alert and not stuck in our ways," Shaina said. Tyson added, "Our mom used to say *if you're not progressing, you're going backwards.*"

"With carbon as the keystone, we want to make a stronger 'arch' by increasing the carbon in our soil and reducing our carbon footprint. COMET has helped give us a voice by identifying [conservation] practices with a carbon benefit," Austin chimed in. •

WATER HOLDING CAPACITY REPORT

NEW COMET-Farm Feature...Coming Soon

The Soil Water Holding Capacity Table will be available for users when using the COMET-Farm Cropland, Pasture, Range, Orchard/Vineyard accounting activity. Users will enter management details as usual, and the available water holding capacity report will generate as an additional tab on the report page. Each defined parcel will have a separate table with scenarios listed vertically in the table. For assistance on interpreting the water holding capacity report and methods used in generating the report, a help document will be available when the report is publicly available.

Step 1 **Activities** Step 2 **Field Management** Step 3 **Report** ▼

Cropland, Pasture, Range, Orchards/Vineyards Cropland Graphical Report Available Water Holding Capacity

Available Water Holding Capacity Report[?]

location: F1



Available water holding capacity by field or soil map unit (bottom image)

Summary Results

Project Scenario(s)	Estimated AWHC in Top 6 inches of Soil (gallons/acre)	Estimated Absolute AWHC in Top 6 inches of Soil (inches water)
Baseline	28,706	1.057
no till	+414	+0.015



Soil Map Unit: Loam - 403271

Project Scenario(s)	Estimated AWHC in Top 6 inches of Soil (gallons/acre)	Estimated Absolute AWHC in Top 6 inches of Soil (inches water)
Baseline	29,577	1.089
no till	+433	+0.016

COMET-FARM TEAM SPOTLIGHT



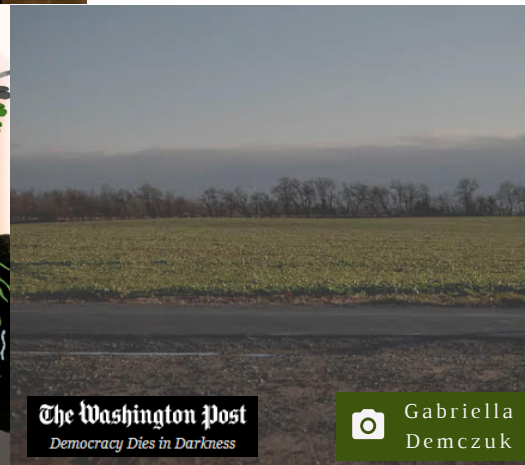
Amy Swan

Amy Swan is an ecologist and ecosystem modeler who coordinates the COMET-Planner tool and collaborates at multiple levels on the COMET-Farm tool, as well as other modeling projects within the team.



Matt Andrus

Matt Andrus serves as an integral COMET-Farm team member working to manage and improve auto testing software that ensures COMET-Farm is running at peak performance.



"How to garden the low carbon way with Sally Nex"

With spring just around the corner, check out this gardening podcast with a focus on low carbon gardening!

[LISTEN](#)


"How the Loss of Soil is Sacrificing America's Natural Heritage"

Ever heard of history repeating itself? Join YaleEnvironment360, as they spin back the clock and dive into historic and current practices contributing to topsoil loss in the Corn Belt.

[READ MORE](#)


"Planting crops — and carbon, too"

Carbon, carbon, everywhere... Explore how a farmer in the Chesapeake Bay area is taking steps to mitigating climate change through maximizing root mass and carbon gains.

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