



Minnesota Solar Energy Industries Association

We Move Minnesota Solar + Storage Forward

The Benefits of Solar for Minnesota Farms

Minnesota has 25.5 million acres of farmland, with about 16.7 million acres of that considered “prime” farmland. Solar has countless benefits to help increase a farm's productivity and diversify its revenue stream. According to American Clean Power, farmers and landowners receive **\$8.5 million** in annual land lease payments from solar alone! In addition to lease payments under Minnesota law, land used for solar production is exempt from property tax and Minnesota sales tax.

Property Rights and Economic Security

A farmer's annual income is very uncertain, but the world's demand for energy is only increasing. By adding solar, a farmer creates a consistent stream of drought-resistant revenue to provide economic security to their bottom line. It's the farmer's right to choose what is best for their land, and solar is a great option. **Solar is keeping Minnesota family farms in business!**







Will Solar Hurt the Land?

No! Significant research has found that solar is safe for soil, animals, water, and humans. A popular myth is that panels leak compounds into the ground, but solar cells are sealed with an aluminum or steel frame and are proven to be safe. Read the full report [here](#).

Agrivoltaics

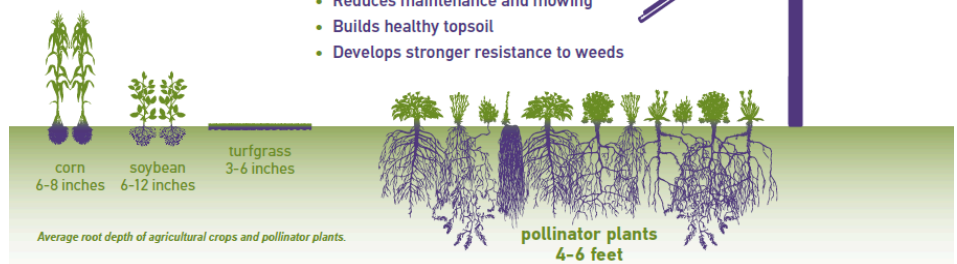
Agrivoltaics is when solar energy and farming come together. Farmers can plant crops and native pollinators under and around the panels, graze livestock, and more. Just because a farm adds solar doesn't mean it's not productive farmland anymore!

Benefits Include:

-  Higher crop yields
-  Increased natural habitat
-  Improved soil quality
-  Economic opportunity
-  Shade for grazing animals

BENEFITS of NATIVE GRASSES AND WILDFLOWERS include

- Reduces soil erosion
- Increases soil organic matter
- Creates habitat for bees and butterflies to forage
- Increases pollination for nearby crops
- Enhances on-site water management
- Reduces maintenance and mowing
- Builds healthy topsoil
- Develops stronger resistance to weeds



Graphic courtesy of SWCA Environmental Consultants



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Pollinator Planting is using native plants that are best adapted to the area's soil and environmental conditions. These also provide habitats for pollinators like bees, bats, and birds. Neighboring farms' crop yields are proven to benefit from the pollinators too!

Solar Grazing is the method of vegetation control at a solar site using livestock. Sheep are most often used for this work, due to their size and grazing behavior. Cows can also find shade and graze under panels, if built at the appropriate height. Grazing is proven to be better for the soil and vegetation vs. traditional mowing.



Crop Production can take place below or around the solar panels, offering a unique environment to grow crops due to the shade created by panels. These benefits include water conservation, crop protection, extended growing seasons, and the opportunity to grow different types of crops. Lots of research is taking place on how some crops produce better yields under solar panels!

How Does the Leasing Process Work?

Once a farmer decides they want to take advantage of solar offers, how does the process work?

- 1. First, the farmer makes an initial inquiry with a solar developer.** MnSEIA has a list of professional and qualified solar developers that serve Minnesota and the surrounding area and agree to MnSEIA's Code of Conduct. Find the list on [our website](#).
- 2. The chosen solar developer will visit the land and assess the suitability for solar.** They will note factors such as the amount of available land, soil conditions, proximity to power lines, and objects that shade the area.
- 3. Once the solar developer agrees that the land is suitable, they will make a lease offer to the farmer.** This lease offer should include the scope of the project, who is responsible for paying the taxes associated with the project, who will be responsible for cleanup of the project, and more.
- 4. The solar developer will then sign a letter of intent** and the lease will move forward to be finalized.
- 5. The solar developer will build the solar project. Both the developer and farmer will benefit from a mutual partnership.** There are no restrictions to reverting land back to agricultural use after the completion of a solar project.

Resources:

- Read about Minnesota farmers who are reaping the rewards of solar [here](#).
- See the Department of Energy's "Farmer's Guide to Solar" [here](#).
- Read the "Renewables and Property Rights" blog by Clean Grid Alliance [here](#).