

High Country News

FOR PEOPLE WHO CARE ABOUT THE WEST

Can small communities tackle global food security?

Climate change has profound impacts on growing seasons and crop yields, but local solutions have promise.

Paige Blankenbuehler | AUDIO | Nov. 5, 2015 | *Web Exclusive*

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This story was produced in partnership with KVNF Radio in Paonia, Colorado.

According to the National Oceanic and Atmospheric Administration, this year is on course to be the hottest year in recorded history. And with greenhouse gas emissions increasing, we're closing in on a global temperature rise of more than two degrees Celsius — what many scientists agree is a point of no return in avoiding the most dangerous impacts of climate change.

Those impacts are felt more acutely in the West. Because it's mostly arid, mountainous, and largely rural, the West sits in the crosshairs of the most profound impacts from climate change. Substantial changes have already affected growing cycles and yields for agriculture, a huge part of the Western economy and culture. Many small communities are rising up to address the challenge of food

security. During a panel discussion on climate change impacts to agriculture in Paonia, Colorado, one expert talked about the drastic change he's personally studied in these mountains.

David Inuoye, of the Rocky Mountain Biological Laboratory, has researched western Colorado wildflowers (<https://www.hcn.org/issues/46.15/zen-and-the-art-of-wildflower-science>) for 37 years, and when he started, he had no idea the high alpine blooms would be such a harbinger for what's happening in the area. "Some of the changes (of high alpine flowers), like longer growing seasons and earlier growing seasons and changes in the flowering and abundance of some species are similar to the kinds of things that seem to be going on here in the North Fork Valley."



In the West, potato crops can withstand more erratic shifts in the climate, but rural growers worry big shifts will threaten even the most hardy agriculture.

Flick user: Josh Schwartzman

As the climate shifts, some farmers might benefit from longer growing seasons, but others may face early blooms and late frosts. But adapting to a fast-changing environment becomes a question of scale. While 'pulling up the stakes to go' may be more feasible for some small-scale growers, vast orchards and vineyards can't relocate so easily. "If you're worried about the tomatoes in your backyard, it's pretty easy to" build a little plastic greenhouse and protect those. If you're talking about a 25 to 30-acre orchard, then it's a completely different scale in terms of trying to protect those plants," Inuoye says.

Biologists and rural growers aren't the first to recognize the difficulty of transitioning large operations. Further west, California communities have faced extreme and prolonged drought and because the state has a variety of climates, farmers have had to adapt in a number of ways. Renata Brillinger, the executive director of the California Climate & Agriculture Network, which is helping large-scale commercial farmers face new realities, says revamping infrastructure, though, has its own unique challenges.

“This movement toward more awareness of the importance of local foods, and supporting your local farmers and these local markets are really exciting developments,” Brillinger says. “I think they'll remain somewhat at the edges, though, until we really address the bigger policy questions and the economic questions that make it challenging to stay in business.”

Local eating seems like a great idea, but in practice, overhauling policies is restricted by global agricultural trade networks, and it's an issue faced by farmers not just in California. In the coming weeks, world leaders will gather in Paris for the United Nations Climate Talks. Just this week, Hilal Elver, an expert on global climate change based at the University of California, Santa Barbara, said another 600 million people could suffer malnutrition by 2080. Meanwhile, global population continues to rise, and is expected to hit 8 and a half billion in just 15 years.

Pete Kolbenschlag, the organizer of the Paonia panel discussion, knows that food security affects everyone. “If you care about what's on your plate, and you care about feeding other people and the planet, then we need to care about climate change, because climate change is going to affect our food supply,” he says.

In that small room on a Tuesday night, local farmers gathered in circle and talked about establishing a food sharing network, a local agricultural currency, and social media strategies. Panel experts even talked about technology that monitors soil moisture to prevent overwatering. These are specific solutions. They haven't solved the big problem, by any means, but at least they're not tackling the challenge alone.