COLORADO AGRIVOLTAIC LEARNING CENTER

origin

Although a novel concept in the United States, agrivoltaic practices have been employed throughout the world. The concept started in Germany, however, Japan currently hosts the most agrivoltaic installations of any country at over 1,400 to date. The United States has just begun implementing agrivoltaic systems in recent years with an early focus on sheep grazing.

the problem

Traditional solar installations are developed with single seed turf or bare ground beneath the panels. The grass seed is inexpensive and can be easily managed by application of pesticides and occasional mowing. This type of vegetation management under panels can lead to decreased water retention, less soil stability, reduced carbon sequestration and loss of habitat for pollinators, birds and wildlife. Solar developments installed in the early 2020's will likely occupy lands and remain unchanged until the 2070's.

a solution

The co-location of solar infastructure with agriculture is "agrivoltaics". Less irrigation is needed to grow crops as solar panels reduce soil evaporation rates. The shade from the solar panels reduces thermal stresses on crops, animals and people. It's a win-win-win when solar is installed correctly to enable agricultural activities within solar arrays. The decisions made today will influence the health of millions of acres of farmland for generations to come.

TYPES OF AGRIVOLTAICS

ECOSYSTEM SERVICES

Photo by: Evan Barrientos of Audubon Rockies

GRAZING

CROP PRODUCTION

Photo by: Werner Slocum of the National Renewable Energy Laboratory

BENEFITS

increased habitat

diverse and native vegetation supports local ecosystems by creating habitat and increasing forage for birds and insects

livestock health

animals benefit from the shade of solar panels on hot days with lower body temperatures that decrease their stress levels and increase their immune functions

higher crop yields

some plants, like leafy greens, benefit from the shade of solar panels in arid regions producing larger yields

crop protection

crops are better protected from high winds and hail due to the solar panels above

economic opportunity

revenues from land leases, electricity sales, managing vegetation and specialty ‘solar crop’ marketing strategies can help support farming families

water conservation

less water is needed for some plants to produce similar or increased yields due to the increased shade decreasing evaporation

WHO WE ARE

our mission

The Colorado Agrivoltaic Learning Center is located at Jack's Solar Garden, the largest commercial agrivoltaic research site of its kind. We showcase clean energy generation coupled with local food production to educate and inspire our community into taking action to improve land stewardship within solar arrays

THREE EDUCATIONAL PILLARS

youth

Big challenges require creative solutions.

Through educational outreach and tours of Jack's Solar Garden for Colorado schools, we teach our youth about solar energy, agriculture, and the combination of the two in agrivoltaic systems. We show them a more sustainable future and the many career opportunities related to agrivoltaics

communities

Seeing is believing.

We provide public and private tours to individuals, community groups, and businesses to showcase agrivoltaics as a new kind of solution to our growing energy, food, and land use challenges. We also offer workshops for solar developers to get an in-depth understanding of agrivoltaics and host free online webinars for the public

policymakers

Colorado is leading the charge.

The future of successful renewable energy deployment rests with our policymakers. They need to understand that solar arrays can be installed so that farmland is not lost. Society should not forget about its soil's health and the agricultural jobs that steward our lands

PARTNERSHIPS

AUDUBON ROCKIES + SPROUT CITY FARMS + COLORADO STATE UNIVERSITY + UNIVERSITY OF ARIZONA + NATIONAL RENEWABLE ENERGY LABORATORY + WISHGARDEN HERBS

TOURS

HIGH SCHOOL FIELD TRIP EXPERIENCES	SATURDAY PUBLIC TOURS	CORPORATE + PRIVATE TOURS
Interested in bringing students out to see the work being done at Jack's Solar Garden? Contact us for field trip + in-person or virtual presentation options!	Public tours are held every other Saturday at 10am from April 22nd - October 28th, 2023	Want to bring your company or organization out to see Jack's Solar Garden? Private corporate, nonprofit, government + community tours are available upon request throughout the year
There is no charge for high school field trips or presentations Contact Allison Jackson at allison@coagrivoltaic.org to discuss availability	Visit our website or reach out to us at info@agrivoltaic.org for pricing *Please note: You must have a tour scheduled prior to visiting Jack's Solar Garden	Colorado government + policymaker tours are FREE for groups up to 20 people Contact us at info@agrivoltaic.org to get prices for corporate, community/civic/non-profit, college classes and to arrange your tour

4500

TOURISTS AT JACK'S SOLAR GARDEN SINCE INCEPTION

1200

VISITS FROM HIGH SCHOOL STUDENTS SINCE INCEPTION

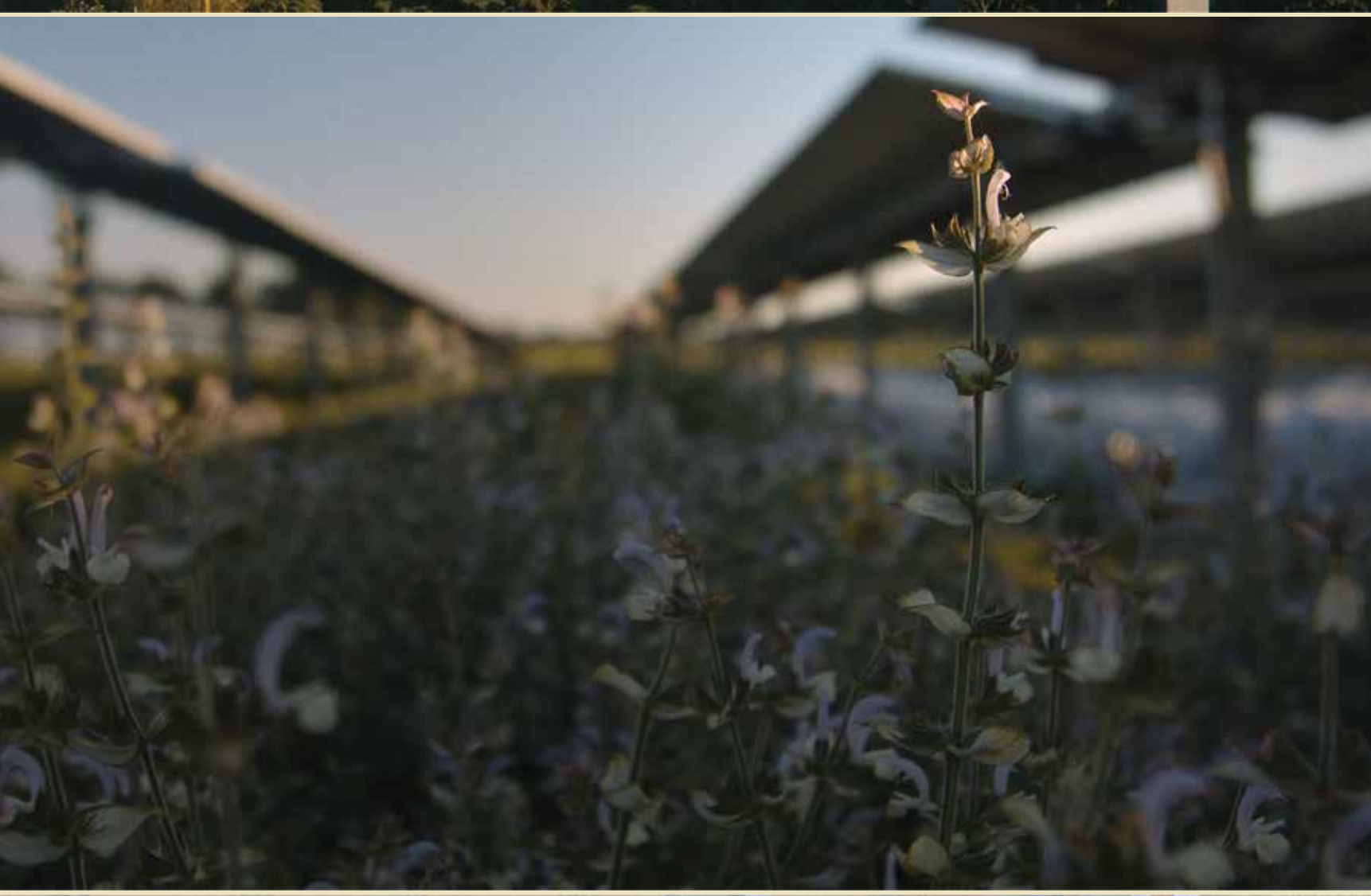
HELP US DOUBLE THOSE NUMBERS IN 2024 BY JOINING US FOR A TOUR AND SPREADING THE WORD

Reach out to Alexandra Hankins at alexandra@coagrivoltaic.org for sponsorship opportunities and ways to partner with us

SCHEDULE A TOUR

Colorado Agrivoltaic LEARNING CENTER

SUPPORT OUR WORK



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