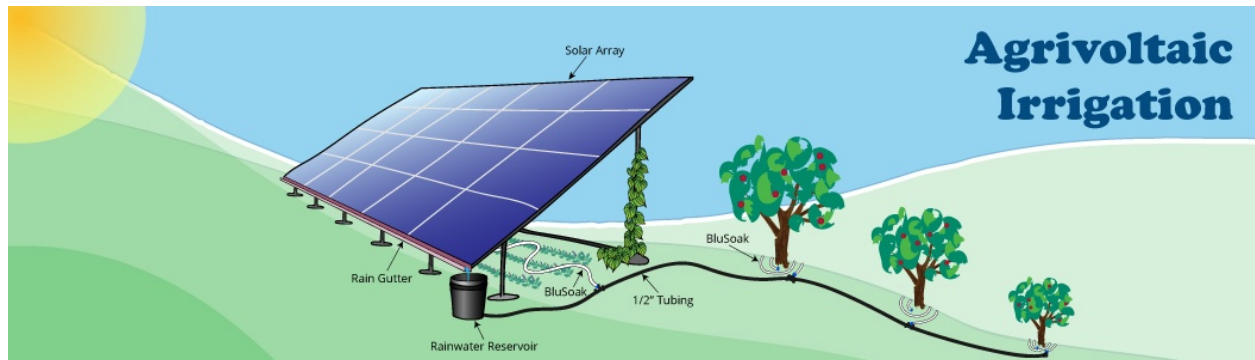


**Meta tag text:** Agrivoltaic Irrigation Systems prevent the competition between farmers wanting to grow crops and the energy industry wanting to install more solar modules

## Agrivoltaic Irrigation

**We need more solar power, we need more good farmland**



Although drought, fire, and erosion continue to decrease good farmland, populations continue to increase. And because farmers in one area tend to grow the same main crops as everyone else in that area, prices stay very low. Agrivoltaic systems can double revenue streams, increase crop value, make the solar output more efficient—all while saving water, meeting long-term renewable energy goals, and assuring a secure long-term food supply.



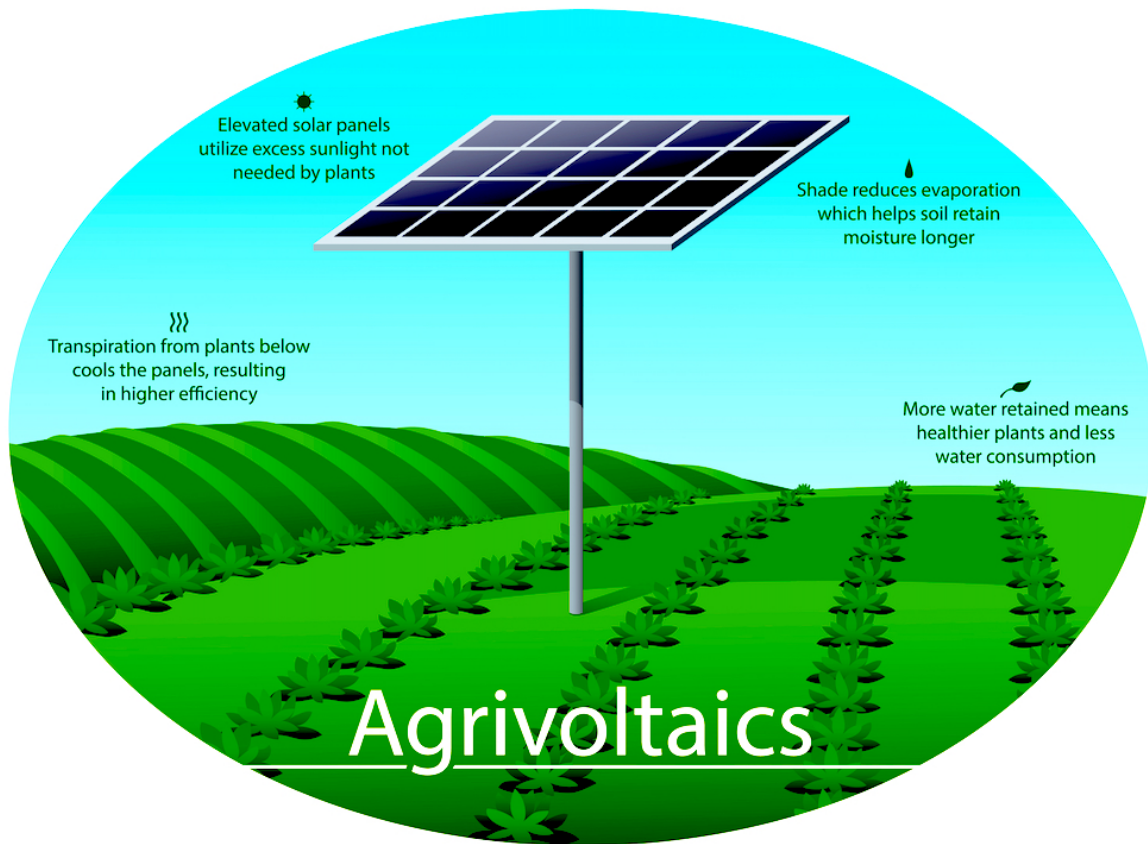
NREL expects that by 2030, utility-scale solar in the USA will cover almost 2 million acres of land. This offers an unexpected benefit for farmers. The shade from PV modules can let farmers grow crops that can't survive or do well in full sun. They can harvest a more valuable crop from the same land that gives them additional revenue from their solar systems. At the same time, growing crops under or near the modules makes them on average 10% more efficient. And the environmental benefits can be huge: an Oregon State University study recently estimated that using only 1% of American farmland in this way would meet our renewable energy targets, save immense amounts of water, and help create a more sustainable, long-term food supply

which—as it is now—can no longer keep up with the world's population.



Agrivoltaic Systems prevent the competition between farmers wanting to grow crops and the energy industry wanting to install more solar modules. Our current agricultural systems use 70% of the world's freshwater and cause more than 1/3 of the greenhouse gases going into the atmosphere and causing climate change. Our irrigation systems connected to solar modules can reverse those negative effects while creating more income for farmers.

For simple systems you can just connect a rain gutter to the bottom of a ground-mounted solar array and channel the water into a reservoir connected to our BluSoak line. The water level in the reservoir only needs to be 5' or 6' above the ground. More complicated and expensive systems can remotely control the array angles to better harvest rain, protect from hail, or adjust the amount of sun to match the individual crop's need. Auto-gravity systems in remote areas can help grow trees on the north side of solar modules and help with more carbon sequestration, erosion prevention, and food-forest generation.



Link to—

**Jack's Solar Farm** <https://www.jackssolargarden.com/>

## Related Parts

- [BluSoak Drip Tape](#)
- [Tape x 3mm Adapter](#)
- [Tape End Plug](#)
- [Tape Valve](#)
- [Tape Coupler](#)

- [3mm Tubing](#)
- [Distribution Dripper](#)
- [8mm Tubing](#)
- [Blumat Pressure Reducer](#)
- [Flow Controllers](#)

## Related Resources

- [How to Design/Configure a Blumat System from Pressure](#)
- [How to Design/Configure a Blumat System from Gravity](#)
- [BluSoak Drip Tape vs. Distribution Drippers](#)
- [Guide to Blumat & BluSoak Container Kits](#)
- [5 Steps to an EasySoak System](#)
- [How to Calculate BluSoak Flow Rates](#)
- [5 Ways Blumat \(and BluSoak\) Benefits Living Soil](#)
- [5 Beginner Mistakes Using Blumat Systems](#)

REQUEST A QUOTE

Connect, link to people working on this at NREL in Golden. Charlie Gay, etc.

National Renewable Energy Lab's Jordan Macknick, SoCore Energy's Laura Caspari, and Fresh Energy's Rob Davis

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Don't use (yet):

Creating Food Forests

In general, vines (especially grapes) are more quickly and easily adversely effected by climate change

“Modern” agricultural systems contribute 1/3+ of the global greenhouse gasses

Between 2011 and 2018, 100,000 farms shut down.

We now throw away more than 30% of all the our agricultural output

["If everyone became vegetarians, most of our environmental problems would end"]

In general, vines (especially grapes) are more quickly and easily adversely effected by climate change