



Byron Kominek

www.jackssolargarden.com







Community Solar Garden!?

Colorado ▾ Customer Support



Xcel Energy*

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Solar Rewards Community

Show your support for a solar garden.

Participate in renewable offerings without the hassle of installing solar panels on your residence or business by subscribing to Xcel Energy's Solar* Rewards Community program. Solar* Rewards Community gives Xcel Energy customers the opportunity to subscribe to a third-party community solar garden nearby. Once subscribed, customers will begin receiving credits on their monthly utilities bill for the solar energy that their subscription contributes to the Xcel Energy grid.

You may or may not save money by participating in solar gardens- subscription agreements are between you and the garden operator. And while we support and administer the program, we cannot advise you on the potential savings or other aspects of your solar garden subscription.





Agrivoltaics

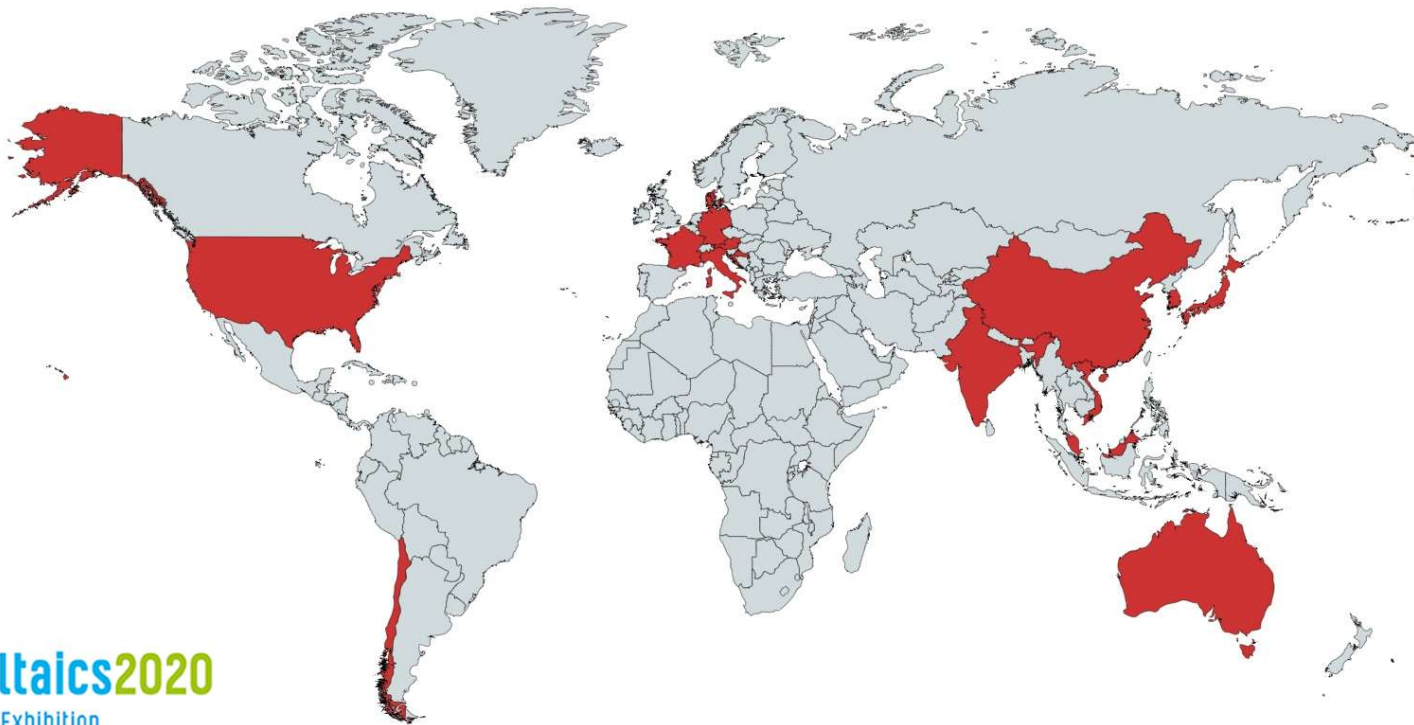




Agrivoltaics



The World of Agrivoltaics



 **AgriVoltaics2020**
Conference & Exhibition
26-28 Aug 2020 Perpignan, France



Agrivoltaics

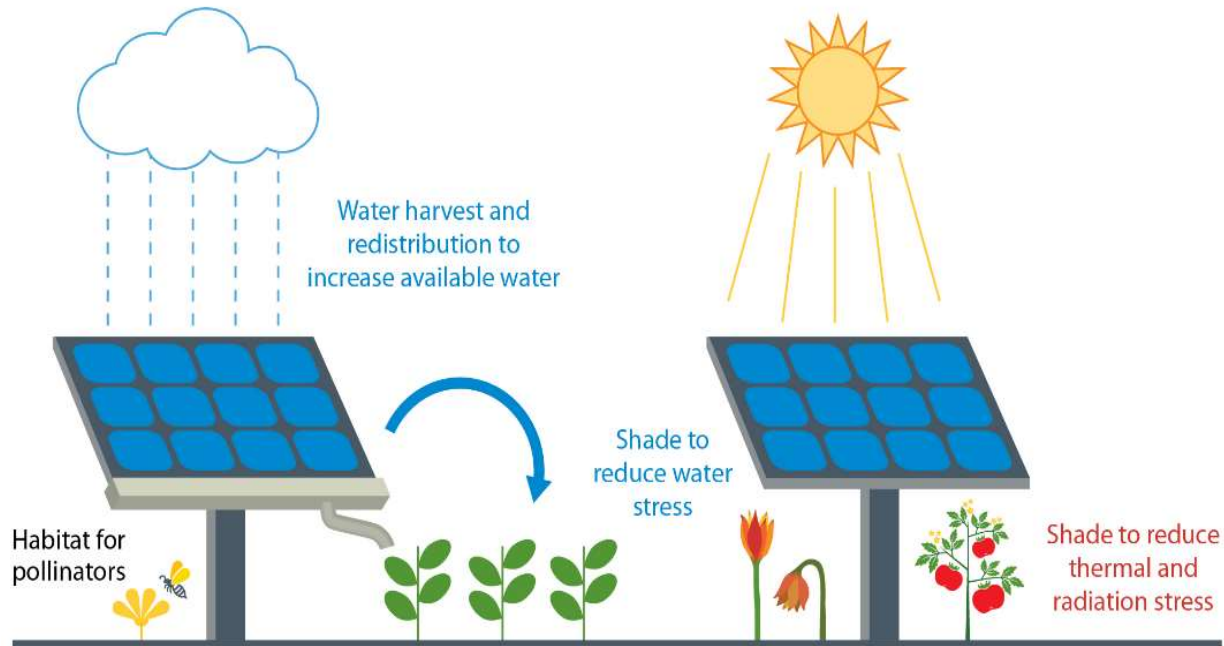


Source: Japan Today (2016) and Sustainenergy (2017)

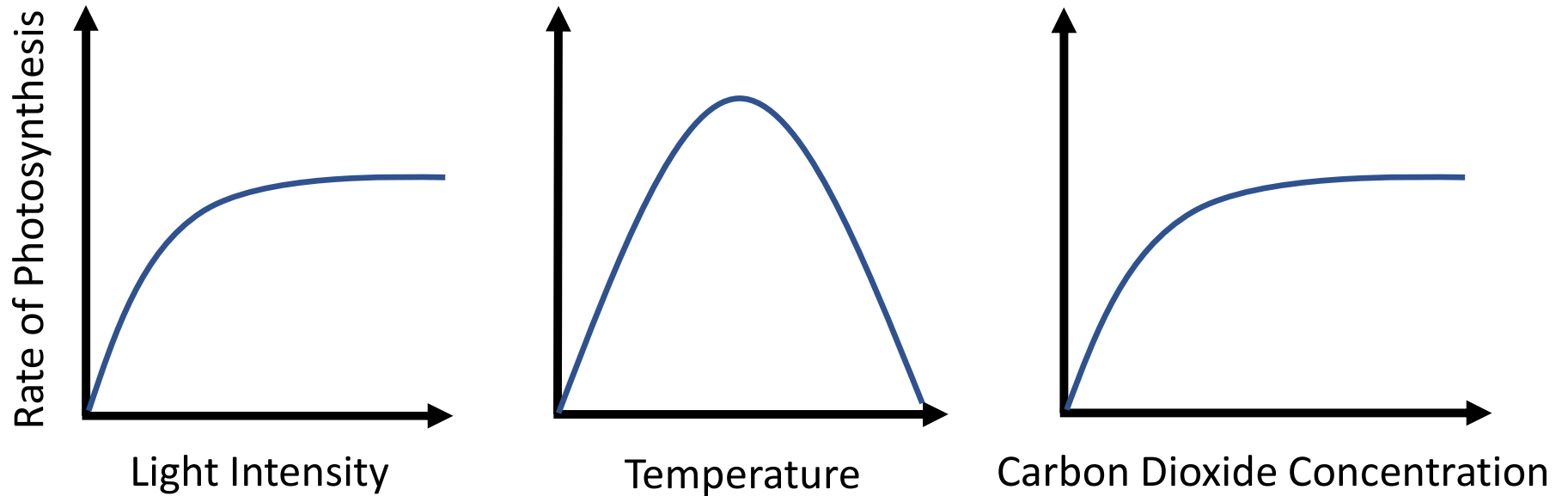




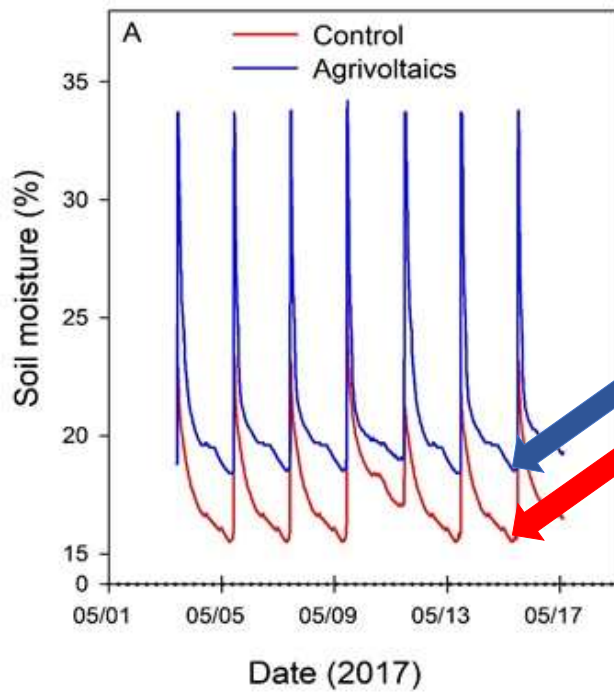
Agrivoltaics



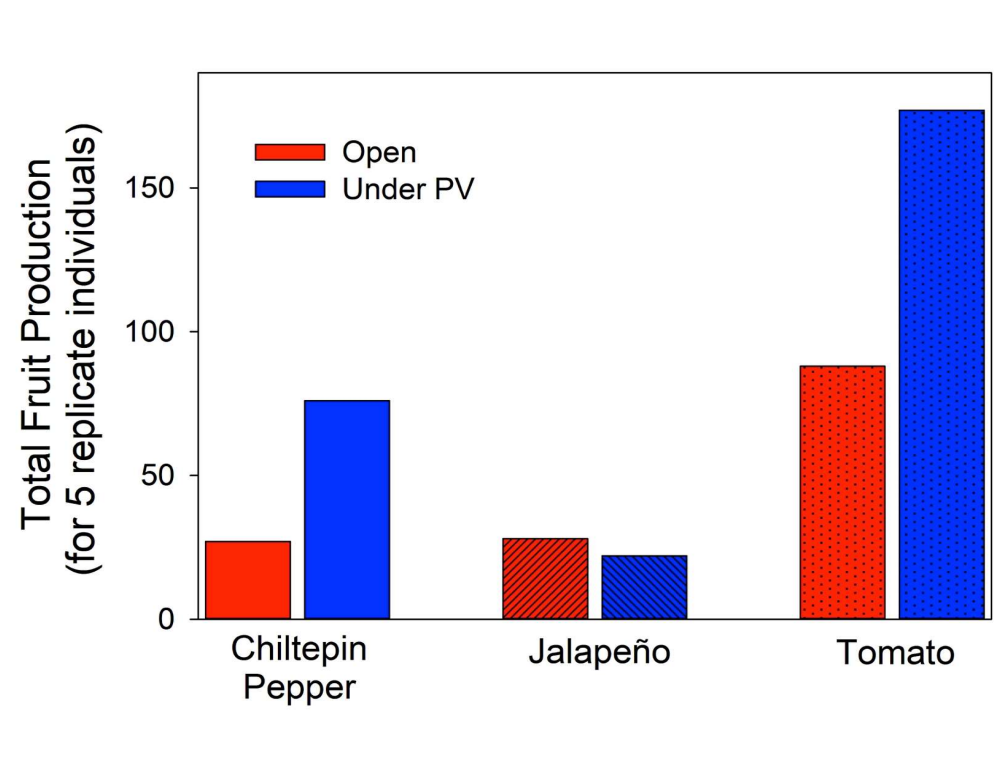
A Quick Biology Lesson



Agrivoltaics



Key Highlight: Agrivoltaics can lead to Higher Crop Yields with Less Water

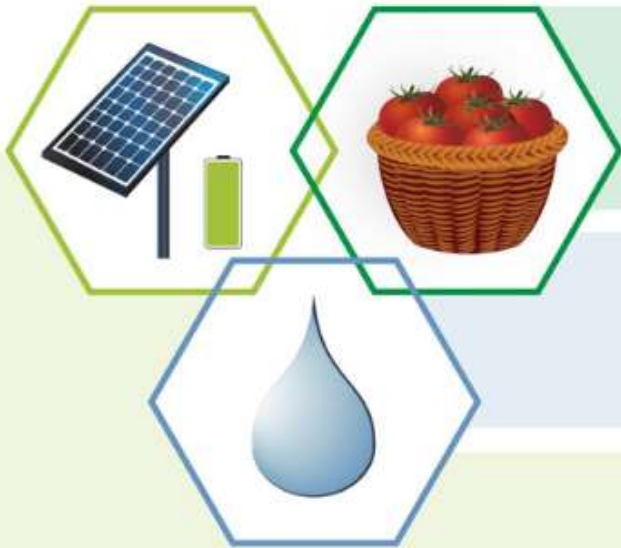


Source: Barron-Gafford et al. (2019) *Nature Sustainability*





Agrivoltaics



Vegetable crops share the land with solar panels.

Shaded plants need less water and cool the back of the solar panels.

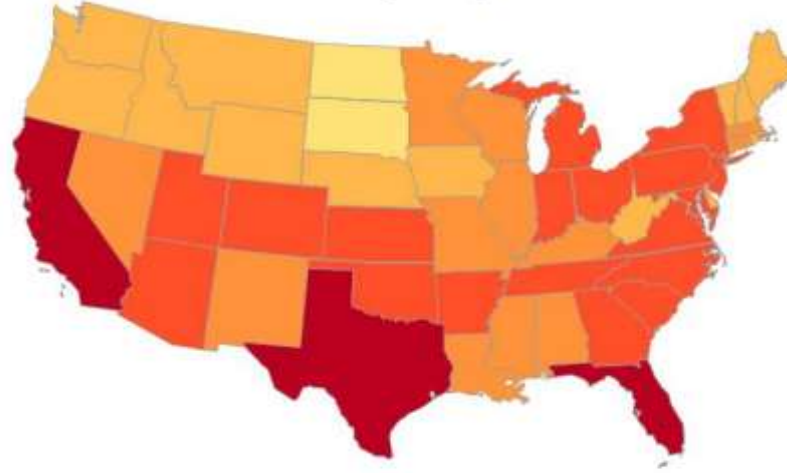
Cooler solar panels capture more energy from the sun.



Figure 3-6. Cumulative Installed PV and CSP Capacity in the SunShot Scenario in 2030 and 2050

2030 PV Capacity: 302 GW

2050 PV Capacity: 632 GW

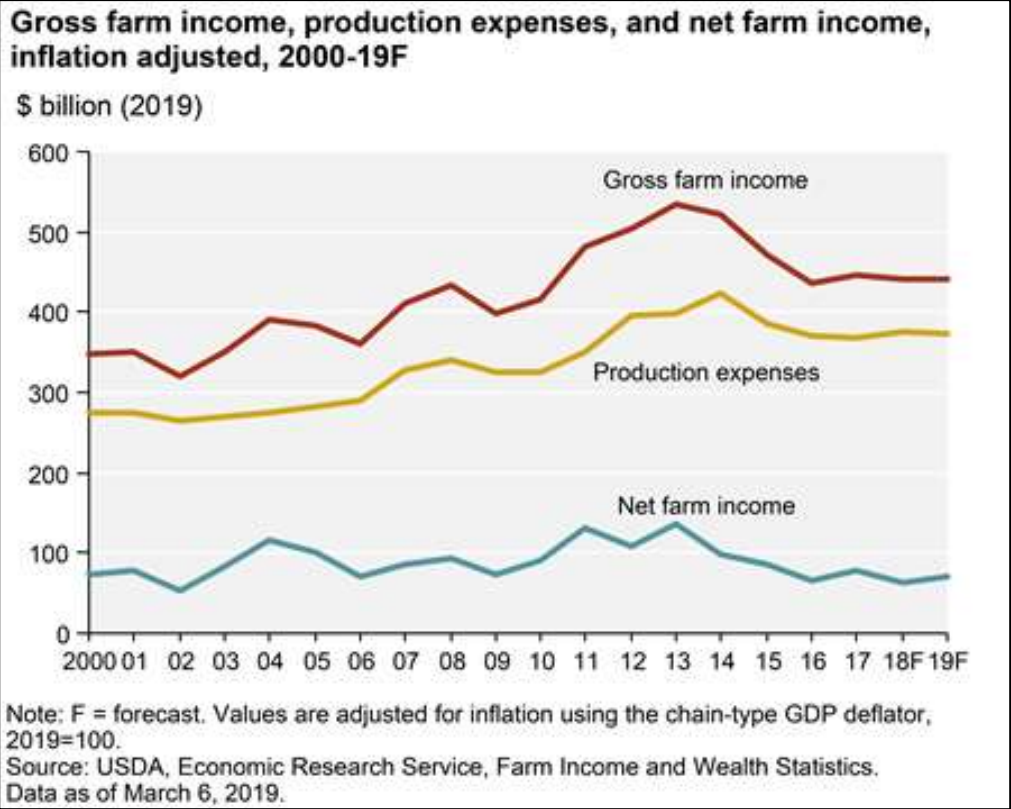


PV Capacity (GW)
< 0.5
0.5 - 1
1 - 5
5 - 10
10 - 30
30 - 50
> 50

2030: 3 million acres
2050: 6 million acres

Source: National Renewable Energy Laboratory





Farm profitability remains a challenge

American Bankers Association and the Federal Agricultural Mortgage Corporation release results of joint survey.

Sections The Washington Post
Preserving Our Past, Feeding Our Future

Business

The next money crop for farmers: Solar panels

Source: USDA Economic Research Service





Boulder County Updated Land Use Code!

The screenshot shows the Boulder County website interface. At the top, there is a dark navigation bar with links for Property Search, Jobs, Volunteer, Elections, County Government, Departments, and Contact. A language selection dropdown is on the right. Below this is a white header with the Boulder County logo and a menu of categories: Families & Adults, Open Space & Recreation, Property & Land, Roads & Transportation, Environment & Sustainability, Safety & Law, and Licenses, Permits & Records. A search icon is also present. The main content area has a light blue background and features the title "DC-18-0002: SOLAR ENERGY SYSTEMS UPDATE" with a breadcrumb trail: Home / Property & Land / Land Use / Planning Division / Amendments to the Land Use Code / DC-18-0002: Solar Energy Systems Update. Below the title is a horizontal line. The "History" section contains two paragraphs of text. The first paragraph states that the Board of County Commissioners authorized staff to pursue text amendments to the Boulder County Land Use Code on May 10, 2018, and that the amendments were approved on Oct. 25, 2018, in Resolution-2018-118, effective Nov. 27, 2018. The second paragraph explains the purpose of the amendments: to facilitate solar energy installation while balancing sustainability goals with scenic, agricultural, and environmental values. A "Subscribe" box on the right side of the page offers to sign up for updates on Land Use Code Text Amendments, with a "Sign-Up" button.

Property Search Jobs Volunteer Elections County Government Departments Contact Select Language

Boulder County FAMILIES & ADULTS OPEN SPACE & RECREATION PROPERTY & LAND ROADS & TRANSPORTATION ENVIRONMENT & SUSTAINABILITY SAFETY & LAW LICENSES, PERMITS & RECORDS

DC-18-0002: SOLAR ENERGY SYSTEMS UPDATE / Property & Land / Land Use / Planning Division / Amendments to the Land Use Code / DC-18-0002: Solar Energy Systems Update

DC-18-0002: Solar Energy Systems Update

History

The Board of County Commissioners authorized staff to pursue text amendments to the [Boulder County Land Use Code](#) related to solar energy systems on May 10, 2018. On Sept. 17, 2018, staff presented proposed Land Use Code text amendments related to solar energy systems to the Planning Commission, which recommend that the Board of County Commissioners approve the proposed amendments. The Board of County commissioners approved the Land Use Code text amendments on Oct. 25, 2018 in [Resolution-2018-118](#), effective Nov. 27, 2018.

The purpose of the Code amendments is to facilitate solar energy installation in appropriate locations, while balancing the county's sustainability-related goals and policies with the scenic, agricultural, and environmental values of the Boulder County Comprehensive Plan. Land Use worked collaboratively with staff from the Parks and Open Space Department and Sustainability Office to identify potential locations for solar gardens in Boulder County. Through this work, staff identified opportunities to improve the clarity and content of the Code, and a need to address the scarcity of sites meeting current Code eligibility criteria for solar energy systems greater than 100kW. Staff intended to update relevant content in Articles 4 (Zoning) and 18 (Definitions) of the Land Use Code, and made other revisions necessary to integrate the changes. Some organizational changes and updates to the existing language were also needed to make the code easier to navigate and utilize.

Subscribe

Sign-up to receive updates on Land Use Code Text Amendments.

[Sign-Up](#)



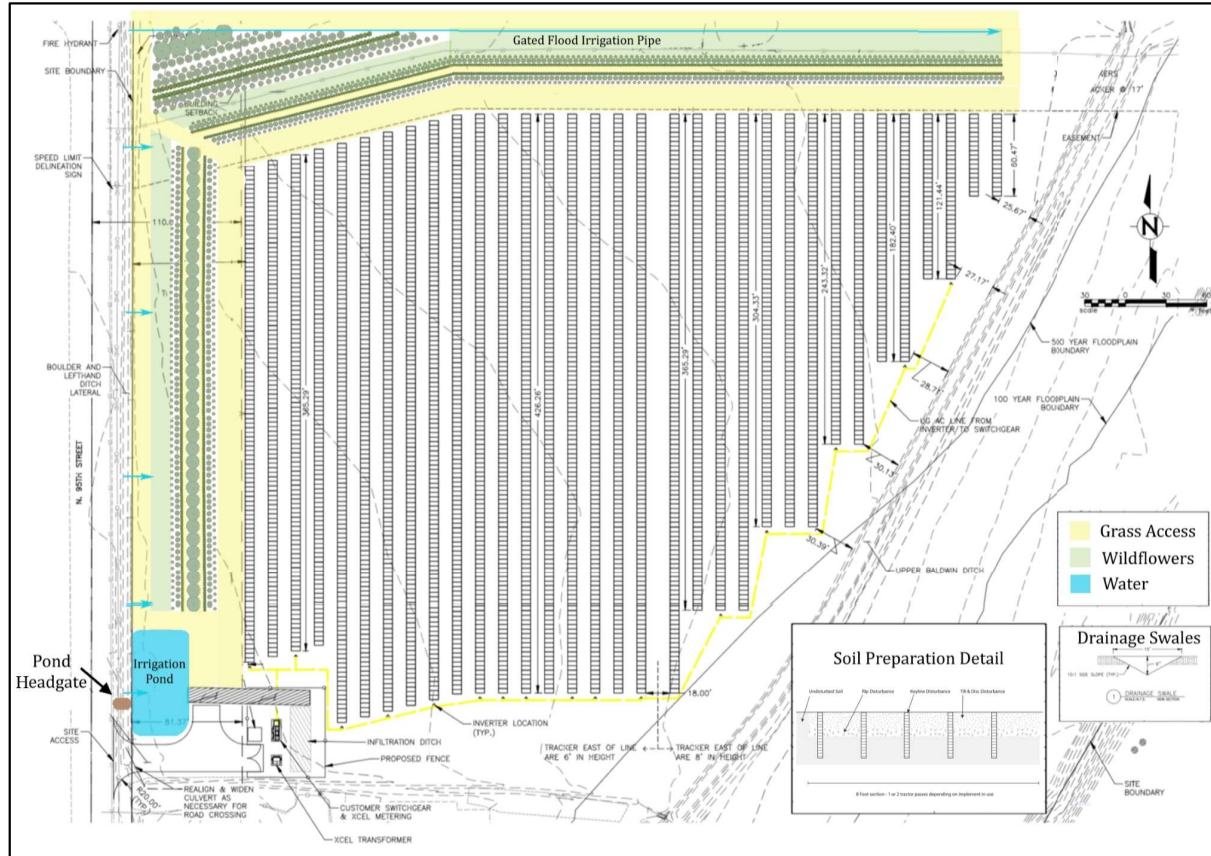


From Hay Field to ...





Design Layout





... a 1.2 MW Solar Array







Inside the Solar Array





Around the Solar Array





Art Event!





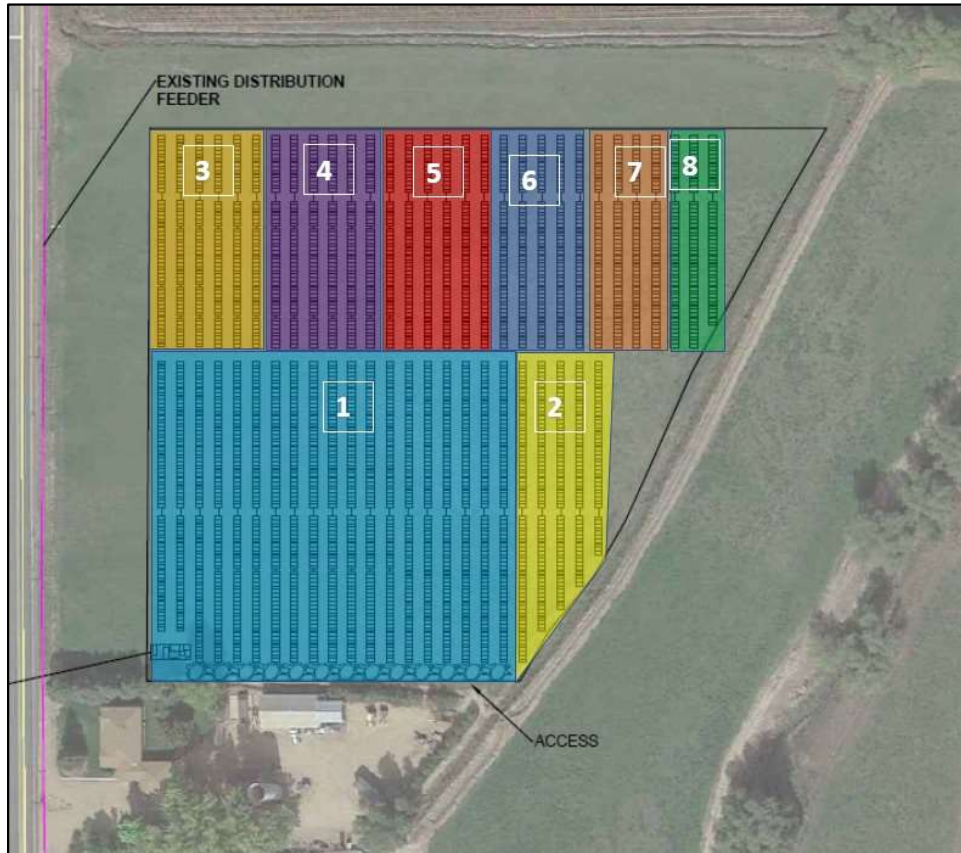
Opening Ceremony!











Images by Werner Slocum/NREL



On-Site Research



Jack's Solar Garden Research Layout
--Farm production centric

-  1. Farm Production for solar customers and donations
-  2. Pasture/grassland/nutrient cycling test plot (CSU)
-  3. Agricultural test plot: horticulture (CSU-Uchanski)
-  4. Agriculture test plot: alternative water management (CSU-Knapp)
-  5. Agricultural test plot: dryland ag (UofA-Barron-Gafford)
-  6. Pollinator habitat test plot (CSU-Seshradi)
-  7. Pollinator habitat test plot (NREL-Macknick)
-  8. Experimental area: mushrooms/other (Byron/CSU/NREL)





Partnerships

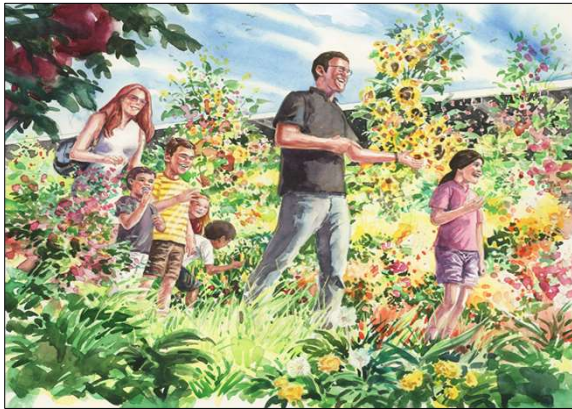
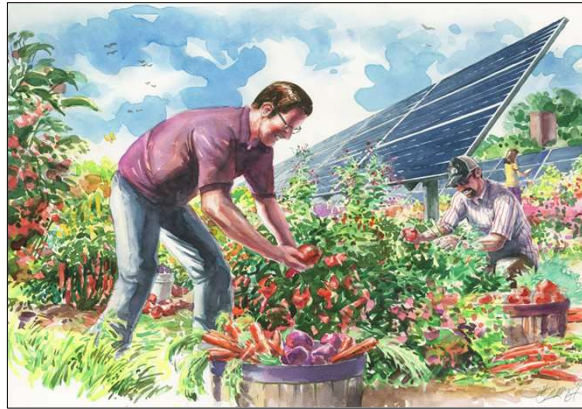


Largest Subscribers





What Jack's Solar Garden Will Be





Colorado
Agrivoltaic
LEARNING CENTER





Colorado
Agrivoltaic
LEARNING CENTER

On-Site Tours

Public Tours

Public Tours will be held **every Saturday at 10:00am** May 1st through September 15th. You must sign up for the public tour by 5:00pm the night before the public tour. You can register by sending an email to coagrivoltaic@gmail.com.

Pricing

Ages 18+: \$15 per person

Ages 17 and under: Free
*Minors must be accompanied by an adult

K-12 and Collegiate Tours

Tours must be reserved at least a week in advance of the tour date. To reserve your time send an email request to coagrivoltaic@gmail.com.

Pricing

College Tours: \$5 per Student

Corporate and Private Tours

Corporate and private tours must be reserved at least a week in advance of the tour date. To reserve your time send an email request to coagrivoltaic@gmail.com.

Pricing

Email coagrivoltaic@gmail.com for pricing





Colorado
Agrivoltaic
LEARNING CENTER

Let your support today by donating at <https://coagrivoltaic.wedid.it>

The Colorado Agrivoltaic Learning Center is a Project of the Colorado Nonprofit Development Center (CNDC) and contributions to CNDC for the benefit of CALC are tax-deductible to the extent permitted by law.

